ENERGY TRANSITION PARTNERSHIP

REPORT

International Experiences in Mobilising Private Capital to Support Energy Transition and Finance Structures for the Energy Sector (Vietnam)

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1. Executive Summary

Emerging Market and Developing Countries (EMDCs) outside China are increasingly central to scaling up climate action, particularly in energy transition. This is crucial for addressing the urgent climate crisis and unlocking long-term economic benefits. These countries need approximately $2.3–2.5 trillion annually by 2030 for climate investment and about 50% of the additional clean energy investments required by 2035 to meet global climate goals, positioning them at the heart of the clean energy transformation (Bhattacharya, Songwe, Soubeyran, and Stern, 2024).

The 29th United Nations Climate Change Conference (COP29) in Baku highlighted the urgent need for a mix of domestic, external, public, and private finance to support climate action in EMDCs. Despite a new $300 billion annual climate finance target set by developed countries by 2035, a larger commitment of at least $1.3 trillion from them is essential. EMDCs, facing rising energy demands, must significantly increase clean energy investments, requiring nearly $2.1 trillion annually by 2035. Mobilising these funds is challenging due to less developed financial markets, necessitating a comprehensive approach.

Vietnam, as one of the fastest-growing economies in Southeast Asia, requires significant investments, estimated at $153.7 billion by 2030 and up to $786.7 billion between 2031 - 2050 according to the adjusted power development plan 8 (PDP8) proposal (as of February 2025). The country's rapid economic growth has driven higher energy demand, but it faces significant climate change challenges. Committed to achieving net-zero emissions by 2050, Vietnam is expanding its renewable energy generation (including hydropower), aiming for 50% by 2030 and 83% by 2050. Despite progress, coal still dominates the energy mix, highlighting the need for continued investment in renewable energy, storage, and grid infrastructure. Recognizing Vietnam’s need for economic growth, development, and job creation, the energy transition presents an opportunity to achieve 'green growth' and provide better jobs.

Attracting private sector investments and fostering regulatory reforms are crucial to accelerating the energy transition and achieving Vietnam’s net-zero commitment. Before the "solar boom" in 2018 driven by favourable feed-in tariffs, Vietnam's renewable energy development was slow and heavily reliant on international donors. Alongside initiatives like the Asia Zero Emission Community (AZEC), the Just Energy Transition Partnership (JETP) marks a significant step forward with an initial $15.5 billion pledge. However, this is far from the $650 billion needed over the coming decades and is heavily reliant on less preferential commercial loans, raising concerns about long-term financial sustainability. Vietnam must strategically deploy initial funds to attract further

private investment, despite public sector constraints and economic vulnerabilities. Mobilising substantial capital requires the active participation of both domestic and international investors, addressing common challenges among EMDCs such as high upfront costs, macro-financial impediments, and data-related constraints, as well as other country-specific barriers.

This report introduces international experiences through four case studies to synthesise lessons for Vietnam, highlighting best practices in mobilising private capital to support energy transition and finance structures for the energy sector at project, regional, and country levels. The case studies showcase models that work across key areas, including transmission, utility, energy efficiency enhancement, and just transition, in countries with socioeconomic conditions similar to Vietnam including India, Uganda, and Egypt, making them highly adaptable. Additionally, insights from the UK, a global finance centre, offers a forward-looking perspective on scaling investment. These examples underscore that, regardless of the economic development stage, mobilising private capital through suitable risk-mitigating strategies, blended finance, and innovative financial instruments is crucial to addressing market failures in the low-carbon sector and achieving climate goals.

The Pro Mini-Grids programme in Uganda, launched in 2017, used a Public-Private Partnership (PPP) model with Build-Own-Operate-Transfer (BOOT) contracts to bundle small mini-grid projects into larger tenders, attracting investors. Funded by the Ugandan Government, BMZ, and the European Union (EU), and implemented by agencies like GIZ, the programme improved procurement capacity, streamlined project development, and provided partial subsidies. This approach reduced preparation time for future projects and familiarised authorities and lenders with mini-grid development. Key lessons include structuring projects for scale, offering flexible subsidies, leveraging blended finance, and ensuring effective coordination and governance. These strategies addressed technical, financial, and regulatory challenges, promoting sustainability and economic growth in rural areas. Experiences here are relevant for a large number of small clean energy projects in Vietnam that would otherwise struggle to attract investment, demonstrating the importance of aggregation, risk-sharing mechanisms, and targeted financial support.

