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Sustainable infrastructure
A paradigm shift for Private Equity

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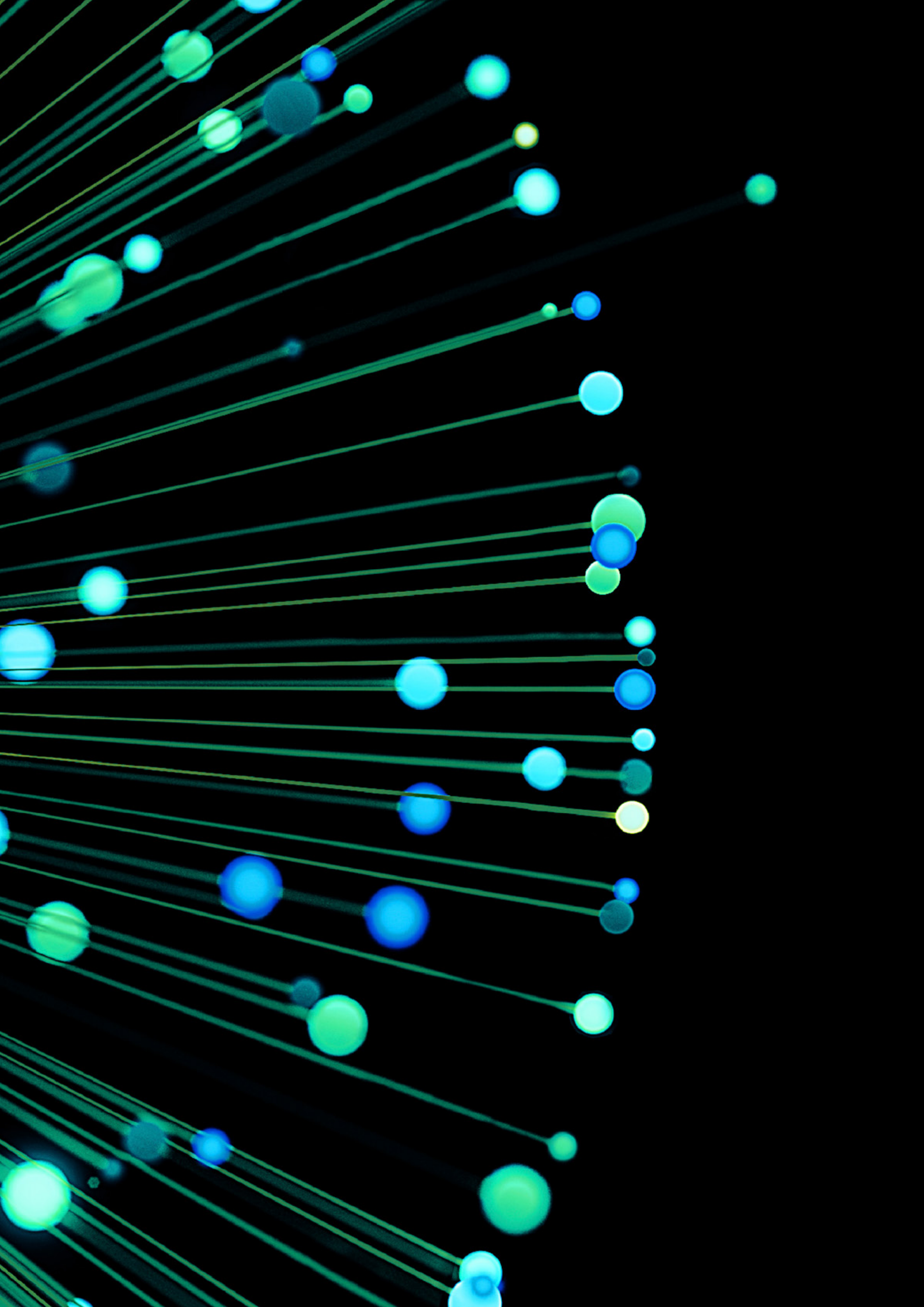

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Sustainable infrastructure
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Why infrastructure?

