

Data centres as a convergence point for capital, power, and sustainability

Data centres have become integral to the functioning of the modern economy. They underpin cloud computing, enterprise software, financial services, ecommerce, streaming, and artificial intelligence. What was once viewed as a specialist real estate subsector has evolved into core economic infrastructure, essential to security, productivity, innovation and growth.

This transformation has created a compelling opportunity for investors. Demand for data centre capacity continues to expand across regions and customer segments, while the supply of high-quality, scalable and energy-secure facilities remains constrained in many markets. At the same time, the characteristics of the sector have become more stringent. Data centres are no longer simply about delivering buildings; they require deep operational capability, secure access to power, and credible sustainability credentials.

Our view is that this convergence of real estate, digital infrastructure, energy and sustainability lies at the heart of the data centre investment opportunity – and it is central to Actis' approach as a growth market investor in sustainable infrastructure.

A sector underpinned by long-term demand

We think that the demand drivers for data centres in growth markets are structural rather than cyclical. Global data creation and consumption continue to grow rapidly, fuelled by cloud migration, mobile usage, digital services and the deployment of AI-enabled applications. While AI has captured much recent attention, broader digital transformation remains the dominant force shaping long-term demand. This is particularly true in the growth markets across Asia, Latin America and the Middle East in which Actis invests, where there is a significant structural undersupply. Although about 70 percent of global GDP lies outside North America and Western Europe, this "rest of the world" market contains less than 30 percent of current global data centre capacity. We believe that the undersupply in these markets is integral to this investment opportunity.

Asia in particular exemplifies this dynamic. Expanding digital economies, rising internet penetration and a growing base of enterprise users are driving sustained growth in data centre requirements across the region. Forecasts by PwC suggest that Asia Pacific data centre capacity will grow at a compound annual rate of over 20 percent before 2028.

We think this supply/demand imbalance is creating a durable investment opportunity. In many Asian markets, the availability of institutional or hyperscale-grade data centre capacity has lagged behind economic growth, leading hyperscalers and large enterprise customers to seek new locations that can offer scalable power, appropriate connectivity and regulatory certainty. Data sovereignty requirements are reinforcing this trend, as governments increasingly require data to be stored and processed locally rather than offshore. More to the point, the low-latency requirements of cloud computing and, increasingly, AI inference mean these assets need to be located near major metropolitan areas where end users are based.

For investors, however, capturing this opportunity requires more than recognising demand growth. It requires the ability to deliver assets that meet exacting technical, operational and sustainability standards, and doing so at scale and over long operating lifecycles in these growth markets.

Data centres and energy: an inseparable relationship

Energy is perhaps the defining constraint and differentiator in the data centre sector. Electricity is typically the largest operating cost line item, and power availability increasingly determines whether projects can proceed at all.

Actis anticipates global data centre electricity consumption will rise materially throughout the coming decade. Even as efficiency improves, total demand is increasing faster than can be offset by those gains. This reality places energy strategy at the heart of data centre investment decisions. Three considerations are particularly important.

First: access to reliable power. In many established data centre markets, grid capacity is constrained and connection timelines are lengthening. This has prompted a reassessment of location strategies, with growing interest in markets that can offer scalable power alongside suitable land and connectivity. This is one of the reasons Johor Bahru, Malaysia, emerged as a data centre hotspot in Asia. Its close proximity to Singapore allows it to serve cloud demand in that major global hub while offering greater (and more affordable) land availability as well as greater power availability, including the space to develop colocated renewables alongside data centres.

Second: cost and long-term price stability. Given the long operating life of data centres, exposure to volatile or rising power prices presents a material risk. Structuring cost-effective and resilient power solutions is therefore central to protecting asset economics. A great example is the power supply agreement reached between two of Actis' portfolio companies, according to which renewables platform Serena supplies an average capacity of 7.5 megawatts to cover data centre platform NextStream's Tamboré data centre in Brazil.

Third: carbon intensity and sustainability. Hyperscalers and multinational customers increasingly incorporate the carbon footprint of power supply into procurement decisions. Most have set ambitious decarbonisation targets, and access to lower-carbon energy can be a prerequisite for contracting. This sustainability need, combined with the need to reduce energy costs, makes energy efficiency an absolute imperative in the data centre space.

Energy is not a background input – it shapes competitiveness, customer demand and long-term value. Investors with the capability to navigate power markets, energy efficiency and renewable energy solutions can therefore benefit from a strong competitive advantage in a sector where the ability to secure reliable, cost-effective and sustainable long-term power contracts is key.

Infrastructure-grade operations

The operational profile of data centres further distinguishes them from conventional real estate. These are important facilities that must operate continuously, with minimal tolerance for downtime. Achieving this requires deep expertise across design, construction, commissioning and ongoing operations.

Key operational considerations include power connectivity, cooling systems, electrical redundancy, backup generation, monitoring and security, all of which must be integrated and managed with precision. The success of a data centre is determined as much by how it operates as by how it is built.