The Benban Solar Park project in Egypt, which focuses on refinancing the debt of six solar power plants through the issuance of Green Project Bonds, demonstrates the effectiveness of using targeted financial instruments and international sustainability standards to attract institutional investors. Supported by MIGA and EBRD, this initiative marked the first private green project bond issuance in Egypt and the southern and eastern Mediterranean region. The refinancing, achieved through a 19-year USD 334.5 million non-recourse Green Project Bond, aims to lower financial costs, enhance viability, and generate

cost savings. The project is underpinned by a 25-year power purchase agreement with the government, ensuring stable revenue. This model highlights the potential for Vietnam to expand the use of green bonds, which have gained traction recently, along with long-term refinancing mechanisms to lower capital costs and attract institutional investors. While frameworks like the Law on PPP in 2021 and Decree 80 for direct power purchase agreements (DPPAs) aim to improve the investment climate, addressing challenges such as tariff uncertainty and limited access to long-term financing will be key to unlocking private sector confidence, similar to Benban's approach.

The Mayor of London's Energy Efficiency Fund, a model of a city fund to achieve a net zero mandate, effectively attracts local capital and addresses regional decarbonisation needs. Established in 2018 to address fragmented and insufficient funding for low-carbon infrastructure, MEEF offers flexible and competitive financing to enable, accelerate, or improve the viability of low-carbon projects. The Greater London Authority (GLA) contributed £43 million from the European Regional Development Fund (ERDF) to the fund, with Amber Infrastructure Group securing an additional £556 million from private investors and the European Investment Bank (EIB). Key practices include strong internal expertise, technical assistance, pipeline development, independent fund management, strategic public fund deployment to de-risk projects, and the use of revolving instruments to reinvest returns into future projects. This model demonstrates how a dedicated city-level fund can effectively mobilize private capital for low-carbon projects, a concept that could be adapted for Vietnam's urban energy transition. While Vietnam has several national funds for environmental protection and private sector support, there is no dedicated fund for renewable energy and energy efficiency. Establishing a similar mechanism, leveraging public funds to de-risk investments and attract private financing, could help bridge this gap and accelerate sustainable urban development.

India, as one of the fastest-growing economies in the world, is at the crossroads of climate action and socioeconomic development, with the concept of a "just transition" central to its efforts. This country-level case study highlights India's commitment to achieving net-zero emissions by 2070, facing a $3.5 trillion investment gap. The "just transition" approach balances environmental and economic goals to ensure inclusivity for workers in carbon-intensive sectors. Key strategies include mobilising private capital, mitigating social risks, creating green jobs, leveraging corporate social responsibility spending, and utilising the International Financial Services Centre to attract foreign just transition investment. India's proactive steps, such as establishing a Skills Council for Green Jobs and issuing sovereign green bonds, demonstrate its commitment to integrating social and environmental priorities into its net-zero journey. These early practices in India's just transition agenda could serve as valuable insights for Vietnam as it navigates its energy transition strategy. With Vietnam also facing challenges in phasing out carbon-intensive

industries, strategies such as mobilizing private capital, creating green jobs, and leveraging policy tools like sovereign green bonds could help ensure a fair and inclusive transition. Additionally, adopting a structured just transition framework could make Vietnam more attractive to development finance institutions (DFIs), unlocking further investment to support its net-zero goals.

