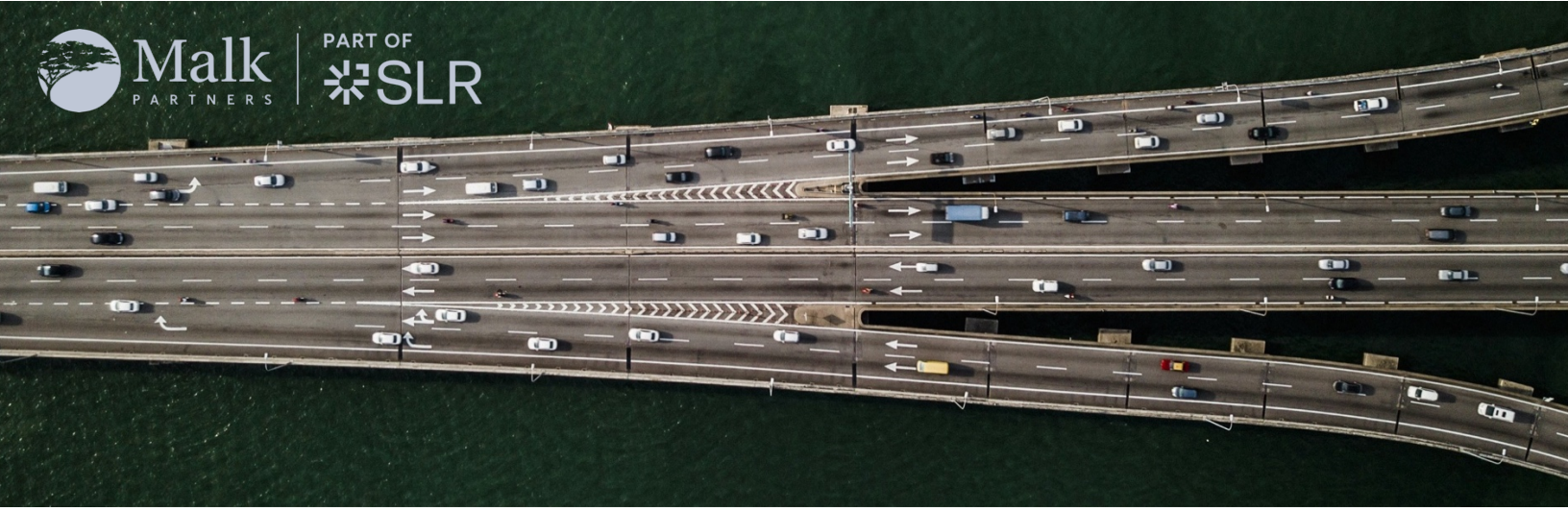

Responsible Investment in Infrastructure

Malk Insights — Q2 2025

Key Takeaways

- In the last decade, private infrastructure has grown into a mainstream asset class; AUM has more than quadrupled with annual growth near 20 percent and allocations now averaging roughly 5 percent of institutional portfolios and continuing to rise.
- Global demand for infrastructure investments is projected to increase above funding to a $15 trillion financing gap, a market opportunity which private market investors are increasingly responding to through expansion of dedicated infrastructure investment vehicles.
- Given infrastructure assets' longer-duration hold periods and critical public services, ESG integration—from climate transition to social license—is both material and value-additive, influencing prospective returns for investors and capital formation strategies.
- Leading private infrastructure sponsors have integrated ESG in fund strategy, developing bespoke due diligence, value creation, and asset management processes to support investment performance and stakeholder engagement.

The Growth of Private Infrastructure

Over the past 10 years, global private infrastructure assets under management have increased over fourfold reaching approximately $1.3 trillion as of mid-2024 at a CAGR of nearly 20 percent. This surge has been catalyzed by a number of factors, including institutional investors seeking stable, long-duration alternatives to low-yield fixed income in an era of near-zero rates in the aftermath of the Global Financial Crisis. The asset class is projected to continue to experience remarkable growth, with AUM expected to reach $2.8 trillion by 2028. Today, infrastructure represents over 5% of institutional portfolios—an increase of over 40 bps year-over-year.

Both public policy and popular demand for infrastructure investments have further catalyzed the growth of infrastructure as a mainstream asset class in the United States and Europe. Increased demand for infrastructure investment has been driven partially by digital infrastructure and energy transition demand, and partially in recognition of historic underinvestment in critical public and transportation assets. Under the Biden administration, the 2021 U.S. Bipartisan Infrastructure Law authorized roughly $1.2 trillion in new spending on transportation, water and power systems, broadband, and climate resilience upgrades. Similarly, the E.U.'s 2022 NextGenerationEU program committed up to €750 billion to investments in green transition and digital infrastructure assets through 2026.

