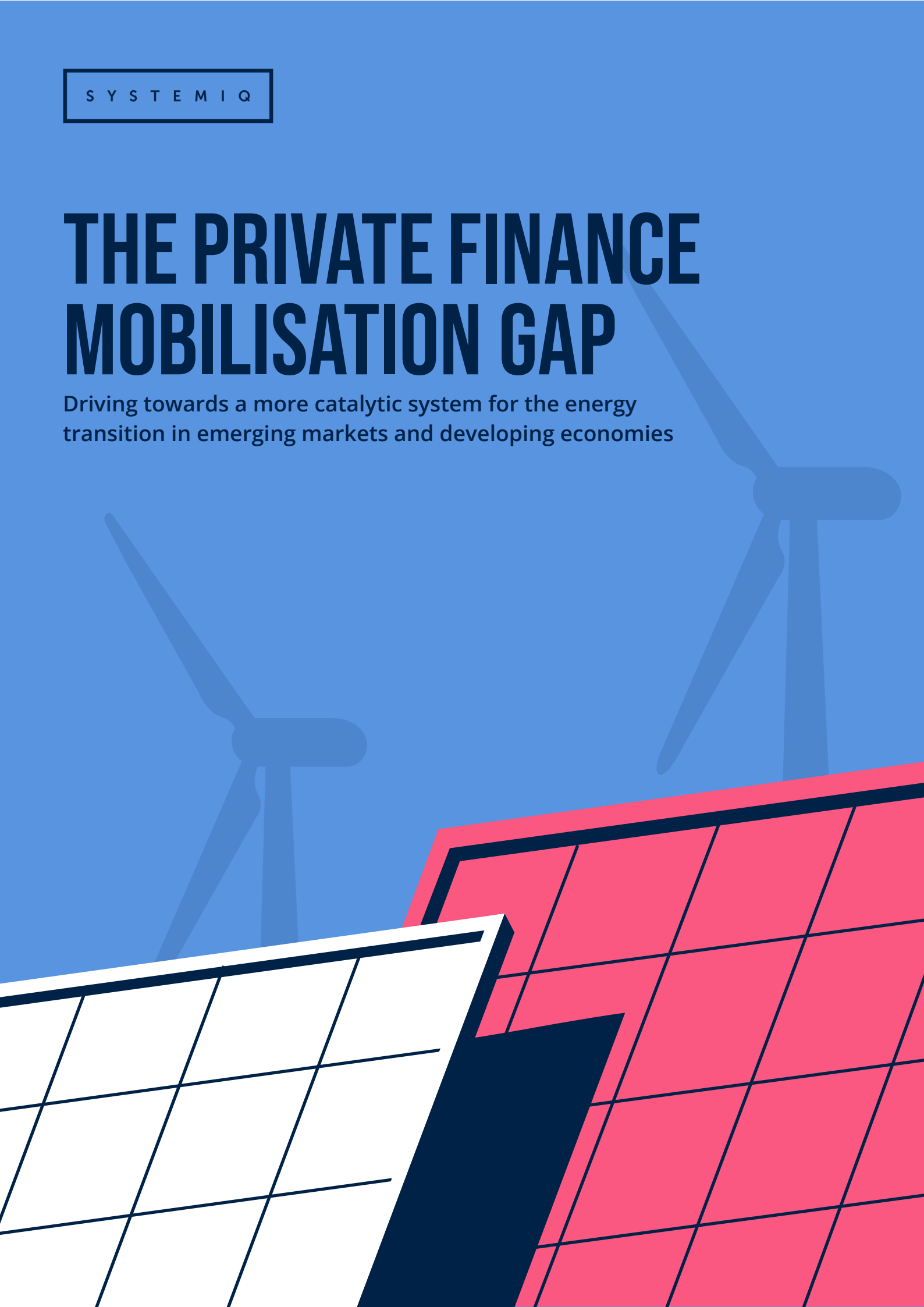
SYSTEMIQ

# THE PRIVATE FINANCE MOBILISATION GAP

Driving towards a more catalytic system for the energy transition in emerging markets and developing economies



# ABOUT THIS REPORT

**APRIL 2026**

This report was developed as input to the work of the Independent High-Level Expert Group on Climate Finance (IHLEG). It was prepared by Systemiq and authored by Maxine Gibb, Jennifer Ring, Mattia Romani and Julia Turner.

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# EXECUTIVE SUMMARY

**The world cannot meet its climate goals without transforming energy systems in emerging markets and developing economies (EMDEs)[1].** These countries - home to 70% of the global population and most of the world's renewable potential - will drive the fastest growth in energy demand. Yet today, they receive just 15% of global clean energy investment - only a fraction of what is needed.

To meet energy investment needs by 2035, current flows will need to increase six-fold. Without a dramatic shift, millions more people will be locked out of clean, affordable and secure power and global emissions will overshoot critical thresholds. Public finance alone cannot close this gap. Mobilising private capital at scale is essential.

**This paper aims to answer a central question: what volume and mix of development and catalytic finance, which is largely provided through public sources, will be needed to unlock private investment for the EMDE energy transition at the scale required?** While many global reports have highlighted the size of the investment need - and the financing gap - there remains limited clarity on how much private investment is realistically possible. Similar clarity is lacking on how much private investment might require some form of risk mitigation and market creating support in order to flow, and what specific instruments will be necessary to mobilise it.

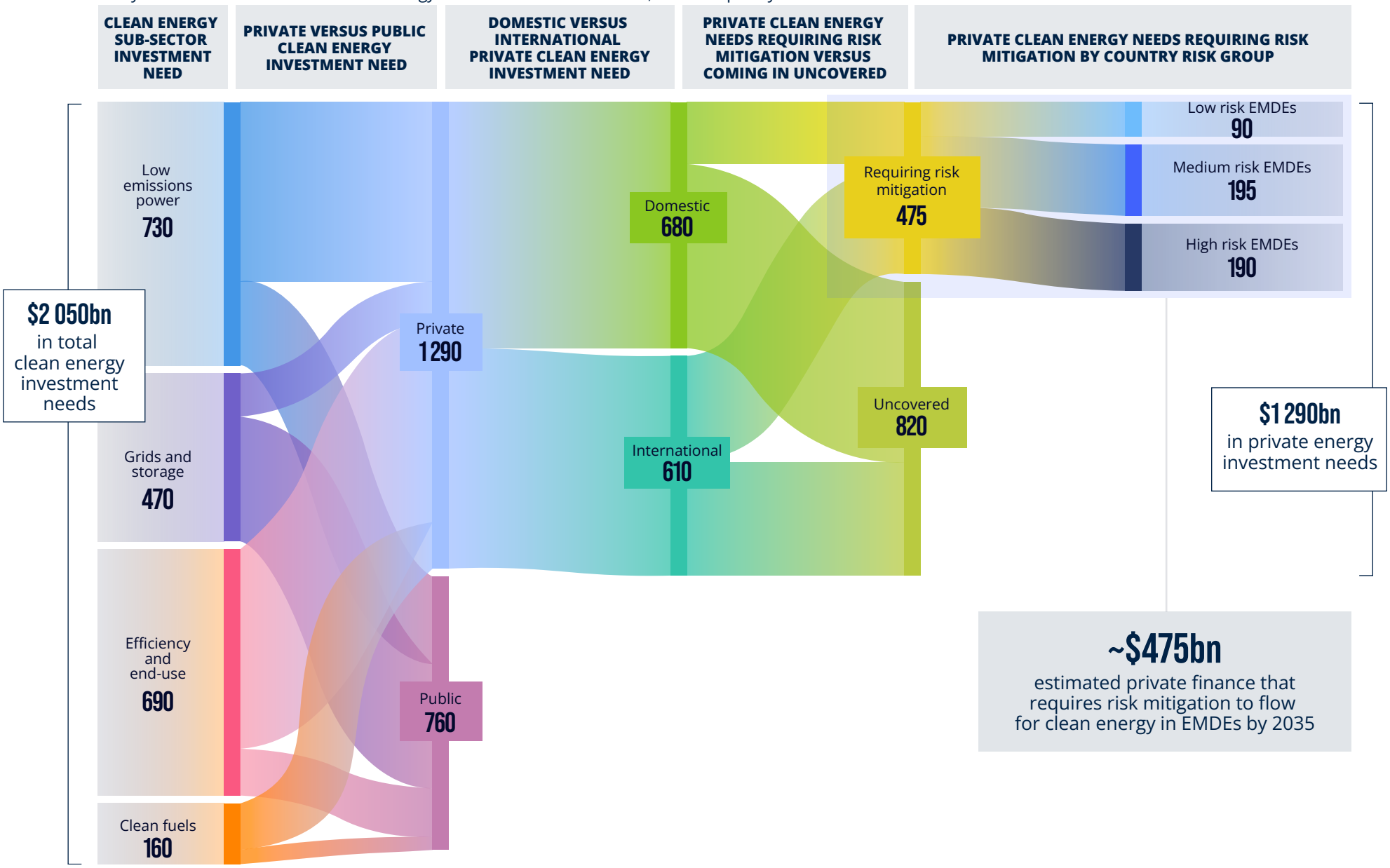
This analysis provides a directional, quantitative, end-to-end response to these questions for 2035.

**The good news is that the transition in EMDEs is increasingly investable.** Costs of clean technologies have fallen, policy reforms are advancing and the opportunity set is large. By 2035, private investors could finance an estimated $1.3 trillion of clean energy solutions across power, efficiency, transport, industry and clean fuels in EMDEs per year. That represents almost two thirds of the total clean energy investment opportunity in EMDEs. Around half will likely come from domestic private investors and households; the remainder - roughly $610 billion - must come from international private finance, which will need to grow nineteen-fold from today's levels. This $1.3 trillion figure is not to be confused with the $1.3 trillion *international* annual overall climate- and nature-related spending requirements estimated by the Independent High-Level Expert Group on Climate Finance (IHLEG) by 2035.[2]

1. EMDEs excludes China for the purposes of this report and analysis.
2. See IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T.* In comparison, the $1.3 trillion referred to in this analysis is the amount of both *domestic and international private investment* that could flow specifically to the *clean energy transition* in EMDEs by 2035.

**EXHIBIT 1** EMDE CLEAN ENERGY INVESTMENT NEEDS BY 2035 ESTIMATED ACROSS FINANCE SOURCES, RISK MITIGATION NEEDS AND COUNTRY RISK PROFILES[3]

Analysis of investment flows for clean energy investment needs in EMDEs, $ billions p.a. by 2035




3. Figures may not add up due to rounding

**But the reality is more complex - without risks being reduced, managed, shared and mitigated, a significant share of this investment will not happen.** As outlined in Exhibit 1, approximately $475 billion of the $1.3 trillion annual domestic and international private finance required to meet clean energy investment is estimated to sit outside of commercial investors' risk-return expectations due to barriers ranging from foreign exchange volatility to political and counterparty risk.[4] Around 80% of this $475 billion sits in high- and medium-risk EMDEs[5], due to their large share of overall investment need and higher risk-reduction requirements. Around 30% of this $475 billion relates to investments in less mature technologies, like clean fuels or battery storage, which face barriers like revenue uncertainty or first-mover disadvantages. Unless these barriers are addressed – through market creating activities and structural shifts, risk-sharing, reduction and management - private investment will remain confined to a few lower-risk markets and mature technologies, leaving vast opportunities unrealised.

**This is where development and catalytic finance becomes decisive.** A range of instruments can unlock private finance at scale by helping to build markets and reducing, managing or sharing the (real or perceived) risks that a private investor is exposed to in a given transaction (see Box 2 for definition of development and catalytic finance). Grants and technical assistance can support pipeline creation by funding early-stage project development activities – such as feasibility studies and transaction preparation – and by absorbing early-stage project risks.

Guarantees, insurance and foreign currency risk mitigation protect against political, performance or currency risks. Catalytic equity can take on risks, especially in early-stage or first-of-a-kind projects that commercial lenders avoid. Other forms of concessional or subordinate debt can improve the risk-return profile of investments while absorbing more risk for senior lenders. These instruments can be deployed strategically, alongside other market-building mechanisms, including demand aggregation, contracts for difference, regulatory reform and policy engagement. Yet despite this potential, these tools are currently mostly deployed project-by-project in small volumes and in ways that mobilise private capital inefficiently.

**Historical data show that on average $2 of public concessional and non-concessional finance[6] is needed to mobilise just $1 of private commercial investment towards the energy transition in EMDEs.** Such low mobilisation levels reflect the structure of finance provided: the majority is delivered primarily in the form of debt instruments that are not designed to mobilise private investment. This is partly because the system of development finance institutions (DFIs), comprising the main providers of this capital, was not set up with the primary objective of mobilising private capital. As a result, in its current form, the system will not deliver the levels of mobilisation required for the future.

4. Based on analysis conducted for this report, we estimate that roughly 36% of private finance will require some form of risk mitigation in order to flow to the EMDE energy transition by 2035. This estimate sits between two relevant, recent analyses: CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap,* which estimates that almost 70% of equity finance needs (international and domestic) may require some kind of risk mitigation to flow by 2035, and IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T,* which estimates that 20% of private international finance flows will be 'mobilised' versus 'direct' investments (i.e. some form of risk mitigation will be required) by 2035 (compared to 60% today). Estimating shares of finance requirements that will require forms of risk mitigation is an evolving field of analysis that requires more focused analyses and data inputs. Key assumptions used here can be found in the Technical Annex.
5. For the purposes of this analysis, EMDEs were categorised into different 'country risk profiles' – see the Technical Annex for a list of EMDEs per country risk group and the methodology used to categorise them.
6. See Box 2 for definitions of development and catalytic finance and mobilisation used in this analysis, as well as the Technical Annex for further details on methodology.

**This represents a huge opportunity missed. If historical patterns were to continue, the world would need nearly $1 trillion in development and catalytic finance annually by 2035 to meet our climate goals - an impossible number.**

However, while it is imperative that providers dramatically increase their development and catalytic finance for clean energy in EMDEs from $70 billion today[7], the scale of this increase wholly depends on how ambitiously this finance is deployed.

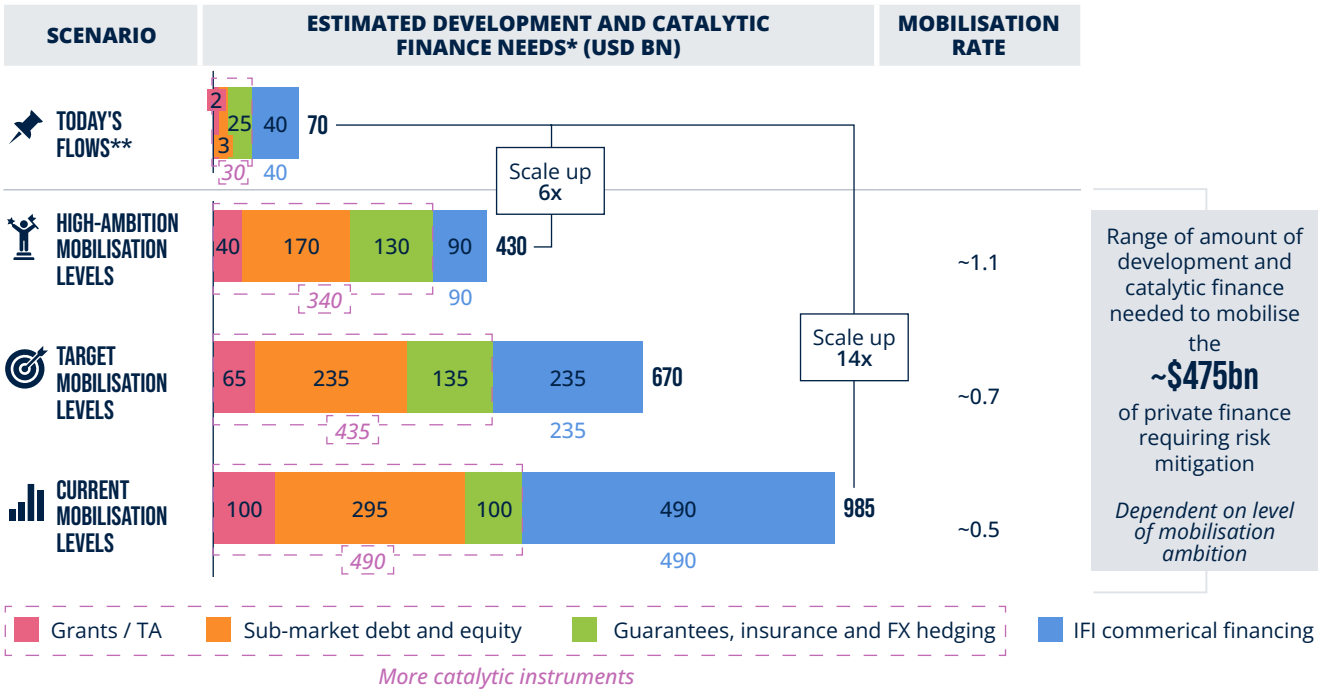
**By adopting a more ambitious, smarter approach anchored in a shift towards more catalytic instruments, the development and catalytic finance required in 2035 could decrease by more than 55%, to roughly $430 billion**. Shifting public finance providers' portfolios to higher-mobilisation instruments like guarantees, local currency financing and catalytic equity will rapidly improve mobilisation efficiency and can bring target investment levels within reach.

