



The potential for carbon revenues
to accelerate just energy
transition:

Opportunities and Challenges

Energy transition requires concessionary resources

- There are overwhelming commercial and environmental arguments for energy transition. However, social, economic and political challenges remain to be resolved.
- The objective of climate finance is to reduce costs and risks associated with the transition and demonstrate the viability of business models.
- Catalyzing the transition requires:
 - Viable business models and financing to retire existing coal fleet on an accelerated basis;
 - Feasible approach to quickly scale up alternatives such as renewable energy; and
 - Support for planning, institutional arrangements, and stakeholder engagement to ensure a just socio-economic transition.

Governing Systems

- Governance model
- Economic transition strategy
- Stakeholder engagement strategy

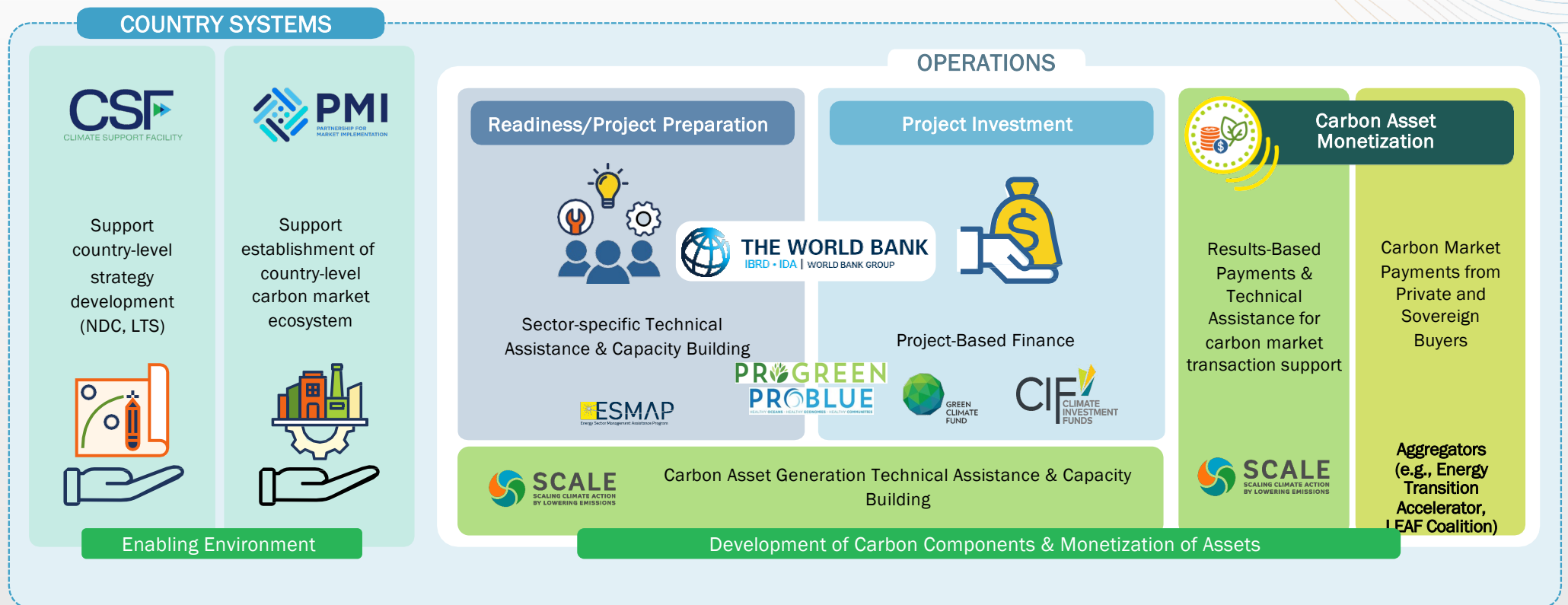
People and Communities

- Assessing workforce
- Reskilling/ training and capacity building
- Community assistance

