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The Energy Transition Accelerator as a Vehicle for Low-Carbon Development Capital: Opportunities, Challenges, and Uncertainties

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Indonesia seeks to retire parts of its large coal fleet before their natural end-of-life operations. Innovative financial instruments will be necessary for doing so.

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Abstract

Addressing the dual needs of development and decarbonization in low- and middle-income countries (LMICs) requires significant increases in public and private investment and project implementation. The Energy Transition Accelerator (ETA) aims to drive such increases by leveraging carbon credits as a sector-wide channel for energy transition finance. The ETA uses advance purchase agreements for carbon credits derived from infrastructure projects, creating new revenue streams and mitigating investment risk. This paper illuminates four key challenges and potential solutions that should be considered for the effective implementation of the ETA.

First, the paper unpacks risks associated with investment pipeline bottlenecks caused by lack of vital financial and technical infrastructure and offers lessons from the nascent experiences of Just Energy Transition Partnerships (JETPs). Second, the paper details unique time horizon challenges that coal-fired power plant (CFPP) retirement presents for credit-based financing and recommends adapting learnings from the Asia Development Bank's Energy Transition Mechanism (ETM). Third, the paper asks how the ETA can enhance matchmaking processes between investors and projects in ways that prevent smaller projects and smaller countries from being left behind. It calls upon the KliK Foundation's early use of Internationally Traded Mitigation Outcome (ITMO) credits for corresponding insights. Fourth, the paper explores how the ETA can promote the justice and social and political acceptance of energy transition policies, which is imperative to both their ethical foundations and their prospects for success. It highlights the Climate Investment Program's Accelerating Coal Transition (ACT) framework for actions across the pillars of governance, people and communities, and infrastructure as a potential model. In combination, these analyses seek to provide adaptable policy structures that support successful ETA outcomes.

INTRODUCTION

Mitigating climate change requires a concerted global effort, particularly for driving energy transitions in low- and middle-income countries (LMICs) (UNFCCC n.d.b). LMICs are poised to grow rapidly in both population and economy and to account for roughly 75% of electricity demand increase by 2050 (Bouckaert et al. 2021). Their degree of future fossil fuel use, which accounts for more than 75% of global greenhouse gas emissions, is the primary factor in whether global climate goals will be reached (IEA 2023). These countries face steep development challenges and climate vulnerabilities and often lack the both the financial resources and hard and soft infrastructure needed to drive energy transitions domestically (UNDP 2023). Such transitions will therefore require substantial increases in financial investment and technical support. Without this support, effectively addressing global energy access, resilience, and decarbonization challenges will not be possible (Phillips et al. 2022).

Private capital investments are particularly vital for LMIC energy transitions (Daharwal et al. 2023). The International Monetary Fund estimates that 80% of climate mitigation investment into emerging and developing economies will need to come from the private sector (IMF 2023). This is a drastic increase from the currently estimated private-sector climate finance investment in LMICs, which stands at only 12% for Africa and 52% for Asia and the Pacific (GCA 2023). While clean energy investment is rising, LMICs are largely excluded because of high real and perceived risk from political instability, currency fluctuations, regulatory uncertainties, weak institutional frameworks, and beyond. Additionally, conventional lending practices often favor large-scale infrastructure projects with predictable revenue streams, leaving smaller-scale and decentralized initiatives without adequate financial support. Addressing these challenges requires concerted efforts from governments, financial institutions, and development organizations to create stronger enabling environments. Innovative financing mechanisms, capacity-building initiatives, and policy reforms are essential for attracting private capital to drive low-carbon development in LMICs around the world.

The Energy Transition Accelerator (ETA) is such a mechanism. Announced in 2022 by the US Department of State, The Rockefeller Foundation, and the Bezos Earth Fund, the ETA proposes using carbon credits as a system-wide channel for energy transition finance. This aggregate crediting approach for entire electricity sectors would in turn create the conditions for system-level change. Within this framework, the advance purchase of carbon credits derived from infrastructure projects generates capital and reduces investment risk by creating additional revenue streams.