Exhibit 2 outlines the estimated range of development and catalytic finance needed across three different scenarios, ranging from a base case to higher ambition:

- **Current mobilisation levels** scenario: maintaining current mobilisation patterns would require **over $985 billion** in development and catalytic finance (around $490 billion in commercial or market-rate financing from international financial institutions (IFIs) and around $490 billion in other, more catalytic instruments) per year by 2035 to unlock private capital for the EMDE energy transition. This represents the outer bound, least likely scenario.
- **Target mobilisation levels** scenario: improved mobilisation in line with estimated multilateral development bank (MDB) mobilisation targets[8] could reduce this need by around **30%**, to approximately **$670 billion** (around $235 billion in commercial financing from IFIs and around $440 billion in more catalytic instruments) per year by 2035.
- **High-ambition mobilisation levels** scenario: a faster shift away from traditional lending models towards the most efficient risk-bearing instruments could lower required development and catalytic finance to around **$430 billion** ($90 billion from commercial financing from IFIs and around $340 billion in more catalytic instruments), a **55% reduction** versus the 'current mobilisation levels' scenario, per year by 2035. Under this high-ambition mobilisation approach, the development and catalytic finance needed becomes achievable and better aligned with global targets.

7. Includes 2023 finance flows from multilateral DFIs, bilateral DFIs, multilateral climate funds, national DFIs, export credit agencies and philanthropies to EMDEs and LDCs for clean energy (includes energy systems, and efficiency and end-use for buildings, transport and industry) from CPI (2025) *Global Landscape of Climate Finance 2025 Dataset.*
8. See Technical Annex for further detail.

**EXHIBIT 2** SUMMARY ESTIMATED DEVELOPMENT AND CATALYTIC FINANCE REQUIREMENTS BY SCENARIO FOR EMDE ENERGY TRANSITION BY 2035




* Potential to lower finance needed through balance sheet recycling, while actual capital requirements will vary by instrument and may be lower than volumes presented here

** Scenarios are not projections from today's flows but shown here as comparison

**BOX 1** FACTORS WHICH COULD LOWER THE ESTIMATES OF DEVELOPMENT AND CATALYTIC FINANCE REQUIREMENTS

## Importantly, development and catalytic finance requirements may in practice be lower than the figures presented in this paper, which are aggregate, directional, outer bound estimates based on currently available data.

Several factors that could not be incorporated into the modelling may reduce overall needs, including:

- **Optimising the instrument mix, based on more granular data on different types of risk:** Significant data limitations on different types of risks make it challenging to determine the optimum mix of development and catalytic financial instruments. More granular data and subsequent analyses are needed to further understand how development and catalytic finance can address different types of risk (e.g. perceived versus currency risk) and its implications on the scale and mix of development and catalytic finance.
- **Rapid changes to accommodate enhanced mobilisation rates in the DFI system:** The analysis is grounded in historical mobilisation data which do not reflect rapid changes occurring in the DFI system to orient towards higher mobilisation objectives. Recent analyses encourage optimism on this front.[9] The analysis does not model the impacts of scaling balance sheet recycling mechanisms for MDBs (such as originate-to-share and originate-to-distribute models), or of other portfolio-level approaches, on the quantum of development and catalytic finance needed. It also does not model the catalytic effects of interventions to build markets, including financial instruments such as contracts for difference, feed-in tariffs, advance market commitments, or broader improvements in regulatory environments, pipeline development and capacity building that enable and mobilise private capital.

9. Recent analysis provided by CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap* finds potential mobilisation rates from catalytic equity ranging from 2.3x to 30x. Reinsured or unfunded guarantees pose another area for orders of magnitude larger mobilisation potential (see footnote 10).

- **Estimates of annual flows do not reflect public capital required:** The development and catalytic finance volumes in this report reflect the annual flows needed to mobilise private investment for the EMDE energy transition, not the public capital required on MDB and DFI balance sheets to deliver them. For example, capital requirements for guarantees can often be far lower than volumes required, especially if reinsured.[10] Capital adequacy and risk weighting reforms could mean that this can unlock flows with very low or no increased public capital required (see Box 3).
- **Changes in country risk and technology maturity:** This analysis takes a conservative approach, assuming that a) current sovereign ratings and country risk profiles, and b) clean energy technology maturities will not significantly change by 2035. In reality, improvements in either of these areas would reduce the quantum of development and catalytic finance needed.

## Achieving higher-ambition mobilisation levels requires deep structural changes to the use of development and catalytic finance – doing so can unlock catalytic potential with less public capital.

Providers of development and catalytic finance should commit to embedding mobilisation into their mandates. Unlocking these flows will rely on parallel reforms that expand MDB and DFI balance sheet capacity to take more risk and deploy more catalytic and risk-bearing instruments at scale, next to their traditional debt products. Accelerated capital-adequacy reforms, closer engagement with rating agencies to narrow gaps between perceived and realised risk, stronger collaboration with shareholders and IFI treasuries to modernise capital frameworks, and expanding risk-transfer mechanisms are key priorities. Together, these changes can put mobilisation targets within reach.

**The goal is not simply to 'de-risk' emerging market investments or use public resources in service of enhancing private investor returns, but rather to optimise the use of scarce resources to maximise impact.** More catalytic instruments within MDB and DFIs asset allocation must include instruments dedicated to bridging costs to accelerate the establishment of well-functioning markets for new technologies and solutions. This includes contracts for difference, feed-in tariffs, advance market commitments, buyers' clubs and so forth, as well as broader efforts to build markets and transform value chains in order to enable and mobilise private capital (see Box 4).

**The message is clear: the world does not just need more development and catalytic finance; it needs finance that is used differently - more strategically, more boldly, and with far greater focus on mobilisation.** The good news is that with the right reforms, innovation and commitment to change, the development and catalytic finance needed can be meaningfully reduced, unlocking the private investment required for EMDEs to deliver reliable, affordable clean energy for all - and with it, a viable global climate pathway.

10. For example, the World Bank's Multilateral Investment Guarantee Agency (MIGA) has reinsured around 70% of its guarantee portfolio (with a board approved limit of up to 80%) to leverage its investment guarantee capacity. See MIGA (2025) *Annual Report 2025: MIGA Appendixes.*Unfunded guarantees have extremely high mobilisation potential (in the order of 30x-55x) as has been demonstrated by the Swedish International Development Cooperation Agency (SIDA) which provides unfunded guarantees, utilising small amounts of public capital relative to the capital mobilised (see Blended Finance Taskforce (2023) *Better Finance, Better Guarantees*). However, not all development and catalytic finance providers are able to reinsure their guarantees or provide unfunded guarantees to this extent (e.g. due to governance structures, risk weighting frameworks).

**BOX 2** DEFINING DEVELOPMENT AND CATALYTIC FINANCE

## In this paper, development and catalytic finance refers to public, philanthropic or impact-motivated finance that reduces, manages or shares real or perceived risks to mobilise private, commercial investment that would otherwise not flow.

- This includes both concessional finance that accepts disproportionate risk and/or below-market returns, and commercially priced instruments from IFIs that play a role in mobilising private finance due to their higher risk tolerance, longer tenors, and increased EMDE experience.[11]
- Development and catalytic finance's role evolves across the project lifecycle – from absorbing development risk and building stronger pipeline (e.g. grants, technical assistance, catalytic equity) at the origination phase, to providing risk-sharing instruments (e.g. guarantees, foreign exchange (FX) solutions, insurance), expanding debt capacity and lowering the cost of capital to convert pipeline into financeable, scalable projects.
- Development and catalytic finance comes primarily from public sources, including MDBs, DFIs, vertical climate and environmental funds (VCEFs) and bilateral donors. A smaller share of development and catalytic finance is provided by the private sector, including philanthropies, High Net Worth Individuals (HNWI), and impact investors - typically in the form of catalytic equity, first-loss positions, or grants.

**This analysis considers four principal categories of development and catalytic finance instruments.** The 'high-ambition mobilisation levels' scenario outlined in this paper is based on increasing the use of more catalytic finance instruments both across these categories (i.e. a higher share of submarket debt and equity, guarantees, insurance and FX hedging) and within each category (i.e. greater use of equity and local currency lending within IFI commercial financing):

- **Grants and technical assistance:**
  - **Grants** provide non-repayable funding to absorb early-stage project risk and enable feasibility work, supporting activities that are essential for bankability but lack a commercial return.
  - **Technical assistance** offers targeted expertise, capacity building and project preparation support. It strengthens enabling environments and improves the quality and readiness of investment pipelines.
- **Sub-market debt and equity:**
  - **Concessional debt** provides loans at below-market interest rates, longer tenors, or more flexible terms, thereby improving project economics and crowding in commercial lenders who would not otherwise participate.
  - **Subordinate debt** includes junior debt instruments that absorb losses first, thereby improving the risk-return profile for senior investors.
  - **Catalytic equity** is equity capital with concessional terms like first-loss or capped returns, which attracts follow-on private equity.
- **Guarantees, insurance and FX hedging:**
  - **Guarantees** are legally binding commitments to cover losses if an investment underperforms. They reduce risk for private investors particularly towards payment defaults, political risk or offtaker failure.
  - **Insurance** transfers defined project or policy risks (e.g. political, breach of contract, construction or climate risks) to insurers. It reduces uncertainty and makes projects more bankable.
  - **FX hedging** instruments mitigate currency volatility, convertibility and interest rate risks. They enable investors to take local-currency exposures that would otherwise be too costly or unpredictable.

11. See ODI (2026) *MDBs as an asset class* for discussion on how MDB-specific attributes attract investor interest.

- **Commercial financing from IFIs:**
  - **Near or at market-rate lending from IFIs,** while non-concessional, is considered to play a mobilising role given that IFI participation signals credibility to markets. It is typically accompanied by strong due diligence and project structuring which can reduce perceived risks and improve financing terms, attracting other commercial private investors.
  - **Syndicated loans,** arranged by IFIs, pool financing from multiple lenders predominantly on commercial terms. They spread the risk of borrower default, encouraging private sector investment.
  - **Senior equity** is equity capital provided on commercial, pari passu terms alongside other investors in the capital structure. It plays a de-risking role similar to commercial IFI lending, reducing perceived project and governance risks, but is considered more risk mitigating or catalytic than lending as it absorbs more risk.

**Both concessional and commercially-priced lending through local currency can be more catalytic.** While not widely used today, local-currency denominated financing can have strong mobilising effects, as it shields projects and investors from exchange-rate volatility, reduces currency mismatch for borrowers and can materially improve debt-service stability in high-risk EMDE markets.

**Notably, risk is dynamic and evolves across the investment lifecycle.**[12] In the 'originate' stage of early project development, uncertainty and risks are high as no revenue is being generated. Early-stage capital and catalytic equity are critical here, as are technical assistance and grants like viability gap funding, which help projects reach final investment decision. In the 'structure' stage, investments move from final investment decision to financial close and construction. This is the point at which major capital needs to be raised. Risk-sharing instruments like guarantees, insurance and FX hedging are useful here and can help lower the cost of capital and attract the debt and equity needed. At the 'scale' stage, projects are operational and generating revenue, stabilising cash flows and reducing overall risk. It is at this stage where there is potential to scale originate-to-distribute asset classes and syndication at a portfolio level, for example, with the potential to achieve higher levels of mobilisation.

12. This is explored further in IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T* in Chapter 5.1 which outlines the 'originate', 'structure' and 'scale' stages of the investment lifecycle and the relevant risk-reducing or catalytic instruments needed. This paragraph draws on this material. Additional framing on the targeted role of blended finance across country and technology risk profiles (e.g. frontier markets - in terms of either country or technology - where early-stage risk capital and project technical assistance meets a key need, versus mobilisation at scale for more mature, low-risk markets where aggregation, portfolio-level blended finance is more relevant) can be found in Grantham Research Institute on Climate Change and the Environment (2021) *Blended Finance for Scaling Up Climate and Nature Investments: Report of the One Planet Lab.*

# 1. INTRODUCTION: WHY THIS REPORT?

## Financing the energy transition in emerging markets and developing economies[13] (EMDEs) will be essential to meet global climate goals and boost resilience for the most climate vulnerable, but questions remain on the pathways to doing so.

**The size of the investment needed and the broad pathways to deliver it have already been articulated.** Between $1.3 trillion to $2 trillion of investment in clean energy systems in EMDEs is needed by 2035, based on estimates from the Independent High-Level Expert Group on Climate Finance (IHLEG), the International Energy Agency (IEA), the Energy Transitions Commission (ETC) and others. Targets like the $300 billion New Collective Quantified Goal and the $1.3 trillion Baku to Belém (B2B) Roadmap outline the necessary contribution to the EMDE transition from external (international) sources of finance. These initiatives - as well as others like the Circle of Finance Ministers - provide recommended actions to accelerate progress, including how to mobilise private capital to deliver the transition in emerging markets.

**Yet important questions remain open as to how we can take concrete steps towards these targets:**

- What specific types of capital or financial instruments will constitute these headline figures – and in what relative quantities?
- How do different types of finance interact dynamically at the sector, solution or project level to reduce the cost of capital?
- How might these dynamics shape capital deployment? Given financing gaps today, are new commitments by capital providers enough to move financial flows closer to the quantum needed?
- If not, what would be required?

## **Efforts to answer these more granular questions are gaining momentum.** Recent work has sought to translate estimates of overall financing needs into concrete implications, in particular those for development and catalytic finance providers.

These providers include multilateral development banks (MDBs), national development banks (NDBs), development finance institutions (DFIs), vertical climate and environmental funds (VCEFs), export credit agencies (ECAs) and philanthropies.

For instance, a new report by Climate Policy Initiative (CPI) and the Global Financial Alliance for Net Zero (GFANZ), supported by Allied Climate Partners, Three Cairns Group and WoodMacKenzie, explores the need and potential for sub-market equity to help close the energy financing gap in EMDEs.[14]

13. EMDEs excludes China for the purpose of this report and analysis.
14. CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap.*

Analysis by International Finance Corporation (IFC) and IEA provides estimates of the concessional finance needed to mobilise private finance for the energy transition in EMDEs.[15]

**This paper aims to complement these efforts by:**

- Assessing the potential contribution of private finance across the EMDE energy transition in 2035 towards different clean energy sub-sectors and technologies.
- Considering how much of that private capital requires some form of risk mitigation to flow, acknowledging an outsized role for development and catalytic finance in countries deemed higher risk for investments and for the least commercially mature technologies.
- Estimating private capital mobilisation rates, based on case study analysis.
- Modelling the potential quantum and portfolio mix of development and catalytic finance instruments to achieve the goals of private capital mobilisation for the energy transition across scenarios of varying mobilising ambition by 2035.
- Locating the conclusions of this analysis in recommendations for shifting and scaling development and catalytic finance instruments, how this links to broader MDB and DFI reform, and areas for suggested future analysis.

14. CPI & GFANZ (2025) *The Clean Energy Equity Investment Gap.*
15. IEA & IFC (2023) *Scaling up Private Finance for Clean Energy in Emerging and Developing Economies.* See Technical Annex for explanation on how these analyses differ.

# 2. ANALYSING THE DEVELOPMENT AND CATALYTIC FINANCE NEEDED TO MOBILISE THE PRIVATE FINANCE NEED FOR THE CLEAN ENERGY TRANSITION IN EMERGING MARKETS AND DEVELOPING ECONOMIES

## 2.1 WHAT IS THE NEED AND OPPORTUNITY FOR PRIVATE FINANCE FOR THE CLEAN ENERGY TRANSITION IN EMDES?

**Investment in the energy transition in EMDEs will be essential for global decarbonisation and resilience.** EMDEs represent over 150 countries,[16] 25% of the global economy and 70% of the global population, and will be the main drivers of economic and population growth in decades to come.[17] Today, many EMDEs face a lack of reliable and affordable energy - all of the 730 million people who lack access to electricity today live in EMDEs.[18] The clean energy transition represents a clear and compelling path forward to meet rising energy demand with cost effective clean power for all, while spurring economic and industrial growth, energy security, and supporting livelihoods and better health outcomes.

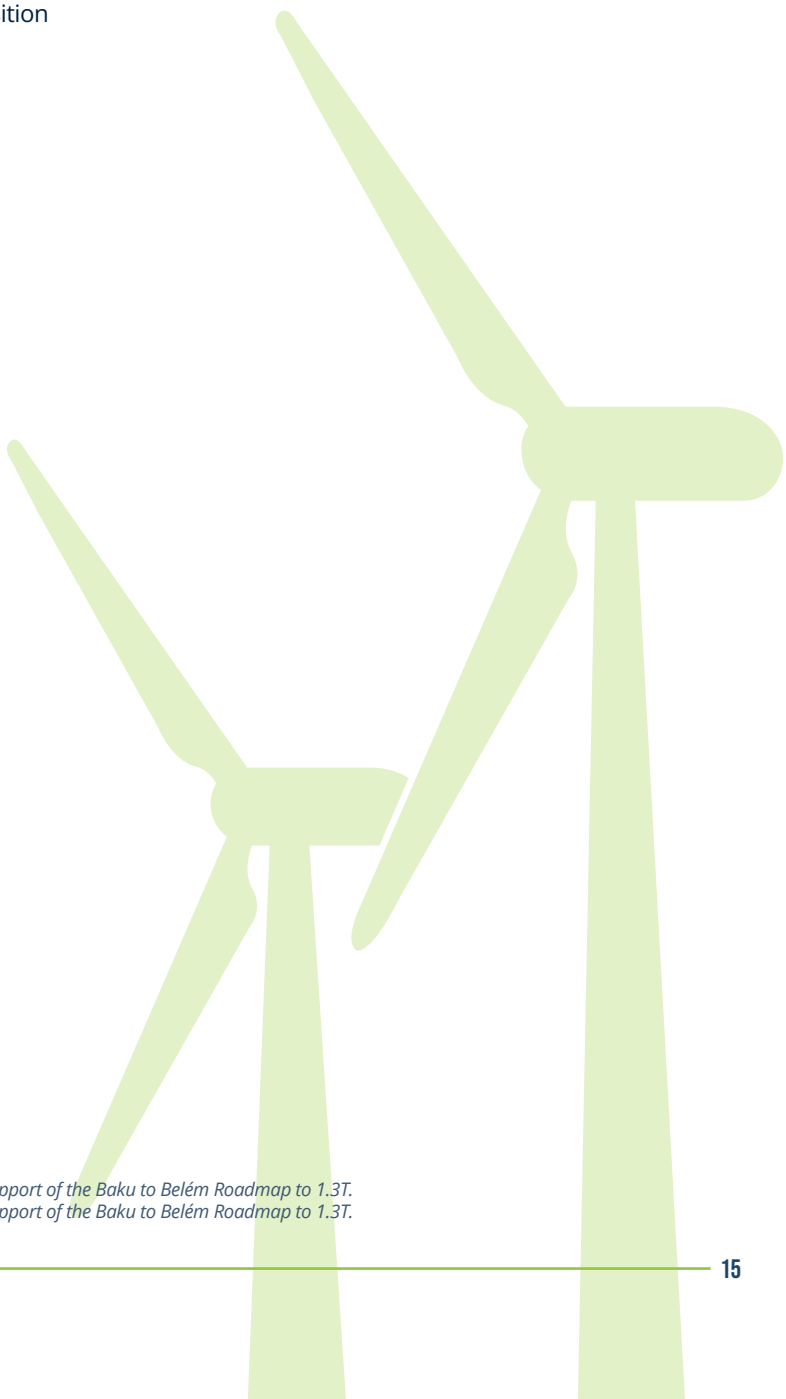
**Yet current investment flows risk leaving EMDEs behind in the transition.** In 2024, $340 billion flowed to investment in the EMDE energy transition.[19] Put in context, this is equivalent to just 15% of global clean energy investment.[20] The shortfall in investment is most acute for least-developed countries (LDCs) and reflects an imbalance in investment flows compared to investment needs and opportunities. Only 2% of clean energy investments are in Africa, which has 20% of the global population and 15% of clean energy investment needs by 2035.[21] Failure to invest adequately in the clean energy transition in EMDEs, especially in LDCs, risks locking in traditional energy models and high-emissions development pathways.