Energy efficiency is a tangible expression of operational

excellence. Power Usage Effectiveness has become a widely recognised benchmark, with leading operators driving improvements through advanced cooling technologies, intelligent building management systems and design optimisation. Lower PUE ratios reduce operating costs and emissions simultaneously, reinforcing both financial performance and sustainability outcomes.

Actis has an average PUE ratio of 1.3 for its total-design IT capacity. This PUE performance underscores the Actis team's strong commitment to sustainability and operational efficiency, even as the firm owns and operates data centres across a mix of geographies, including in hotter regions that place greater demands on cooling systems.

This operational intensity means that data centres sit at the intersection of real estate and infrastructure. Investors approaching the sector purely from a property perspective may underestimate the technical and operational demands involved, while infrastructure-only approaches can overlook local real estate dynamics such as land acquisition, permitting and market-specific development practices. In Actis' view, success requires an integrated model that brings both disciplines together.

Sustainability as a core investment requirement

Sustainability in data centres has shifted from a differentiator to a baseline requirement. This reflects the convergence of customer expectations, regulatory trends and long-term asset risk management.

Hyperscalers increasingly require suppliers to align with their decarbonisation pathways, with Microsoft, Meta and Amazon for example all aiming for net zero carbon emissions by 2030 or 2040. Governments are also tightening environmental and energy regulations, particularly for high-consumption assets. At the same time, investors and lenders are placing greater scrutiny on sustainability performance as part of risk assessment and exit planning.

For data centres, integrating sustainability from inception can deliver tangible benefits. Energy-efficient design reduces operating costs. Access to renewable power mitigates exposure to carbon-related risks, enhances customer attractiveness and can result in further cost reductions. Moreover, resilient design features such as climate risk mitigation and efficient water management protect asset value over long operating horizons.

Crucially, we believe sustainability is also a defence against depreciating value or stranded-asset risk. In a sector where technology, regulation and customer standards continue to evolve, assets that cannot meet future energy, emissions or wider resource requirements risk obsolescence. Embedding sustainability early helps future-proof investments and preserves liquidity.

Epoch Digital: an integrated data centre platform in practice

We believe that Actis' focus on sustainable infrastructure provides a natural foundation for investing in data centres. The firm's experience across energy, infrastructure and real estate, with responsible investment principles embedded from the outset, enables an integrated approach to a sector where power, operations and sustainability are inseparable.

Epoch Digital, Actis' pan-Asian hyperscale data centre platform, illustrates how this integrated strategy is being applied. The platform is developing, owning and operating data centres in select Asian markets, including South Korea, Malaysia and Taiwan, with a current portfolio of roughly 260 MW of IT capacity.

Epoch Digital focuses on markets where demand visibility is strong and where Actis has a strategic advantage in overcoming land and power constraints that create barriers to entry for less specialised investors. The platform's assets are designed to meet both traditional cloud and AI inference workloads, providing flexibility and resilience as demand patterns evolve.

Operational efficiency and sustainability are central to the proposition. A focus on PUE, energy-efficient design and responsible construction practices that meet hyperscale requirements are maintained from the beginning. This approach not only helps meet stringent hyperscaler demands but also enhances long-term cost competitiveness and asset durability.

The platform also benefits from Actis' broader capabilities across energy, where the firm has built, operated or owned an installed capacity of 41 gigawatts, allowing power strategy and sustainability considerations to be addressed alongside real estate execution rather than as afterthoughts. As a result, the firm is strongly positioned with expertise in all aspects required for the data centre revolution.

Conclusion

We believe the data centre sector represents one of the most appealing investment opportunities within growth market real assets today. We think it is more supported by durable demand drivers and reinforced by supply constraints, particularly in fast-growing regions such as Asia, than the data centre growth being witnessed in developed markets like the US.

It is important to remember that data centres are not conventional real estate assets. Their success depends on operational excellence, secure access to power and credible sustainability performance. Energy strategy and sustainability integration are now central determinants of competitiveness and long-term value.

Actis' approach – rooted in sustainable infrastructure, operational discipline and long-term value creation – is designed to meet these requirements and to capitalise on the sector's continued and structural expansion into growth markets.

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COMPANY OVERVIEW

Actis is a leading growth market investor in sustainable infrastructure. Actis invests in structural themes that aim to support long-term, equitable growth in defensive, critical infrastructure across energy transition, digitalisation transition, and supply chain transformation.

Actis believes that the firm's decades of global experience, operational know-how and strong culture allow it to create global sustainability leaders at scale. Actis is a signatory to the Principles for Responsible Investment (PRI), an investor initiative supported by the United Nations.

In October 2024, Actis joined forces with General Atlantic, a leading global growth investor, creating a diversified, global investment platform. Together we have approximately \$118 billion in combined assets under management. Actis operates as General Atlantic's sustainable infrastructure business. This strategic combination further enhances Actis' focus as a leader in global sustainable infrastructure.

You can learn more about Actis at www.act.is

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