Infrastructure is a societal necessity; it defines how resources, products, and people move through the economy. It also plays an indispensable role in our lives that ultimately shapes our society and culture. These fundamental aspects of infrastructure have not changed; but recent shifts in technology, societal views, and governmental policies are creating a new paradigm for both infrastructure and private equity (PE) investors.

Over the last two decades, infrastructure investment funds were primarily viewed as stable sources of returns that prevailed through economic cycles. Infrastructure encompassed a broad set of asset classes: energy generation and transmission, transportation and logistics, and water and waste management. It was primarily a market dominated by asset managers who took mostly passive roles in lower risk, lower return strategies.

In recent years, PE investors have increasingly challenged conventional approaches to risk and return within their infrastructure portfolios. While stability amid chaotic markets is still a hallmark, many of today's infrastructure investors are seeking higher potential returns due to structural changes in both policy and market demand. Many of these changes are in response to revolutionary advances in technology and increased focus on sustainability. Now more than ever, society is focused on the impact of today's investment decisions on future generations.

Governments are rolling out unprecedented incentives for infrastructure investment while economic and social transformations are ushering in new types of opportunities based on advances in technology. The confluence of government and market forces has shifted traditional infrastructure risk and return profiles.

Previous safe harbors such as power generation or midstream gas pipelines are being disrupted by the energy transition, where the next generation of investments face commercial and development risk not evident just a decade prior. Additionally, assets that previously garnered only modest attention from infrastructure investors, such as data centers, fiber optic networks, and telecom, have been the subject of many hotly contested M&A processes.

In this article, we look at how PE investors are capitalizing on these shifts around infrastructure.

"We believe successful infrastructure investors over the next decade will likely be those who think beyond individual asset classes and instead invest in infrastructure as a system with sustainability and technology at its center."

This will involve re-evaluating portfolios and risk-return profiles in light of a complex and changing global investment landscape. Rather than investing in traditional "core" or "non-core" asset classes, tomorrow's Infrastructure investor will likely invest in assets that are central to innovation: data, clean energy, clean transportation infrastructure, and the assets critical to related supply chains. Infrastructure investors are finding ways to generate outsized returns as they navigate this new paradigm.

For instance, according to one publicly listed private equity fund's Q4 2023 earnings release, its infrastructure business delivered 33% over the past two years compared to more modest returns for the S&P 500[1] and the FTSE 100[2]. Such success in an increasingly volatile deal market is capturing the attention of other PE investors, who are likely taking note of the massive capital raising potential and return profiles of infrastructure funds.

Figure 1. The infrastructure opportunity at a glance

Key macro themes

Evolving policy framework

Enhanced focus on sustainability reforms drives new incentives

PE in infrastructure

Spending gaps and rising deficits may present lucrative opportunities for PE

Future outlook

Decarbonization and digitization efforts in the modern world are expected to drive future digital infrastructure demand

Key opportunities for investors

Significant infrastructure investment required

US$15T

Projected global public funding gap[3]

US$2.6T

Projected US public funding gap[4]

US$479B

Allocated to climate and energy funding from recent US legislation[5,6]

US$300B

Dry powder raised by PE infrastructure funds[7]

Evolving policy framework

Government spending alone is expected to fall short of minimum requirements to maintain existing infrastructure at acceptable levels, with a global funding gap of nearly US$15 trillion expected by 2040[3]. Many governments are also grappling with challenges of redesigning critical infrastructure around new technologies and more sustainable solutions, with spending priorities shifting as a result.

In November of 2021, the US government signed into law the Infrastructure Investment and Jobs Act (IIJA - also known as the Bipartisan Infrastructure Law), which aimed to direct nearly US$1.2 trillion of federal funds toward projects in the transportation, broadband, energy, and climate infrastructure spaces[8].