Physical Infrastructure

- Land repurposing
- Investing in assets

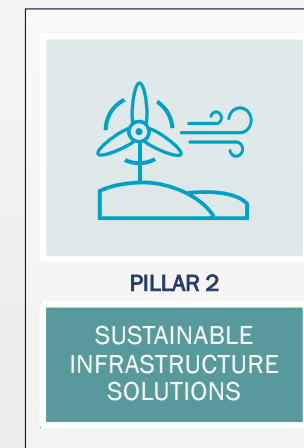
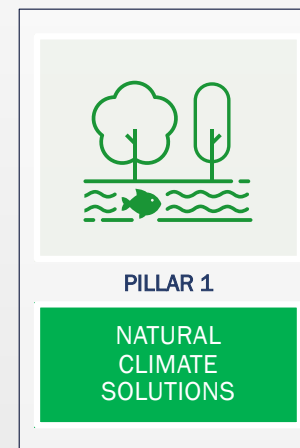
A coordinated approach to supporting countries



Scaling Climate Action for Lowering Emissions

Scaling Climate Action by Lowering Emissions (SCALE) is the new umbrella trust fund for all World Bank Results-Based Climate Finance (RBCF). SCALE:

- ✓ Supports countries to generate high-integrity Emission Reduction Credits (ERCs) to help meet increased ambition in NDCs and access voluntary and compliance carbon markets, helping to mobilize additional finance.
- ✓ Provides technical assistance + RBCF with floor price as a grant
- ✓ Is fully integrated into World Bank operations
- ✓ Promotes social inclusion through associated EnABLE (Enhancing Access to Benefits while Lowering Emissions) trust fund



Mobilizing results-based climate finance at scale



INVESTMENTS

Forestry, Agriculture, Oceans, Energy, Transport, Water, Sustainably-Linked Finance, Subsidy Reform, etc.



BARRIERS PREVENTING ACCESS TO CARBON MARKETS

Lack of incentive for actions & reforms without credible guarantee of payment

Insufficient Capacity to Generate High-Integrity Carbon Credits from Projects

Inadequate Country-level Legal, Regulatory Policy Environment



CARBON REVENUES

Provide Results-Based payments with floor price:

- Guarantees payment for carbon credits
- Ensures a minimum price

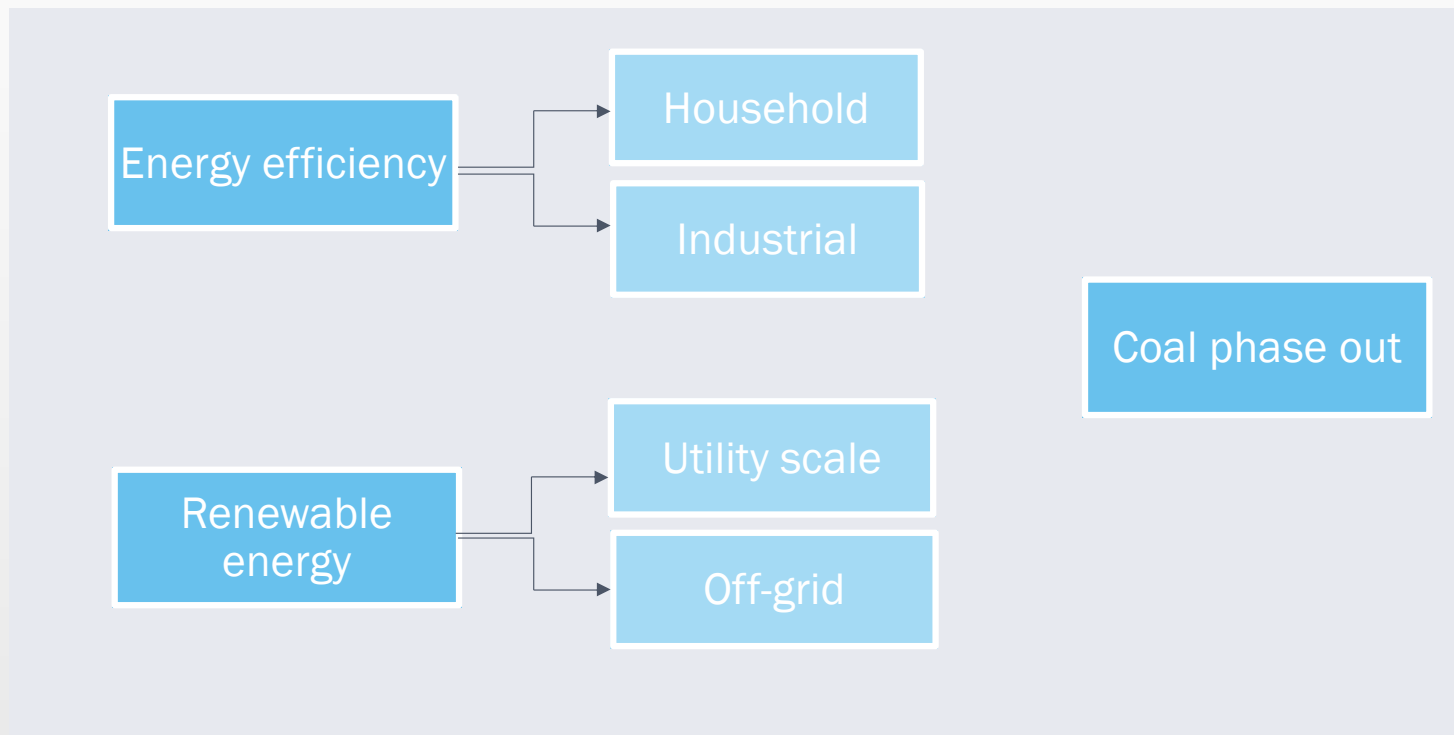
Support Carbon Asset Generation & Monetization:

