REWIRING THE GRID: POWER INFRASTRUCTURE AS A STRATEGIC MOAT IN THE AI AND HPC PIVOT

Our Investment Thesis

The AI (Artificial Intelligence)/HPC (High-Performance Computing) boom is ushering in a generational infrastructure cycle, with U.S. data center capacity forecasted to double from 21 GW to 45 GW in five years. This unprecedented growth, paired with the massive capital inflow from cloud hyperscalers, has exposed the limitations of legacy data centers in handling AI workloads. Bitcoin miners with large, scalable, power-rich sites, and the ability to deliver infrastructure quickly are emerging as ideal partners to bridge this capacity shortfall. While not all miners can pivot, those who do are positioned to participate in one of this decade's most attractive infrastructure arbitrages. **At the same time, we believe that those who continue in bitcoin mining stand to benefit from a higher hashprice environment, fueled by reduced network competition and a bullish macro setup, including pro-bitcoin policy tailwinds in the U.S.** As crypto and AI increasingly intersect, miners represent a rare, tangible play on this convergence. Crypto x AI narratives have attracted over $382M in early-stage VC investments and now account for $33B in aggregate market cap (Galaxy Research, 2024). Yet, few deliver the scalable infrastructure link that mining does — energy. Bitcoin mining, in this light, is not merely surviving but evolving — from a volatile, monoline crypto play to a dynamic asset class capable of supporting the next wave of AI innovation. For miners that can successfully straddle both worlds, the reward is not just financial — it's foundational.

Our Pick This Month

Core Scientific, Inc. (NasdaqGS: CORZ)

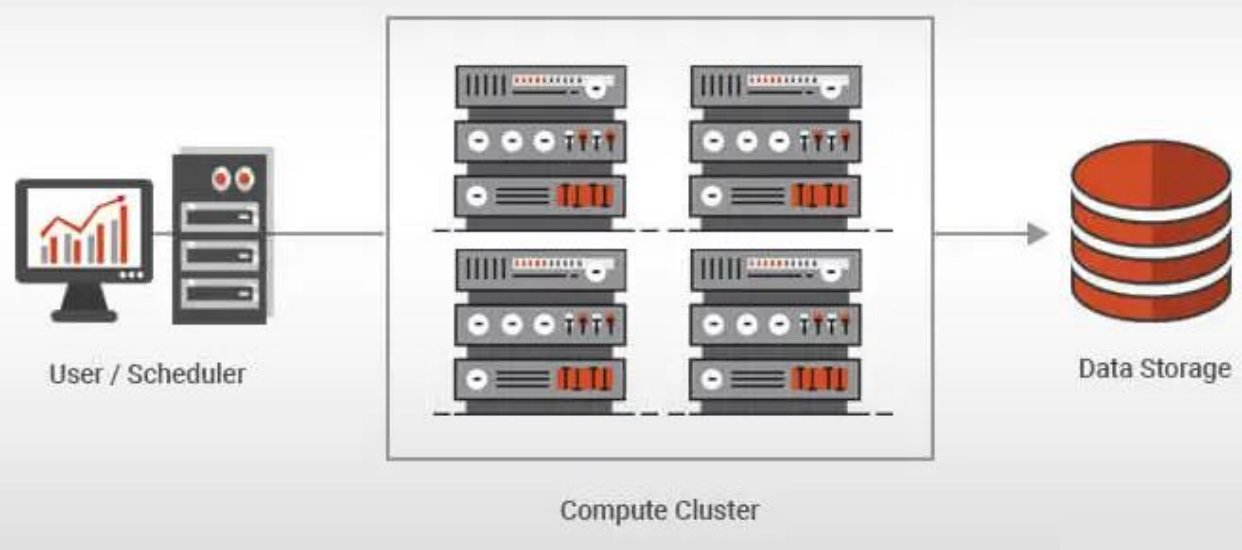
Core Scientific is reallocating most of its infrastructure from Bitcoin mining to AI-focused data hosting, with 700 MW committed to high-performance compute workloads. The company has secured long-term contracts with CoreWeave, including capex reimbursements and high-margin terms, which could significantly increase future EBITDA. Further, ongoing site development in Georgia and other U.S. states supports additional capacity without major greenfield risks. While Bitcoin mining remains active, capital and strategy are aligned with AI infrastructure, reducing dependence on crypto volatility.

