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Unlocking the Climate Opportunity in Emerging Markets

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Two-thirds of the world's population lives in emerging markets and developing economies (EMDEs) outside China, yet these economies are estimated to receive less than 30% of global energy investment in 2026. Demand is rising, and much of the infrastructure to serve it remains to be built. Financing that enables clean generation in place of fossil-fuel alternatives can avoid emissions for decades. The potential influence investors have over what gets built is the climate case for EMDE exposure.[1]

Capital constraints can improve the terms available to skilled investors, though financing costs also reflect governance, currency, and power-buyer risks. The International Energy Agency (IEA) and International Finance Corporation (IFC) report that the cost of capital for a typical utility-scale solar project can be two to three times higher in key emerging economies than in advanced economies or China. Managers with local teams may be better positioned to evaluate the asset, its power buyer, and the market, and to negotiate terms that compensate them for risks they take. Better sourcing and underwriting may help a manager earn a return, while getting viable clean-power projects built. Returns must hold after losses, currency moves, and fees, while climate benefits depend on a credible account of what would otherwise have been built.

Investors may already hold EMDE exposure through global managers. For those seeking additional exposure, a focused infrastructure mandate may be the right next step. A broader program makes sense as compelling projects and managers become available. Return potential, direct emissions benefits, and the ability to catalyze other clean-energy projects are key investment criteria. We would size the commitment against the investor's existing holdings and objectives.



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1 The IEA–IFC's 2023 study groups emerging market and developing economies (EMDEs) largely as non-OECD economies and includes Chile, Colombia, Costa Rica, and Mexico. World Energy Investment 2026 instead classifies these four countries as advanced economies. Both EMDE groupings include China and India, span several income levels, and extend beyond the countries represented in emerging-market equity indices. Our investment focus is on opportunities outside China. China merits separate treatment because its clean-energy financing has drawn substantially on domestic capital, state-owned enterprises and government financing.

Why emerging markets belong in a climate solutions portfolio

In a market where the power system is still growing, clean generation can serve new demand before fossil-fuel capacity is built to meet it. In a mature system, clean power can often replace existing fossil-fuel power generation. According to the IEA, EMDEs will lead growth in energy demand, so the choice of what to build now can shape emissions for decades. Where a coal or gas plant is being planned, a clean alternative can prevent those emissions from becoming part of the system. For investors, that growth creates opportunities to finance new clean power projects and the grids needed to connect them.

Emerging markets can also "leapfrog" older infrastructure by using newer, local systems to deliver a service sooner. In Sierra Leone, where extending the national grid to many rural areas is uneconomic, Off-Grid Power (SL) Ltd has built and now operates 40 solar-hybrid mini-grids serving more than 99,000 people. Communities gain electricity without waiting for the national grid, while investors can finance local networks where customer payments support a return. The World Bank and GOGLA (the off-grid solar industry association) estimate that off-grid solar is the fastest, most cost-effective way to provide basic electricity to more than 40% of those expected to remain unelectrified in 2030.

The case for emerging markets also extends beyond reducing future emissions. Many face substantial risks from climate impacts already underway. The Intergovernmental Panel on Climate Change (IPCC) found that mortality rates from floods, droughts, and storms in 2010–20 were 15 times higher in highly vulnerable regions than in the least vulnerable regions, with hotspots across parts of Africa and South Asia. Private capital can be used to address flood protection, early-warning systems, and resilient infrastructure alongside clean power infrastructure.

The United Nations Environment Programme (UNEP) estimates that developing countries' annual adaptation financing needs far exceed international public finance flows, with scope for private finance to play a larger role under supportive policies. We see adaptation as a selective, secondary opportunity for institutional investors where resilience infrastructure or services offer a credible path to returns.

