RESEARCH THEMES

Request for Proposals: Environmental Economics and Policy in South Africa: Designing for Growth

Theme 1. Reforming South Africa's Energy System: Market Design, Pricing, Transition, and the Political Economy of Decision-Making

Sub-themes:

- Inform the design of South Africa's electricity market in the context of ESKOM unbundling and the evolving role of the Integrated Resource Plan, including wholesale market structure, the architecture of the Transmission System Operator, and capacity mechanisms.
- Develop frameworks for electricity pricing that balance cost reflectiveness, fiscal sustainability, and the developmental requirements of expanded access.
- Identify the cost-effective policy mix for coal plant retirement and the infrastructure required to replace retiring capacity, with attention to worker, community, and regional impacts.
- Examine the regulatory, fiscal, and legal architecture of distribution, embedded generation, and wheeling across municipal boundaries, including the implications for municipal finance and the risk of a two-tier electricity system.
- Quantify the economy-wide impacts of electricity unreliability on investment, productivity, and firm survival, and the welfare gains from alternative reliability-first reform packages.
- Apply political economy methods to understand how environmental and climate policy decisions are made in South Africa — including the role of industry actors, intra-government coordination, and the interaction between formal consultative processes and informal influence channels — and what this implies for the trajectory of policy.

Theme 2. Trade, Competitiveness, and the Design of Climate Policy Instruments

Sub-themes:

- Update the economic case for carbon pricing in South Africa given recent developments in energy markets, CBAM exposure, and fiscal pressures.
- Analyse the firm-level effects of CBAM on investment, financing, and competitiveness in exposed South African sectors, and the implications for South Africa's response options, including the question of a domestic CBAM-equivalent measure consistent with UNFCCC Article 2.5.
- Examine the effects of climate policy uncertainty and the politics of policy reversal on private investment decisions and financing costs in exposed sectors.

- Assess the trade, fiscal, and competitiveness implications of green hydrogen and e-fuel strategies, and identify where South Africa has a defensible competitive position.

Theme 3. Climate Adaptation Finance, Environmental Health, and Water Service Delivery

Sub-themes:

- Develop a framework for financing climate adaptation in South Africa given the current fiscal architecture and South Africa's middle-income status, drawing where appropriate on international experience including the IMF DIGNAR framework, the work of the French Development Agency, and the Coalition of Finance Ministers compendium.
- Assess the regulatory, legal, and financing options for water service delivery and the sequencing of the current reform agenda, including the conditions under which private sector investment can be enabled.
- Quantify the health and productivity costs of air pollution hotspots in South Africa, and assess the cost-effectiveness of alternative policy instruments — emissions fees, targeted enforcement, compliance schedules, and disclosure.
- Evaluate intergovernmental fiscal arrangements for environmental service delivery at the local government level, and the conditions under which alternative governance designs improve accountability and outcomes.
- Examine cross-sector trade-offs and interdependencies in the water-energy-food nexus, including the productivity implications of resource competition between high-water-demand sectors (data centres, agriculture, mining) and water service delivery, and the trade-offs this creates for regional growth and adaptation planning.

Theme 4. Firm-Level Impacts of Environmental and Climate Policy and the Productivity Question

Sub-themes:

- Quantify the firm-size-distributional impacts of environmental and climate policy compliance — including carbon tax, CBAM, emissions reporting, and environmental impact assessment requirements — and the implications for firm scaling, market structure, and aggregate productivity, with particular attention to South Africa's missing-middle problem.
- Examine the firm-level effects of electricity unreliability and pricing on small versus large firm survival, scaling, and productivity, and how these vary across sectors and regions.
- Assess the drivers and consequences of clean technology adoption and diffusion at the firm level in South Africa, including the role of energy prices, reliability, and policy uncertainty.
- Evaluate the firm-level consequences of green industrial policy interventions — local content requirements, the renewable energy master plan (SAREM), sector-specific decarbonisation mandates — for firm scaling and productivity.

- Improve the measurement infrastructure for firm-level employment and value-added effects of the green transition, and assess the implications of measurement gaps for the design and evaluation of green industrial and labour market policy.