A Selective Yet Transformative Opportunity in the AI-HPC-Blockchain Nexus

The investment thesis around HPC and AI-driven data infrastructure is entering a critical inflection point, particularly catalyzed by the strategic repositioning of legacy Bitcoin miners. As the April 2024 halving event slashed mining rewards and amplified profitability pressures, operators with access to substantial power infrastructure and high-density cooling are increasingly redeploying their capabilities toward AI and HPC workloads. **We believe this transformation is underpinned by a fundamental overlap in infrastructure intensity, both Bitcoin mining and AI/HPC demand low-latency power delivery, robust energy throughput, and scalable modularity.** Miners like TeraWulf (NasdaqCM: WULF) and Core Scientific (NasdaqGS: CORZ), already operating near power generation hubs, are now monetizing their energy arbitrage advantage through enterprise-grade compute contracts. These players are not just shifting workloads but evolving into vertically integrated digital infrastructure providers. For instance, TeraWulf's transition—evidenced by its 131% YoY revenue growth and a structurally healthy 60% gross margin—demonstrates that compute-as-a-service underpinned by renewables may command superior economics versus volatile Bitcoin-denominated cash flows. Further, Piper Sandler's modeling suggests HPC contracts could drive 2–3x EBITDA uplift over mining alone, making the case for capex reallocation compelling in a rising AI infrastructure tide.

From an investment standpoint, this strategic pivot creates a differentiated infrastructure-backed growth story, largely insulated from BTC's price cyclicality. The primary investment driver lies in the high switching cost embedded in hyperscale AI workloads and their long-term contracts, significantly de-risking revenue forecasts compared to mining revenues that hinge on network difficulty and coin price. **Power access— historically a cost center— is becoming a profit center as AI players increasingly face grid bottlenecks and permitting delays.** This positions former miners as key beneficiaries of the power-to-compute arbitrage. Moreover, as the AI infrastructure layer experiences secular demand tailwinds driven by Large Language Model (LLM) proliferation, multi-modal model training, and inference-as-a-service, the cash flow visibility of power-rich miners-turned-HPC providers improves. **Notably, partnerships such as Core Scientific with CoreWeave and TeraWulf with Core42 are early validations of this thesis.** The investment upside is further supported by margin expansion through energy-efficient architectures and potential regulatory tailwinds favoring carbon-neutral data centers. While the transition demands upfront capex and domain adaptation, the high-IRR opportunity embedded in this pivot positions select Bitcoin miners as asymmetric plays on the AI infrastructure supercycle. **We expect capital markets to increasingly reward these operators not as volatile crypto miners, but as scalable compute utility businesses with tangible infrastructure moats.**

Chart 1: Architecture and Workflow of a High-Performance Computing System



Source: Ace Cloud Hosting

Powering HPC: Strategic Implications for Digital Infrastructure and Energy Markets

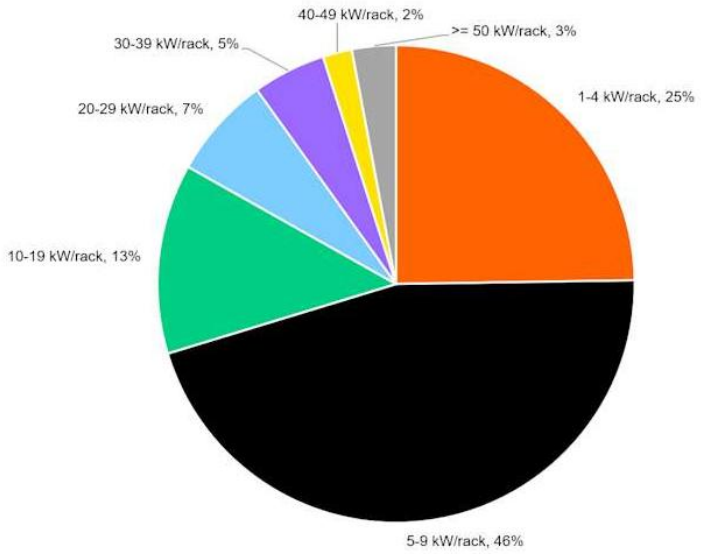
The accelerating demand for AI and ML infrastructure is catalyzing a structural convergence between compute capacity and power generation, transforming energy into a monetizable asset class within the digital economy. **While market commentary has largely focused on data center expansion, our analysis underscores a more nuanced investment thesis: power itself has become the gating factor for value creation in the HPC value chain.** With the Electric Power Research Institute (EPRI) estimating U.S. data centers could account for nearly 10% of national electricity demand by 2030, the scarcity of firm, dispatchable power is elevating the strategic relevance of miners and utilities that control scalable energy assets.