16. While the IMF classifies 157 countries as emerging markets and developing economies as of 2025, this analysis assesses investment needs for 139 EMDEs as listed in the Technical Annex.
17. CPI (2025) *Global Landscape of Climate Finance 2025: EMDE Spotlight;* IEA (2025), *World Energy Outlook 2025.*
18. EA (2025) *"Access to electricity stagnates, leaving globally 730 million in the dark"*. Accessed 5 December 2025.
19. IEA (2025) *World Energy Investment 2025 Datafile.*
20. IEA (2024) *World Energy Investment 2024.*
21. IEA (2025) *World Energy Investment 2025.*

**By 2035, investments will need to increase six times from current levels to meet the estimated $2 trillion in clean energy finance needed for EMDEs.**[22] 75% of this finance will need to flow to 20 of the largest emerging market economies. Brazil and India alone account for 25% of the total clean energy investment needs.

**Public sources of finance alone cannot close this financing gap and deliver the investment required.** Public budgets and fiscal space in EMDEs are increasingly under pressure from high debt burdens and growing borrowing costs. Public capital from international sources is constrained by shrinking official development assistance (ODA) budgets. Public finance will still need to scale to meet clean energy needs and to deliver on internationally agreed commitments. However, it cannot do so at the level required while also allocating scarce resources to areas which require higher shares of public investment, such as adaptation and resilience, loss and damage, just transition and nature-related investments.

**Private investment in the EMDE energy transition is therefore an imperative - and an opportunity.** EMDEs are rich in renewable resources, holding 70% of global solar and wind resources and 50% of critical minerals.[23] Much of the clean energy transition offers investment opportunities with clear returns aligned with private sector preferences and obligations. Increasingly, EMDE governments are introducing supportive policy and regulatory measures that enable this capital to flow.



22. IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T.*
23. IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T.*

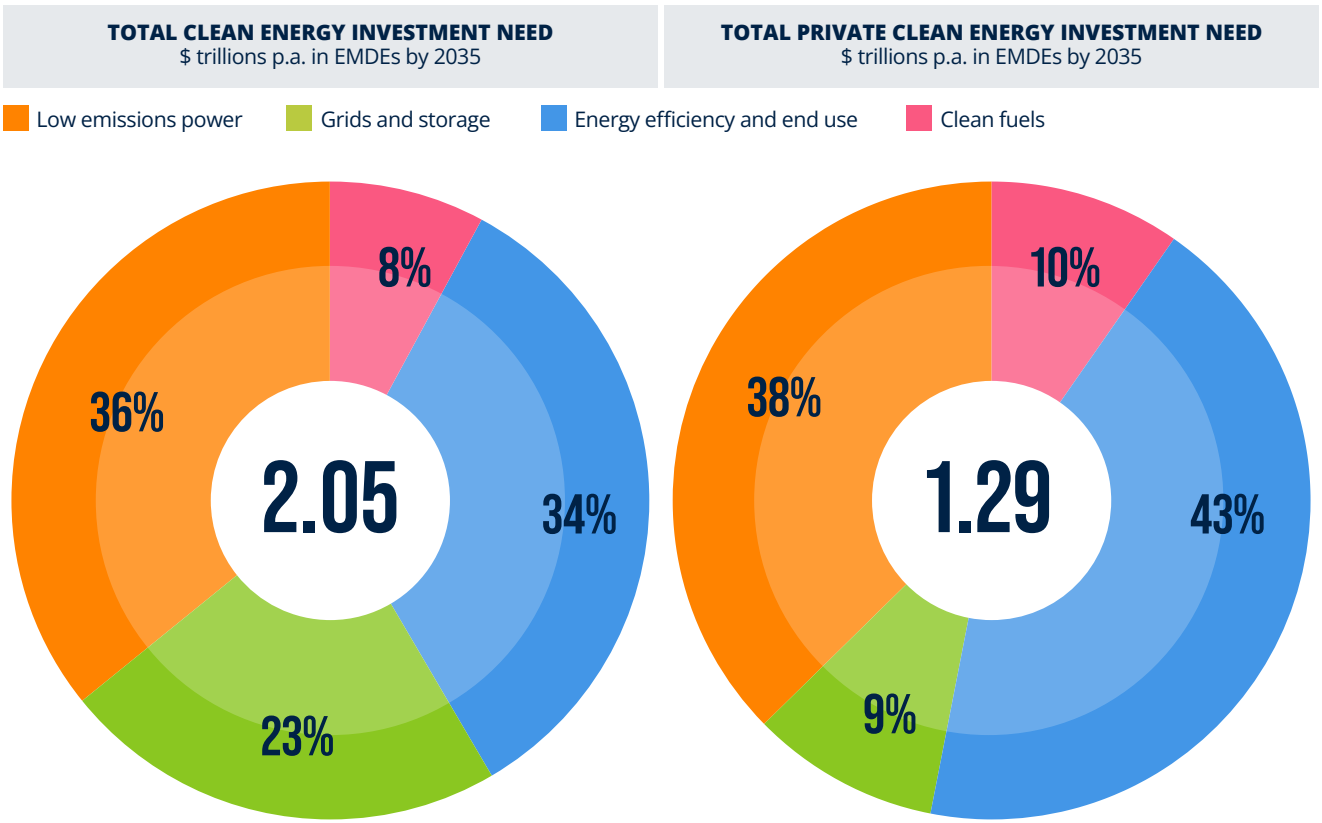
## BREAKING DOWN THE PRIVATE INVESTMENT NEED FOR ENERGY TRANSITION IN EMDES

### By 2035, an estimated $1.3 trillion, or 63%, of the total clean energy investment needed in EMDEs could come from private sources.

Of this, an estimated 38% of private investment could flow to low emissions power, 43% to efficiency and end-use across buildings, transport and industry, 9% across grids and storage and 10% across clean fuels (Exhibit 3).[24]

Approximately 70% of the private investment needed is likely to be debt financing and 30% equity financing, although this varies by region and sub-sector.[25]

**EXHIBIT 3** TOTAL AND ESTIMATED PRIVATE CLEAN ENERGY INVESTMENT NEEDS BY SUB-SECTOR SHARES IN EMDES BY 2035 IN A NET ZERO EMISSIONS (NZE) SCENARIO[26]

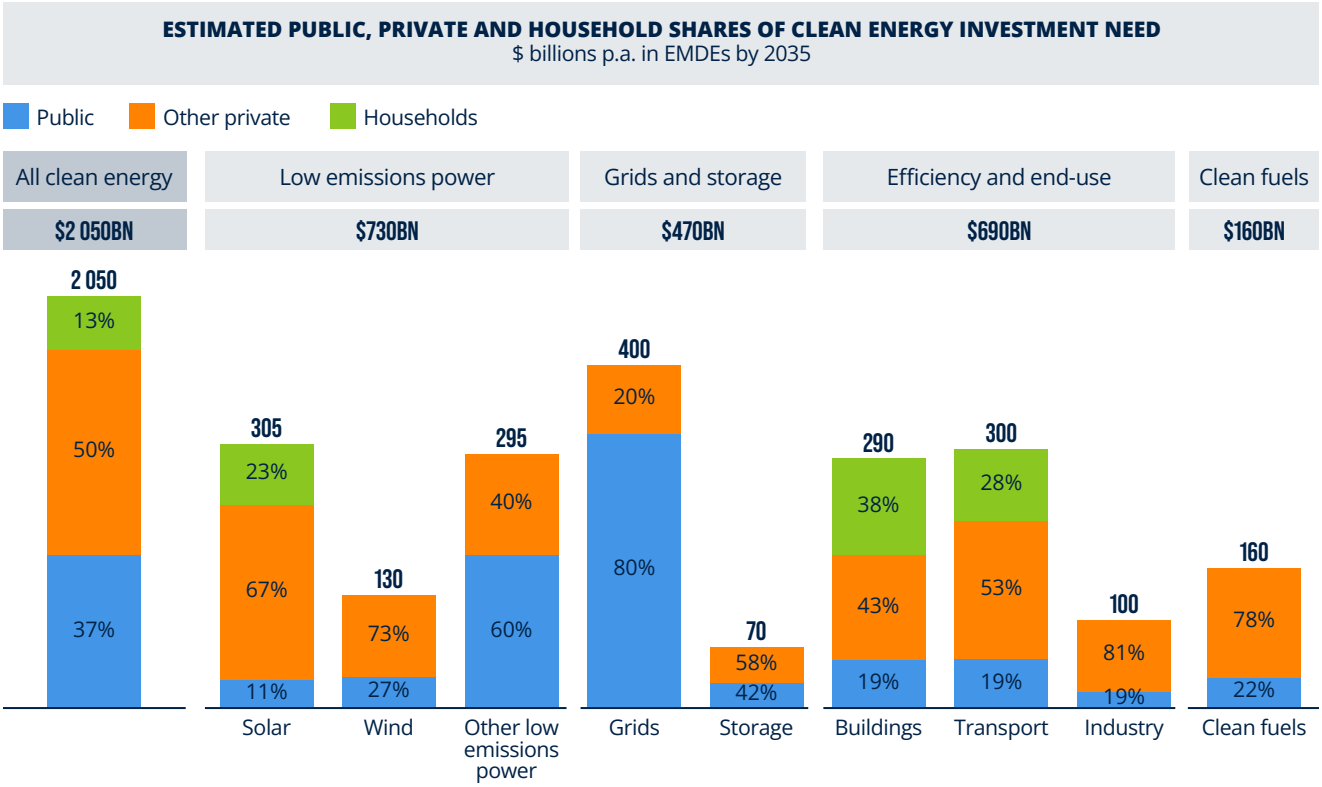



**The share of investment need that can be addressed by the private sector varies by energy sub-sector and solution** (Exhibit 4). For instance, by 2035, 81% of the total investment needed for efficiency and end-use investments could come from private sources, predominantly corporates and households, compared with 26% for grids and storage investments which are predominantly financed by public investment through state-owned enterprises (SOEs).

Similarly, low emissions power investments like solar can be largely privately financed, while public sources are more critical for nuclear or large hydropower projects. Factors shaping the extent of potential private finance participation across sectors include maturity of the principal technology, risk-return profile, public goods dependency and policy environment.

24. IEA & IFC (2023) *Scaling up Private Finance for Clean Energy in Emerging and Developing Economies.*
25. CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap.*
26. Figures may not add up to 100% due to rounding.

**EXHIBIT 4** ESTIMATES OF PUBLIC, PRIVATE AND HOUSEHOLD SHARES OF INVESTMENT IN CLEAN ENERGY SUB-SECTORS IN EMDES BY 2035 IN A NZE SCENARIO[27]




**Both domestic and international private finance will be needed to deliver the EMDE energy transition.** Of the estimated $1.3 trillion in private investment needed, roughly $680 billion - just over half - can come from domestic financial institutions, corporations, and households. Approximately 40% of domestic private investment is expected to come from households, particularly for solutions in renewable energy (e.g. rooftop and off-grid solar systems), e-mobility (e.g. electric vehicles and two/three-wheelers), energy efficiency (e.g. home retrofits, efficient appliances), and clean cooking.

Household investment combines self-financing (through savings) and intermediated finance (via banks). It means that achieving these levels of household expenditure critically relies on securing greater access to affordable finance. The remaining $610 billion of private finance will come from international sources like international financial institutions, multinational corporations and other sources of foreign private investment.

**While both domestic and international private finance will need to grow substantially, the step change will be greatest for international investment.** In 2023, private cross-border flows for the energy transition to EMDEs were just over $30 billion, less than 20% of total private flows.[28] This needs to increase by 19 times to reach the levels required in 2035, whereas domestic private finance needs to grow by 4 times.

27. This shows the estimated share of household investment for clean energy in EMDEs by 2035, including self-financing and other forms of intermediated financing. Households are a source of domestic private investment and calculated as part of the overall private investment needs for clean energy in EMDEs by 2035. However, a portion of household investment (around 60%) is assumed to be self-financed and is excluded from the estimated amount of private finance that will require risk mitigation to flow. The category of 'private' in the exhibit includes all other forms of domestic and international private investment including corporations. Figures may not add up to 100% due to rounding.
28. CPI (2025) *Global Landscape of Climate Finance 2025 Dataset.*

# 2.2 HOW MUCH PRIVATE FINANCE FOR THE EMDE ENERGY TRANSITION WILL REQUIRE RISK MITIGATION TO FLOW?

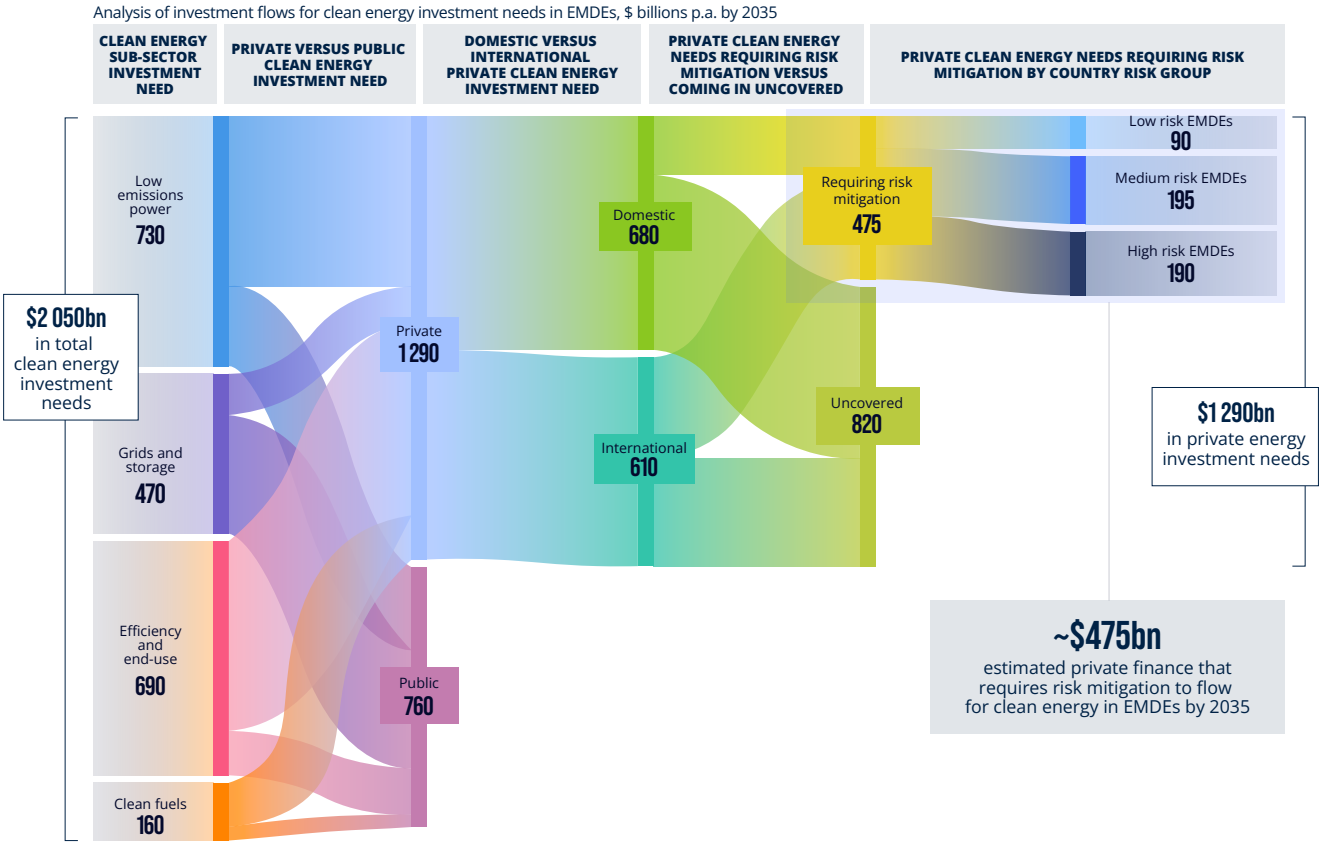
**The energy transition is an increasingly investable proposition.** Of the $1.3 trillion total private investment needed, an estimated two-thirds, or $820 billion, of private finance in 2035 could flow to the EMDE energy transition without risk mitigation - particularly in low-risk geographies and mature sectors.

