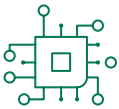


MACQUARIE ASSET MANAGEMENT

Structural trends driving today's infrastructure opportunity

A powerful set of long-term forces is driving renewed demand for infrastructure worldwide. These are not short-term cycles – they reflect lasting shifts in how economies operate, how people live and work, and how essential services are delivered. Together, they are creating one of the most significant investment opportunities infrastructure has seen in decades.



Digitalisation

The shift of economic activity to digital channels, driving demand for data creation, storage and transmission, and the connectivity and power infrastructure that enables them.



Decarbonisation and electrification

The transition to lower-carbon energy systems, including the replacement of fossil fuels with electricity across transport, industry and buildings.



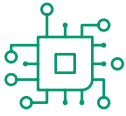
Deglobalisation and supply chain realignment

A move away from highly globalised supply chains toward regionalisation, reshoring, and greater national resilience and security.



Demographic and economic change

Population growth, ageing, migration and urbanisation, alongside rising living standards that reshape where people live, how they consume services, and what infrastructure is required.

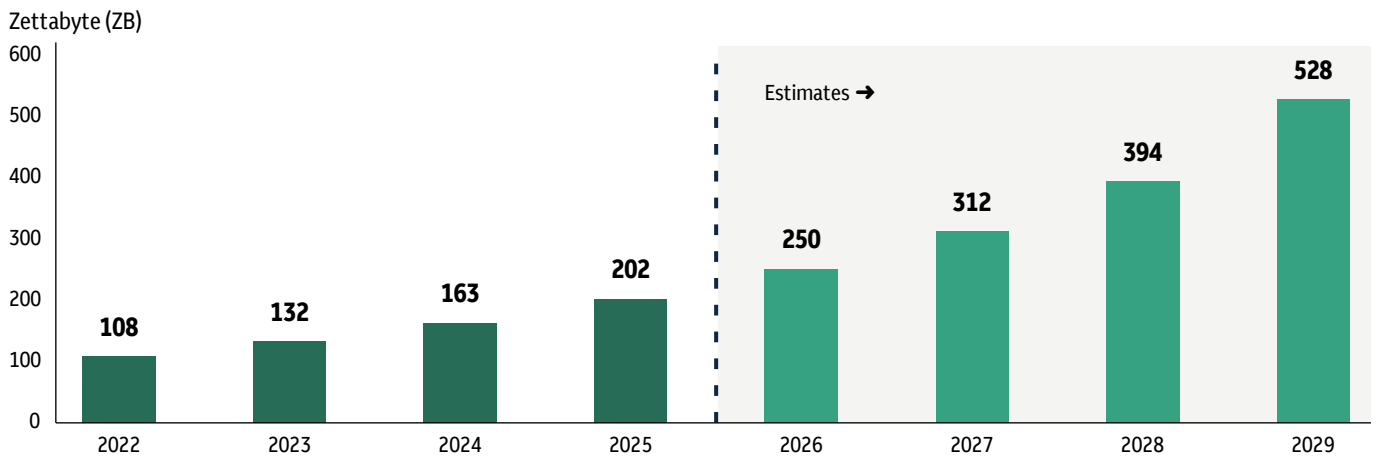


Digitalisation

The rapid expansion of the digital economy is driving a step change in demand for infrastructure that underpins data creation, storage, and transmission. Cloud computing, rising data consumption and increasingly power intensive AI workloads are accelerating investment across data centres, fibre networks, and connectivity assets. Crucially, this digital build out also has significant downstream implications for power infrastructure, as electricity demand rises to support always on, high availability digital systems. As economies become more data driven, infrastructure that enables secure, reliable, and scalable digital activity is becoming ever more essential.

Global data centre generation (Figure 1)

Annual data created, captured, copied and consumed worldwide (Zettabytes), with estimates from 2026 onward



Source: IDC, "Worldwide Global DataSphere Structured and Unstructured Data Forecast, 2024-2028", September 2024; Kioxia Holdings, "Integrated Report 2025", October 2025

Data generated
2022

108 ZB

Baseline year

Average annual
growth

~25%

2022 - 2029 CAGR

Data generated
2029E

528 ZB

IDC estimate

Growth
2022-2029

~5x

Near fivefold increase

Key takeaway



Cloud computing, AI workloads, and always-on digital systems are expected to drive a ~2.5x increase in global data generation from 2025 to 2029 - accelerating demand for data centres, fibre networks and the power infrastructure to support them, making digitisation one of the most significant structural themes in infrastructure today.