- Standard development
- Operational capacity (e.g., MRV, quality assurance, social inclusion, benefit sharing, etc.)
- Carbon market transaction support

Establish Country-level Carbon Market Ecosystem:

- Legal and regulatory basis for carbon markets
- Policy environment and pricing instruments
- Institutional set-up

Several activities can support energy transition



For developing countries, energy access is a key component of transition



Health:

2 out of 3 healthcare facilities do not have reliable electricity access



Food Security:

30-40% of SSA's total food production is in large part due to lack of refrigeration



Education:

2 out of 3 primary schools have no access to electricity at all



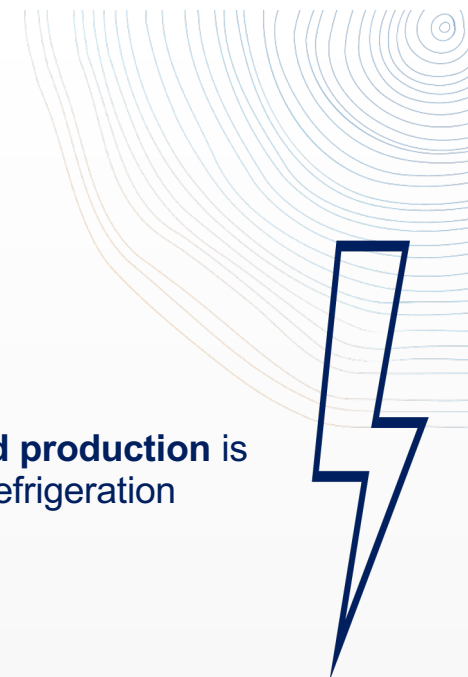
Economic Costs:

Up to 4 percent of GDP lost due to unreliable electricity in some countries



Fragility:

2 out of 3 Africans lacking electricity access live in countries classified as fragile and conflict



The carbon market challenge is different for different activities

Key Challenges



Insufficient volume/scale



High transaction costs associated with measuring emission reductions and rigorous carbon validation & verification



Complexity of carbon generation and carbon market participation: Process and Monetization uncertainty → price, quantities & timing



High perceived risks from potential buyers (including linked to integrity and financial management). Reputational risks.