Even as political appetite for large-scale energy transition and infrastructure spending has declined due to fiscal conservatism under the Trump administration and competing priorities (e.g., defense spending) in the E.U., the demand for infrastructure investment has never been greater. The G20 Global Infrastructure Hub projects a $15 trillion gap between investment needs and projected funding by 2040, spotlighting the private investment opportunity and the pivotal role of infrastructure funds in bridging public funding shortfalls.

Transaction Structures and Investment Assets

As private infrastructure platforms scale, it is critical to develop responsible investment controls that are right sized for a fund's strategy. Private infrastructure involves a range of investor profiles spanning both equity and debt vehicles. Infrastructure private equity firms—both dedicated managers (e.g., Brookfield, Macquarie, Stonepeak) and large multi-strategy firms (e.g., Blackstone, KKR, EQT)—acquire controlling stakes in brownfield assets (existing developments) or sponsor greenfield projects (new developments). Private credit and project finance debt providers underwrite non-recourse loans for new and existing assets while public finance may also participate in debt structuring, either through municipal bonds or tax-exempt debt, to fund government-sponsored projects. Public–private partnerships (PPPs) blend private efficiencies with public mandates and subsidies to share development and operational risks. Similarly to other private equity and credit strategies, the maturity and depth of ESG involvement should be correlated to ownership and operational control. Majority equity investors typically develop bespoke responsible investment programs tailored to asset types, stakeholders, and project partners, while credit and project finance providers implement higher-level ESG screening for investments.

Within infrastructure private equity and debt, investment strategies are classified by risk-return profile. Core strategies target regulated, cash-yielding assets (e.g., utility networks, toll roads) with minimal growth expectations; Core-Plus strategies pursue modest enhancements in more complex assets (e.g., midstream energy expansions, emerging-market transport); Value-Add strategies undertake operational turnarounds or asset repositioning (e.g., transforming regional airports); Opportunistic strategies focus on greenfield development projects with higher growth potential and volatility. Funds with more conservative strategies commonly focus on ESG risk mitigation and downside protection to assets while growth-oriented investments frequently integrate environmental, social, and governance factors into value creation planning. As investors expand infrastructure platforms further, it will be critical to right-size responsible investment controls to their fund objectives and investment strategies.

Key Responsible Investment Considerations

Infrastructure's long-term investment horizons, frequently spanning decades rather than years, create a unique opportunity to embed environmental, social, and governance considerations into asset investment strategies. Rather than managing ESG exposure to mitigate risk during a shorter-term private equity or credit investment horizon, infrastructure investors frequently see ESG factors as fundamental to their value creation and investment strategies. Renewable energy demand and future projections for the global climate transition are a major catalyst of growth for infrastructure funds responding to global decarbonization commitments and growing energy market demand for clean, low-emissions electricity. Investments in renewable infrastructure have surged past $2 trillion globally for the first time in 2024, reflecting a maturing market where clean energy assets now outpace fossil fuels by two-to-one in capital deployment. Physical climate resiliency and energy transition risks are also critical long-term factors across asset types, as regulators and credit agencies increasingly integrate physical climate risk scenario analyses and longer-term greenhouse gas (GHG) emissions targets and decarbonization actions into debt covenants and ratings for infrastructure assets. Proactive decarbonization of assets can unlock green bonds and sustainability-linked financing for assets, which increased by 20% in 2024 led by $210 billion in government issuances.

Beyond long-term environmental considerations, the essential public services frequently provided by infrastructure assets and blended public-private financing make social license to operate and public engagement critical for successful projects. From modeling job growth and health and safety to supporting workforce development and

broader community engagement initiatives, infrastructure investors and operators must evaluate the impacts of portfolio assets on community, in addition to commercial, stakeholders. Infrastructure assets must also navigate air, water, noise, and pollution permitting, and commonly implement prevention and abatement plans for project approval. Lack of sufficient engagement with community stakeholders and establishment of social license to operate during project development was found to occur in nearly 30% of failed clean energy projects. As such, the integration of ESG factors in investment strategies and the development of transparent stakeholder engagement programs are vital to securing long-term support. Good governance of infrastructure assets, including setting clear management policies, tying operating incentives to sustainability performance, and ensuring robust cybersecurity controls and operational continuity, further underpins project success and investor confidence in infrastructure funds.