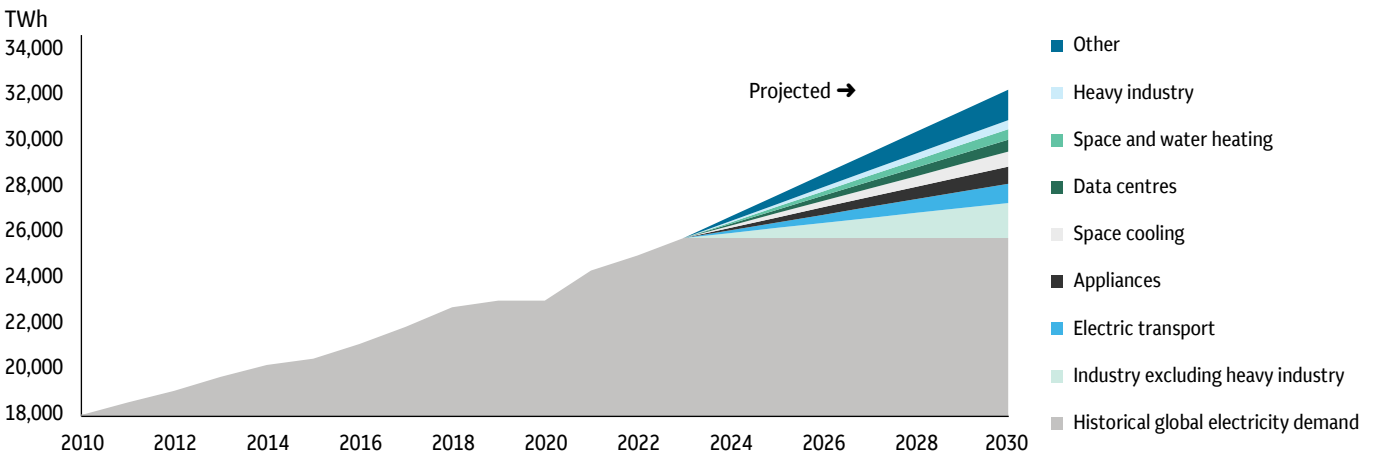


Decarbonisation and electrification

The global shift toward cleaner energy systems, alongside the electrification of transport, industry and computing, is transforming how electricity is generated, stored, and delivered. After decades of relatively flat electricity consumption in many developed markets, demand is now rising as electric vehicles, electrified industrial processes and digital technologies gain scale. This transition is driving sustained investment across renewable generation, storage, grid reinforcement, and flexibility solutions. Importantly, the opportunity is not confined to a single technology or phase of the transition but spans the full power value chain as energy systems adapt to meet changing demand patterns.

Global electricity demand by sector (Figure 2)

Terawatt-hours (TWh), historical demand with sector-level forecasts to 2030.



Source: BNEF, "New Energy Outlook 2025: Data Viewer (1.4)", April 2025; IEA, "Energy and AI", April 2025

Total demand
2010

~18,400

TWh baseline

Total demand
2023

~25,800

TWh historical

Total demand
2030

~34,000

TWh BNEF forecast

Fastest
growing sector

Data centres

+650 TWh by 2030 (IEA)



Key takeaway

The electrification of transport and industry, alongside the rapid growth of power-intensive computing, is transforming how electricity is generated, stored and delivered – driving sustained investment across the full power value chain, from renewable generation and storage to grid reinforcement and flexibility solutions, as energy systems adapt to meet changing demand patterns.