Of this $820 billion, an estimated $160 billion will come from self-financed household investment and the remaining $660 billion from other private sources. This is an estimate of the amount of private capital that can flow uncovered - where risk-return profiles are well matched with investors' risk appetite, and where applicable fiduciary obligations and regulation.

## An estimated $475 billion of private finance - around one-third of the total private investment needed - will require some form of risk mitigation to flow to the EMDE energy transition by 2035 (Exhibit 5).[29]

Not all risk-return profiles are aligned with private finance mandates. To meet investment needs for these solutions, development and catalytic finance will be needed to reduce, manage and share risk, and crowd in private capital that would not otherwise participate.

**EXHIBIT 5** BREAKDOWN OF ESTIMATED CLEAN ENERGY INVESTMENT NEEDS FROM PRIVATE SOURCES REQUIRING RISK MITIGATION BY 2035[30]




29. Based on analysis conducted for this report, we estimate that roughly 36% of private finance will require some form of risk mitigation in order to flow to the EMDE energy transition by 2035. This estimate sits between two relevant, recent analyses: CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap,* which estimates that almost 70% of equity finance needs (international and domestic) may require some kind of risk mitigation to flow by 2035, and IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T,* which estimates that 20% of private international finance flows will be 'mobilised' versus 'direct' investments (i.e. some form of risk mitigation will be required) by 2035 (compared to 60% today). Estimating shares of finance requirements that will require forms of risk mitigation is an evolving field of analysis that requires more focused analyses and data inputs. Key assumptions used here can be found in the Technical Annex.
30. Figures may not add up due to rounding

**The private finance that will likely require risk mitigation to flow for the EMDE energy transition is not uniformly distributed.** Risk mitigation will be needed disproportionately for private investment in frontier markets - typically those with speculative-grade credit ratings, characterised by higher levels of country, political and foreign exchange risk that raise the cost of capital.

While high-risk EMDEs account for just 21% of private climate finance needed in 2035, they account for 39% of private finance that requires risk mitigation (Exhibit 6). As with high-risk markets, there is an outsized need for risk mitigation to bring risk-return profiles in line with private sector expectations for sectors with less mature solutions that are not yet at scale or cost-competitive in EMDEs. For instance, clean fuels represent 10% of the overall private climate investment need but could account for 17% of the private investment that will likely need risk mitigation to flow.

As a result, while total private investment need is highest in low- and medium-risk countries in mature technologies, the share of the private investment need that requires risk mitigation in order to flow is relatively smaller for lower-risk countries and mature solutions, and relatively larger for medium and higher risk countries and less mature solutions (Exhibit 7). These are investment areas where investment flows are more scarce today.

**EXHIBIT 6** BREAKDOWN OF INVESTMENT NEEDS BY COUNTRY RISK GROUPS[31]

| | Low risk EMDEs | Medium risk EMDEs | High risk EMDEs | **Total** |
|---|---|---|---|---|
| **INVESTMENT CREDIT RATINGS** | A to BBB- | BB+ to B- | CCC+ to D | |
| **# OF COUNTRIES** | 17 | 61 | 61 | **139** |
| **EMDE PRIVATE CLEAN ENERGY INVESTMENT NEED** | $555bn (43%) | $460bn (36%) | $275bn (21%) | **$1,290bn** (100%) |
| **PRIVATE INVESTMENT NEED REQUIRING RISK MITIGATION** | $90bn (19%) | $195bn (41%) | $190bn (39%) | **$475bn** (100%) |
| **RATIO OF $ OF PRIVATE INVESTMENT FLOWING UNCOVERED VS WITH RISK MITIGATION** | 6.2 : 1 | 2.4 : 1 | 1.5 : 1 | |

31. See Technical Annex for list of EMDEs per country risk group and the methodology used to categorise them. Numbers may not add up due to rounding.

**EXHIBIT 7** MATRIX SHOWING SHIFT IN INVESTMENT NEED DISTRIBUTION FROM TOTAL PRIVATE INVESTMENT NEED TO INVESTMENT NEED REQUIRING RISK MITIGATION, BY TECHNOLOGY MATURITY[32] AND COUNTRY RISK

**DISTRIBUTION OF PRIVATE INVESTMENT NEED ACROSS COUNTRY RISK GROUPS AND TECHNOLOGY MATURITY**

% distribution p.a. in EMDEs by 2035

| | COUNTRY RISK | | | |
|---|---|---|---|---|
| Technology maturity | Low risk | Medium risk | High risk | Total |
| Mature | 36% | 30% | 18% | 84% ($1,080bn) |
| Less mature | 7% | 6% | 3% | 16% ($210bn) |
| Total | 43% ($555bn) | 36% ($460bn) | 21% ($275bn) | 100% ($1,290bn) |

**DISTRIBUTION OF PRIVATE INVESTMENT NEED REQUIRING *RISK MITIGATION TO FLOW* ACROSS COUNTRY RISK GROUPS AND TECHNOLOGY MATURITY**

% distribution p.a. in EMDEs by 2035

| | COUNTRY RISK | | | |
|---|---|---|---|---|
| Technology maturity | Low risk | Medium risk | High risk | Total |
| Mature | 11% | 30% | 30% | 71% ($335bn) |
| Less mature | 8% | 11% | 9% | 29% ($140bn) |
| Total | 19% ($90bn) | 41% ($195bn) | 39% ($190bn) | 100% ($475bn) |

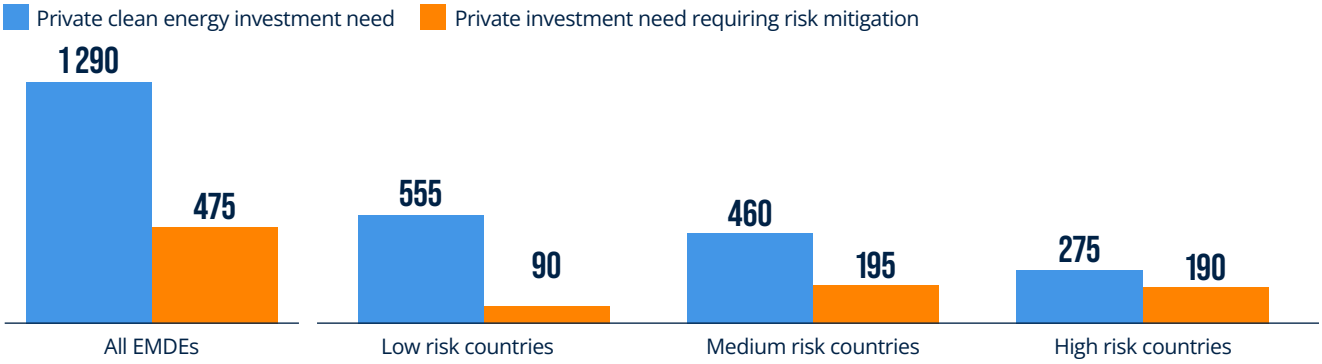
**Combining country risk and technology maturity provides a clearer picture of where development and catalytic finance is most needed.** Exhibit 8 outlines the investment needed broken down by country risk group and technology maturity. It captures the total private investment needed in clean energy, and the portion of this that requires risk mitigation support. Of the investment that requires risk mitigation, it splits this into mature versus less mature technologies.

In investment-grade, low-risk countries, mature technologies will likely require only limited risk mitigation despite making up the bulk of the total financing need. Conversely, there is a relatively larger role for development and catalytic finance to help build new markets and mobilise investment in less mature technologies. In contrast, in higher-risk countries, significant development and catalytic finance flows will still be needed for mature technologies, given country, political and foreign exchange risks.

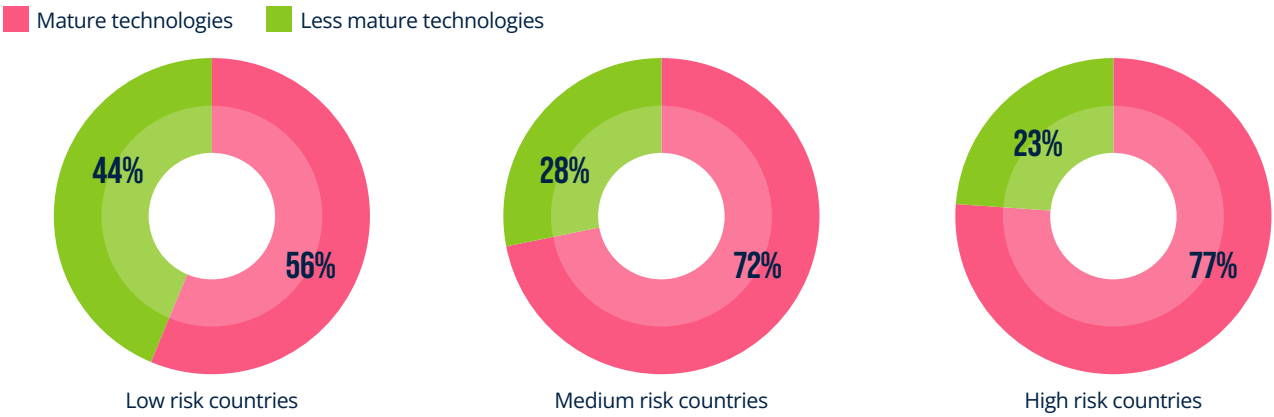
32. See Technical Annex for technology maturity categorisations. Numbers may not all add up due to rounding.

**EXHIBIT 8** INVESTMENT NEED BREAKDOWN BY COUNTRY RISK GROUP AND TECHNOLOGY MATURITY

**ESTIMATED PRIVATE CLEAN ENERGY INVESTMENT NEED VS. PORTION THAT REQUIRES RISK MITIGATION SUPPORT TO FLOW BY COUNTRY RISK GROUPS**
$ billions p.a. in EMDEs by 2035




**PRIVATE INVESTMENT NEED REQUIRING RISK MITIGATION PER COUNTRY RISK GROUP SPLIT FOR MATURE VS. LESS MATURE TECHNOLOGIES**
% of private investment need requiring risk mitigation in the energy transition in EMDEs by 2035




## 2.3 WHAT IS THE TRACK RECORD FOR PRIVATE CAPITAL MOBILISATION FOR THE EMDE ENERGY TRANSITION?

**The volume of development and catalytic finance required to mobilise private finance will depend critically on the mobilisation rates it can achieve.** This is an area of uncertainty. The challenge of estimating future potential mobilisation rates is compounded by a limited understanding of the baseline today – data is fragmented and incomplete. While the Organisation for Economic Co-operation and Development (OECD) and the MDBs annual Joint Report on Climate Finance provides valuable insights, visibility remains poor on the volumes of development and catalytic finance deployed across sectors and geographies, the role of this finance in crowding in private finance and the relative contribution of different development and catalytic finance mechanisms.

**Analysis for this report of 70 blended finance clean energy transactions in EMDEs since 2015 addresses some of this gap.**[33] The sample in scope included transactions from a range of country risk profiles (high, medium and low) across energy transition sub-sectors of varying degrees of maturity. For each transaction, an estimated mobilisation rate was calculated, derived from the face value of development and catalytic instruments relative to private commercial finance deployed (see the Technical Annex for additional details on the methodology).

33. Authors' analysis of blended finance transaction dataset from Convergence.

**The analysis finds that on average, around $2 of development and catalytic finance (as defined in Box 2) was required to mobilise $1 of private finance between 2015 and 2024 (Exhibit 9).**[34]

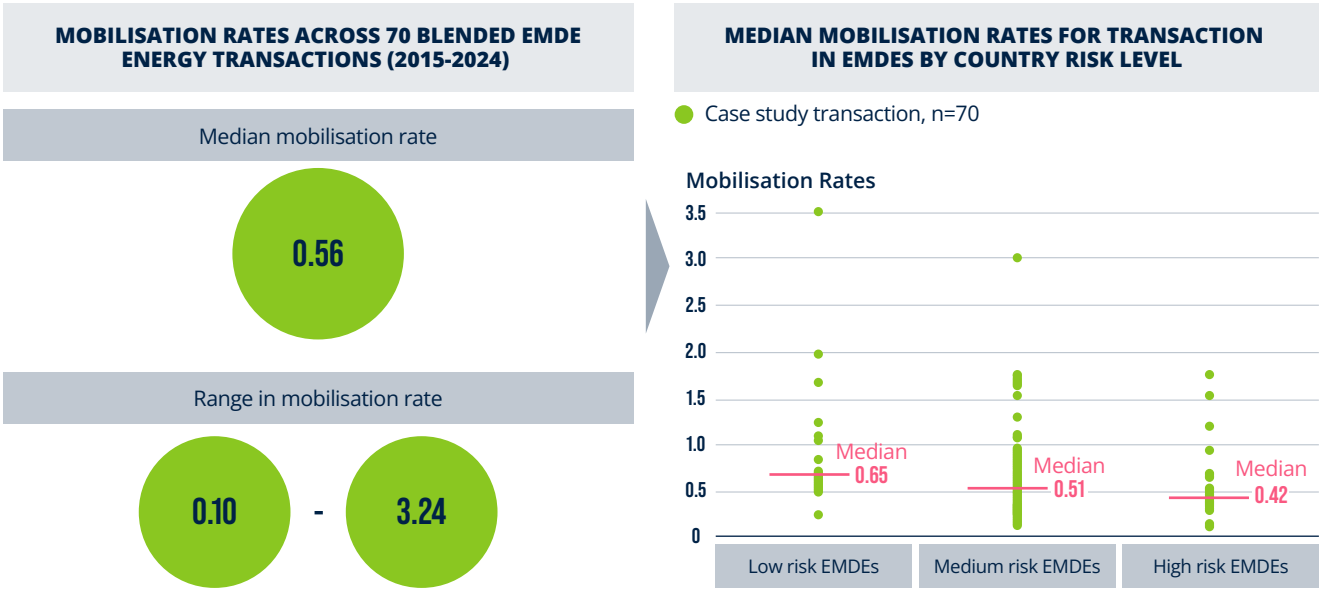
Key insights:

- **Mobilisation rates remain low -** the median mobilisation rate was 0.56 across all samples.
- **Rates were relatively higher in lower risk countries -** with the mobilisation rate for transactions in low-risk countries 1.5 times that of high-risk countries.
- **Commercial IFI lending accounts for more than half the development and catalytic finance deployed across the sample transactions.** This is followed by sub-market debt and equity that accounts for just under a third. Guarantees, insurance and FX hedging, and grants and technical assistance represents the rest, with higher shares for grants.

The sample averages disproportionately reflect investments in mature technologies in lower risk EMDEs and are not necessarily representative of the average mix of instruments required for the investment that requires risk mitigation.

- **This mix of development and catalytic finance instruments points to a critical reason for low mobilisation rates: debt financing dominates portfolio allocation,** particularly lending at or near commercial terms. This offers much lower mobilisation compared to other instruments - especially catalytic equity, guarantees, currency risk solutions - which drive greater reductions in cost of capital or are more risk-bearing.

**EXHIBIT 9** KEY INSIGHTS FROM HISTORICAL CASE STUDY ANALYSIS OF BLENDED TRANSACTIONS FOR EMDE ENERGY TRANSITION




34. The approach of measuring mobilisation rates used in this analysis does not attempt to measure causality or additionality but instead assesses the volumes and mix of development and catalytic finance relative to the private commercial capital volumes present in a single transaction. While similar to 'leverage' ratios sometimes used to measure private capital mobilisation, it differs by not considering public sources of commercial lending as being leveraged or mobilised. See Technical Annex for further discussion on the measurement of mobilisation rates.

# 2.4 HOW MUCH DEVELOPMENT AND CATALYTIC FINANCE WILL BE REQUIRED TO DELIVER THE PRIVATE FINANCE NEEDED FOR THE EMDE ENERGY TRANSITION?

**More - and more effective – development and catalytic finance will be imperative to mobilise the annual $475 billion private finance that will require some form of risk mitigation to flow, for the EMDE energy transition by 2035.** Whether or not this is achievable depends crucially on the efficiency and effectiveness of development and catalytic finance.

**At current mobilisation rates, the gap between available versus required development and catalytic finance to unlock private investment in EMDEs is vast.** Today only an estimated $70 billion[35] flows from development and catalytic finance providers like MDBs, national and bilateral DFIs, VCEFs and philanthropy to the energy transition in EMDEs. At current mobilisation rates, the volume of finance needed to share, manage and reduce risk for private investment for the EMDE energy transition in 2035 would be a staggering $985 billion (around $490 billion in commercial IFI financing and around $490 billion in other, more catalytic instruments) (Exhibit 10). This is equivalent to around 14 times current flows. Even with a significant step change in international public flows to EMDEs, this dwarfs feasible levels.

**Rapidly dialling up mobilisation rates offers a compelling alternative to scaling development and catalytic finance volumes beyond what is beyond what is currently possible.** A critical lever is to shift, in aggregate, the mix of development and catalytic finance mechanisms deployed towards instruments with significantly higher mobilisation potential. It means moving away from lower mobilisation mechanisms like IFI commercial lending and increasing use of the most risk-reducing and catalytic mechanisms – like guarantees, local currency financing and catalytic equity. Achieving the levels of private investment needed for the transition will in large part depend on how far and fast this change to the development and catalytic capital mix happens.

**Three scenarios demonstrate possible futures:**

**CURRENT MOBILISATION LEVELS SCENARIO**

The mix of development and catalytic finance instruments reflects the level of mobilisation per dollar seen on average, based on case studies (Exhibit 9). This would lead to a need of more than $985 billion in development and catalytic finance annually (around $490 billion in commercial IFI financing and around $490 billion in other, more catalytic instruments) by 2035 to mobilise private finance for the EMDE energy transition. This reflects a worst-case scenario that is unlikely (given recent actions and commitments by key providers of development and catalytic finance) but demonstrates the magnitude of the need if great strides are not made in improving private capital mobilisation.