Several Bitcoin miners with latent power capacity, previously valued for their crypto exposure, saw equity valuations re-rate by over 100%, reflecting investor recognition of embedded optionality in power-rich infrastructure. Estimates say that 100MW of energy aligned with AI/HPC workloads could command up to $1 billion in enterprise value. **We believe this re-pricing is not a transient trade but a signal of long-duration capital formation in compute infrastructure.** Notably, utilities with natural gas generation and transmission capabilities—such as Capital Power, AltaGas, Enbridge, and TC Energy—are well-positioned to capture rising load demands and facilitate the digital-energy transition.

Bitcoin Miners as Strategic Enablers in the AI Infrastructure Shift

The accelerating demand for AI and HPC infrastructure is creating a structural transformation in the data center landscape. Traditional data centers—originally built for applications like video streaming or cloud storage, are falling behind in their ability to support the compute density, power requirements, and interconnectivity demanded by large-scale AI models such as LLMs. With server rack densities now exceeding 130 kW, more than triple the 40 kW limit just a few years ago, existing facilities often lack the necessary electrical, cooling, and network backbones to accommodate next-gen systems like NVIDIA's GB200 NVL72. **Meanwhile, the lead time for greenfield data center development has extended to 2–4 years, largely due to strained power grids and delayed interconnection approvals.** As a result, the gap between AI infrastructure demand and deployable capacity continues to widen. Notably, Hyperscalers like AWS and Google Cloud are projected to spend over $370 billion by 2038 on AI-specific infrastructure, up 127% from 2024. We maintain that this unprecedented capex cycle is shifting the market's attention toward unconventional but infrastructure-rich assets, including those held by Bitcoin miners.

Chart 2: Surging Rack Densities: Powering the Next Generation of AI Data Centers



Source: Galaxy Research

Bitcoin miners are uniquely equipped to bridge the AI infrastructure gap due to their historical focus on low-cost, high-volume energy procurement. Many large-scale miners already possess the most time-consuming and capital-intensive components required for AI/HPC data centers: access to hundreds of megawatts of power at a single site, on-site substations, long-lead grid equipment, water access for cooling, and proximity to dark fiber networks. These attributes closely align with the prerequisites for AI data centers, which demand low-latency GPU communication, high power reliability, and scalable cooling architectures. Additionally, miners bring operational expertise in running high-density server environments, along with skilled facility management and security teams—assets that can streamline deployment timelines for hyperscalers. Critically, public market valuations further amplify the upside: Bitcoin miners typically trade at 6–12x EV/EBITDA, whereas AI-centric data center operators are valued at 20–25x. This valuation arbitrage offers a powerful incentive for miners to reposition their infrastructure toward AI use an evolving dynamic that could reward investors who are closely tracking these infrastructure transitions. **However, the transition is not plug-and-play. Upgrades to mechanical cooling systems, network fabrics, redundancy protocols, and facility form factors are essential to meet AI-grade reliability and compute efficiency standards.**

Despite the apparent fit, not all mining operations can capitalize on this infrastructure arbitrage. The ability to support AI workloads requires more than just power availability. Facilities must have regulatory approvals in place, be zoned appropriately, and be able to support sophisticated retrofitting for AI hardware, including rack-mounted server integration, direct-to-chip liquid cooling, and high-bandwidth networking. Redundancy requirements are also drastically higher: AI

