

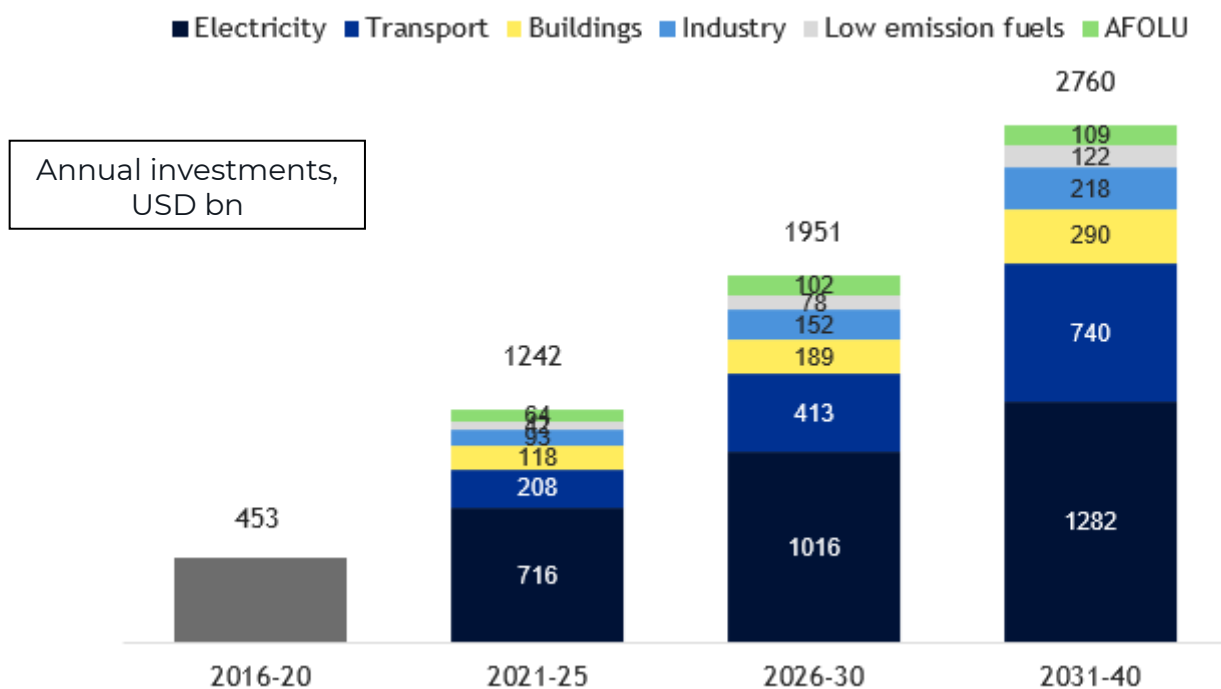
Emerging Markets Investment and Financing

The Race to Zero Net Zero Financing Roadmaps set out the investments needed to achieve net zero by 2050, and identify investment roles and opportunities for private and public actors to drive this transition. This note summarizes the investment and financing opportunities for **emerging markets** from this analysis, with a focus on the actors supporting direct capital investment.

Key Messages

- Emerging markets and developing economies (EMDEs) make up about 40% of global real GDP, but account for 50-60% of decarbonization investment needs. They are projected to require particularly high shares of global investments in transport and AFOLU, ranging from 55-70%.
- Public and blended finance, as well as funding from DFIs and MCFs, is projected to play a much larger role across lighthouse investment opportunities in EMDEs. However, private actors are still projected to provide substantial direct capital expenditure.

Investment and Financing Needs



- Investment increases across all sectors between 2020 and 2040. Initially almost 60% of investments are in electricity, concentrated in technologies such as solar PV, wind and hydro, and new electricity lines.
- Electrification enables subsequent scale up in end use sectors, particularly transport and industry, where EMDEs account for 60% of global investments in the 2030s. Battery electric light duty vehicles and 2/3 wheelers each require over USD 100 billion in annual investments across the 2030s.
- EMDEs account for around two thirds of investment needs in AFOLU, reflecting their role in agricultural production as well as the high potential for habitat restoration.