35. Includes 2023 finance flows from multilateral DFIs, bilateral DFIs, multilateral climate funds, national DFIs, export credit agencies and philanthropies to EMDEs and LDCs for clean energy (includes energy systems, and efficiency and end-use for buildings, transport and industry) from CPI (2025) *Global Landscape of Climate Finance 2025 Dataset.*

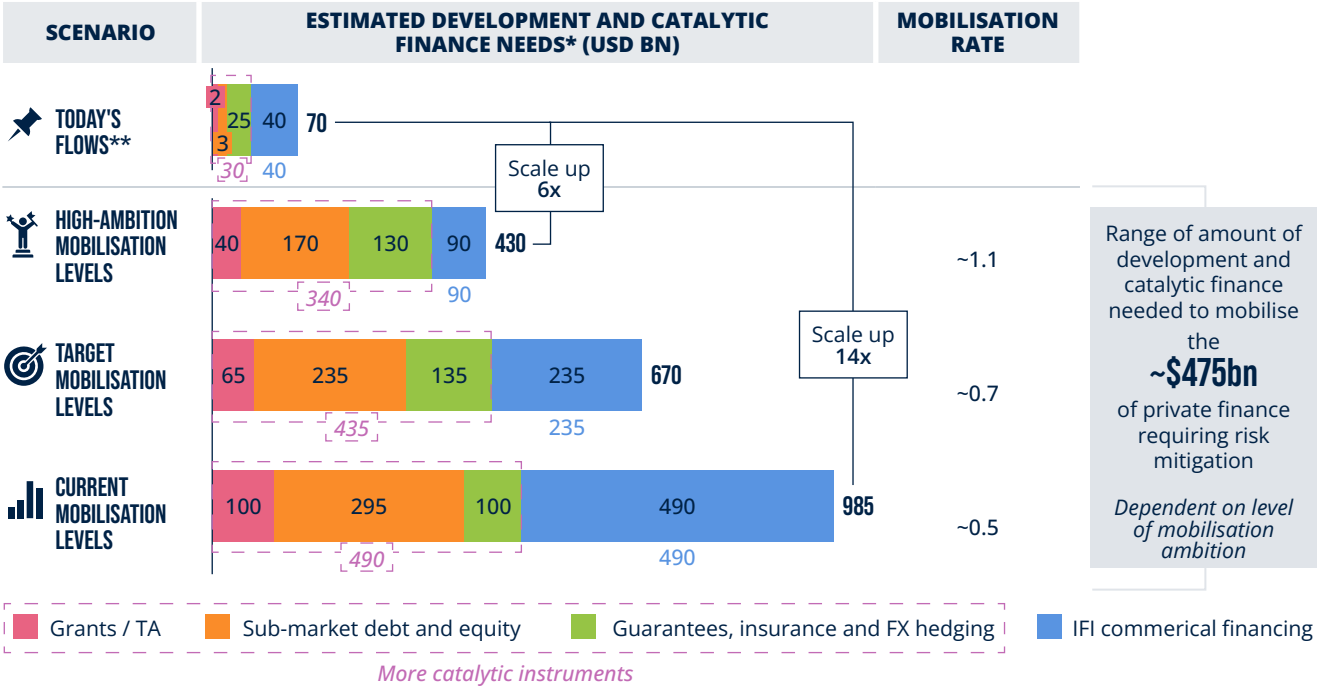
**TARGET MOBILISATION LEVELS SCENARIO**

The mix of development and catalytic finance instruments evolves approximately in line with stated mobilisation ambitions from MDBs.[36] The development and catalytic finance needed would decline by an estimated 30% to $670 billion per year (around $235 billion in commercial IFI financing and around $440 billion in more catalytic instruments). This scenario is an estimate based on MDBs' high-level climate finance commitments and private capital mobilisation targets projected to 2035, and qualitative commitments from MDBs that indicate shifts towards more catalytic instruments and greater mobilisation efforts.

**HIGH-AMBITION MOBILISATION LEVELS SCENARIO**

A faster shift away from traditional lending models towards the most efficient and risk-bearing instruments could lower the risk-reducing finance needed to an estimated $430 billion per year (around $90 billion in commercial IFI financing and around $340 billion in more catalytic instruments) - a 55% saving versus the base case, 'current mobilisation levels' scenario. See Exhibits 10 and 11. This amount could decrease further based on additional considerations discussed below.

**EXHIBIT 10** DEVELOPMENT AND CATALYTIC FINANCE ESTIMATES AND MOBILISATION RATES BY SCENARIO




* Potential to lower finance needed through balance sheet recycling, while actual capital requirements will vary by instrument and may be lower than volumes presented here

** Scenarios are not projections from today's flows but shown here as comparison

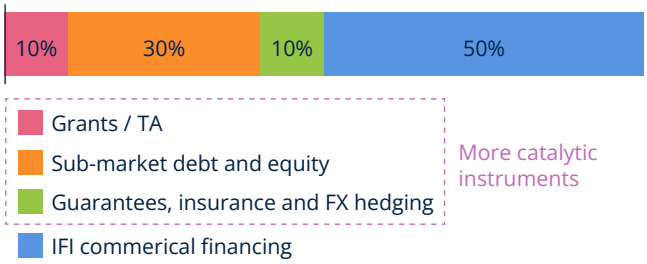
36. This scenario takes MDBs' joint climate finance commitments and private capital mobilisation targets for 2030, projects these targets to 2035, and models an instrument mix that would achieve a similar mobilisation rate. Qualitative inputs from a range of MDB reports, strategy documents and communications collectively point to increasing use of catalytic instruments, particularly guarantees, equity, and concessional capital, with a stronger emphasis on private capital mobilisation through blended finance and risk mitigation approaches. See Technical Annex for further details.

**EXHIBIT 11** INDIVIDUAL SCENARIO BREAKDOWNS WITH KEY ASSUMPTIONS

## SCENARIO 1: CURRENT MOBILISATION LEVELS

| | |
|---|---|
| Development and catalytic finance required p.a | **$985bn** |
| IFI commercial financing portion | **$490bn** |
| More catalytic portion | **$490bn** |
| Mobilisation rate | **~0.5** |

Development and catalytic finance instrument split




Key assumptions:

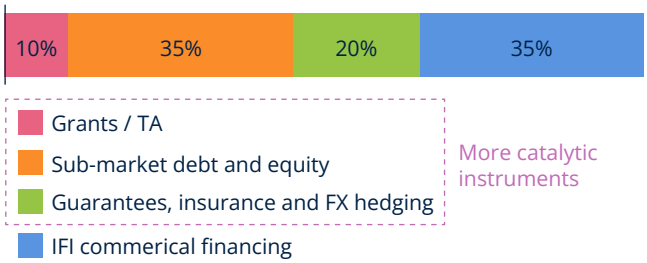
- The instrument mix in 2035 will reflect a **similar development and catalytic finance instrument mix** to today's averages
- **No increases in efficiency by 2035 are achieved relative to today** (e.g. overall instrument mix does not meaningfully change)
- **Use of most catalytic instruments** (e.g. guarantees, catalytic equity, local currency finance) remains limited
- **IFI commercial lending remains predominant** form of financing

*This represents a least likely, outer bound scenario due to active changes taking place in the MDB financing ecosystem*

## SCENARIO 2: TARGET MOBILISATION LEVELS

| | |
|---|---|
| Development and catalytic finance required p.a | **$670bn** |
| IFI commercial financing portion | **$235bn** |
| More catalytic portion | **$440bn** |
| Mobilisation rate | **~0.7** |

Development and catalytic finance instrument split



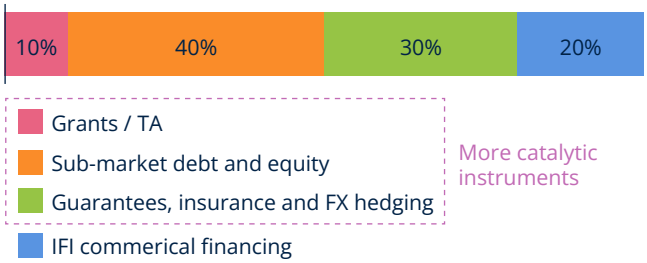

Key assumptions:

- **The expected growth** in climate finance commitments and private capital mobilised from 2024 to 2035, **based on MDB commitments, implies a 0.7 target mobilisation rate by 2035** (see technical annex)
- By 2035, the **development and catalytic finance instrument mix shifts to greater shares of more catalytic instruments** like guarantees, equity and local currency financing **in lieu of commercial IFI lending,** reaching a 0.7 mobilisation rate
- **Increases in mobilisation effects is due to shifts in the instrument mix only,** and does not assume any incremental mobilisation efficiencies

## SCENARIO 3: HIGH-AMBITION MOBILISATION LEVELS

| | |
|---|---|
| Development and catalytic finance required p.a | **$430bn** |
| IFI commercial financing portion | **$90bn** |
| More catalytic portion | **$340bn** |
| Mobilisation rate | **~1.1** |

Development and catalytic finance instrument split




Key assumptions:

- By 2035, accelerated efforts beyond today's commitments shifts the **instrument mix** to even higher shares of the most catalytic instruments
  - In lieu of commercial IFI lending, share of **risk mitigation instruments like guarantees/insurance/ FX hedging triples vs base case**
  - **Catalytic equity** as a share of development and catalytic finance has **increased 15x** from a base case scenario
- **Increases in mobilisation effects is due to shifts in the instrument mix only,** and does not assume any incremental mobilisation efficiencies

**Importantly, development and catalytic finance requirements may in practice be lower than the figures presented in this paper, which are aggregate, directional, outer bound estimates based on currently available data.** Several factors that could not be incorporated into the modelling may reduce overall needs, including:

- **Optimising the instrument mix, based on more granular data on different types of risk:** Significant data limitations on different types of risks make it challenging to determine the optimum mix of development and catalytic financial instruments. More granular data and subsequent analyses are needed to further understand how development and catalytic finance can address different types of risk (e.g. perceived versus currency risk) and its implications on the scale and mix of development and catalytic finance.
- **Rapid changes to accommodate enhanced mobilisation rates in the DFI system:** The analysis is grounded in historical mobilisation data which do not reflect rapid changes occurring in the DFI system to orient towards higher mobilisation objectives. Recent analyses encourage optimism on this front.[37] The analysis does not model the impacts of scaling balance sheet recycling mechanisms for MDBs (such as originate-to-share and originate-to-distribute models), or of other portfolio-level approaches, on the quantum of development and catalytic finance needed. It also does not model the catalytic effects of interventions to build markets, including financial instruments such as contracts for difference, feed-in tariffs, advance market commitments, or broader improvements in regulatory environments, pipeline development and capacity building that enable and mobilise private capital.
- **Estimates of annual flows do not reflect public capital required:** The development and catalytic finance volumes in this report reflect the annual flows needed to mobilise private investment for the EMDE energy transition, not the public capital required on MDB and DFI balance sheets to deliver them. For example, capital requirements for guarantees can often be far lower than volumes required, especially if reinsured.[38] Capital adequacy and risk weighting reforms could mean that this can unlock flows with very low or no increased public capital required (see Box 3).
- **Changes in country risk and technology maturity:** This analysis takes a conservative approach, assuming that a) current sovereign ratings and country risk profiles, and b) clean energy technology maturities will not significantly change by 2035. In reality, improvements in either of these areas would reduce the quantum of development and catalytic finance needed.
  - **Changes in investment grade status for key EMDEs could reduce the amount of development and catalytic finance needed.** A few large, medium-risk EMDEs - such as Brazil, Colombia, South Africa and Vietnam - are on the cusp of investment grade status and could reasonably upgrade in the next ten years. This would lessen the need for risk-reducing measures in these countries which collectively require a large share of clean energy investment, reducing the overall development and catalytic finance needed by 2035.

37. Recent analysis provided by CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap* finds potential mobilisation rates from catalytic equity ranging from 2.3x to 30x. Reinsured or unfunded guarantees pose another area for orders of magnitude larger mobilisation potential (see footnote 36).
38. For example, the World Bank's Multilateral Investment Guarantee Agency (MIGA) has reinsured around 70% of its guarantee portfolio (with a board approved limit of up to 80%) to leverage its investment guarantee capacity. See MIGA (2025) *Annual Report 2025: MIGA Appendixes.* Unfunded guarantees have extremely high mobilisation potential (in the order of 30x-55x) as has been demonstrated by the Swedish International Development Cooperation Agency (SIDA) which provides unfunded guarantees, utilising small amounts of public capital relative to the capital mobilised (see Blended Finance Taskforce (2023) *Better Finance, Better Guarantees*). However, not all development and catalytic finance providers are able to reinsure their guarantees or provide unfunded guarantees to this extent (e.g. due to governance structures, risk weighting frameworks).

- **Short of a shift in investment grade status, advances in the enabling environment in EMDEs could significantly lower real and perceived risks, thereby increasing the mobilisation rate of development and catalytic finance instruments.** This includes clear, predictable policy and regulatory frameworks that build investor confidence; better availability of performance, climate and risk data to enable more accurate pricing and due diligence; strong, well-governed country platforms that build stronger, quality pipelines and coordinate public, private and development partners around integrated investment strategies; reform packages and partnerships to finance investment needs; and deepening of local capital markets and financial sector capacity.[39] Together, these help to lower the barriers to private flows and enhance mobilising effects of development and catalytic finance.

- **Across geographies, as climate technologies mature, an increasing share will become cost-competitive with incumbent, high-carbon solutions - shifting into the mature category, reducing the need for development and catalytic finance over time.** In many cases, these technologies face market failures today - including high perceived risk, limited track record, coordination failures and mispriced externalities. Development and catalytic finance instruments can help to address these failures by lowering early investment risk and enabling deployment at scale. By enabling private investment to flow today, development and catalytic finance can accelerate learning, cost reductions and market growth for these solutions, bringing forward market tipping points, after which technologies become commercially viable without ongoing support.

**BOX 3** A NOTE ON BALANCE SHEET REQUIREMENTS FOR DEVELOPMENT AND CATALYTIC FINANCE INSTRUMENTS

## The development and catalytic finance volumes estimated in this report represent the annual flows of development and catalytic finance required to mobilise private investment for the EMDE energy transition. Importantly, these figures do not reflect the MDBs and DFIs balance-sheet capital changes needed to deliver such catalytic flows, and hence the amount of public funding required to unlock such catalytic finance.

In practice, shifting portfolios toward more catalytic and higher risk-bearing instruments has direct and complex implications for balance-sheet usage, capital-adequacy ratios, provisioning and risk-weighting. These implications are complex and difficult to anticipate with precision. While there is broad alignment on the capital requirements for traditional instruments such as senior debt or equity, institutions apply markedly different standards and methodologies when booking capital against guarantees, depending on their structure, underlying risk, fee profile, and other characteristics. These approaches are shaped by internal policies as well as the nature of an institution's capital base and its credit rating. Rating agencies likewise lack consistent methodologies for assessing the risks associated with newer catalytic instruments, and tend to err on the conservative side.

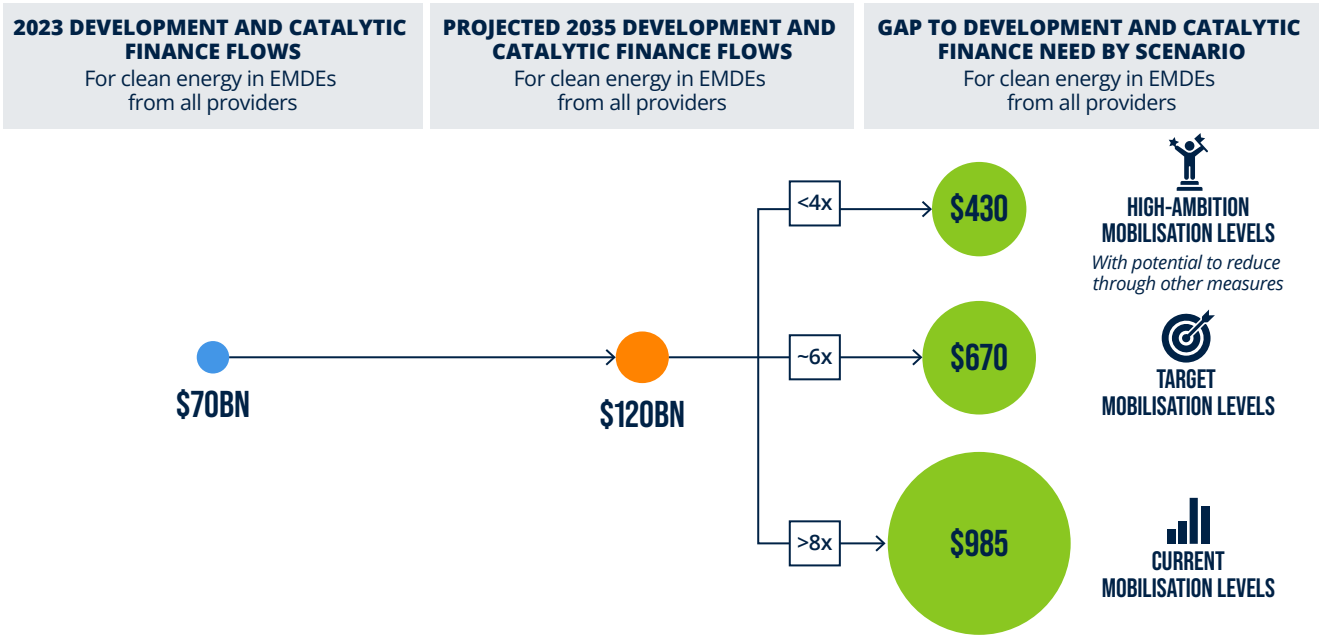
This underscores the importance of advancing capital adequacy framework (CAF) reforms; strengthening dialogue with credit rating agencies to narrow gaps between perceived and realised risk; and working closely with shareholders and IFI treasuries to modernise capital-adequacy assessments, recognise callable capital, and scale up risk-transfer mechanisms. These issues are discussed further in Section 3.

