

WHO BEARS THE INVESTMENT BURDEN? MICROSIMULATING THE DISTRIBUTIONAL AND ENERGY POVERTY CONSEQUENCES OF GERMANY'S HEAT TRANSITION

Karl Seeger, Aaron Praktiknjo
RWTH Aachen University, Aachen, Germany

Extended Abstract

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Abstract Summary

The decarbonisation of residential heating is shifting the financial burden on households from recurring energy expenditures (OPEX) toward lumpy, long-lived investment costs (CAPEX). Mandated heating replacements, envelope retrofits, and the switch to low-carbon technologies create a burden dimension that expenditure-based energy poverty indicators (Boardman, LIHC, or Hills-type measures) cannot capture. Households may show *lower* running costs after a heat pump installation while being simultaneously strained by annuities, equity contributions, or modernisation surcharges passed on by landlords. This *transformation burden* has remained largely invisible in existing microsimulation analyses of German energy policy. The paper addresses this gap by extending an established household microsimulation with a full CAPEX dimension and asks: *How does the heat transition reshape both the income distribution and the prevalence of energy poverty in Germany, and which new vulnerabilities emerge at the interface of owner-occupiers and tenants?*

Presenting Author Biography

Karl Seeger is research associate at the Chair for Energy System Economics at RWTH Aachen University. His research interests focus on energy poverty and distributional justice, as well as the political-economic dimension of the heating transition.