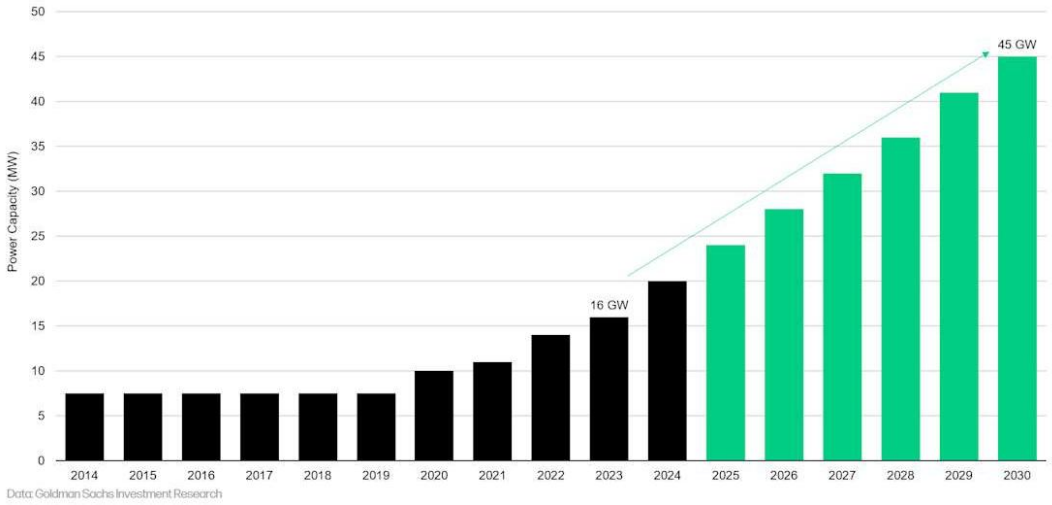
data centers operate with N+1 or greater redundancy, ensuring uninterrupted training cycles even during equipment failures—an expectation rarely applicable to Bitcoin mines. Additionally, the physical architecture of mining farms, often optimized for Application-Specific Integrated Circuit (ASIC) miners with shoebox-style enclosures, is fundamentally incompatible with the rack-and-stack configuration of AI systems. These differences make retrofitting a technically demanding endeavor, feasible only for miners with the foresight, capital, and organizational capability to execute a multi-year infrastructure pivot. **Nevertheless, for this select cohort, we believe the convergence of high-margin AI/HPC workloads and undervalued infrastructure presents a generational opportunity—one where Bitcoin miners, traditionally viewed as energy-intensive liabilities, may become indispensable accelerants in the buildout of the AI economy.**

Strategic Upside: Miners Poised for AI/HPC Conversion Can Unlock Significant Value

Bitcoin miners that possess the right combination of infrastructure, energy access, and strategic foresight are uniquely positioned to capitalize on the unprecedented demand surge from AI and HPC workloads. Transitioning to AI/HPC operations entails more than physical retrofitting—it requires domain expertise, long-term capital planning, and sophisticated execution. Those who succeed stand to unlock powerful economic levers. Chief among these is the transformation of volatile, short-cycle bitcoin revenue into high-margin, long-term cash flows backed by creditworthy counterparties. Colocation and build-to-suit models for AI/HPC typically secure fixed contracts before the data center is built, allowing operators to pass through energy and operational costs while generating stable EBITDA. This transition not only insulates revenue from bitcoin's cyclical pressures but also opens access to deep institutional capital pools, including private equity and infrastructure investors who are eager for yield-backed digital infrastructure assets. **With over $18B in data center development financing underwritten in Q1 2024 alone, and spreads ranging from 2.25% to 4.50% above SOFR, financing appetite remains strong despite higher rate environments.**

As noted, the valuation differential between bitcoin mining and AI/HPC, driven by superior visibility, customer stickiness, and secular growth tailwinds, the strategic upside. Miners converting to AI/HPC unlock this arbitrage—notably, hybrid mining/AI firms represent just 23% of Digital Realty's EV despite controlling over 3.5x the MW capacity. For miners with convertible infrastructure, the shift to AI/HPC represents a compelling path to valuation accretion. However, this opportunity is selective. Only a subset of miners has the large-scale, energy-rich sites and accelerated energization timelines necessary to support hyperscaler workloads. As legacy data centers struggle to meet the surging power densities required for modern AI training, miners emerge as a logical partner for hyperscalers racing to scale capacity. Those miners who can execute this pivot—by locking in AI tenants, securing project finance, and delivering infrastructure—we believe will become strategic players in the broader AI data center ecosystem.