39. Grantham Research Institute on Climate Change and the Environment (2021) *Blended Finance for Scaling Up Climate and Nature Investments: Report of the One Planet Lab.*

**Despite the opportunity offered by enhancing mobilisation rates, an increase in development and catalytic finance volumes versus the current trajectory remains essential. A projection of current trajectories shows that providers could deliver $120 billion in development and catalytic finance for clean energy in EMDEs by 2035, which is still four times less than required in a highly ambitious scenario (Exhibit 12).**[40]

This indicates that current commitments are not sufficient and that higher aspirations for both climate finance as well as mobilisation targets from MDBs and other providers are an imperative.

**EXHIBIT 12** COMPARISON OF TODAY'S CLEAN ENERGY DEVELOPMENT AND CATALYTIC FINANCE FLOWS VERSUS A 2035 PROJECTION BASED ON STATED COMMITMENTS VERSUS THIS REPORT'S SCENARIO ANALYSIS




## This analysis underscores the urgency of rapidly evolving capital provider mandates and portfolios to scale provision of the most catalytic mechanisms.

Failure to do so risks inflating the total development and catalytic finance need to above achievable levels and jeopardising the delivery of critical targets and commitments - including the $1.3 trillion in international finance for EMDEs by 2035 as laid out in the Baku to Belém Roadmap. Further analysis is required to fully assess the capital needs, and therefore the public finance support, associated with the change in mix of instruments suggested under these scenarios, taking into consideration ongoing reforms of key institutions.

A potential agenda for further research is laid out in Section 3.

**Achieving the most ambitious scenario will require considerable changes in asset allocation and therefore has implications on MDB and DFI's financial models and, potentially, their sustainability.** Making these changes isn't possible without considerable structural reform and shareholder support. This is further discussed in section 3 below.

40. Estimates for the 2035 projected development and catalytic finance flows for clean energy in EMDEs is calculated as follows: MDBs' annual climate finance commitments to EMDEs by 2035 are assumed at $160 billion (based on projected growth from MDBs' $120 billion commitment by 2030 to low- and middle-income countries - see Technical Annex for further details). MDBs are assumed to represent 60% of total climate finance from all development and catalytic finance providers, meaning an estimated $270 billion in total climate finance could be provided by all development and catalytic finance providers to EMDEs by 2035. This then assumes that 45% of climate finance will go to clean energy based on 2023 CPI investment flows from development and catalytic finance providers, resulting in a total projection of ~$120bn in development and catalytic finance flows for clean energy in EMDEs by 2035 based on stated commitments.

# ADDITIONAL CONSIDERATIONS

## While not included in the scope of this analysis, other factors could further improve mobilisation rates and bring down the development and catalytic finance required:

**Broader enabling conditions and market-making:**

- Broader interventions to build markets and transform supply-chains, including ad-hoc financial instruments as well private capital enabling interventions (e.g. policy and regulatory reform, standards, capacity building) and private capital mobilising interventions (e.g. pipeline development, project preparation, revenue support and first-mover and demonstration investments) could increase mobilisation rates across instruments (see Box 4). However, it is important to note, that lower mobilisation rates may still be a feature when deploying development and catalytic finance instruments towards market-creation activities, as these work to improve enabling conditions generally as opposed to directly mobilising capital.

**Balance sheet recycling to increase mobilisation:**

- MDBs and DFIs can recycle their scarce capital more efficiently by expanding risk transfer mechanisms, such as securitisation, guarantees and reinsurance, that increase lending headroom for a given amount of capital. Originate-to-distribute (OTD) and originate-to-share (OTS) mechanisms, for instance, allow private finance - particularly institutional investors - to share in MDB loan portfolio risk in ways that align with their risk-return preferences. By pooling loans and distributing or sharing these with investors - either through cash securitisations (e.g. Collateralised Loan Obligations) or synthetically (e.g. Significant Risk Transfers) - MDBs and DFIs can free up space on balance sheets for re-deployment into transition-aligned projects. Examples, such as IFC's 2025 EM Securitization Program and African Development Bank's (AfDB) expanding Room2Run platform, highlight how these mechanisms can expand lending within existing capital and risk constraints without compromising credit ratings. These efforts could be amplified by developing multi-MDB asset classes that aggregate loans across several MDBs and DFIs into diversified portfolios.

  A cross-MDB OTD platform would offer investors exposure to broader, more diversified pools of EMDE assets while allowing MDBs to share risk with each other.[41] Such efforts should be advanced with careful consideration of the ongoing discussions about the need to maintain preferred creditor treatment (PCT) norms, particularly in relation to sovereign or sovereign-guaranteed exposures.[42]

**Mobilising private capital through dedicated funds:**

- Development and catalytic finance instruments will likely be increasingly applied at the fund level rather than the project level, which may generate higher mobilisation rates than estimated in this paper.[43] This reflects a change in how instruments are deployed through larger, scaled investment vehicles that pool assets and use catalytic structures, such as concessional or mezzanine tranches, to improve risk-return profiles for private investors. Investments in these funds will ultimately need to flow to project level investments, where additional private capital may be mobilised, or additional development and catalytic finance may be required. Thus, fund-level mobilisation must remain distinct from project-level mobilisation to avoid double counting as capital flows into underlying transactions.

**Improved mobilisation across all instruments:**

- By 2035 a shift away from bespoke, deal-by-deal solutions towards scalable, standardised and aggregated approaches could make development and catalytic finance instruments more efficient and reduce transaction costs. With more scalable, consistent structures and greater track record of transactions, investor familiarity and perceptions of investability also stand to improve. Together, this could increase mobilisation rates across the board - although the scale of these potential improvements remains unclear.[44]

See Chapter 5 of the IHLEG's Fourth Report for a more detailed discussion.[45]

41. IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T; OECD (2025) Mobilising Private Capital for Climate Action.*
42. ODI (2026) *Preferred creditor treatment and multilateral development banks' mobilisation agenda.*
43. Convergence (2022) *The Action Plan for Climate & SDG Investment Mobilization Annexes,* p.40.
44. OECD (2025) *Increasing development finance efforts to scale private finance mobilised and its impact.*
45. IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T*

## **Market creation and value chain transformation is critical to catalyse private investment at scale in EMDEs, beyond the deployment of individual financial instruments.** This requires a coordinated and sequenced set of activities that both enhance the enabling conditions for private investment and directly mobilise private capital into transactions and assets.

The increased allocation towards instruments like guarantees, catalytic equity and first-loss structures called for in this paper can play important roles in market creation in EMDEs. However, they sit alongside broader interventions that target more structural shifts. This includes:

**Private capital enabling interventions** focus on improving the overall investability of markets by addressing structural, regulatory and capacity constraints. Enabling interventions include:

- **Policy, regulation and market design** to create revenue visibility and reduce risk across sectors – for example, renewable auctions and green taxonomies.
- **Standards, contracts and market infrastructure** to reduce transaction costs and enable replication – for example, standardised power purchase agreements (PPAs) and contract templates for emerging technologies.
- **Capacity building and pipeline infrastructure** to improve pipeline quality execution capacity, building the supply of investable solutions – for example, project preparation facilities.
- **Demand creation and behavioural incentives** to stimulate early demand and unlock commercially viable markets that require a market nudge – for example, green mortgage subsidies and public procurement commitments.

**Private capital mobilising interventions** directly crowd in private capital into specific pipelines, transactions or asset classes. Mobilising interventions include:

- **Pipeline creation and project preparation** to convert opportunities into bankable projects – for example through funding for feasibility studies and transaction advisory services
- **Revenue support and market-shaping mechanisms** to provide price certainty and address revenue risk in early markets, including contracts for difference, long-term offtake agreements, and buyers' clubs
- **Specific instruments can play a role,** such as catalytic finance for first movers in new markets (e.g. catalytic equity, first-loss capital and concessional co-investment) to establish a track record, offset first-mover disadvantage and accelerate cost curves; and crowding in investment to targeted, early-stage investments (e.g. through guarantees, insurance, FX hedging and subordinated debt)

Examples of models that have been adopted in recent years, and that can serve as a model for scaling up, include India's use of the Solar Energy Corporation of India (SECI) as a centralised intermediary that aggregates demand and provides creditworthy long-term offtake agreements to renewable developers; Germany's H2Global mechanism, which uses a double-auction model to bridge the cost gap between green hydrogen supply (often in emerging markets) and demand in importing countries; India's emerging green public procurement initiatives, which aim to create early demand for low-carbon materials such as steel and cement through government purchasing commitments; and Brazil's large-scale renewable energy auction and corporate PPA markets, which combine long-term price certainty with growing private sector demand to enable rapid deployment at scale.

Further work is needed to better understand the relative effectiveness of these interventions, how they interact, and their catalytic impact in new markets and less mature technologies – beyond transaction-level mobilisation.

# 3. A PATH FORWARD TO SCALE AND EFFECTIVELY DELIVER ON THE DEVELOPMENT AND CATALYTIC FINANCE NEEDED TO MOBILISE PRIVATE FINANCE FOR THE ENERGY TRANSITION IN EMERGING MARKETS AND DEVELOPING ECONOMIES

**The central recommendation of this analysis is that MDBs, DFIs, VCEFs and philanthropies should increase the total deployment and relative allocation of the most risk-reducing and catalytic mechanisms, particularly instruments like guarantees, FX risk mitigation and catalytic equity, across their climate portfolios.**

Rapidly scaling up the most efficient instruments in line with the 'high-ambition mobilisation levels' scenario, while also expanding risk transfer and recycling mechanisms like OTD and OTS, and increasing market building efforts, will be essential to put the levels of private capital mobilisation needed for the EMDE energy transition within reach.

**Doing so is essential, but requires additional critical enablers to be in place.** This is true within MDBs, DFIs and within the wider policy and enabling environment. It is part of a broader set of reforms in the global climate finance framework that are mutually reinforcing and have the potential to significantly increase the mobilisation of public finance instruments.

# 3.1 ENABLING CONDITIONS WITHIN MULTILATERAL DEVELOPMENT BANKS AND DEVELOPMENT FINANCE INSTITUTIONS

**Today, institutional challenges limit scope for expanding deployment of the most risk-reducing and catalytic mechanisms.** In many MDBs, and particularly DFIs, private capital mobilisation remains peripheral. Mandates often refer only loosely to mobilisation and lack concrete implementation plans, KPIs, or links to staff incentives.

Institutional risk appetite is also constrained by the need to preserve AAA balance sheets. This requirement limits the volume of higher-risk instruments that call for MDBs to hold more capital in reserve, such as equity, subordinate debt or early-stage capital. This is particularly the case for MDBs that rely on leverage. These challenges are compounded by gaps in internal capacity and systems for operating complex risk-sharing measures.

**Key recommendations:**

- **Elevate mobilisation within mandates and incentives.** Update MDB and DFI mandates, strategies and frameworks to explicitly include private capital mobilisation. Strengthen operationalisation through quantitative KPIs and cascade these into corporate scorecards, staff incentives, and planning.
- **Implement the G20 capital adequacy framework (CAF) recommendations in full to enable more efficient use of MDB capital and increase headroom.** Key measures include:
  - Strengthening dialogue with credit rating agencies to improve assessment of MDBs' financial strength.
  - Incorporating the financial benefits of callable capital in capital adequacy assessments Improving data transparency.
  - Working with shareholders to reconcile misalignment of risk tolerance versus MDB development goals and available resources
  - Further measures beyond CAF - like hybrid capital instruments and further adjusting loan to equity ratios while maintaining AAA ratings - could also be explored in the spirit of increasing the flexibility of MDBs to deploy higher mobilisation instruments.
- **Improve cross-system coordination.** Improving not only inter-MDB collaboration and transparency but also coordination with DFIs, VCEFs and NDBs can accelerate pipeline, enable larger transactions, and improve private sector engagement.

As previously discussed, there are also a number of broader enabling environment conditions which must be tackled to drive additional capital to the EMDE energy transition. These conditions and associated recommendations such as building pipelines of quality investments, strengthening local capital markets, enhancing data transparency and reforming credit rating methodologies and prudential regulations, are discussed comprehensively in IHLEG's Fourth Report[46] and the Report of the COP30 Circle of Finance Ministers.[47] Notably, the development and catalytic finance instruments discussed in this report can play important roles in creating new markets and supporting these enabling conditions.

46. IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T.*
47. Circle of Finance Ministers (2025) *Recommendations on Scaling Private Finance for the Energy Transition in EMDEs.*

# 3.2 SUGGESTED AREAS FOR FUTURE ANALYSIS

## This report provides an indicative first answer on development and catalytic finance requirements to mobilise the private finance need for the energy transition in EMDEs and its implications for capital providers.

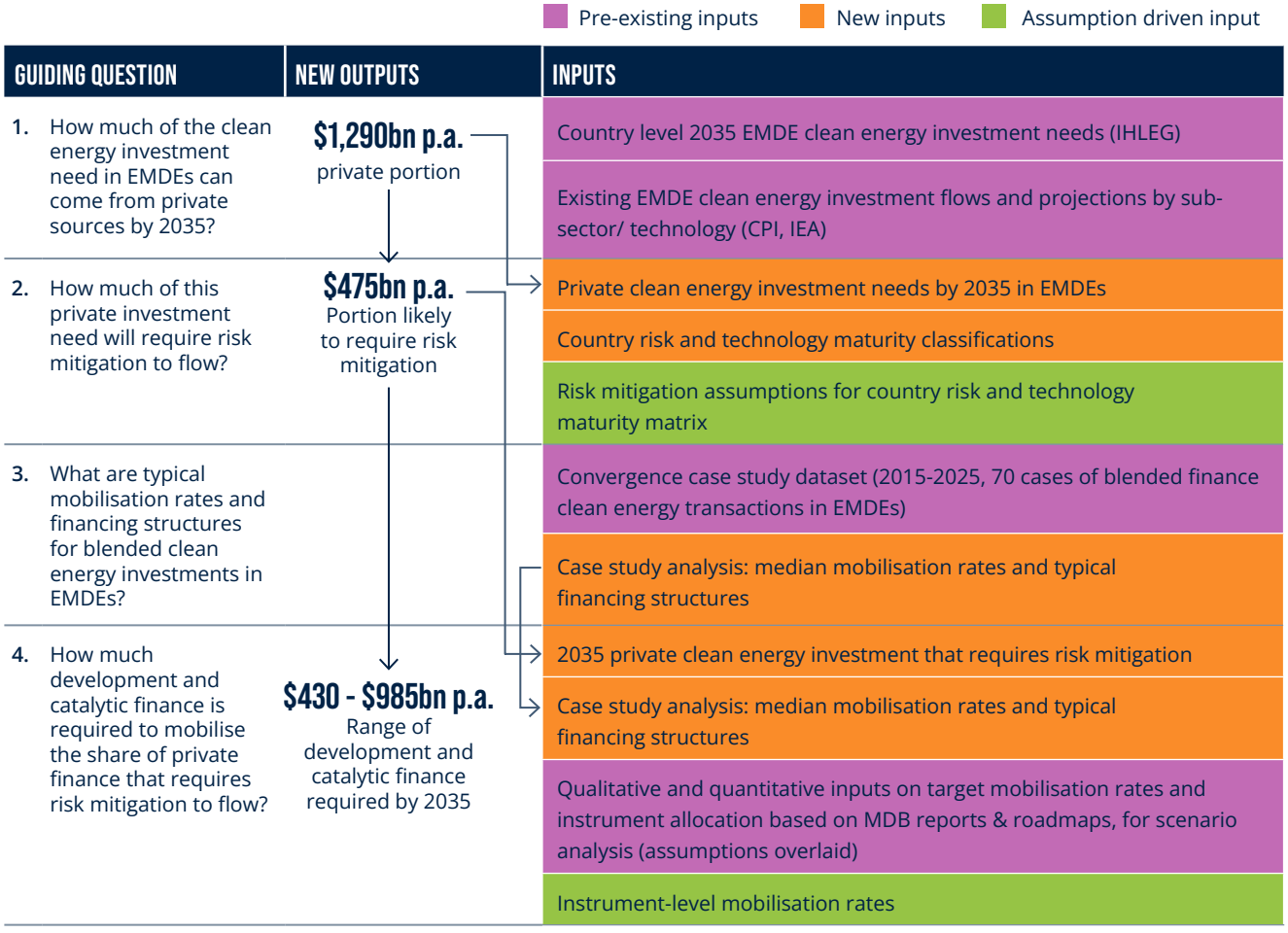
There are a number of priority areas for further analysis proposed here to push this agenda forward:

- **Increasing understanding of the portion of private finance that will require risk mitigation to flow,** building on existing analyses to achieve a more granular picture across different categories of country risk and technology maturity.
- **Assessing the capital intensity versus mobilisation potential of development and catalytic finance instruments.** A comparative analysis of how different instruments perform in terms of private capital mobilised per MDB/DFI dollar deployed will shed light on the quantitative balance sheet implications for different development and catalytic finance instrument mixes deployed at scale. This depends on parallel efforts to enhance data granularity on development and catalytic finance instrument performance. This should be complemented by more granular data and subsequent analyses to further understand how development and catalytic finance can address different types of risk (e.g. perceived versus currency risk).
- **Determining the total public finance requirements under different scenarios.** In light of the above analysis on capital requirements associated with different mixes of catalytic instruments, this would provide guidance on the volume of public contributions required to meet ambitions aligned with the Baku to Belém Roadmap.
- **Granular mapping of investment needs to the investment cycle.** Breaking down EMDE clean energy investment needs by stage (e.g. originate, structure and scale) and quantifying the development and catalytic finance instruments most relevant to each stage will provide more granularity on the volumes needed for specific instruments and how they can be most effectively used.
- **Extending the analysis to other transition-critical sectors.** Applying a similar methodology to other sectors like adaptation and resilience and nature-based solutions to build a system-wide picture of development and catalytic finance needs.
- **Assessing the multiplying effects of originate-to-distribute models.** Estimating the multiples that could be achieved through OTD models that transfer risk for investments at lower risk, operational stages - and the implications this can quantitatively have on development and catalytic finance availability. Such an analysis would need to manage data limitations.
- **Assessing the enabling and mobilising effects of catalytic instruments and other mechanisms in the context of broader market building interventions.** Understanding and measuring the mobilising effects of different market-making mechanisms (discussed in Box 4) towards enabling broader private capital mobilisation, and how this can inform effective use of instruments and their allocation across MDB and DFI portfolios. This includes clarifying how these mechanisms are more effective when coordinated and sequenced and what mechanisms are most effective at different points in value chains.