The ETA is a novel decarbonization approach with immense potential impact. It provides a pathway for carbon credit usage that can unlock a major new source of capital for energy transitions at a critical time for LMICs. However, several aspects of this policy remain new and untested: namely, how best to deploy a sector-wide crediting approach and whether advance purchase agreements can sufficiently derisk the activities the ETA aims to help finance.

This paper synthesizes key challenges, opportunities, and uncertainties the ETA may face and offers pathways for enhancing ETA impacts. The paper focuses on the intersection between carbon markets and energy transition finance and describes lessons of related policy frameworks from portfolio-level energy transition investments and innovative carbon market mechanisms. These frameworks offer guidance for ETA strategies and distinct policy designs that can be adapted for ETA implementation.

BRIDGING ENERGY TRANSITION FINANCE AND CARBON MARKET LANDSCAPES

Portfolio-level energy transition finance seeks strategic and integrated approaches for driving low-carbon transformations in a country's energy system. By consolidating resources and aligning investments with overarching climate, energy, and development objectives, these approaches can enhance the effectiveness and impact of finance interventions and accelerate progress towards local and global goals. The Paris Agreement establishment of nationally determined contributions (NDCs), wherein countries commit to bespoke climate change targets and plans, can provide initial roadmaps for portfolio-level finance through mapping sector-wide mitigation goals and strategies. National banks are uniquely situated to facilitate integration of NDCs given their understanding of local priorities and financing needs, and global actors such as development finance institutions and multilateral development banks can use NDCs to guide their resource provisions (Convergence Blended Finance 2023, UNFCCC n.d.a).

The ETA aims to leverage these benefits of portfolio-level climate finance through a crediting methodology that incentivizes country-wide transitions in the power sector. The ETA recognizes *host jurisdictions* as government entities that have a current NDC and ambitious climate goals. Through this recognition, countries can generate carbon credits at the sector scale and sell them to private buyers or other governments. This sectoral approach helps create a centralized platform for different funding sources and recognizes the benefits of collaboration and the potential for both public- and private-sector climate mitigation goals to drive demand for credits.

The ETA represents a novel deployment of carbon crediting structures and principles. Conventional voluntary carbon markets enable crediting activities that reduce or remove carbon emissions and the purchase of these credits by entities seeking to offset their own emissions. These credits are managed either through registries that monitor credit issuance and trading or through brokers and carbon credit exchanges. The registries are supported by independent governance bodies, such as the Voluntary Carbon Markets Integrity Initiative and the International Council for the Voluntary Carbon Markets, which set standards and rules for better oversight of carbon markets to tackle issues such as additionality, leakage, and double counting (Runyon 2024). The ETA expands on these principles and proposes the advance purchase of carbon credits to provide revenue streams that can derisk private upfront capital at a sectoral scale.

ETA implementation is at an important juncture. The crediting standard is still in development by the Environmental Resources Trust and will deploy three distinct crediting approaches depending on the projected emissions trajectory of a country. Countries that have already reached peak electricity sector emissions will have an absolute reduction target, whereby sectoral emissions reductions below a conservative baseline are creditworthy. Countries with a heavy reliance on fossil fuels that have not yet reached peak emissions will follow a rate-based performance standard, attempting to decrease the rate of emissions growth and help facilitate an earlier peak in electricity sector emissions. These countries would then transition to the absolute reduction standard. Countries with low access to energy will use a performance reserve that addresses increasing emissions intensity during the performance period (Lockhart et al. 2022).