Chart 3: U.S. Data Centers Projected to Reach 45 GW by 2030



Source: Galaxy Research

Future-Proofing Bitcoin Mining: Grid Synergies, Optionality, and Strategic Load Flexibility

Despite the rising prominence of AI/HPC, bitcoin mining will continue to grow, albeit with evolving dynamics. The pivot toward AI does not spell the end of mining but introduces a more nuanced growth profile. As major U.S. miners convert assets to AI/HPC, it reduces hashrate competition, which supports hashprice for those remaining on the network. Concurrently, bitcoin mining is expected to push further into remote geographies, monetizing stranded energy in places like Ethiopia and Paraguay. These flexible, location-agnostic deployments reinforce bitcoin mining's role as a strategic tool for energy infrastructure monetization. Additionally, in regions lacking fiber and grid infrastructure, mining provides a bridge investment, underwriting substation buildouts with near-term mining revenue while awaiting future AI or industrial load. **For miners unable to secure AI clients or meet the technical bar, continuing as pure-play BTC operations remains viable, especially in sites unsuitable for HPC retrofits.**

The convergence between AI/HPC and mining is also evolving at the hardware level. ASIC manufacturers are producing server-compatible machines, enabling data centers to deploy BTC miners in underutilized racks—a move that enhances design flexibility and simplifies future conversions. Moreover, AI workloads are not uniformly power-intensive. Training exhibits spiky load profiles due to checkpointing, while inference demand aligns with diurnal usage. This volatility creates arbitrage for dynamic load-balancing, where bitcoin mining can absorb troughs in AI demand. Over time, this flexibility can smooth grid load, provide stability, and enhance overall asset utilization, allowing miners and data center operators to extract value from every marginal MW. **As regulatory scrutiny on AI's power draw intensifies, this synergy could become a core pillar of sustainable AI data center design.**

Company Spotlight - Core Scientific, Inc. (NasdaqGS: CORZ)

Strategic Repositioning: From Crypto Roots to AI Hosting

Core Scientific, once predominantly known for its extensive Bitcoin mining operations, is undergoing a calculated and compelling strategic pivot. Founded in 2017, the company built its foundation by operating large-scale crypto mining data centers, but recent developments mark a significant departure from this identity. With AI infrastructure demand soaring, Core Scientific is repurposing its digital real estate to serve as HPC hosting hubs for artificial intelligence workloads. This transition is already bearing fruit—as of March 2025, 700 MW out of its 800 MW total capacity is committed to AI-centric operations, with the majority tied to its largest client, CoreWeave. This pivot reflects broader industry dynamics: Bitcoin mining profitability remains volatile, while AI workloads are generating consistent, high-margin opportunities. **Core Scientific's strategy to de-risk its revenue base through diversification into AI and HPC is a forward-looking move that positions the firm in one of the fastest-growing segments of the digital infrastructure space.**

Dalton Expansion: Laying the Groundwork for Future Growth

A central pillar of Core Scientific's AI strategy is geographic expansion, with Dalton, Georgia, emerging as a strategic hub. The company recently secured rezoning approval for over 170 acres of greenfield land along Old Tilton Road, earmarked for the development of a new AI data center campus—Dalton 4. This site will complement Core's existing 195 MW capacity in the region, which includes Dalton 1 (50 MW, hosting Nvidia DGX hardware since 2018) and Dalton 3 (145 MW). The first facility at the new site is slated to be operational by July 2026. **The proximity to Core's existing operations offers synergies in power procurement, staffing, and network infrastructure.** This initiative is part of a broader blueprint that includes conversions of legacy crypto sites across North Dakota, Kentucky, North Carolina, Alabama, Texas, and a new facility under development in Oklahoma. **With these moves, Core Scientific is not only adding capacity but optimizing its infrastructure footprint to serve the growing appetite for AI compute.**