This legislation will cover about half of the US$2.6 trillion projected funding gap in the US from 2020 to 2029. Together, the IIJA and US Inflation Reduction Act (IRA) will provide almost US$479 billion in funds toward climate technologies and energy infrastructure over the next decade[5,6].

One notable example of public funding fueling private climate and energy infrastructure spend can be found in the rise of electric vehicles and related infrastructure requirements. This is likely to revitalize interest in motorway service areas, but it can also drive investment in battery technology, grid modernization, and component manufacturing for chargers, which will have impacts to transportation all across the world.

Additionally, we expect continued deal making in the US around renewable generation and storage as investors come to appreciate the value of transferable tax credits provided by the IRA.

"Given the global scale of anticipated public spending and the expected funding shortfalls, the message is clear: a combination of both government and private sector spending will be necessary to bridge the infrastructure gap."

The role of PE in infrastructure

Since 2018, there has been a rapid increase in dealmaking by the largest PE infrastructure funds, which are serving as a catalyst toward realizing social and governmental sustainability aspirations[7,9]. The top ten infrastructure funds by 2023 AUM completed nearly 1,000 transactions for nearly US$1.7 trillion globally in the period from January 2018 to February 2024[7,9]. Notably, this increase in dealmaking withstood a global pandemic and was sustained in the face of rapidly rising interest rates and inflation during 2022 and 2023.

> *"PE funds have amassed US$300 billion in dry powder to invest globally in infrastructure while corporate balance sheets hold valuable assets needing to be monetized against the backdrop of an increasingly expensive debt market[7]."*

It appears asset managers and institutional investors have likewise taken notice of the high-coupon, inflation resistant infrastructure opportunity. For example, in January of 2024, BlackRock announced an acquisition of Global Infrastructure Partners—a PE infrastructure investor. This US$12.5 billion acquisition is expected to close in the third quarter of 2024[10].

This type of acquisition may indicate the strength of the asset class as a whole and is further evidence of the confidence investors and their limited partners have around infrastructure.

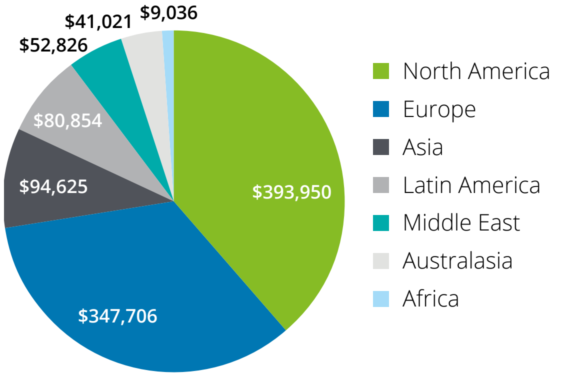
Though infrastructure investment returns can be lower than other PE investment opportunities, their stability and longer duration typically makes them attractive in the face of global economic uncertainty. A recent shift in M&A paradigms included infrastructure funds evaluating investments in stable businesses like regulated utilities. There has also been an increased interest in using partnership structures to invest alongside corporates with the possibility of PE-backed leverage. Based on publicly available information from PE investors that report their fund returns, it appears that these strategies were highly profitable in a period when returns were muted in many other asset classes.

We have identified three trends from data on recent PE investments in infrastructure: there is a shift away from fossil fuel infrastructure toward renewable energy, creative deal structuring is needed as debt financing has become harder to secure, and technology is increasingly important to infrastructure investment[11].

According to Infralogic data summarized in the charts below, sustainable energy investments held five spots within the top ten list of subsectors based on global infrastructure investment deal value from January 2023 to February of 2024[11].