These carbon credits can ultimately either contribute to a country's NDC under Article 6 of the Paris Agreement—which provides legal and functional scaffolding for trading emissions reduction credits internationally—or be managed through voluntary markets. Operating within a sector-wide, portfolio-level structure aims to capitalize on the benefits of efficient, scalable, and impactful energy sector transitions, and to pave the way for new, unexplored opportunities in climate finance. However, many questions and challenges for ETA implementation remain. This paper focuses on four:

1. How can the ETA overcome investment pipeline bottlenecks caused by lack of vital financial and technical infrastructure?
2. How can the ETA address the time horizon challenges that coal-fired power plant (CFPP) retirement presents for credit-based financing?
3. How can the ETA enhance matchmaking processes between investors and projects in ways that prevent smaller projects and countries from being left behind?
4. What practices are needed for the ETA to promote the justness and social and political acceptance of energy transition policies?

The following sections correspond to these questions. The paper uses the ETA Core Framework to identify polices with the greatest relevance for ETA goals and mechanism. These include both portfolio-level approaches that focus on country-wide implementation and market-based approaches that use advance purchase agreements to minimize revenue risk and incentivize private-sector investment. Policies that have yet to execute pilot studies or failed to offer concrete material lessons are excluded. However, this analysis remains constrained by a lack of empirical data and results, both for the ETA as a nascent approach and for related policies at early stages of driving private capital into developing markets. As such, this analysis is forward-looking and will require further scrutiny, testing, and evaluation.

OVERCOMING INVESTMENT PIPELINE BOTTLENECKS

Investment pipeline bottlenecks caused by lack of financial and technical infrastructure limit the upside of sector-wide energy transition strategies by undermining scalability and slowing deployment. The ETA's approach distinguishes it from project-level alternatives by creating greater potential for cohesive and timely decarbonization at a sector level. Realizing the potential of this sectoral approach will require streamlining regulatory and legal environments and developing robust infrastructure to drive scale and prevent pipeline bottlenecks.

Lessons can be gleaned from the portfolio-level investment packages of Just Energy Transition Partnerships (JETPs). While not credit-oriented like the ETA, JETPs are sectoral approaches to energy transition finance that seek to deploy a combination of grants, concessionary loans, and private finance to accelerate transitions to cleaner energy sources (Nangoy and Vu 2023). The first JETP was announced in 2021 with an $8.5 billion financing deal for South Africa, followed by additional partnerships in Indonesia, Vietnam, and Senegal (Kramer 2022).

The South Africa JETP, which is in the most advanced stage of implementation, highlights key challenges for developing country-level investment pipelines. South Africa's investment

plan outlines how catalytic capital generated from the JETP will be deployed to support the energy transition, focusing on modernizing the electricity sector, developing new electric vehicles, and investing in green hydrogen (Presidency of South Africa 2022, p. 137). The JETP aims to support South Africa in achieving the lower end of their national NDC of 350–375 Mt CO_2e to meet the Paris Agreement's 1.5°C temperature goal. While France and Germany have transferred EUR 600 million to South Africa's National Treasury, additional finance has been locked up because of the perceived absence of necessary regulatory and organizational frameworks to facilitate capital deployment (Vankeukelom 2023). Physical infrastructure limitations further exacerbate project implementation delay. Notably, a pipeline of wind projects was undermined by the state-owned utility Eskom's insufficient transmission capacity (Lenferna et al. 2023). These factors have combined to prevent actionable project pipelines acceptable to capital providers and South African stakeholders from taking shape even after more than two years of JETP implementation efforts.

The ETA faces similar vulnerabilities given its portfolio-level climate finance strategy, and it is crucial that ETA partners take steps to avoid similar investment barriers. Sequencing and prioritization decisions are key. The ETA aims to facilitate sector-wide systemic changes through activities including early coal plant retirement, grid improvements, and renewables deployment. To effectively meet this goal and avoid the pipeline bottlenecks seen in the South Africa JETP, the ETA should prioritize fundamental infrastructure projects relating to grid improvement and basic development before prioritizing renewables and non-capacity-building projects. This is particularly important in countries that have a heavy reliance on fossil fuels and have not yet reached peak emissions. In such cases, the ETA should use the long time horizons associated with CFPP decommissioning and retirement to support projects that are developing grid and storage infrastructure. Such early prioritization would have the cobenefit of increasing political and social support for ETA investments.

