



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centers and help us to shape change!

Are you interested in questions relating to regional transformations of energy systems, pathways to a decarbonized economies and societies, and would like to participate in a research with application for South Africa? The Team Regional Economics at the Institute of Climate and Energy Systems (ICE) specializes in spatial economic and multidisciplinary modeling to enable a comprehensive understanding of the transformation of energy systems. We investigate how the various effects of the energy transition impact the economy at the regional level, analyze the consequences for stakeholders, and provide insights for decision-makers, academia, and policymakers. Based on econometrics and policy evaluation, we develop tools that enable a smooth energy transition in line with climate targets and stakeholder requirements. Using cross-sectional and panel data for Germany, the EU, and international contexts, our analyses provide insights into, for example, the regional economic potential for expanding renewable energies, multiregional decision-making analyses, and distribution analyses for negative emission technologies from an economic perspective. Our target audience are scientists, politicians, and decision-makers who are looking for sound strategies for the energy transition.

We offer you to the next possible date an exiting

Master Thesis – Regional Impacts of Energy System Transitions – Example South Africa

Your Job:

The decarbonization pathways that have been embarked upon are increasingly challenging for individual economies. This concerns both the associated decline of the coal industry and the need for technological change in energy-intensive industries such as steel. Great hopes are being placed in the development and expansion of a hydrogen industry. This is expected to have both employment and income effects.

As part of a master's thesis, the effects of the transition from a coal-based to a hydrogen society are to be analyzed based on regions in South Africa. The methodology is to be based on an input-output

approach (Gupta et al., 2023; Stadler et al., 2021). The approach should be generalized in such a way that it can also be used for other regions / countries.

Your tasks in detail:

You are part of the Spatial Economics team, which conducts research in the field of economics and social sciences on the transformation of the energy system, and support the research assistants in the following activities:

- You carry out literature research and summarize it orally and in writing
- You research, describe, and analyze regional (economic) data
- You design regional econometric-based input-output approaches with our support
- You present your results to the team
- You take part in team meetings and project meetings

Your Profile:

- You are completing a master's degree in the field of economics or in a related field
- You are interested in the challenges of the energy transition and its economic consequences
- You have a quick grasp and the ability to analyze and creatively implement complex issues
- You are proficient in the use of statistical and geoinformation software (e.g., Python, R, QGIS)
- You have a high degree of team spirit

Our Offer:

We work on cutting-edge, innovative topics and offer you the opportunity to play an active role in shaping change. We offer you:

- An interesting and socially relevant topic in an interdisciplinary, well-networked project team
- Ideal conditions for practical experience alongside your studies
- An international, committed, and collegial working environment
- Excellent scientific equipment and the latest technology
- Qualified supervision by academic colleagues
- Optimal conditions for balancing work and private life as well as a family-conscious company policy
- The opportunity to work flexibly (in terms of location), e.g., in a home office
- Flexible working hours as well as a reasonable remuneration
- The work is scheduled to be carried out at the Jülich Research Centre over a period of six months

In addition to exciting tasks and a collaborative working atmosphere at Jülich, we have a lot more to offer: <https://go.fzj.de/benefits>.

We welcome applications from people with diverse backgrounds, e.g., in terms of age, gender, disability, sexual orientation / identity, and social, ethnic, and religious origin. A diverse and inclusive working environment with equal opportunities, in which everyone can realize their potential, is important to us.

Further information on diversity and equal opportunities can be found at <https://go.fzj.de/equality>.

We look forward to receiving your application. The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible via our **Online Recruitment System!**

Contact Form:

If your questions have not yet been answered via our **FAQs**, please send us a message via our **contact form**.

Please note that for technical reasons we cannot accept applications by e-mail.

www.fz-juelich.de

WE WERE AWARDED