Lack of technical capacity and experience (as Africa generally overlooked in 1st phase of carbon markets under CDM)



Regulatory uncertainty

Potential solution

Aggregation

Digitalization of carbon market ecosystem and capacity building

Conservative baselines, rigorous methodologies and robust MRV

Transparency

Procurement and financial management good practices

Environmental and social safeguards

Country carbon market strategy, policy framework, and technical assistance

Methodologies emerging for transition credits fall in two categories

Project-based approaches

- Methodologies under development by Verra, Gold Standard, Asian Development Bank, Asia Carbon Institute
- Focused on the retirement of individual coal-fired power plants (CFPPs) and their replacement with cleaner energy
- Issued directly to individual projects for monetization in carbon markets
- Individual CFPP emissions using historical and forward-looking adjustment factors such as emission factor/efficiency and capacity factor

Sectoral Approaches

- Winrock International's Energy Transition Accelerator (ETA) program methodology
- Focuses on national or sub-national level activities including early CFPP retirement, accelerated renewables, infrastructure investments, grid operation improvements, and regulatory measures
- Issued to host countries/jurisdictions that can use the credits to fulfill Nationally Determined Contributions (NDCs) or transfer to eligible private or sovereign buyers
- Sectoral (national or subnational) scale emissions from all generation units within the jurisdiction based on absolute emissions or a standard emission factor

Domestic offset markets generate compliance demand

- The South African carbon tax covers about 90% of the country's total GHG emissions and applies to all stationary and mobile sources of direct and process emissions, including electricity generation.
- GHG emissions on which tax is imposed can be reduced by applying allowances. One of them is the Offset Allowance, permitting entities covered under the carbon tax to retire eligible carbon credits (Carbon Tax Offsets or CTOs) to reduce their emissions by 5-10%, depending on the activity.
- The credit generating activity must occur within South Africa and be outside the tax net. Credit generating activities involving an energy generation project under the Renewable Independent Power Producer Programme (REIPPP) are excluded.
- Headline carbon tax rates have increased significantly over time, and have been legislated to increase stepwise to ZAR 462 by 2030 (from ZAR 159 for the 2023 tax year).

Domestic markets offer an alternate use case for credits

Domestic prices for energy transition credits are higher than international prices

- Trading in the domestic carbon market is less transaction cost and effort intensive for project developers, as it does not require an intermediary.
- The fixed price and lack of volatility in the domestic market is a benefit for selling credits and allows project developers to anticipate carbon revenues to leverage private sector capital.
- Perceptions of carbon market revenues as a share of project financing needs vary by project developers and types.

Attention to Just Transition criteria is increasing

- Attention to Just Transition criteria associated with credits is increasing, especially when credits are to be sold internationally.
- A JET in South Africa needs large scale investment in renewables. Improving energy access and security is a priority.
- Energy efficiency and cookstoves projects can support a JET at a household level and are in demand.
- Carbon revenues may have a role in meeting transition costs that are unlikely to be return-bearing.

Demand in international carbon markets is currently depressed but expected to grow

Demand in international carbon credit markets have fallen, but there is future hope

2023 saw transaction values across markets fall by 61% from the previous year, down to \$723M USD

Despite the contraction of the last two years, VCMs are expected to grow significantly in the coming decades

Price trends varied between project types. Renewable energy and energy efficiency projects commanded prices of USD 3.88 and USD 3.65 respectively – although demand for credits from utility-scale renewables is limited

CORSIA and Article 6 markets are in early implementation phases with progress expected over the next few years

Energy transition credits are an emerging area

Two draft methodologies for phasing out coal as part of a JET have recently been released by the Coal to Clean Credit Initiative and Gold Standard

Just Transition requirements of these projects include:

- Stakeholder mapping and assessment for vulnerability
- Communication strategies
- Implementation plans

Other project types, such as energy efficiency and cookstoves can support a JET at a household level and are in demand

Energy transition credits are likely to end, and the incentive to transition will decrease over time

Multi-stakeholder initiatives are working together on the issue of integrity

Avoiding overestimation, permanence, additionality and avoidance of harm are key aspects of integrity

Effective institutional arrangements and governance of carbon markets can ensure the transparency, accountability and credibility of the emissions reduction efforts made

Price volatility, market efficiency and cash flow are the main challenges when engaging in carbon markets