The Asset Owners Forum South Africa (AOFSA) consortium showcases how technical assistance and capacity-building can significantly scale investment by prioritizing fundamental infrastructure projects. Supported by USAID's Prosper Africa initiative, along with MiDA Advisors and CrossBoundary, AOFSA has secured a $400 million commitment to infrastructure projects. These supporting organizations played a crucial role in developing an effective internal framework for project selection and investment deployment. Additionally, they streamlined the investment process by addressing external factors that could impede progress.

Internally, AOFSA benefited greatly from funding through Prosper Africa and the implementation expertise provided by the two advisory firms. They helped establish a robust governance structure, effective membership building, and efficient decision-making processes. By creating clear standards and effective procedures for evaluating investment opportunities, and leveraging their extensive networks, they developed a strong project pipeline. This resulted in $130 million being deployed toward opportunities from this pipeline, showcasing the tangible impact of their internal capacity-building efforts.

Moreover, the Prosper Africa initiative and supporting implementation advisors helped address pipeline bottlenecks resulting from poor financial and technical infrastructure through several additional interventions. First, the initiative provided comprehensive advisory services to navigate the complex financial, policy, and regulatory landscapes and facilitate smoother investment processes concerning federal and local regulations. This included

providing policy analysis, conducting regulatory impact assessments, and supporting policy reforms to create enabling investment environments. Prosper Africa also provides market information that helps identify and capitalize on investment opportunities and helps design and structure innovative financial instruments to meet the needs of infrastructure projects. Through these interventions, USAID helped AOFSA establish its commercial viability, leveraged $291 million in private-sector capital as co-investments, and facilitated 759 project deals.

The ETA would benefit from adopting a similarly focused organizational framework to provide capacity-building support and technical assistance. Through allocating sufficient resources to the development of strong internal governance practices and project evaluation methodologies, as well as prioritizing an understanding of regulatory environments, the ETA can enhance robust project pipelines. This strategic approach would enable the ETA to effectively attract and manage investments, build trust, and promote sustainable growth and successful project implementation.

ADDRESSING TIME HORIZON CHALLENGES FOR CFPP RETIREMENT

Compared to credit generation from infrastructure projects such as wind farms or other clean energy projects, CFPP retirements present unique challenges for developing credits. Shorter-term infrastructure projects enable potential carbon credit purchasers to monitor construction progress and develop expectations for when credits will likely be received. The early retirement of fossil fuel plants can take much longer, and therefore requires new approaches to crediting methods and timelines. The Energy Transition Mechanism (ETM) developed by the Asian Development Bank (ADB) offers insights into the nature of this problem and the seeds of potential solutions for the ETA.

The ETM is a financing scheme using concessional funding from governments and philanthropies to encourage early retirement of fossil fuel plants, as well as to increase investments in transmission and renewable energy. The ETM is comprised of two separate funds: the carbon reduction fund and the clean energy fund (Saeed 2022). While the carbon reduction fund's primary focus is to support the decarbonization of CFPPs, the clean energy fund provides parallel support for the expansion of renewable energy infrastructure to meet the energy needs created when CFPPs go offline. The ETM uses project and portfolio models within the carbon reduction fund to facilitate early retirements. The project model relies on the ADB providing low-interest loans and concessional capital to help finance or refinance CFPPs, thus facilitating early repayment of loans and retirement of assets. The portfolio model lends specifically to state-owned utilities or conglomerates, tying financing to key performance indicators that encourage reduction of coal capacity.