# TECHNICAL ANNEX

This report provides initial, directional and aggregate estimates of the development and catalytic finance that could be required to mobilise private finance for the energy transition in EMDEs. These estimates come with significant uncertainty and carry a wide margin of error. They are intended to provide indicative insights, laying the groundwork for deeper analysis and highlighting key data gaps and areas where further modelling and refinement of assumptions would be most valuable.

**FIGURE 1** OVERVIEW OF METHODOLOGY AND KEY INPUTS AND OUTPUTS



# GUIDING QUESTION 1: METHODS FOR DISAGGREGATING CLEAN ENERGY INVESTMENT NEEDS

The first guiding question in the analysis involved disaggregating the share of total clean energy investment needed in EMDEs by 2035 that could come from private sources (estimated at around $1,290 billion annually), broken down by domestic versus international private sources for each clean energy technology category. This involved the following steps:

**I. Establishing EMDE clean energy investment needs for 2035**

- Country level energy investment needs for EMDEs in 2035 were provided by the Independent High-Level Expert Group (IHLEG) on Climate Finance.
- Cumulative EMDE investment estimates totalled $2,050 billion as outlined in IHLEG's Fourth Report[48], reflecting both public and private energy investment needs.
- EMDE countries included in the analysis are listed in Table 9 of this section.

**II. Establishing the private share of 2035 EMDE clean energy investment needs**

- Total investment need was split across four clean energy subsectors[49] based on IEA and IFC analysis of the annual average investment required for 2031-2035 based on a net zero emissions (NZE) scenario.[50] (See Table 1, column A).
- Each sub-sector was broken down into sub-sub-sectors and technology level categories based on 2024 investment flows for EMDEs from the IEA's World Energy Investment 2025 dataset.[51] (See Table 1, columns B and C).
- The private share of each technology-level category (Table 2) was estimated from a range of IEA sources and CPI 2023 investment flows (See Table 2, column D. See Table 4 for more detail on sources used).
- Each of these respective shares was multiplied by each other to reach the share of each technology that could be met by private sources out of the total clean energy investment need (Table 2). This totalled $1,290 billion or 63%. This is in line with IEA estimates that around 60% of clean energy investment in EMDEs will need to be met by private sources.[52]

**TABLE 1** CLEAN ENERGY INVESTMENT BROKEN DOWN BY SHARES FROM SUB-SECTOR TO TECHNOLOGY LEVEL, FOR ALL CLEAN ENERGY INVESTMENT IN EMDES BY 2035[53]

| (A) SUBSECTOR CATEGORIES BY SHARE OF TOTAL CLEAN ENERGY INVESTMENT | | (B) SUB-SUB-SECTOR CATEGORIES BY SHARE OF SUB-SECTOR INVESTMENT | | (C) TECHNOLOGY-LEVEL CATEGORIES BY SHARE OF SUB-SUB-SECTOR INVESTMENT | |
|---|---|---|---|---|---|
| Source: IEA & IFC 2035 Projections | | Source: IEA 2025 World Investment Data | | | |
| Low emissions power | 36% | Renewable generation | 85% | Solar | 49% |
| | | | | Wind | 21% |
| | | | | Other | 29% |
| | | Nuclear and other clean power | 15% | - | 100% |
| Grids and storage | 23% | Electricity networks | 85% | - | 100% |
| | | Battery storage | 15% | - | 100% |
| Efficiency and end-use | 34% | Energy efficiency | 57% | Buildings | 57% |
| | | | | Transport | 26% |
| | | | | Industry | 17% |
| | | Other end-use | 43% | Buildings | 22% |
| | | | | Transport | 66% |
| | | | | Industry | 12% |
| Clean fuels | 8% | Clean fuels | 100% | - | 100% |

48. IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T.*
49. For further details on what is included under each IEA category see Table 5, as well as IEA's *'How we track investment in energy'*
50. IEA & IFC (2023) *Scaling up Private Finance for Clean Energy in Emerging and Developing Economies. Found on p.12, Table 1 'Annual clean energy investments in EMDEs to align with sustainable development and climate goals'.*
51. IEA (2025) *World Energy Investment 2025 Datafile.* 2024 flows were used for all categories except for the sub-sub-sector split of electricity networks as a share of grids and storage, which instead used an estimate from IEA (2024) *Reducing the Cost of Capital.*
52. IEA & IFC (2023) *Scaling up Private Finance for Clean Energy in Emerging and Developing Economies.*
53. Numbers may not add up due to rounding.

**TABLE 2** PRIVATE SHARE OF CLEAN ENERGY INVESTMENT IN EMDES BY 2035[54]

| SUBSECTOR CATEGORIES | | SUB-SUB-SECTOR CATEGORIES | | (D) TECHNOLOGY-LEVEL CATEGORIES SHARE OF PRIVATE SOURCES OF INVESTMENT BY 2035 | | TECHNOLOGY PRIVATE SHARE OF TOTAL INVESTMENT NEED BY 2035 |
|---|---|---|---|---|---|---|
| | | | | Source: Combination of projections from IEA and 2023 flows from CPI | | Product of applying shares of columns (A), (B), (C) and (D) |
| Low emissions power | 36% | Renewable generation | 85% | Solar | 89% | 13% |
| | | | | Wind | 73% | 5% |
| | | | | Other | 55% | 5% |
| | | Nuclear and other clean power | 15% | - | 15% | 1% |
| Grids and storage | 23% | Electricity networks | 85% | - | 20% | 4% |
| | | Battery storage | 15% | - | 58% | 2% |
| Efficiency and end-use | 34% | Energy efficiency | 57% | Buildings | 81% | 9% |
| | | | | Transport | | 4% |
| | | | | Industry | | 3% |
| | | Other end-use | 43% | Buildings | | 3% |
| | | | | Transport | | 8% |
| | | | | Industry | | 1% |
| Clean fuels | 8% | Clean fuels | 100% | - | 78% | 6% |
| TOTAL PRIVATE SHARE | | | | | | 63% |

### III. Establishing the split between domestic and international sources within 2035 private EMDE clean energy investment needs

- Shares of private domestic investment versus private international investment were applied for each technology category based on CPI 2023 investment flows[55] (Table 3, column E).
- Domestic private investment share was assumed to scale down between 2023 and 2035 by 25% for low emissions power, efficiency and end-use and clean fuels sub-sectors, and by 15% for the grids and storage subsector, based on expected relative growth of private international investment. Due to data limitations for nuclear power, average domestic and international financing shares across all clean energy investment were used as a proxy.
- This analysis finds that the domestic share of private clean energy investment reduces from 77% today (2023 flows) to 53% by 2035. This is broadly in line with IHLEG estimates that find that 54% of all private climate finance ($750 billion out of $1,400 billion) can come from domestic sources.[56]

### IV. Establishing the share of household investment in clean energy by 2035 in EMDEs

- Household investment is a significant source of private domestic finance and was estimated in this analysis to account for the portion of household investment that is self-financed (e.g. from savings not lending). The analysis assumes that this self-financed portion does not require risk mitigation and is thus excluded in the calculations on how much private finance requires risk mitigation to flow (explained under Guiding Question 2).
- Household investment as a share of domestic private investment was estimated using CPI 2023 investment flows[57] for solar and energy efficiency and end-use in buildings and transport (Table 3, column F).

54. Numbers may not add up due to rounding.
55. CPI (2025) *Global Landscape of Climate Finance 2025 Dataset.*
56. IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T*
57. CPI (2025) *Global Landscape of Climate Finance 2025 Dataset*

- An assumed 15% increase was applied to reflect projections of growth in household investment in clean energy within EMDEs.[58] This does not greatly impact the share of households as a portion of all clean energy investment because the overall share of private domestic finance is expected to decrease relative to international private finance.
- 60% of all investment from households is assumed to be 'self-financed' by 2035, and for the purpose of this analysis, is assumed not to require any risk mitigation to flow. This is based on CPI 2023 investment flows (which indicate a 50/50 split between debt and equity for investment in transport and buildings) and the assumption that debt as a share of spending versus equity-based investment will increase by 2035 as access to affordable finance improves.[59]

**TABLE 3** ESTIMATES OF DOMESTIC AND HOUSEHOLD SHARES OF PRIVATE CLEAN ENERGY INVESTMENT IN EMDES BY 2035

| SUBSECTOR CATEGORIES | SUB-SUB-SECTOR CATEGORIES | TECHNOLOGY-LEVEL CATEGORIES | (E) SHARE OF PRIVATE ENERGY INVESTMENT FROM DOMESTIC SOURCES | (F) SHARE OF DOMESTIC PRIVATE INVESTMENT FROM HOUSEHOLDS |
|---|---|---|---|---|
| | | | Source: CPI 2023 flows with assumptions applied | |
| Low emissions power | Renewable generation | Solar | 60% | 42% |
| | | Wind | 50% | |
| | | Other | 32% | |
| | Nuclear and other clean power | - | 50% | |
| Grids and storage | Electricity networks | - | 3% | |
| | Battery storage | - | 14% | |
| Efficiency and end-use | Energy efficiency | Buildings | 59% | 88% |
| | | Transport | 73% | 47% |
| | | Industry | 75% | |
| | Other end-use | Buildings | 34% | 88% |
| | | Transport | 73% | 47% |
| | | Industry | 75% | |
| Clean fuels | Clean fuels | - | 43% | |

58. IEA (2024) *Source of energy investment by scenario,* G20 Brazil Presidency and IEA (2024) *Roadmap to Increase Investment in Clean Energy in Developing Countries.*
59. Data on household investment as well as the relative share of self-financing versus debt-financing is sparse. However, IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T* indicates that up to half of corporate and household climate investment could be self-financed, while the IEA (2025) *Tracking energy efficiency investment progress* states that 50-60% of all efficiency investment spending is sourced from household savings or business equity.

**TABLE 4** SOURCES AND METHOD FOR CLEAN ENERGY INVESTMENT NEED DISAGGREGATION FOR TABLES 1 - 3

| DATA POINTS | | CATEGORY | SOURCE |
|---|---|---|---|
| A | Subsector categories by share of total clean energy investment | All sub-sectors | Scaling up Private Finance for Clean Energy in Emerging and Developing Economies, IEA & IFC (2023) - Table 1: Share by sector in NZE scenario by 2035 (Sum of sector shares may not add up to 100% due to rounding) |
| B | Sub-sub-sector categories by share of sub-sector investment | All sub-sub-sectors excluding grids and storage | Shares based on IEA 2025 World Investment Data estimates for 2025 |
| | | Grids and storage | Shares calculated from IEA's Reducing the Cost of Capital (2024) |
| C | Technology-level categories by share of sub-sub-sector investment | All technology categories | Shares based on IEA 2025 World Investment Data estimates for 2025 |
| D | Technology-level share of private sources of investment by 2035 | All renewable generation and battery storage | CPI Global Landscape of Climate Finance tracking data for 2023 flows |
| | | Nuclear | Shares based on IEA's Path to a New Era for Nuclear Energy (2025) |
| | | Grids | Shares based on IEA's 2030 scenario for grids investment |
| | | All efficiency and end-use, clean fuels | Scaling up Private Finance for Clean Energy in Emerging and Developing Economies, IEA & IFC (2023) – "Table 4.1 Blended finance to support private sector finance under the NZE scenario for 2026-2030 and 2013-2035" on p129. Used IFC Private finance % estimates for period average 2026-2035 and applied average sub-sector estimates to technology level categories |
| E | Share of private energy investment need from domestic sources | All sub-sub-sectors | CPI Global Landscape of Climate Finance tracking data for 2023 flows; domestic share of private finance flows in EMDEs and LDCs with 25% discount to reflect growth in private external share by 2035, and a 15% discount for battery storage with no discount for grids due to existing low shares. Nuclear assumes the average (~50%) domestic private share for energy investments |
| F | Share of domestic private investment from households | Solar, buildings and transport | CPI Global Landscape of Climate Finance tracking data for 2023 flows; household investment as share of domestic private finance flows in EMDEs and LDCs with 15% increase projected to reflect growth in household expenditure. 60% of household investment is assumed to be self-financed and excluded from de-risking calculations |

**TABLE 5** OVERVIEW OF IEA INCLUSIONS UNDER CLEAN ENERGY SUB-SECTOR CATEGORIES AND TECHNOLOGY MATURITY ASSESSMENT

| SUBSECTOR CATEGORY | SUB-SUB-SECTOR CATEGORY | TECHNOLOGY-LEVEL CATEGORY | INCLUSIONS UNDER IEA'S TRACKING AND CATEGORISATION | TECHNOLOGY MATURITY |
|---|---|---|---|---|
| Low emissions power | Renewable generation | Solar | Solar PV: buildings and utility-scale; solar CSP | Mature |
| | | Wind | Wind onshore and offshore | Mature |
| | | Other | Tidal; geothermal; hydro and pumped hydro storage; bioenergy and renewable waste | Mature |
| | Nuclear and other clean power | - | Nuclear and H2 based fuels: hydrogen and ammonia | Less mature |
| Grids and storage | Electricity networks | - | Transmission and distribution lines; grid equipment (transformers, substations) | Mature |
| | Battery storage | - | Battery storage (buildings and utility scale) | Less mature |
| Efficiency and end-use | Energy efficiency | Buildings | Building materials (envelope and retrofits); appliances; water/space; heating/cooling; cooking; switching from fuel to electricity for heating, cooling and cooking (e.g. heat pumps) | Mature |
| | | Transport | Road vehicles (cars, buses, trucks, and two-and three-wheelers); domestic navigation; rail transport; maritime and aviation | Mature |
| | | Industry | Industrial energy management systems; fuel efficiency; equipment efficiency (e.g. motors); deployment of best available technology | Mature |
| | Other end-use | Buildings | Electrification: heat pumps; renewables for building use (bioenergy; geothermal; solar home systems (solar heating); hydrogen; other renewables) | Mature |
| | | Transport | Electrification: battery and hybrid plug-in (road); fuel cell (road); EV charger utility (road); electricity, hydrogen and bioenergy for transport (rail, navigation and aviation) | Mature |
| | | Industry | Electrification: heat pumps for industrial heat; electric boilers; electrification of energy-intensive processes. Renewables and other decarbonisation technologies (Bioenergy, geothermal, solar, hydrogen and H2 based fuels, CC) | Less mature |
| Clean fuels | Clean fuels | - | Low-emission fuels (Liquid biofuels and biogases (production without CCUS); hydrogen and hydrogen-based fuels (production with electrolyser); CCUS for hydrogen production; other production, infrastructure and processing) | Less mature |

## GUIDING QUESTION 2: METHODS FOR ESTIMATING THE PROPORTION OF PRIVATE CLEAN ENERGY INVESTMENT NEEDS THAT WILL LIKELY REQUIRE RISK MITIGATION TO FLOW

The second guiding question required estimating the share of private clean energy investment (around $1,290 billion annually) that would likely require some kind of risk mitigation to flow.

A risk matrix was created that applied risk mitigation rates (i.e. the share of private investment needed that would require risk mitigation to flow), disaggregated by 1) country risk level, 2) technology maturity and 3) domestic or international source of finance. Different risk rates were applied to the international and domestic portions of the private investment needed due to the differing risks that domestic or international investors face around currency risk and convertibility, as well as other embedded advantages that domestic investors may have.

**I. Categorising clean energy technologies by technology maturity**

- The technologies outlined in Table 1 were assigned a 'mature' or 'less mature' categorisation based on 1) technology readiness level (TRL) scores of the dominant technology as assessed by the IEA and 2) expert input including secondary sources for an EMDE context (see Table 5 for maturity categorisations).

**II. Establishing country risk categories for EMDEs**

- The dataset of 139 EMDEs was assessed and categorised into three risk categorisations (Table 9).
- Each country was provided a score based on their sovereign credit ratings from S&P, Moody's and Fitch (where available), and was supplemented by BloombergNEF's Climatescope overall country ratings and the World Bank's Regulatory Indicators for Sustainable Energy (RISE) country score for the 'Renewable Energy' category.
- The credit ratings were weighted more strongly than the other scores, and as such:
  - Low-risk countries in this analysis correlate with investment-grade status, including 'lower medium grade'
  - Medium-risk countries correlate to non-investment grade and highly speculative ratings
  - High-risk countries correlate to unrated or ranging from in default to substantial risk/highly speculative

**III. Applying risk mitigation assumptions to the established private clean energy investment need by technology maturity, country-risk profiles and source of investment**

- Private clean energy investment volumes were disaggregated by 1) country risk level, 2) technology maturity and 3) domestic or international source of finance.
- Based on expert input, a set of risk mitigation rates were applied to the disaggregated volumes of private investment need (Table 6), e.g. an assumed 5% of domestic investments for mature technologies in low-risk emerging markets will require some form of risk mitigation by 2035.
- Based on this, an estimated 36% of private investment will require risk mitigation in 2035 for clean energy investment in EMDEs (25% of private domestic requires risk mitigation and 50% of private international requires risk mitigation).