ESG Integration in Infrastructure Funds

Similarly to other alternative asset strategies, ESG integration and maturity levels vary depending on ownership structures for debt and equity investment partners. Majority equity sponsors face much more exposure than minority debt partners, and as such should maintain more advanced ESG functions and portfolio management controls. For such funds, successful integration of environmental, social, and governance matters into the core strategy and operations of infrastructure funds both mitigates material risks and positions portfolio assets to better capture long-term value creation potential. Despite widespread acknowledgment of the importance of ESG factors in infrastructure investment and operations, many funds struggle with implementing frameworks and capturing comprehensive data on portfolio asset performance. Lack of a coherent approach to ESG management can hamper successful investment screening and asset operations, making strategic integration of ESG factors a core component of risk management and value creation planning across infrastructure funds.

Leading infrastructure sponsors commonly apply a tiered approach to ESG management across the transaction lifecycle. First, investors must ensure that pre-transaction due diligence sufficiently captures investment risks and value creation opportunities. Due diligence processes for infrastructure assets should be calibrated to the materiality thresholds of a specific geography and asset type as material factors differ significantly across jurisdictions and assets, and should evaluate both external risks (e.g., physical climate exposure, regulatory compliance, community scrutiny) and internal management systems (e.g., availability of carbon data, worker health and safety performance). In addition to ESG performance screening, diligence of infrastructure assets also frequently integrates in-depth EHS due diligence assessments, for both greenfield and brownfield investments, including factors such as site contamination, asset condition, and regulatory permitting compliance to establish a comprehensive baseline for a prospective project.

Post-transaction, GPs may set time-bound internal and external performance targets to guide value creation and operational improvements throughout the hold period. ESG-related targets should be tailored to the material factors identified during due diligence and value creation strategies, particularly for assets such as renewable energy investments where sustainability is a core performance metric. Common performance targets include GHG emissions reductions and avoided emissions, recordable health and safety incident rates, and the creation of good-paying jobs for local communities. Infrastructure investors may also link projects to international frameworks, such as the UN Sustainable Development Goals (SDGs), as public infrastructure projects frequently support key global development priorities. Commitments to performance targets and development goals can bolster interest from other GPs or LPs for future co-investment in assets if they meet the criteria of funds with a sustainability or climate mandate, supporting capital formation for ESG-advanced LPs in a competitive fundraising environment.

Throughout the hold period, investors must ensure that asset operators and management teams maintain sufficient ESG management systems to sufficiently monitor quantitative ESG-related performance in alignment with performance targets and value creation priorities. Qualitative factors, such as community engagement and regulatory scrutiny, should also be monitored to ensure visibility into externalities that may materially impact assets. As a best practice, quantitative and qualitative performance factors are commonly integrated into performance management

dashboards and reporting templates for asset management teams and investors on a standard (e.g., quarterly) cadence. Larger portfolio assets may also publish public-facing sustainability reports and disclosures, a best practice to support stakeholder visibility into ESG commitments and performance.

However, despite the importance of ESG integration in infrastructure strategies, capability and data gaps readily persist across infrastructure private equity funds. Many teams lack sufficiently bespoke diligence tools and scenario models to tailor analysis to infrastructure's asset-heavy nature and the nuances of specific geographies and asset types. Legacy infrastructure assets and operating entities may also lack sufficient ESG fluency and technology integration to manage exposure and performance across large, complex assets. To successfully execute on ESG priorities for portfolio assets, sponsors must develop ESG functions and resources that are right sized for infrastructure investments.

How Malk Can Support

As ESG integration across infrastructure funds continues to mature and meet growing LP demand for infrastructure allocations, Malk can support investors in meeting investor demand and bridging internal capability gaps. Malk partners with leading global infrastructure funds in designing custom investment screening resources, due diligence processes, portfolio data collection and management controls, and multi-year value creation roadmaps. Bespoke engagements include modeling of long-term climate and social risk scenarios, development of asset-level decarbonization strategies, and construction of community benefit agreements. Malk also provides outsourced data collection, validation, and reporting services for infrastructure portfolios, helping GPs to navigate discrepancies in data availability and accuracy to meet increasingly stringent LP demands.

By combining deep infrastructure know-how with private market ESG expertise we help clients to safeguard returns, enhance resilience, and meet rising expectations from regulators, lenders, and communities alike. For institutional investors evaluating allocation to infrastructure funds or sponsors looking to better integrate sustainability across their portfolios, reach out to the Malk team to better understand how our ESG advisory services can support your investment activities.

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About Malk Partners

Malk Partners is the preeminent advisor to private market investors for creating and protecting value through environmental, social, and governance ("ESG") management and impact investing. Founded in 2009, Malk Partners advises many of the world's leading alternatives managers investing across private equity, growth equity, venture capital, and private credit by helping them define ESG goals, achieve ESG results, and guide their portfolio companies in driving value creation and mitigating risks. The firm is headquartered in New York. For more information about Malk Partners, please visit www.malk.com.