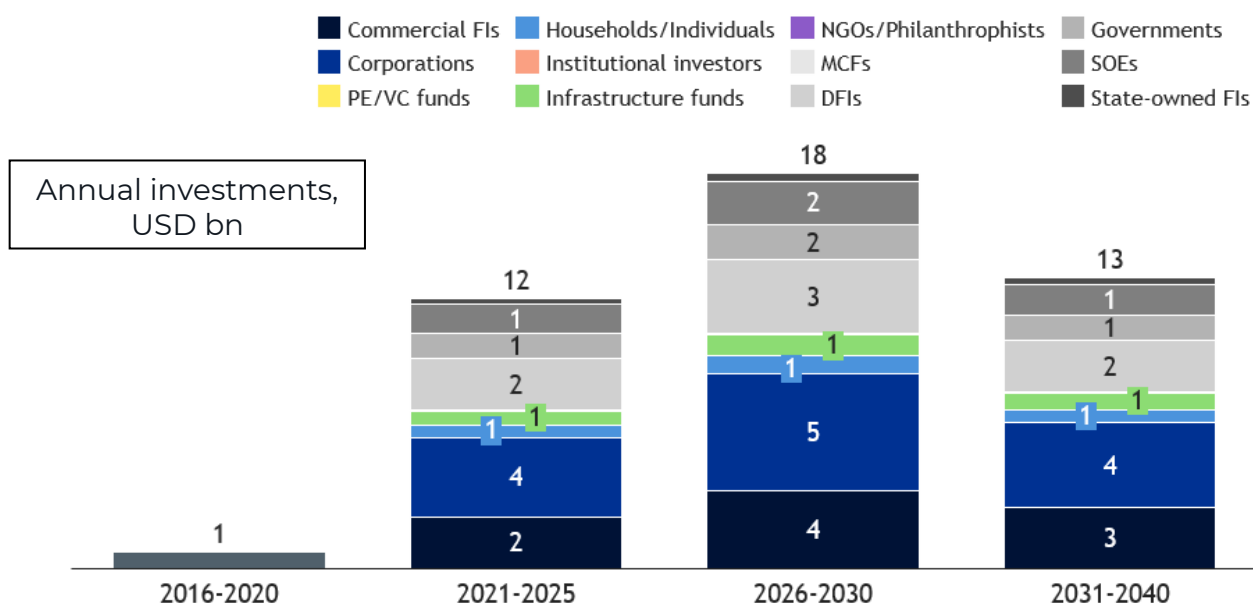
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Lighthouse Opportunities

- Solar photovoltaic (PV) power will likely be key for decarbonising Africa's electricity sector, which currently accounts for ~40% of CO₂ emissions in Africa, requiring a 130x increase in capacity by 2050 relative to today. It is also crucial for achieving universal energy access. Reliable and well-developed electricity networks are key enablers of electrification and clean power generation in Central and South America. These networks need to expand and modernize to manage increasing demand and intermittent and distributed renewables, and to allow demand-side response.