**IV. Limitations**

- The evidence base to inform these risk mitigation assumptions across different sectors and geographies is sparse. This is a limitation of this analysis and a potential priority area for future exploration.[60]

**TABLE 6** RISK MITIGATION ASSUMPTION MATRIX

| RISK MATRRIX | INTERNATIONAL | | | DOMESTIC | | |
|---|---|---|---|---|---|---|
| Tech Maturity | Low Risk | Medium Risk | High Risk | Low Risk | Medium Risk | High Risk |
| Mature | 20% | 50% | 80% | 5% | 35% | 65% |
| Less Mature | 50% | 80% | 100% | 35% | 65% | 85% |

60. Based on analysis conducted for this report, we estimate that roughly 36% of private finance will require some form of risk mitigation in order to flow to the EMDE energy transition by 2035. This estimate sits between two relevant, recent analyses: CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap,* which estimates that almost 70% of equity finance needs (international and domestic) may require some kind of risk mitigation to flow by 2035, and IHLEG (2025) *Delivering an integrated climate finance agenda in support of the Baku to Belém Roadmap to 1.3T,* which estimates that 20% of private international finance flows will be 'mobilised' versus 'direct' investments (i.e. some form of risk mitigation will be required) by 2035 (compared to 60% today). Estimating shares of finance requirements that will require forms of risk mitigation is an evolving field of analysis that requires more focused analyses and data inputs.

# GUIDING QUESTION 3: METHODS FOR CASE STUDY ANALYSIS OF CLEAN ENERGY BLENDED FINANCE TRANSACTIONS

A case study analysis was conducted to answer the third guiding question: what are typical mobilisation rates and financing structures for blended clean energy investments in EMDEs?

**I. Data source for case study analysis**

- Case study analysis was based on a dataset of clean energy blended finance transactions from Convergence that fulfilled the following requirements:
  - Took place from 2015-2024
  - Included both private commercial finance and public development and catalytic finance (i.e. cases with only public investment and public commercial co-investment with no private investment were excluded)
  - Had complete transaction data (i.e. all listed investors within a transaction had associated data on the type of instrument used and the volume of the investment)
  - Were clean energy investment transactions, as categorised under the technology maturity and sub-sector classifications
  - Were project or company-level transactions
- Due to data sharing restrictions, details of each transaction were anonymised but included enough data to establish the relevant technology maturity and country risk category, as well as the year of transaction, the deal size, the type of deal, and the size and type of each investment within the transaction.
- In addition, transaction data provided granularity on the sources and types of capital for each transaction, broken down as follows:
  - Private or public investor
  - Senior, subordinate or first-loss debt (and whether senior debt is concessional or not)
  - Senior or junior equity
  - Guarantee, partial guarantee or insurance
  - Grants, technical assistance (TA)

**II. Approach for case study analysis**

- For each case study transaction, the relative mix of instruments used, their respective quantities and the investor type were recorded.
- The relative mix of development and catalytic finance instruments (i.e. excluding any private capital mobilised) was recorded as:
  1. % of TA or grants,
  2. % of sub-market finance (including subordinate debt, junior equity, concessional senior debt, first-loss debt),
  3. % of guarantees, insurance or FX hedging,
  4. % of commercial IFI financing (including senior debt and senior equity from public providers).
- Any private finance that was not purely commercial debt or equity (e.g. was junior, subordinate, a grant or a risk mitigation instrument) was included in the 'development and catalytic finance' portion of the mobilisation calculation. However, this was exceedingly rare in the dataset.
- Mobilisation rates were assessed for each transaction by dividing the total private commercial capital invested by the total amount of development and catalytic finance invested (both concessional and commercial sources of public finance including senior debt and equity).

### III. Limitations

- Independent verification of case study data was not possible, because the dataset was anonymised.
- The dataset does not capture the full range of development and catalytic finance instruments used. As a result, the analysis relies on category-level proxies for instruments with similar characteristics.
- Instrument-level additionality and mobilisation effects cannot be assessed. Accordingly, the analysis adopts a 'structure' level approach, assessing mobilisation across entire financing structures rather than attributing effects to individual instruments.

## NOTE ON THE ASSESSMENT OF MOBILISATION RATES

**Comparing methodologies for mobilisation assessment:**

- There are two main methodologies for measuring private capital mobilisation today:
  - The OECD Development Assistance Committee (DAC) methodology[61] calculates mobilisation at the level of individual instruments by estimating the amount of private capital that can be causally attributed to each public instrument, i.e. 'direct mobilisation'
  - The MDB Joint Methodology[62] measures mobilisation categorised as 'Private Direct Mobilisation' (private finance committed as a direct result of an MDB's active participation in a specific transaction) and 'Private Indirect Mobilisation' (private finance mobilised elsewhere in the project structure due to MDB involvement, even if not directly co-invested).
- The approach used in this analysis is most similar to the MDB Joint Methodology, as it includes private indirect investment within the scope of mobilisation. Specifically, it captures mobilisation at the project finance or company structure level by assessing the amounts and types of public investment instruments present within a transaction, relative to the private sources of investment (whether directly or indirectly mobilised).
- This differs from the approach of certain individual MDBs, outside of the Joint Reporting methodology, which considers co-financing from other MDBs or public sources as 'mobilised' capital (e.g. the IFC considers public co-financing under its mobilisation metrics).

**Including IFI commercial financing in mobilisation calculations:**

- This analysis considers that IFI commercial financing cannot be separated out from other instruments when assessing the ability of different financing structures to attract private investment.
- The inclusion of IFI commercial financing in this analysis is due to 1) the focus of the analysis: to understand what development and catalytic finance is required to mobilise private sources of commercial capital and 2) the fact that IFI commercial financing does play a role (albeit a minor one) in reducing risk perceptions due to their AAA credit ratings and the due diligence and other market signalling they provide.
- This differs from most other analyses to date, which do not account for IFI commercial financing when assessing mobilisation (despite the predominance of senior debt in these types of transactions). IFI commercial financing is sometimes counted as capital or co-financing that has been 'mobilised' as commercial finance in other analyses, despite it coming from public sources.

61. OECD (2025) *Handbook on measuring and reporting on Mobilised Private Finance in OECD DAC Statistics*
62. Joint MDBs (2018) *MDB Methodology for Private Investment Mobilization*

# GUIDING QUESTION 4: METHODS FOR SCENARIO MODELLING OF DEVELOPMENT AND CATALYTIC FINANCE REQUIREMENTS

To answer guiding question 4, three scenarios were modelled to estimate the amount of development and catalytic finance that could be required (to mobilise the private finance that required risk-mitigation to flow) for the energy transition in EMDEs. A baseline scenario was constructed based on the case study analysis, reflecting current mobilisation rates and today's overall average mix of development and catalytic finance instruments. Higher ambition scenarios modelled how changes in the overall instrument mix could increase mobilisation rates, and thus lower the amount of development and catalytic finance required.

**I. Establishing the typical instrument mix and mobilisation rates (e.g. 'financing archetype') for clean energy financing in EMDEs**

- Case study data was assessed to provide a median mobilisation rate and average instrument mix ('financing archetype') for each country-risk, sub-sector and technology maturity grouping.
  - For example, based on case study data, in high-risk EMDEs, transactions for mature technologies in the low emissions power sector typically achieve a median mobilisation rate of around 0.4, with an average instrument mix of ~10% grants and TA, ~35% sub-market capital, ~10% risk mitigation instruments and ~50% commercial IFI financing.
- Where data was missing, assumptions were made based on similar sub-sector, country-risk or technology maturity profile averages.
- The development and catalytic finance needed was then assessed for every country-risk, subsector and technology maturity combination by applying the identified median mobilisation rate to the amount of private finance requiring risk mitigation.
  - For example, if an estimated $65 billion of private finance required risk mitigation for mature technologies in the low emissions power sector for high-risk EMDEs, and the median mobilisation rate was around 0.4 for this combination, then estimates for development and catalytic finance for this combination would be around $155 billion.
- To reflect the overall financing archetype (i.e. median mobilisation rate and average instrument mix) for the energy transition in EMDEs by 2035 as a whole, the financing archetypes derived from case studies were weighted by the development and catalytic finance need calculated above. This reflects the disproportionately higher risk mitigation requirements for higher risk countries and less mature technologies. Through this method, mobilisation rates and instrument mixes from higher risk financing archetypes are given more weight in calculating the development and catalytic finance need than lower risk archetypes.
- This overall financing archetype, based on historical case study analysis, informs the baseline 'current mobilisation levels' scenario.
  - The 'current mobilisation levels' scenario shows that to mobilise the $475 billion in private finance requiring risk mitigation, around $985 billion in development and catalytic finance would be required based on: a ~0.5 mobilisation rate and an instrument mix of 10% grants and TA, 30% submarket capital, 10% risk mitigation instruments, and 50% commercial IFI financing.

**II. Modelling scenarios for development and catalytic finance requirements**

- Alternative scenarios were modelled by changing the mix of development and catalytic finance instruments, and the associated mobilisation effects.
  - To model changes in the instrument mix at a financing structure level (e.g. shifting from 30% sub-market capital in scenario 1 to around 35% submarket capital in scenario 2), estimated individual mobilisation rates were assigned for each development and catalytic finance category based on research and other inputs.[63]

63. Individual mobilisation rate estimates were informed by Blended Finance Taskforce (2023) *Better Finance, Better Guarantees,* CPI & GFANZ et al. (2025) *The Clean Energy Equity Investment Gap,* and Convergence (2022) *The Action Plan for Climate & SDG Investment Mobilization Annexes.*

- These individual mobilisation rates for each development and catalytic finance category were then weighted at a financing structure level based on the scenario. For example, the individual mobilisation rate for submarket capital would be weighted by 30% in scenario 1. Summing up the weighted mobilisation rates for each category equals the scenario's overall mobilisation rate.
- Increases in mobilisation are the result of changes in instrument mix only, and do not include any modelling of increased mobilisation efficiency from other factors.

- Table 8A and 8B provide an overview of the assumptions made for the future scenario modelling and the key inputs used.

**III. Modelling the target mobilisation level scenario based on MDB commitments**

- MDB commitments to increase climate finance to $120 billion by 2030 and private capital mobilisation to $65 billion (an implied 0.55 mobilisation rate) were used as a basis to model a 2035 scenario. Implied annual growth rates were calculated from a baseline of 2024 flows to achieve the 2030 target. This growth rate was then applied to estimate the 2035 commitment, reaching an implied 0.7 target mobilisation rate (increased from 0.4 in 2024). See Table 7.
- Shifts in the instrument mix were then modelled in line with qualitative indications from MDBs to increase deployment of more catalytic instruments like catalytic equity, local currency lending, concessional finance, guarantees and FX risk mitigation to reach a 0.7 mobilisation rate.

**TABLE 7** SUMMARY OF ESTIMATED MDB COMMITMENTS ON MOBILISATION BY 2035[64]

| JOINT MDB REPORTING | 2024 | 2030 | IMPLIED ANNUAL GROWTH RATE | 2035 |
|---|---|---|---|---|
| **MDB's climate finance committed** | $85bn (actual) | $120bn (committed) | **6%** | $160bn (implied) |
| **MDB's private finance mobilised** | $33bn (actual) | $65bn (committed) | **12%** | $115bn (implied) |
| **Implied mobilisation rate** | 0.4 | 0.55 | **5.5%** | 0.7 (implied) |
| **Source** | MDB joint climate finance reporting | MDB Joint COP29 Statement | | Calculated using 2023-2024 annual growth rate |

## COMPARING RESULTS WITH RELATED ANALYSES

**IEA and IFC analysis on concessional capital requirements for scaling private finance towards energy in emerging markets**

- While this analysis draws heavily on the IEA and IFC report *Scaling Up Private Finance for Clean Energy in EMDEs,* and its projections of future energy transition investment needs, it differs in its results: the IEA and IFC estimate that around $100 billion in concessional capital is required by 2035 to mobilise the private capital required for the energy transition in emerging markets. This is lower than our ambitious scenario. Details on the methodology used in this analysis are limited. However, there are some key differences and potential explanations to take note of:
  - The IEA and IFC analysis sizes only concessional capital, while our analysis also attempts to quantify non-concessional development and catalytic instruments like market-rate IFI lending, which may not be included in the IEA and IFC analysis.

64. 2024 actuals sourced from MDB Joint Reporting on Climate finance - indicates commitments and private climate co-financing towards low- and middle-income countries.

- The IEA and IFC analysis appears to use higher mobilisation rates to estimate their concessional capital requirements due to IFC's methodology of including public commercial co-financing in their mobilisation rates. The IEA and IFC analysis may also assume much higher mobilisation rates will be achieved by 2035 from concessional finance.[65]
- The IEA and IFC analysis may estimate that lower shares of private capital will require risk mitigation.

**TABLE 8A** ASSUMPTIONS AND SOURCES USED IN SCENARIO ANALYSIS

| SCENARIO | KEY ASSUMPTIONS | SOURCES |
|---|---|---|
| **1. Current mobilisation levels** | ■ The instrument mix in 2035 will reflect a similar development and catalytic finance instrument mix to today's average mix, taking into account historical averages, implying:<br>  ▬ Use of risk-mitigation instruments like guarantees, insurance and FX hedging remains limited<br>  ▬ IFI commercial financing remains the predominant form of financing.<br>■ No increases in efficiency are achieved relative to today (e.g. overall instrument mix does not meaningfully change). | Historical case study data, Convergence data set.<br>OECD data on private capital mobilisation. |
| **2. Target mobilisation levels** | ■ By 2035, the development and catalytic finance instrument mix shifts to greater shares of guarantees, local currency financing and equity in lieu of commercial IFI lending.<br>■ Indicative commitments from MDBs on mobilisation strategies and priorities used to inform shifts in instrument mix to achieve a 0.7 mobilisation rate.<br>■ Increase in mobilisation effects is due to shifts in the instrument mix only, and does not assume any incremental mobilisation efficiencies. | Joint MDB Statements and Viewpoint Notes; World Bank Group Roadmap; CAF Review, ADB Capital Utilization Plan; EBRD Strategic and Capital Framework which reflect some quantitative and largely qualitative commitments towards increasing private capital mobilisation through greater use of guarantees, local currency instruments, catalytic equity and concessional finance. |
| **3. High-ambition mobilisation levels** | ■ By 2035, accelerated efforts beyond today's commitments shift the instrument mix to even higher shares of the most risk-reducing and catalytic instruments, generating higher mobilisation rates beyond what current trends and commitments indicate.<br>■ In lieu of commercial IFI lending, share of guarantees triples versus 'current mobilisation levels' scenario.<br>■ Catalytic equity as a share of development and catalytic finance has increased 15 times from the current mobilisation scenario.<br>■ Increase in mobilisation effects is due to shifts in the instrument mix only, and does not assume any incremental mobilisation efficiencies. | IHLEG (2025); Circle of Finance Ministers (2025); CPI & GFANZ et al. (2025); Baku to Belém Roadmap (2025). |

65. For example, referencing similar analysis in IEA (2024) *Reducing the Cost of Capital,* the IEA states that concessional funds will need to leverage 6 to 7x in private finance versus the 0.3 observed today, implying much higher growth rates in mobilisation in the future.

**TABLE 8B** UNDERLYING INSTRUMENT MIX ASSUMPTIONS PER SCENARIO

| | 1. CURRENT MOBILISATION LEVELS | 2. TARGET MOBILISATION LEVELS | 3. HIGH-AMBITION MOBILISATION LEVELS |
|---|---|---|---|
| **Submarket debt and equity mix** | Portfolio mix | | |
| Concessional debt | 99% | 92% | 78% |
| Local currency concessional debt | 0% | 5% | 10% |
| Catalytic equity | 1% | 3% | 12% |
| **IFI commerical financing mix** | Portfolio mix | | |
| Debt | 96% | 85% | 85% |
| Equity | 4% | 10% | 10% |
| Local currency lending | 0% | 5% | 5% |
| **Equity as share of overall development and catalytic finance** | ~2% | ~4.5% | ~7% |

**TABLE 9** COUNTRIES INCLUDED IN CLEAN ENERGY ESTIMATES WITH COUNTRY RISK CATEGORISATION FROM THIS ANALYSIS

| COUNTRY RISK CATEGORY | COUNTRIES INCLUDED |
|---|---|
| **Low Risk** | Azerbaijan, Botswana, Bulgaria, Chile, Croatia, India, Indonesia, Kazakhstan, Malaysia, Mauritius, Mexico, Peru, Philippines, Poland, Romania, Thailand, Uruguay. |
| **Medium Risk** | Albania, Angola, Armenia, Bahamas, Bangladesh, Barbados, Benin, Bosnia and Herzegovina, Brazil, Cabo Verde, Cambodia, Chad, Colombia, Costa Rica, Côte d'Ivoire, Democratic Republic of the Congo, Dominican Republic, Egypt, El Salvador, Fiji, Georgia, Grenada, Guatemala, Honduras, Jamaica, Jordan, Kenya, Kingdom of Eswatini, Kyrgyzstan, Lesotho, Libya, Madagascar, Malawi, Maldives, Mongolia, Montenegro, Morocco, Namibia, Nepal, Nicaragua, Nigeria, North Macedonia, Panama, Papua New Guinea, Paraguay, Republic of Moldova, Rwanda, Saint Vincent and Grenadines, Senegal, Serbia, Seychelles, South Africa, Tajikistan, Tanzania, Togo, Trinidad and Tobago, Türkiye, Turkmenistan, Uganda, Uzbekistan, Vietnam. |
| **High Risk** | Afghanistan, Algeria, Antigua and Barbuda, Argentina, Belarus, Belize, Bhutan, Burkina Faso, Burundi, Cameroon, Central African Republic, Comoros, Djibouti, Dominica, Ecuador, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, Iraq, Islamic Republic of Iran (Iran), Kiribati, Kosovo, Lao People's Democratic Republic (Lao PDR), Lebanon, Liberia, Mali, Marshall Islands, Mauritania, Federated States of Micronesia, Mozambique, Myanmar, Nauru, Niger, Pakistan, Plurinational State of Bolivia (Bolivia), Republic of the Congo (Congo), Russia, Saint Kitts and Nevis, Saint Lucia, Sao Tome and Principe, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sri Lanka, Sudan, Suriname, Timor-Leste, Tunisia, Ukraine, Vanuatu, Venezuela, Yemen, Zambia, Zimbabwe. |

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