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Regulatory institutional capacity in the energy transition: The case of Europe

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Extended Abstract

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Abstract Summary

An energy transition that is just in nature does not only require decarbonization but the institutional framework to guide the distributional effects of the transition. Highly integrated energy markets and systems exist in the European Union. Despite the advanced infrastructure in Europe, a range of heterogeneous regulatory institutional conditions exists between the countries such as credit market regulations, labour regulations, business regulations and openness of the market. These differences influence the ability of national economies to mobilize investment, adjust production structure and absorb market and policy shocks. These institutional differences become clearly visible in the energy transition, especially with the aim of rapid decarbonization, which requires countries to implement large-scale infrastructure changes and new technological deployment, accelerated permitting processes for energy deployment and adapting labour markets to evolving industries optimally.

These regulatory institutional conditions affect how countries implement policies in response to the just energy transition, in a manner that ensures both decarbonization of the economy occurs while also accounting for socio-economic stability. Beyond the energy security concern, regulatory institutions also assist with limiting the unequal adjustment of burdens across borders, industry, states and households. This study aims to examine how regulatory institutional dimensions affect energy security across countries within the European Union. Panel data is used in a cross-sectional ARDL model to analyze both the short and long run effects of regulatory institutional dimensions on energy security. A Regulatory Efficiency Index is constructed from four institutional dimensions: credit market regulation, labour regulation, business regulation, and market openness. This analysis contributes to the research stream of the just energy transition by indicating that a more efficient regulatory process can create a more equitable transition by improving investment conditions, optimizing adjustment costs and improving market adaptability across member states of the European Union.

Presenting Author Biography

Dr. Alanda Venter is an Assistant Professor at RWTH Aachen University under the Chair of Energy System Economics and at the Institute for Future Energy Consumer Needs and Behavior. She currently serves as co-lead of the SAGE-BRIDGE project, developed in partnership with the SARChI Chair in Just Energy Transition in South Africa. Her research focuses on the role of institutional processes and governance dimensions in shaping more just outcomes within the energy transition.