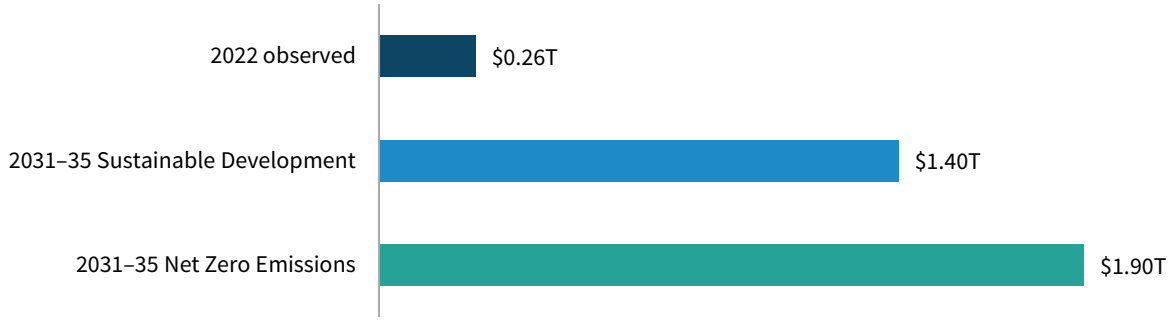
For a climate solutions mandate, the central EMDE opportunity is to finance clean power while demand is growing and much of the infrastructure is still being built. That includes large-scale generation and grids, as well as local systems that can reach communities sooner. Adaptation adds a selective opportunity in projects with clear resilience benefits and a credible path to returns. Together, these opportunities make EMDE exposure a deliberate allocation choice within a climate solutions portfolio.

The investment case

The scale of the investment need is clearest outside China. The IEA and IFC estimate that annual clean-energy investment across EMDEs would need to rise from roughly $770 billion in 2022 to an average of $2.2 trillion–$2.8 trillion annually from 2031 to 2035 under the Sustainable Development and Net Zero Emissions by 2050 scenarios (Figure 1). Outside China, the rise is from about $260 billion to $1.4 trillion–$1.9 trillion. China accounted for about two-thirds of

Figure 1 Significant investment required in EMDEs ex China to meet climate goals

Clean-energy investment outside China • Annual investment in EMDEs US$ trillions (constant 2022 dollars)



Source: IEA–IFC, Scaling Up Private Finance for Clean Energy in Emerging and Developing Economies (2023).
Notes: The two early-2030s values come from the Sustainable Development and Net Zero Emissions scenarios. More current broad EMDE historical data are not available.

EMDE clean-energy investment in 2022. The IEA and IFC report that domestic capital has been the main source of its private clean-energy finance, while the IEA documents the historically large role of state-owned enterprises and government financing. China remains investable, but its financing scale can hide the capital needed elsewhere. Those other economies receive less than 30% of global energy investment while holding two-thirds of the population, and Africa receives about 3% with 20% of the population.

Financing EMDEs ex China investment will require a much larger private contribution. The IEA and IFC estimate that private finance would need to supply roughly 60% of the total financing need—$0.9 trillion–$1.1 trillion—annually by the early 2030s, up from about $135 billion at the time of their 2023 study. Public and concessional lenders can help make some projects finance-able for private investors by sharing specific risks or improving financing terms.