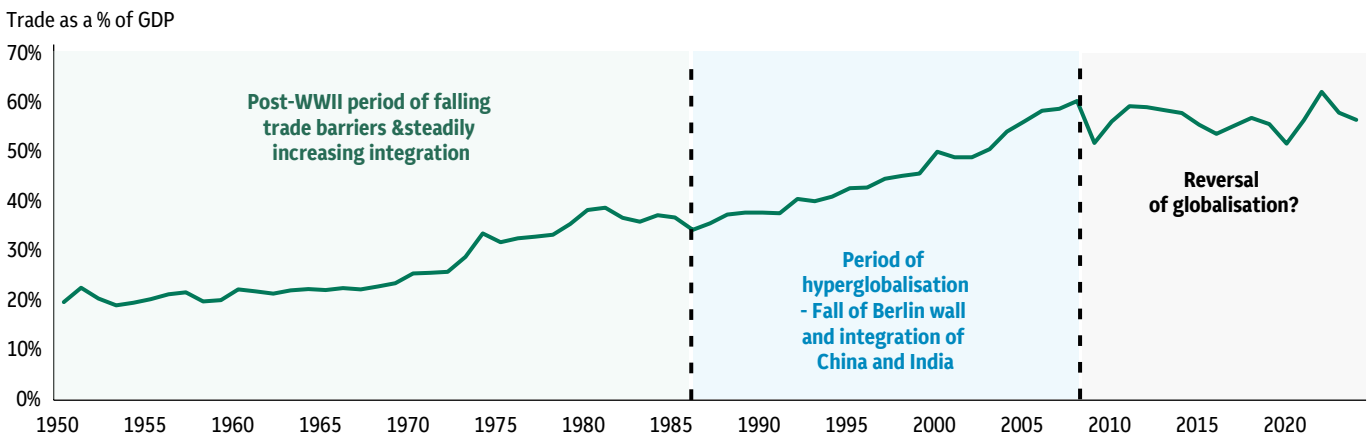


Deglobalisation and supply chain realignment

Geopolitical shifts and lessons learned from recent supply chain disruptions are prompting governments and corporates to reassess how critical goods and services are produced and distributed. Greater emphasis on domestic resilience, energy security and supply chain reshoring is increasing infrastructure investment needs across transportation networks, utilities, logistics assets, and industrial infrastructure. These trends are supporting demand for assets that enhance redundancy, reliability, and local capacity – characteristics that align closely with infrastructure’s role as the backbone of economic activity.

Global trade as a share of GDP (Figure 3)

Trade (export + imports) as a % of global GDP – three distinct eras of globalisation



Sources: Macrobond.

Trade share
1950

~20%

Post-WWII baseline

Growth
to peak

3x

1950 - 2022
all-time high

Trade
share

~62%

2022, post-pandemic
rebound

2024
level

~56%

Declining amid
structural shifts

Key takeaway



Despite a post-pandemic rebound, the long-run trend in global trade as a share of GDP is under pressure as geopolitical shifts and supply chain disruptions push governments and corporates to reshore critical production. This is increasing infrastructure investment needs across transportation networks, utilities, logistics and industrial assets – with a premium on redundancy, reliability and local capacity.