While the work by the ADB is promising and paves the way for early CFPP retirement, concessional capital provides limitations on the scalability of the ETMs ambitions. These challenges are manifesting in the ETM portfolio. The CFPP at the most advanced ETM due diligence phase—the Cirebon-1-CFPP in Indonesia—is currently on track to be operational until 2042. While the ETM aims for its retirement timeline to be accelerated by 7 years, investors must still wait 11 years before seeing returns. Incentivizing investors to purchase credits over a decade in advance of receipt of the credits is a serious challenge. Additionally,

different retirement scenarios further complicate the credit allocation for coal plant retirement, with decommissioning, cofiring, and repurposing all having different outcome scenarios and thus requiring independent crediting methodologies. Finally, voluntary carbon market transactions are subject to skepticism around credit integrity and quality. Credits generated from CFPPs will be under great scrutiny for meeting standards around additionality and permanence given their association with coal (MAS and McKinsey 2023). The challenge with permanence is particularly difficult given the possibility for retired CFPPs to be restarted, and as such for abated emissions to be delayed rather than truly halted. This reputational risk, particularly for private-sector buyers, could negatively impact demand for CFPP retirement credits.

The ETA should respond to these realities by first targeting CFPPs with shorter retirement timelines for early decommissioning under a credit-based approach. With shorter retirement timelines, investors have a clearer understanding of when the credits will be received and are therefore more likely to engage. Furthermore, earlier credit allocation could increase interest in the advance purchase of credits for buyers who will use credits for compliance obligations under Article 6 and must operate within the constraints of NDC windows. The ETA should also consider leveraging government support and concessional capital to derisk CFPP credit offtake agreements, given the long time horizons. This could be supplemented by creative insurance guarantees from multilateral development banks (MAS and McKinsey 2023).

Mitigating the risks associated with longer time horizons would allow the ETA to leverage credit-based financing to support early retirement and decommissioning of CFPPs. There are such efforts being trialed alongside the ETA by the Transition Credits Coalition (TRACTION), which was developed under the leadership of the Monetary Authority of Singapore to pilot high-integrity carbon credit usage in CFPP early retirements (MAS 2023). To reduce scrutiny and criticism around the integrity of carbon credits generated, the ETA should construct long-term contractual obligations to prevent future reintegration of CFPPs onto the grid. As such, negotiations with the sponsor, grid operating companies and state-owned utilities will be more complex and time-consuming than with more straightforward decarbonization activities. However, they may result in increased consumer confidence in the quality of the credits and help mitigate reputational risk.

ENHANCING MATCHMAKING PROCESSES BETWEEN INVESTORS AND PROJECTS

Matchmaking private investor upfront financing with attractive infrastructure projects is difficult. Small projects are less able to secure finance than larger projects because of high transaction costs and limited returns on investment. This issue also poses questions on what countries stand to benefit from advance-purchase financing methodologies. While the goal of the ETA is to drive private capital into LMICs for energy sector decarbonization, its utility across different country and project scales is in question. Smaller LMIC countries may be less able to participate in market mechanisms as effectively because the high transaction costs per project and limited project volume do not attract private-sector investment.

In response, the ETA's sector-wide crediting approach has the potential to support financial aggregation of projects, providing numerous benefits to both the buy and sell side and in-

creasing capital for groups of smaller infrastructure projects. Aggregating multiple projects to create a larger ticket size can make the investment more attractive to the private sector while reducing transaction costs (UNDP n.d.). The effective use of Article 6 credits is a promising pathway to this end, and the KliK Foundation's early use of Internationally Traded Mitigation Outcome (ITMO) credits offers operational lessons.

The KliK Foundation was formed by the Swiss Petroleum Association with the mission to offset a portion of Swiss transportation sector emissions. It does so through building partnerships with developers in countries with which the Swiss government has bilateral ITMO transfer agreements (currently 13 countries). The host government agrees to the sale of the ITMOs, which the KliK Foundation purchases at an agreed price from a developer. The revenue generated from the ITMOs therefore makes the infrastructure project bankable for the private developer. The KliK Foundation then submits the certificates that correspond to its mandatory CO_2 emissions reductions to the Swiss government. The government confirms that the Foundation has fulfilled its obligation, and for any uncompensated ton of CO_2, the KliK Foundation is required to pay a sanction of 160 Swiss francs.