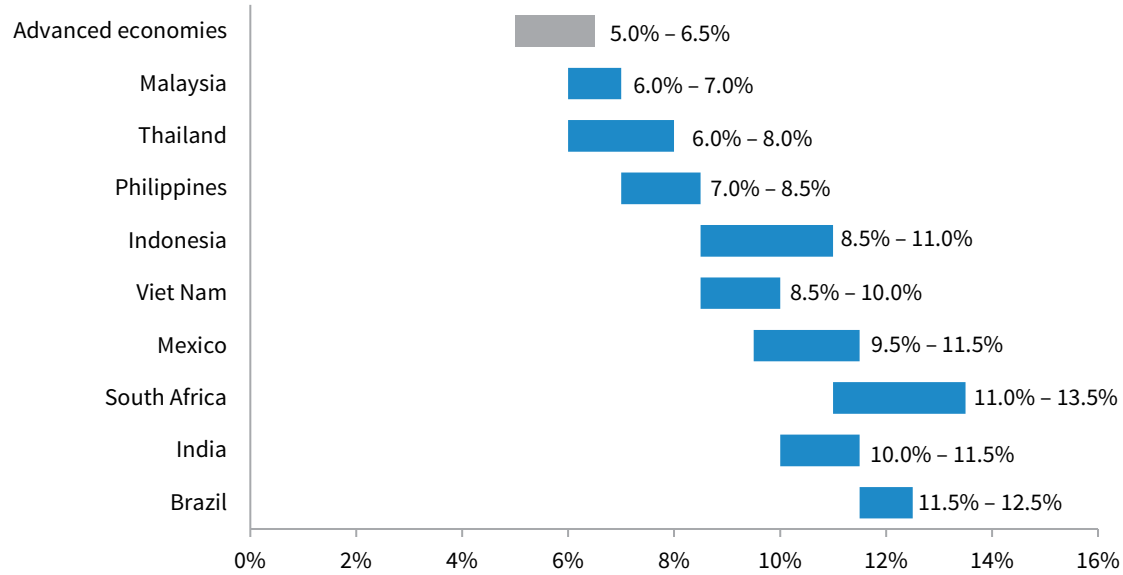
Scarce capital can give a manager a stronger position in negotiations. A developer with a viable project may have few financing options that allow construction to proceed. An investor willing to commit can negotiate a better price or stronger contractual protections. For climate solutions, this financing can also be additional: it may determine when the project is built, or whether it is built at all.

High financing costs raise the hurdle for developing clean-energy projects in many EMDEs. The IEA's 2025 survey puts the weighted average cost of capital (WACC) for utility-scale solar in EMDEs well above that of advanced economies. Figure 2 shows nine EMDE markets with published 2024 solar WACC ranges. These nominal, post-tax, local-currency estimates reflect financing conditions including differences in inflation and risk. They reflect local borrowers' financing conditions and can differ from the returns available to a global investor.

Financing costs reflect risks investors can see and, at times, uncertainty they cannot easily resolve. An IEA and World Economic Forum survey discussed by the Payne Institute found wide differences in required returns for similar projects within the same country. The IEA and IFC also found that limited information can raise perceived risk. Managers who know an asset and its power buyer may find opportunities to generate attractive returns when the investment price adequately reflects the risks.

Figure 2 EMDE solar financing costs sit well above advanced-economy levels

2024 cost of capital for utility-scale solar • Nominal post-tax local-currency WACC survey ranges (%)