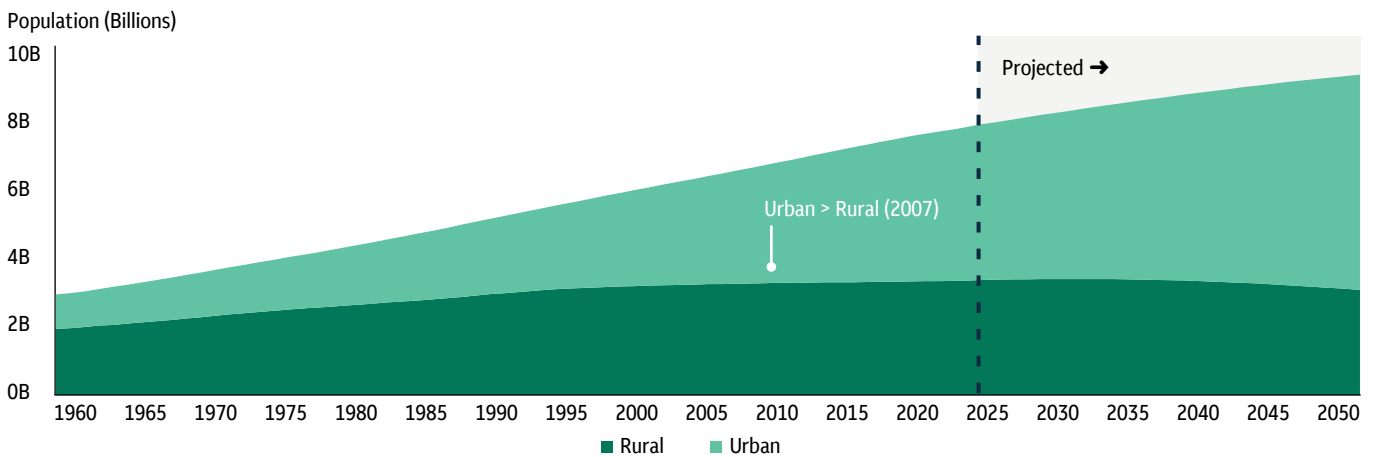


Demographic and economic change

Population growth, urbanisation and shifting consumption patterns continue to create new infrastructure requirements across cities and essential services. Expanding urban centres require investment in power, transport, utilities, and social infrastructure, while changing household and business needs are reshaping how infrastructure assets are used. At the same time, economic development and rising living standards in many regions are increasing per capita demand for energy, connectivity, and services, reinforcing the long-term need for infrastructure investment.

Global urban and rural population growth 1960 - 2050 (Figure 4)

Total population in billions, with projections from 2024 onward



Source: World Bank - Population Estimates and Projections, December 2025

Urban
1960

1.03b

34% of world
population

Urban
surpassed rural

~2007

first time in history

Urban 2050
(Projected)

~6.7b

68% of world
population

Total 2050
(Projected)

~9.7b

World Bank
estimate



Key takeaway

Urbanisation, migration and rising living standards are increasing per capita demand for energy, transport and services. By 2050, two in three people are projected to live in cities, reinforcing the long-term need for infrastructure investment.

Why expertise matters

While infrastructure offers compelling characteristics, the asset class is inherently complex. Assets can vary significantly by region, regulatory framework, stakeholder environment, and underlying business model, with outcomes often shaped by local market dynamics rather than broad macro trends alone.

As a result, specialised experience – spanning asset origination, operational oversight, regulatory engagement, and capital markets – is often critical to identifying attractive opportunities, assessing risk appropriately and stewarding long-term value on behalf of investors. In an environment where infrastructure demand is being driven by multiple overlapping structural forces, disciplined asset selection and active management play an increasingly important role in translating long-term themes into durable investment outcomes.


A sustained, multi-decade opportunity

Individually, each of these forces supports higher infrastructure demand. Taken together, they reinforce the view that infrastructure is entering a prolonged period of investment driven by structural – not cyclical – change. The scale, duration and essential nature of these trends underpin the long-term relevance of infrastructure assets within portfolios and help explain why private infrastructure continues to attract growing investor attention.

The bottom line

Together, these structural trends reinforce the case for private infrastructure as a long-term allocation.

By providing exposure to essential assets anchored in enduring demand drivers, private infrastructure offers the reliability and durability of cashflows that underpin its long-term relevance within portfolios – and the ability to actively manage complexity means it remains well positioned to translate structural opportunity into resilient investment outcomes.

 Reden Solar, France



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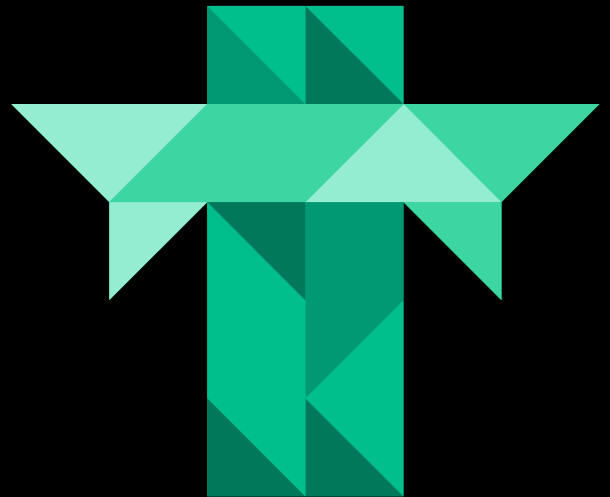
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