Chart 4: Geographic Footprint of High-Capacity Data Sites

Source: Core Scientific Q4 2024 Earnings Presentation

CoreWeave Partnership: A $600M+ EBITDA Catalyst

Core Scientific's commercial relationship with CoreWeave—one of the most prominent private players in the AI cloud space—is both its biggest asset and largest dependency. The two firms have inked multi-billion-dollar agreements under which Core Scientific will deliver 500 MW of capacity by late 2026, with an additional 200 MW allocated for support functions. Importantly, the contracts include capital expenditure reimbursements of approximately $180 million and yield contribution margins around 80%, suggesting strong unit economics. Analysts project that the fully ramped contracts could generate over $600 million in annual EBITDA by FY2027. Moreover, CoreWeave's recent $12 billion partnership with OpenAI and its IPO filing on March 3, 2025, further enhance the outlook for Core Scientific. Should CoreWeave successfully list and expand its revenue base beyond Microsoft, **Core Scientific is poised to benefit from increased infrastructure demand and reduced customer concentration risk. However, the reliance on a single anchor client remains a notable risk factor that investors are watching closely.**

Bitcoin Mining: Still Relevant, but Secondary

Despite its AI pivot, Core Scientific continues to operate one of the largest Bitcoin mining fleets in North America. As of March 2025, the company ran 156,000 self-owned miners, producing 247 BTC in the month, up from 215 BTC in February. Total energized hash rate stood at 19.1 EH/s, though slightly down from the prior month due to equipment rotation. Fleet efficiency improved modestly to 24.3 J/TH. While the segment remains profitable, it is increasingly capital-constrained and susceptible to macro factors such as Bitcoin price volatility and energy costs. That said, new mining rigs from Block (NYSE: SQ) are expected to arrive in H2 2025, which could enhance productivity and lower the cost per coin. Moreover, Core Scientific's flexible approach to grid support—providing 35,295 MWh to local utilities in March alone—illustrates the company's operational agility and ability to monetize power curtailment, a key differentiator in a margin-compressed mining market.

Financial Outlook and Strategic Assessment

Core Scientific's financial trajectory reflects a company in mid-transition. Fiscal year 2024 revenue was projected at $492.2 million, rising to $522.9 million in FY2025, while EBITDA is forecasted to remain relatively flat at ~$145 million.

However, recent company filings indicate FY24 revenue of $510.7 million and Adjusted EBITDA of $157.4 million a decrease of $12.1 million over 2023, suggesting that AI/HPC revenue has yet to fully materialize in reported financials. Analysts forecast profitability in 2025, with EPS estimates at $0.74 and EV/EBITDA multiple hovering near 41x, signaling high growth expectations. Notably, the stock has delivered a 145.7% return over the past 12 months, even amid broader market volatility, reflecting investor confidence in the AI transformation thesis. That said, high customer concentration, infrastructure execution risk, and the potential downturn in AI demand could pose challenges. **Nonetheless, Core Scientific's unique position—operating at the nexus of crypto infrastructure and AI hosting—offers a compelling asymmetric upside, especially if it succeeds in broadening its AI customer base and executing on its expansion roadmap.**

Core Scientific shares have increased 145.7% over the past year, compared to a 5.19% gain in the S&P 500, supported by a shift in business strategy from Bitcoin mining to AI infrastructure hosting. With a strong balance sheet, strategic site expansion, high-margin contracts, and a clear pivot toward the AI/HPC market, the company is well-positioned to capitalize on secular tailwinds. Further, the success of CoreWeave's IPO and its deeper integration with AI leaders like OpenAI only strengthens the investment thesis. However, investors must weigh the opportunities against execution risk, customer concentration, and ongoing volatility in legacy Bitcoin mining operations. **All said, Core Scientific represents a next-generation digital infrastructure play, and its ongoing transformation is one to watch closely.** The company is currently trading at an EV/EBITDA ratio of 22.6x, which is lower as compared to its industry peers.

Chart 5: CORZ vs. SPX – 1Y Price Performance

Source: Trading View as of 04/18/2025

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