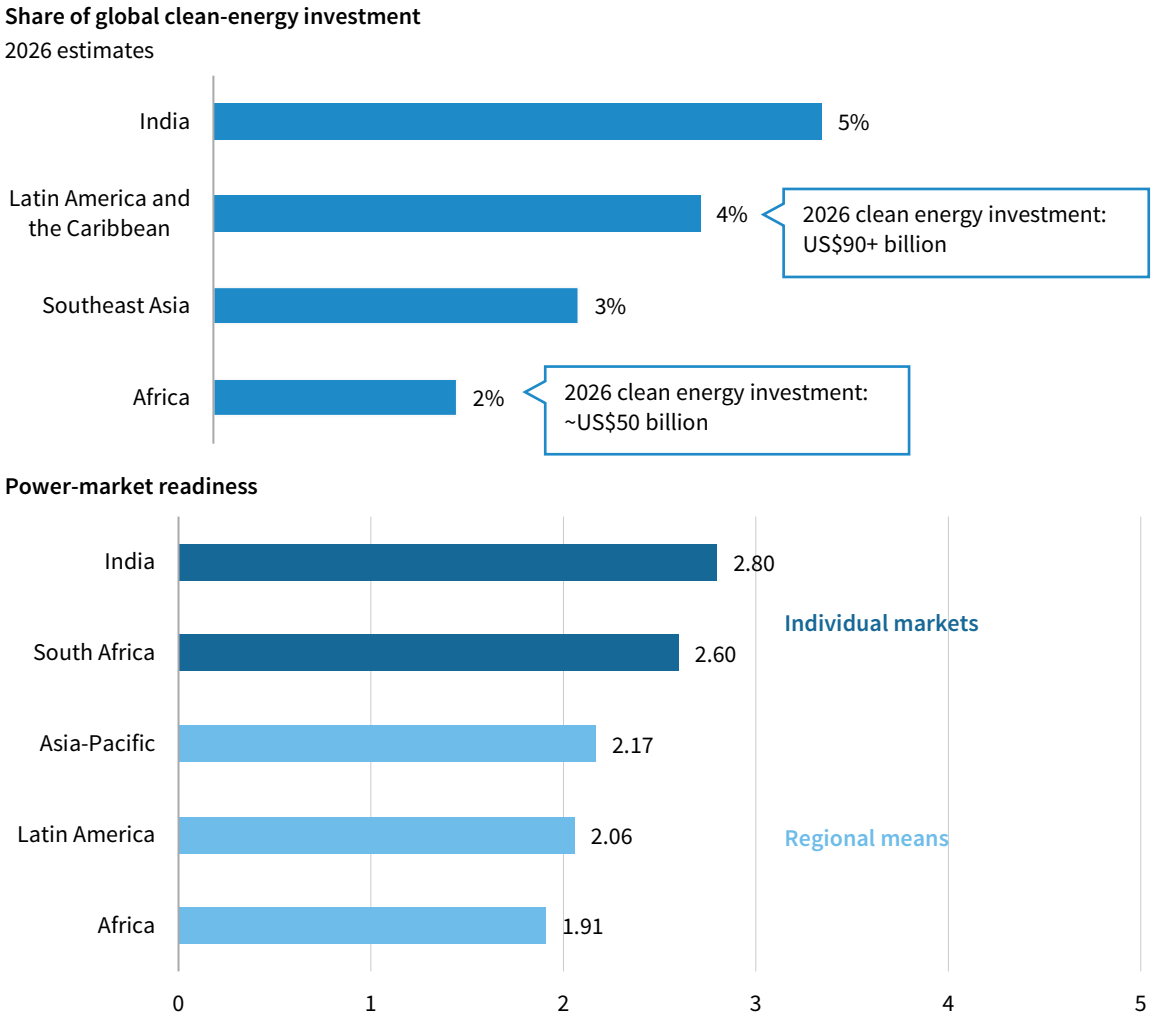
Source: IEA Cost of Capital Observatory for 2024 utility-scale solar projects and IEA (2025) for the advanced-economy comparator.
Note: Results from smaller survey samples are indicative.

Fuel imports give many governments a reason to support domestic clean power. Among the Climate Vulnerable Forum's 74 members, 64 are net fossil-fuel importers. Ember estimates that the importing members spent $155 billion on net fossil-fuel imports in 2024. When domestic solar or wind replaces electricity generated from imported coal or gas, the utility sector can reduce its fuel purchases and exposure to price spikes, while the country spends less foreign currency on fuel. Electrified transport can extend that benefit to oil demand. Governments' interest in reducing fuel-import costs can create a policy incentive for domestic clean energy. Whether that supports project revenues depends on power-purchase agreements, the buyer's creditworthiness, currency exposure, and market rules.

Why selectivity matters

An unmet need becomes an investable pipeline where managers can find viable projects, workable financing, and reliable counterparties. Figure 3 offers two clues. Even small global shares represent sizeable markets: the IEA estimates 2026 clean-energy investment at more than $90 billion in Latin America and the Caribbean and almost $50 billion in Africa. BloombergNEF's Climatescope scores (zero to five, higher is more favorable) show how ready markets are to put energy-transition investment to work. India scores 2.80 and South Africa 2.60 against an African regional average of 1.91, showing why diligence must move from regions to countries and projects. Figure 4 turns those signals into our regional starting view. China appears in EMDE totals and receives separate treatment because of its distinct financing structure.

