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Beyond the National Dividend: A Linked CGE-Microsimulation Analysis of Distributional Welfare under South Africa's 2025 Integrated Resource Plan

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Extended Abstract

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Abstract Summary

Distributional Analysis of South Africa's IRP 2025

While South Africa's 2025 Integrated Resource Plan (IRP) have the potential to produce national economic gains (a "double dividend"), these aggregate figures hide severe risks to specific regions and poor households. This papers aims to evaluate the regional effects of the Just Energy Transition, including effects on GDP, employment and key sectors while providing in depth poverty and inequality analysis.

The study uses a sophisticated two-tier model:

1. Macro (TERM-SA CGE): Simulates the economy-wide effects of South Africa's Just Energy Transition under the balanced growth path.
2. Micro (TDB Microsimulation): Uses the Tiberti et al. (2018) toolkit to map those macro shocks onto actual household data, accounting for how people change their spending and labour choices.

The modelled scenario focuses on the "Balanced Path" of the IRP 2025, a strategy designed to reach Net Zero by 2050 while maintaining energy security through a diversified mix of renewables, gas, and nuclear.

The research identifies a "Transition Gap", the difficulty for coal workers to move into green jobs. It predicts that without targeted fiscal support for Mpumalanga, the transition will increase poverty and inequality (higher Gini coefficient) due to rising electricity tariffs and localised job losses.

Presenting Author Biography

Dr. Jessika Bohlmann is a Senior Lecturer in the Department of Economics at the University of Pretoria (UP) and Deputy Director of the DSI/NRF SARChI Chair in Just Energy Transition. She is also currently Managing Editor and Special Issues Editor of Elsevier's Energy Policy journal. Dr. Bohlmann is also serving on the Council of the Economic Society of South Africa (ESSA) and the South African Association for Energy Economics (SAAEE). Her academic and contract work has mainly focused on energy transitions, environmental policy, and youth unemployment, using both computable general equilibrium and econometric modelling methods.