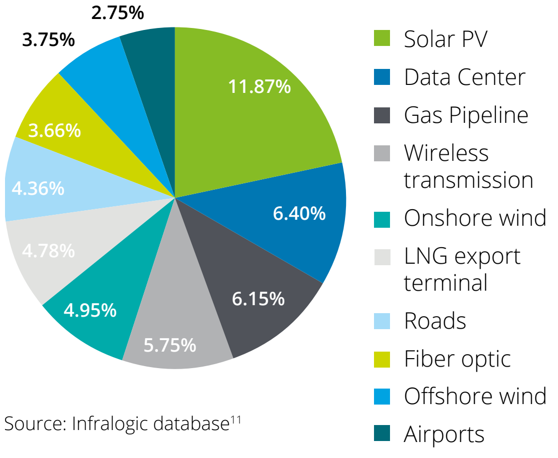
Figure 2. A summary of recent infrastructure investments

Closed transactions by region:
Jan-23 to Feb-24 ($USM)



Source: Infralogic database[11]

Closed transactions – top 10 subsectors by value:
Jan-23 to Feb-24



Source: Infralogic database[11]

The solar energy subsector represented nearly 12% of overall closed deal value globally[11]. Renewable energy only represented 12% of the global energy supply in 2022, but the International Energy Agency (IEA) expects renewables to represent 23% of the global energy supply by 2030[12]. Large PE funds investing in this energy transition may represent a key opportunity for PE. In fact, some are estimating that around US$4.5 trillion will need to be invested globally in clean energy each year to achieve net zero emissions by 2030[13].

Recent publicly announced PE deals that focused on sustainability include Blackstone's infrastructure fund investment of US$3 billion in 2022 in renewable energy developer Invenergy Renewables[14]. Shortly thereafter, Invenergy subsidiary, IRG Acquisition Holdings or "IRGAH" (a partnership between Invenergy and PE investors), acquired 14 renewable generation projects from utility American Electric Power[15]. Bank of America Securities then also announced in 2023 a purchase of US$580 million of tax credits from IRGAH. Stonepeak Infrastructure Partners and Global Infrastructure Partners made similar multi-billion-dollar investments in wind energy as recently as February 2024. These deals clearly show how PE can act as a catalyst as governments incentivize scaling the growth of renewable energy.

Despite this surge of interest in clean energy projects, recent economic trends around inflation and rising interest rates have produced a tougher market for traditional debt financing—prompting a need for increased creativity. One publicly listed private equity fund calls out "deconsolidation" as a key investment theme in its market outlook for 2024, noting that the current market has led many companies to seek to offload asset-heavy, non-core parts of their businesses via leaseback or spinoff transactions—freeing up cash and lessening the negative impacts to earnings[16]. On the utility side of this equation, sell-side processes are becoming more frequent as corporates seek to monetize legacy balance sheets to raise funds in support of energy transition and decarbonization programs. This was the case for NiSource when it sold a minority stake of its subsidiary NIPSCO to a PE investor in 2023 for $2.15 billion[17]. In this instance, PE likely provided a more attractive form of financing than debt markets with the benefit of participating in a rate regulated operation as a minority owner. Recent deal activity has also included numerous club deals and minority interest acquisitions which likely included promises to provide future capital contributions.

Technology is growing as an influential infrastructure trend due the immense computing power and data storage requirements of e-commerce and generative artificial intelligence. Infrastructure investors are focusing more on data centers, cellular tower networks, and fiber broadband networks. PE investors are recognizing those needs and investing in both digital infrastructure assets and upstream power generation[11].

Among publicly announced data center transactions, KKR and Global Infrastructure Partners' 2022 acquisition of CyrusOne and Blackstone's 2021 acquisition of QTS Realty stand out as two of the largest deals in the sector[18,19]. Silverlake and Digital Bridge followed suit, with a recent announcement of a US$6.4 billion investment in Vantage Data Centers to continue to expand its data center capacity[20]. In the data transmission side of the equation, in 2021, Stonepeak Infrastructure Partners acquired Astound Broadband, the sixth largest cable operator in the United States for US$8.1 billion[21].