Figure 3 Small global investment shares still represent substantial markets



Sources: IEA World Energy Investment 2026, p. 202 (shares), pp. 209 and 217 (dollar amounts) and BloombergNEF Climatescope 2025.
Notes: IEA figures are rounded 2026 clean-energy investment estimates covering all investors. Climatescope scores are from a separate 2025 assessment. Each panel uses its source's regional groupings.

In India, a solar project's return depends on its grid connection and the utility buying its power. An adaptation project may depend on a public contract, while a private company may sell directly to customers. In manager diligence, we would assess the manager's underwriting skill by reviewing how it identifies the payer, evaluates payment timing, and incorporates currency and construction risks into projected investment returns. This assessment evaluates the manager's investment process across its portfolio of investments.

A higher financing cost creates room for a return. We compare the terms offered with construction, currency, and power-buyer risks, then assess the return after losses, hedging, and fees. In a pay-as-you-go solar model, customer repayment, equipment reliability, and servicing costs also determine whether faster clean-energy access produces an attractive investment return. A manager's informational edge can narrow as competitors enter the market.

Figure 4 Regional opportunities require country- and project-level underwriting

Region	What the evidence shows	Our view
India	India is a large clean-power market. Grid delays and utility payment risk can hold back projects even where demand is strong.	A possible anchor market for the right manager. Check grid access, the buyer's ability to pay, and terms after competition.
Southeast Asia	Solar and other clean-power investment is growing, but financing costs and project readiness differ among countries.	Look for viable projects and strong buyers in specific markets, including the Philippines and Indonesia.
Latin America	Chile, Brazil, and Colombia score well in Climatescope. Financing costs and power-market rules differ by country. The Inter-American Development Bank (IDB) also reports new financing for Amazon-related nature and resilience projects.	Look beyond power generation to resource efficiency, sustainable agriculture, avoided deforestation and reforestation. Underwrite the buyer, revenue model, and climate outcomes country by country.
Middle East and North Africa (MENA)	Gulf renewable projects often use sovereign or state-linked finance. An Egyptian wind project shows how private developers, the European Bank for Reconstruction and Development (EBRD), and commercial lenders can work together.	Look for room for outside investors and reliable buyers. Finance structures differ across the Gulf and North Africa.
Sub-Saharan Africa	The region has a large electricity-access gap and widely varying power-market conditions. Energy investment is unevenly distributed across Africa.	Start in markets and projects where contracts, payment and currency risks can be managed. A focused sleeve, sometimes alongside concessional capital, can grow as managers establish a record.

Source: Cambridge Associates LLC.
Notes: Regional views provide a starting point for diligence. Investor objectives, available managers, and project terms determine position sizes. China is omitted from the regional opportunity rows because its large domestic capital market and state-linked financing make the ex China financing-gap case less directly applicable; it remains investable on its own terms.

What implementation looks like

Investors may begin with a focused infrastructure mandate or build a broader program across private markets. Infrastructure directly finances power and grids. Credit reaches projects and businesses that local banks serve inconsistently, while private equity extends the opportunity to operating companies. Figure 5 shows the role each sleeve can play. Its weight depends on a portfolio's existing exposure and on the exposure of available managers.

— **PRIVATE INFRASTRUCTURE** can finance renewable generation, grids, storage, and distributed energy, as well as resilient water and transport assets. India shows how inadequate transmission can hold back renewable deployment, according to the IEA. An infrastructure allocation may anchor an energy-heavy carve-out when there is a strong pipeline and terms fit the investor's portfolio.