The collaboration between the KliK Foundation and Energy Absolute Public Company Limited, based in Thailand, offers an example of these arrangements in action. The financial commitment made by the KliK Foundation facilitated Energy Absolute's investment to convert their private bus fleet in Bangkok to electric vehicles and away from internal combustion engines (KliK 2024). The e-bus program is anticipated to result in a cumulative reduction of over 500,000 tons of CO_2 by 2030. This agreement marks the first implementation of Article 6 of the Paris Agreement, with the ITMOs purchased by the KliK Foundation intended to contribute toward Switzerland's NDC and a corresponding adjustment to be made to Thailand's NDC.

The KliK Foundation's use of advance-purchase agreements under Article 6 functions similarly to the ETA's advance-carbon credit sale to derisk investment. As such, the KliK Foundation's early learnings offer project-level insights for matchmaking investors and projects and the importance of transparency in credit allocation.

These learnings include a cautionary tale. In the Energy Absolute case, the additionality of the project rests on the argument that the E-bus implementation would not have been financially viable without the additional capital provided by the KliK Foundation for the ITMOs purchased. Alliance Sud and Fastenaktion analyzed this bilateral agreement and raised concerns about the degree to which this project was truly additional. Firstly, official documentation failed to provide adequate empirical evidence to demonstrate the cost difference between traditional and E-buses, which the KliK Foundation capital aimed to bridge. The KliK Foundation failed to offer further insight into their calculations on this matter when contacted by Alliance Sud. Further, the existence of alternative e-bus providers in Bangkok, which were developed without carbon credit purchases, suggests the potential financial viability of e-bus implementation without the KliK Foundation's purchase.

The KliK Foundation requires projects to go through due diligence from independent experts as well as from federal governments with continuous review of the claimed emissions reductions by independent experts. Despite this, the inconsistencies and oversight in the e-bus case raises additionality concerns. This collaboration between KliK and Energy Absolute is an example of a forward-purchase agreement that could feasibly be facilitated under the

ETA's mechanisms. The early criticisms of its demonstrable impact on reducing carbon dioxide emissions speaks to the importance of transparency around the scheme's mechanisms for conducting due diligence and proving additionality of projects (Berner 2023).

The ETA should take measures to address the challenges inherent to carbon markets highlighted by the KLiK Foundation case. The approach the ETA takes in aligning its crediting methodology with that of existing integrity standards to be more comprehensive and ensure quality and integrity will be essential. Clear explanation of which projects carbon credits are being derived from and where financing is being directed under this methodology will help build investor confidence in the quality of credits, increase market liquidity, and decrease market volatility (Blaufelder et al. 2021).

PROMOTING JUSTICE AND SOCIAL AND POLITICAL ACCEPTANCE

By altering status quos, energy transitions invariably create new challenges for certain segments of society. JETPs seek to implement measures that prevent such transitions from disproportionately affecting less-privileged sectors of society and to instill principles and policies from the outset that address particular societal risks for the host country. This is critical, as JETP implementation challenges have shown, for sector-wide approaches that can have cascading and at times unintended and unanticipated social and political consequences. In practice, the South Africa JETP experience is again instructive.

While the South Africa JETP Investment Plan committed to a just transition, its outline of financing needs from 2023–2027 allocated less than 0.7% of total funds needed for social investment and inclusion and skills development across all sectors. This small percentage of funding resulted in minimal on-the-ground support in South Africa and caused significant resistance at the local level. Disruptions to a target country's national economy, labor markets, energy sectors, and beyond through inadequate transition support not only imperil local support, but also exacerbate private-sector investor risk, undermining the efforts of the concessional capital deployed. The ETA core framework partially responds to these needs through its commitment to channel 5% of revenue generated from credits towards adaptation and resilience. The "Just Transition and Safeguards Framework" specifically requires host jurisdictions to designate a governmental body with responsibility for ensuring safeguards are implemented, monitoring compliance, and providing guidance on how to satisfy safeguard requirements. Insights from JETP implementation in South Africa show the need to proactively understand the adaptive needs of communities at a local level, help reduce friction with implementation, and increase demand for financing through ETA partnerships.