Outlook for the future of infrastructure investing

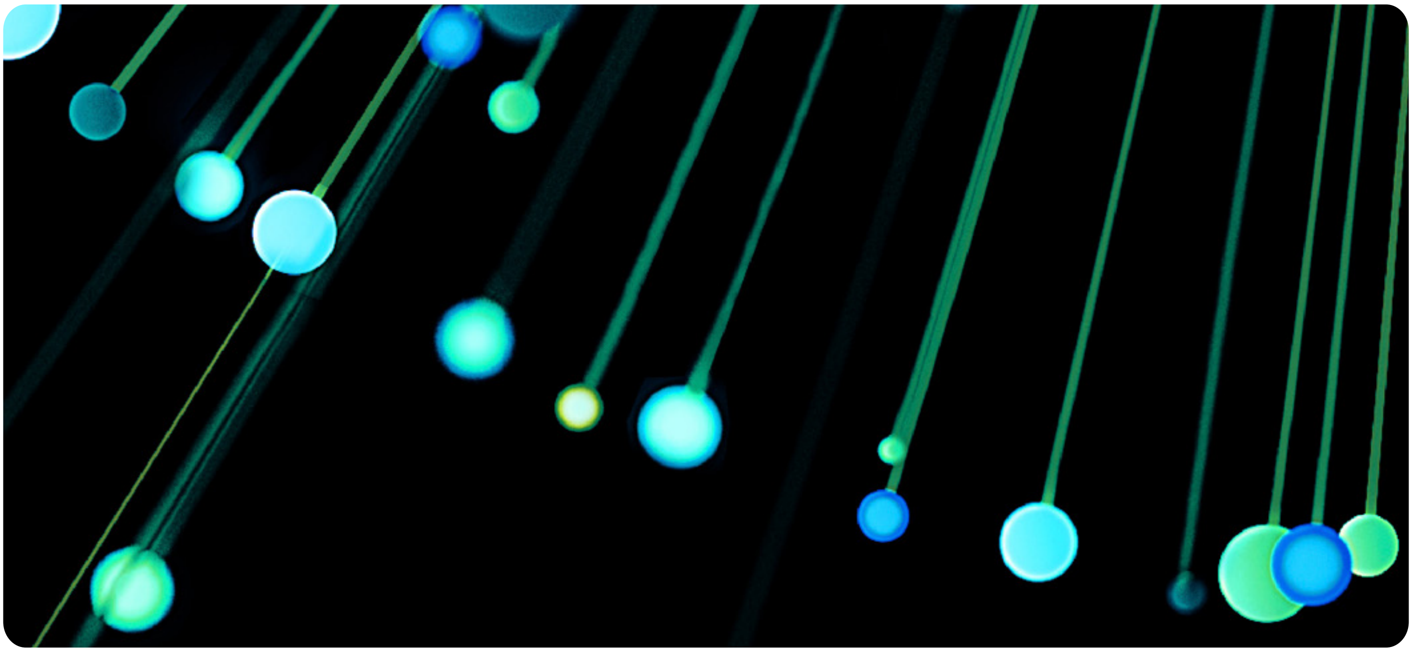
Infrastructure investors may have an opportunity to shape society with their investments like never before. In their respective 2024 market outlooks, both KKR and Macquarie acknowledge that global infrastructure investment is needed to support decarbonization and digitalization[16,22]. There is also a shift toward sustainability as an investment theme among PE investors. As an example, TPG's Rise fund focuses on climate solutions.

We expect continued regulatory support and a favorable environment for PE as governments provide grants and tax incentives to entice capital deployment on proven clean technologies. Additionally, significant funding for emerging clean technologies like hydrogen as fuel, carbon capture, and next generation power storage will also help rapidly scale businesses around these technologies. Grants for nascent technologies may create more opportunities for venture capital than infrastructure funds in the near term. However, based on the creativity demonstrated by infrastructure funds over the last five years, we expect preferred investing, joint ventures, and adoption of higher risk/return profiles in the medium term. Infrastructure investors will likely need to continue to exhibit high levels of creativity to see their infrastructure investments outpace the market in the future.