Figure 5 Infrastructure can anchor an EMDE allocation, other strategies add breadth

Sleeve	Role in mandate	Where the opportunity sits
Private infrastructure	Core candidate for energy build-out; subject to portfolio fit	Renewable power, grids, storage, and distributed energy; water, sanitation, and resilient transport
Private credit	Complementary where financing gaps are underwritable	Projects or companies underserved by local banks; assess contracts, collateral, and currency
Private equity	Complementary operating-company exposure	Industrial emissions reduction, resource efficiency, sustainable agriculture, and climate services
Venture capital	Selective, smaller allocation	Local energy systems, storage, grid software, water technology, and agricultural tools
Nature-based solutions	Core candidate for land-use mandates; selective otherwise	Land and ecosystems; assess rights, consent, permanence, leakage, hazards, and measurement

Source: Cambridge Associates LLC.

Notes: The table illustrates each strategy's role and omits rankings and expected return ranges. Investor-specific weights follow objectives, existing holdings, available managers, and project terms.

— **PRIVATE CREDIT** can finance projects and companies that local banks serve inconsistently. Seniority and covenants can give a lender more protection than an equity investor, but the value of that protection depends on the borrower and the enforceability of its contracts. Currency exposure also matters.

— **PRIVATE EQUITY** can back businesses that reduce industrial emissions, improve resource efficiency, support lower-emissions agriculture, and deliver climate services. Returns depend on the business, operational improvement, and exit. Its role in a dedicated climate-solutions allocation depends on the managers and companies an investor can access.

— **VENTURE CAPITAL** can support emerging energy-storage technologies, grid software, water technology, and agricultural tools. The risk of loss and uncertain path to scale argue for careful position sizing in most portfolios.

— **NATURE-BASED SOLUTIONS** like forest conservation and restoration offer another way to reduce net emissions, particularly in parts of Latin America. The IPCC identifies substantial mitigation potential from protecting and restoring forests. Managers would need to establish land rights, community consent, measurable carbon benefits, and a dependable source of revenue. This is a selective opportunity alongside the larger clean-energy case.

We would first evaluate the EMDE assets an investor already holds through global managers to identify gaps and size any additional commitment. A global or regional manager can allocate across countries and sectors. A dedicated specialist may add value through differentiated project

access, stronger deal terms, or demonstrated results. We would compare the specialist's sourced investments, realized returns in the investor's reporting currency, and portfolio overlap with those of broader managers under consideration.

Local teams with strong relationships may access projects before a competitive auction, assess a power buyer's finances, and negotiate stronger contractual protections. Limited public information makes these capabilities valuable. Diligence should establish how they translate into attractive net returns, accounting for construction risk, potential losses, currency exposure and fees.

Diversification requires looking beyond country allocations to the underlying customers, contracts, and currencies. Projects in different countries can share similar risks if they all sell power to financially weak state-owned utilities. We would assess these exposures across both proposed mandates and existing holdings.

Climate outcomes also require scrutiny. For mitigation, managers should identify what would likely happen without the investment, explain how they estimate avoided emissions, and report actual operating results against those assumptions, including uncertainty. For adaptation, they should identify the hazard, the people or assets protected, evidence of reduced risk, and who pays for the service. We would also consider whether an investment enables other clean-energy projects, for example, by expanding grid access or providing financing.

Spreading commitments across vintages can reduce reliance on a single entry point. We would pace commitments according to portfolio needs, manager availability, and the quality of the investable pipeline.

Conclusion

Much of the power system that will serve growth in emerging markets has yet to be built. That gives a climate solutions mandate an opportunity to finance clean generation, grids, and distributed energy early in markets where investment is scarce and local underwriting matters. A focused infrastructure mandate may capture much of the opportunity. Credit and operating businesses can expand it when suitable managers and projects are available. We would size the allocation against existing holdings and require both credible emissions benefits and attractive net returns. Physical resilience belongs in project design and underwriting, with stand-alone adaptation pursued selectively. The central opportunity is to earn attractive net returns, with risks properly priced, by financing clean power that changes what gets built and avoids emissions relative to a credible alternative. ■

Mark Sintetos also contributed to this publication.

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