From there, the report also provides broader international experiences and trends in strategies and mechanisms used to enhance the risk-adjusted return it offers to investors. The clean energy transition is complex, requiring integrated strategies across sectors such as electricity generation, industrial development, transport, and social infrastructure. Effective coordination between public and private stakeholders, with strong government oversight, is essential for achieving coherence and exploiting synergies. Comprehensive financing strategies are vital, optimising the use of public finance to align with policy priorities and infrastructure investments. To mobilise private capital, public finance institutions must streamline administrative procedures, lower transaction costs for accessing risk mitigation instruments, set internal incentives to promote their use, and expand their toolkit with solutions specifically designed for renewable energy projects.

Innovative climate finance solutions, particularly blended finance, combine public, philanthropic, and private capital to drive investments in sustainable development, especially in high-risk markets. Successful blended finance projects depend on the right mix of debt, equity, and grants, along with effective risk-mitigation tools and proper investor seniority to balance losses and returns. This approach often involves deal structuring to integrate various types of capital and risk mitigation strategies, attracting investors and ensuring adequate funding.

Collaboration between the public and private sectors, such as blending public finance with private capital, can de-risk investments and internalise the social benefits of climate projects. Project-based financing, despite challenges, can target underfunded areas with positive climate impacts. Blended finance is key in mobilising private capital for green investments by combining concessional funds from donors with commercial investments from private entities and development finance institutions. Blended finance enables investments in high-impact projects that are not yet commercially viable, such as those with high upfront costs or involving emerging technologies. Concessional funds can provide partial guarantees, subordinated debt, equity, or cover development costs to incentivise project sponsors to meet targets.

In addition to blended finance, innovative financial instruments and platforms are essential for scaling up private capital. Green, social, sustainable, and sustainability-linked (GSSS) bonds offer the potential to attract private climate financing into EMDCs like Vietnam. Project aggregation platforms and securitisation vehicles can pool smaller energy

transition projects into investment-grade portfolios, overcoming size mismatches and attracting institutional investors by reducing transaction costs and diversifying risks. Voluntary carbon markets can channel resources into clean energy projects by monetising carbon credits, but require stronger oversight, standards, and verification to ensure credibility. Strengthening local capital markets, such as bond, equity, and derivatives markets, can increase domestic private investment, as seen in China and India, especially when revenue streams are in local currencies.

A useful blended finance approach to mobilise private capital for green energy projects is the Public-Private Partnership (PPP). Defined by the World Bank as a long-term contract between a private party and a government entity, PPPs enable the development of critical energy infrastructure by sharing risks and responsibilities. This model leverages private sector efficiency, innovation, and financial resources while ensuring government oversight. Various models, such as the BOOT model, have been successful in countries like Brazil, Peru, and India, reducing costs and diversifying funding sources. However, the concession model has had mixed results in some EMDCs, highlighting the need for tailored approaches that align public-private models with a country's regulatory framework and market dynamics. When well-designed, PPPs can play a crucial role in addressing funding constraints, poor planning, and maintenance challenges in green energy projects, driving innovation and sustainability.

Synthesising international experiences, this report provides ten specific recommendations for Vietnam to effectively mobilise private capital, strengthen its regulatory frameworks, and implement innovative financial instruments to accelerate its energy transition. The recommendations focus on strengthening decarbonisation and just transition strategies, establishing a transparent and supportive policy framework, developing a robust legal framework for diverse financing mechanisms, leveraging planned International Financial Centres to attract global capital, enhancing cooperation with international partners, strategically deploying public funds, ensuring strong governance and transparency, building local market capacity with international support, implementing place-based investments, and exploring regional or provincial fund models.

The next report within this project will assess Vietnam's financial landscape for energy transition, examining financial structures, instruments, and private capital mobilisation. It will analyse financing trends, debt management, and regulatory gaps while evaluating the effectiveness of investment mechanisms. In addition, it will provide strategic recommendations to enhance resource allocation, strengthen financial instruments, and improve the regulatory environment for scaling up private capital for the energy transition. Developing a clear roadmap for implementation, strengthening stakeholder engagement through regular consultations, and establishing a robust monitoring and evaluation

framework to track progress and measure outcomes are essential. Additionally, fostering knowledge sharing and capacity building through global platforms and training programs will enhance the skills and knowledge of stakeholders involved in the energy transition.