Recent trends show increasing investment in data centers, renewable energy development, and logistics-related fleets and operations. We expect these macro trends to continue in the near term to support the transformation of the economy around energy and digital commerce.

"The digital assets of the future will consume massive amounts of electricity, so savvy investors may decide to take advantage of synergies between digital infrastructure and renewable energy generation in their portfolio."

It is also likely that investors will widen the aperture on what constitutes infrastructure and place bets on chip manufacturers and associated supply chain and logistics assets. Over the next decade, we expect opportunities for innovative infrastructure investors to capitalize on building the assets necessary to support the "next big thing." Opportunities include the expansion of 5G networks, the development and implementation of artificial intelligence, crypto currencies, data mining, machine learning, and virtual reality. For Infrastructure investors, investing in power generation, digital infrastructure, and logistics as a related system centered around sustainability will propel growth in returns alongside societal goals.



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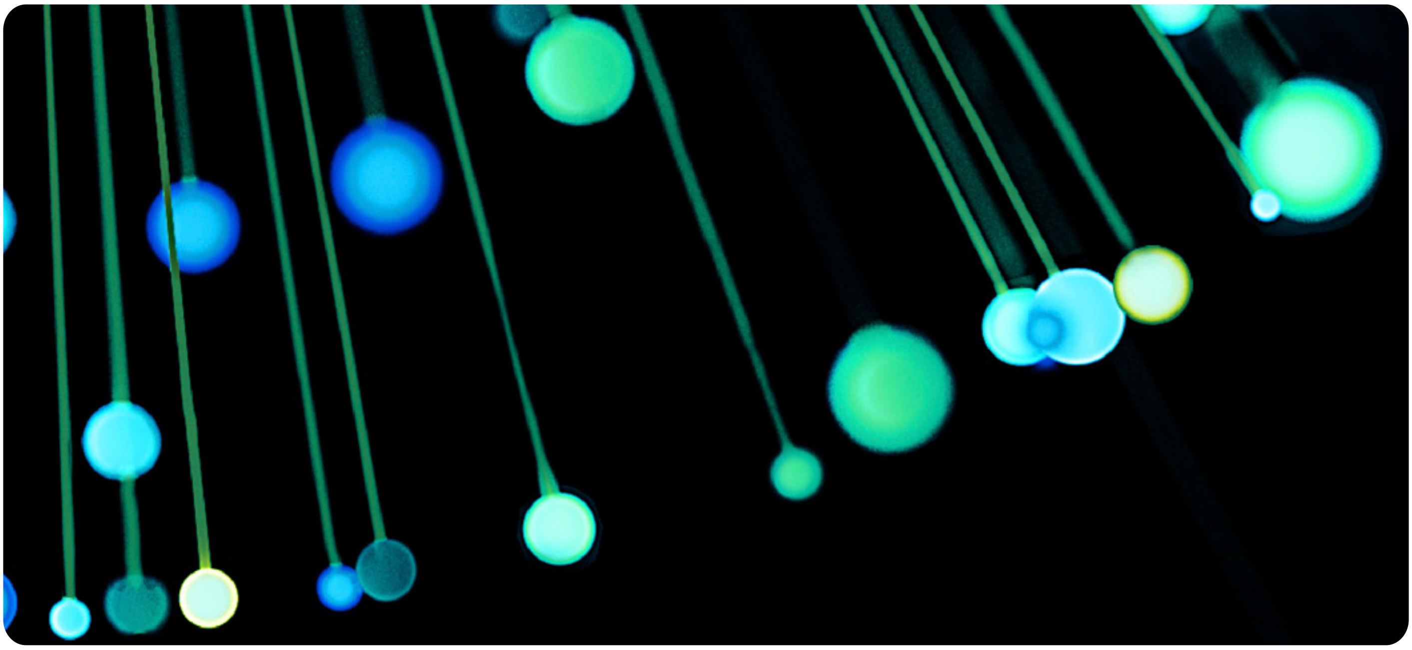

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Important notice

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