Solar PV in Africa

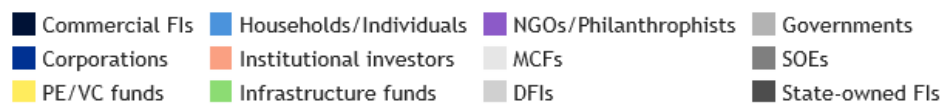
- The traditionally SOE-dominated sector could attract investments from (often international) private project developers, as the market matures in the medium term. Off-grid PV could be largely financed by households, commercial FIs providing consumer debt, and corporate consumers.
- Public-private partnerships and guarantees might facilitate private sector investments. Blended finance with concessional debt could help to increase the bankability of projects, especially in off-grid solar.
- Project-financed PV, supported by concessional debt, can increase the bankability of projects for private investors. For off-grid PV financing, innovative types of consumer financing, such as PAYG and crowdfunding mechanisms could be crucial to address high upfront investment costs and mitigate risks.
- High perceived risks currently constrain investments. These include liquidity risks, regulatory instability, grid interconnection risks, and counterparty and off-taker risks. Insufficient bankable projects, small deal sizes, and uncertain demand also hinder capital mobilization. For off-grid solar, affordability and access to working capital, lack of technical expertise and equipment act as barriers to investments.
- Clear and reliable regulatory frameworks based on best practices would enable further investment. This includes competitive auctions with bankable PPAs, cost-reflective tariffs, and transparent procurement processes. Innovative financing, including community financing, can support off-grid solar installations.



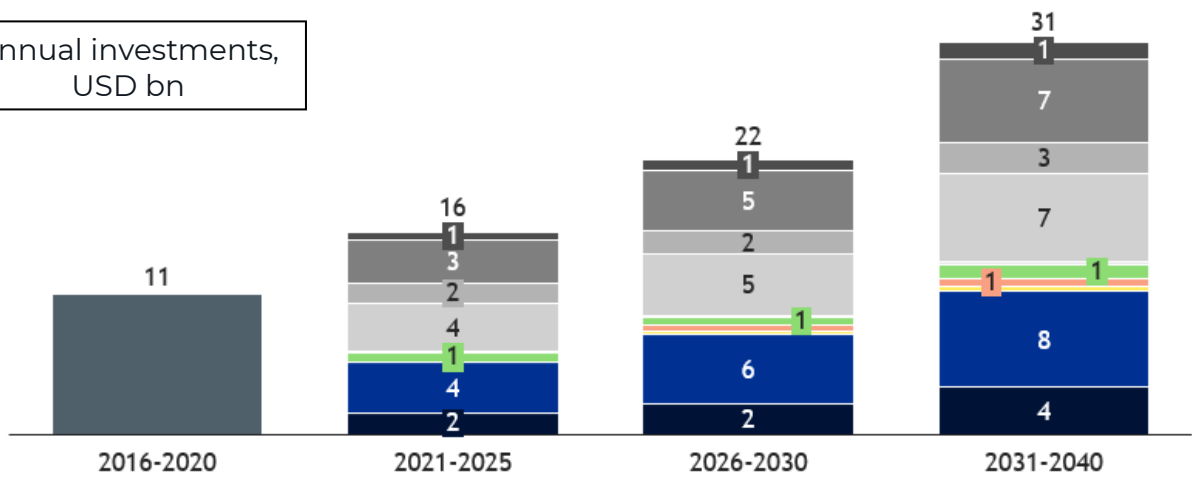
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Electricity Networks in Central and South America

- This funding gap is projected to be addressed by corporations, DFIs, governments and SOEs. This mix reflects historic asset ownership and the differences between transmission and distribution, with private participation historically strong in the latter. However, public actors are projected to remain important. Institutional investors are could also participate more in the medium to long term.
- Investment is projected to come from a mix of private and public sources, matching the mixed ownership of assets. Public and blended finance may play a bigger role in specific projects, like transnational interconnectors or remote distribution.
- Project finance is projected to meet over half of the investment need. A slight shift away from grant finance after 2025 is projected, as investment need and interest grows facilitating project finance. Low-cost project finance debt and grant finance are likely to continue contributing around 1/5 of investments.
- Low electricity prices reduce cost recovery and potential for financial viability. Transmission and distribution losses also reduce the attractiveness of investments. Lastly, costs are difficult to allocate for major projects across multiple jurisdictions, discouraging financing for key interconnectors.
- Regulatory stability in the power sector coupled with adequate network planning would enable further investment from private sources. In particular, increasing the adoption investment-friendly private participation models like build, own, operate and transfer models would continue to support investments.



Annual investments, USD bn



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For more information see gfanzero.com/netzerofinancing

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