For South Africa, these justice imperatives intersect with energy sector employment realities. Coal meets 74% of South Africa's primary energy needs, and the coal industry supports roughly 20% of the country's employment in mining alone. Progress on decommissioning existing coal plants has faced roadblocks from powerful labor unions that argue that they were not adequately consulted in the development of the JETP coal retirement plans (CIF 2022). For example, the largest union at Eskom demanded suspension of the JETP because of threats to 51,000 jobs in coal and power industries (Sguazzin 2023). Furthermore, the worsening electricity crisis in South Africa in years following the JETP signing has only deepened opposition to early coal plant retirement, including from the Minister of Mineral Resources and Energy (Vanheukelom 2023).

The Climate Investment Program's Accelerating Coal Transition (ACT) framework offers responding principles for the ETA to effectively integrate local considerations into national-level climate finance platforms. The ACT aims to build local-level support for countries that are transitioning away from coal by focusing on the three pillars: governance, people and communities, and infrastructure. The ACT recognizes that deploying climate finance to reform a heavily coal-dependent country's energy system requires providing both capital for the transition and technological and social strategies to mitigate the local socioeconomic consequences of reforming an economy.

Through adoption of a similar framework to the ACT, the ETA could avoid some of the just implementation issues seen in South Africa's JETP. For example, within South Africa, the ACT has developed plans specifically to help foster community-driven development through retraining coal-fired power plant employees, contract workers, and suppliers. This plan was developed through a community needs assessment and through consultation with local and provincial governments (CIF 2022). The ETA would benefit from a similar independent suborganization whose primary purpose is addressing local integration aspects of infrastructure projects funded by the ETA. In doing so, the ETA could establish support on a local level and overcome some challenges created by sector-wide approaches. Timing is key, and the ETA must tangibly pursue social and political buy-in from the initial project stages and ensure that these efforts continue to be prioritized throughout project execution.

CONCLUSION

The ETA is constructed to leverage the enormous potential for carbon crediting mechanisms to scale up energy transition investments. However, despite this potential, energy transition finance and carbon markets have largely occupied separate tracks in international climate discourse, diplomacy, and action (Ewing 2023). Energy transition finance hinges on national and institutional commitments to provide resources to developing country counterparts that help them roll back or skip entirely high-emitting development. Attendant debates center on countries following through on past promises, the need to reform finance delivery institutions and practices, and how best to use scant public money to galvanize larger private investments. International carbon markets, meanwhile, provide ways for political jurisdictions to drive emissions reductions through caps, prices, and incentives and for well-resourced companies to offset their emissions through actions outside their own supply chains and operations. Carbon market debates revolve around how to ensure that carbon credits are trustworthy and represent actual mitigation outcomes, and how to scale the supply and effective exchange of credits to meet mounting demand.

These two tracks are converging, with the ETA at the vanguard. There is growing demand for high-quality credits with both clear mitigation value and strong development benefits. Effectively blending public and private investments for energy transition outcomes is both difficult and essential, and carbon markets offer a pathway toward greater speed and scale. Those impacted by energy transition policies—market-driven or otherwise—want locally beneficial results, transparent processes, and just recompense for those negatively affected. For the ETA to effectively bridge this gap, it must strike the delicate balance of creating robust, portfolio-wide methods and test cases for issuing credits without creating systems that are impenetrably complicated for the stakeholders involved, especially those in LMICs.

In this respect it is essential that the ETA learn from related efforts at the intersection of portfolio-level energy transition investments and carbon market transactions. This paper has offered four pathways for doing so that adapt external policy designs to address project pipeline development, CFPP retirement timelines, matchmaking between credit buyers and sellers, and the need for justice, transparency, and additive local value. While no panacea, addressing these issue areas is vital to ETA success and should be prioritized through concentrated and durable efforts that bring together stakeholders on both sides of the ETA ledger.

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