



A new era of data center infrastructure

*The market has been attracting extraordinary investment;
new research shows the momentum is durable*

by Eamon Nolan

Modern economic growth has been built largely on infrastructure. Railroads and highways ignited industry and connected communities. Ports enabled global trade. Power grids and pipelines energized countless homes and businesses. Broadband and fiber optics transformed communication. Across these eras and others, the foresight to commit capital to promising technologies — long before the full scale of their impact emerged — has been essential to powering progress.

Today, the world stands before a new era of infrastructure investment with similarly powerful potential: data centers and the energy required to run them. But where is this new era heading? To get a clearer read on the market outlook, Vinson & Elkins surveyed 200 senior infrastructure developers and private capital investors, asking about prospects for growth, challenges that could impede it and solutions for sustaining momentum.

THE BULL CASE IS INTACT, BUT POWER CONSTRAINTS LURK

The survey's headline finding is that confidence remains high. Nearly 90 percent of investors believe the current pace of AI-driven data center capital expenditure is sustainable for the next one to five years. That kind of consensus is rare in infrastructure markets, reflecting extraordinary demand for compute capacity from hyperscalers, enterprise AI adopters and governments.

Yet, despite the robust demand signal, market participants are clear-eyed about constraints that could slow the buildout, especially the availability of power. Virtually all respondents believe the current pace of data center development risks outpacing available power infrastructure, while 48 percent of developers and 57 percent of investors see that risk as significant. The practical implication is that power procurement is now investors' top underwriting

consideration. Projects with a clear path to secured power — whether through long-term utility agreements or through on-site generation capacity — carry materially lower execution risk than those still in queue.

GEOGRAPHY IS GOING TO MATTER MORE

The power challenge may also create opportunity: 96 percent of developers and 87 percent of investors say power limitations likely will shift data center development to new locations. This geographic reshuffling is already opening doors for investors willing to look beyond traditional data center corridors such as Northern Virginia, the Dallas–Fort Worth metroplex and Silicon Valley in California, where high demand for land and power have driven up prices. Newer markets with available power capacity, favorable permitting environments and grid access stand to attract the most developers, and investors underwriting projects in those areas likely will benefit from less competition and more favorable land and power economics.

Meanwhile, power constraints are driving a trend toward building power independence into the project itself. Indeed, 77 percent of developers and 81 percent of investors report increased adoption of microgrids, on-site generation and other alternatives to grid-dependent power. These solutions add complexity and upfront capital requirements, but market participants increasingly believe decoupling project timelines from years-long utility queues is a critical path to responding to hyperscaler timing demands for build-outs.

Asked about the structural changes that would most improve speed-to-power for large digital loads, both developers and investors singled out expanded private generation flexibility among the most important. Clearly, both see behind-the-meter and distributed power not as a stopgap, but as a durable feature of the data center business model. Investors need to be comfortable underwriting that approach and developing the technical diligence capabilities to evaluate it.

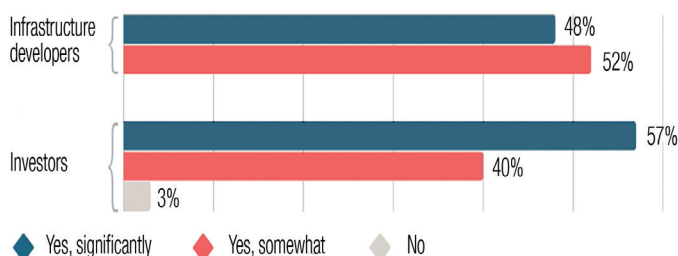
BEYOND HYPERSCALER PROJECTS: THE RISK IS MANAGEABLE

Non-hyperscaler projects are accounting for a growing share of data center development, and the findings here show the factors that are most driving investor confidence. These include long-term contracted offtake agreements (46 percent), sponsor or private equity backing (42 percent), and secured power procurement (41 percent).

These results confirm what we see in practice. Rather than chase a narrative, thoughtful investors are demanding structural protections before committing capital — similar to how they approach any infrastructure deal.

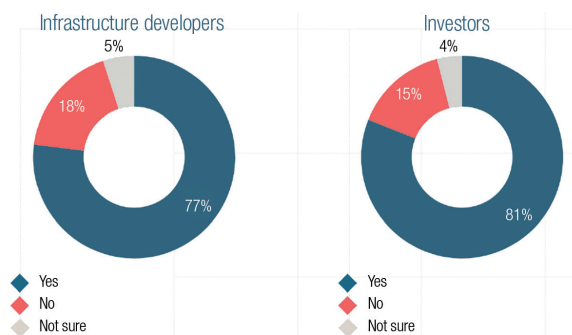
No less important, credit risk among tenants outside the hyperscaler universe is not keeping many up at night, with 91 percent of developers and 90 percent of investors characterizing this risk as low or moderate. This suggests a maturing market where tenant diversification is increasingly seen as viable rather than speculative, as long as the contractual framework appropriately allocates risk.

Do you believe the current pace of AI-driven data center development risks outpacing available power infrastructure?



Source: Vinson & Elkins

Are developers in your region increasingly pursuing hybrid or off-grid power solutions?



Source: Vinson & Elkins

ROOM TO RUN

The people who financed previous eras of infrastructure were not working with complete information. But they did have a sound read on demand, a clear understanding of the constraints, and the discipline to structure and allocate their capital wisely — dynamics that enabled them to make investments that would prove to be among the most consequential in modern history.

Those same three dynamics are at play in today's data center infrastructure market. Most investors see a market with substantial room to run. They know the path forward depends on data centers' ability to procure reliable power. And they are carefully weighing where and how best to deploy their capital. Indeed, the market is betting that any power limitations will be solvable, and that those who solve them fastest will capture disproportionate value. ♦

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