

**Technische Universität Berlin**

Technische Universität Berlin offers an open position:

2 positions - Research assistant - salary grade E 13 TV-L Berliner Hochschulen

part-time employment may be possible

Faculty VII - Institute of Economics and Law - Workgroup for Economic and Infrastructure Policy (WIP)

Reference number: VII-672/24 (starting at 01/06/25 / limited until 31/08/28 / closing date for applications 21/02/25)

Working field:

With more than 35 000 students, circa 100 course offerings and 40 Institutes, the Technische Universität Berlin is one of Germany's largest and most internationally renowned technical universities. The range of services offered by our seven faculties serves to forge a unique link between the natural and technical sciences on the one hand, and the planning, economics and social sciences and humanities on the other. The Workgroup for Infrastructure Policy at TU Berlin (TUB-WIP) is a department, which forms part of Faculty VII, Economics and Management. TUB-WIP is dedicated to advancing infrastructure policy and planning, particularly in areas like sustainable transportation, smart cities, energy optimization, and water resource management. With an interdisciplinary approach and a strong focus on institutional economics theories, they collaborate with experts from various fields to find holistic solutions to complex infrastructure challenges. Beyond research, the department plays a vital role in education and outreach, shaping future infrastructure professionals and engaging with policymakers and industry stakeholders. Their global impact is felt through international collaborations and contributions to critical global issues such as sustainability and energy transformation.

The IDEAL4GREEN project addresses the urgent challenges of climate change and the global shift towards sustainable energy systems. It focuses on developing and integrating microgrids, which are crucial in managing the variability of renewable resources and achieving decarbonization targets. The project aligns with the European Commission's commitment to carbon neutrality by 2050 by empowering energy communities and optimizing local supply and demand. The project proposes a comprehensive doctoral training network aimed at developing skilled engineers with interdisciplinary and intersectoral expertise. This network diverges from conventional university-based research, maintaining strong industry links and emphasizing practical implementation. IDEAL4GREEN consists of 8 beneficiaries and 11 partner organizations, recruiting 15 doctoral candidates to undertake research on microgrids' planning, design, operation, control, and impact assessment.

The research encompasses innovative frameworks and methodologies for integrating microgrids and transforming traditional grids into sustainable energy systems. The Doctoral Candidates will engage in a mix of academic and industrial experiences, including secondments and networking meetings, ensuring their exposure to both theoretical knowledge and practical skills.

TUB-WIP seeks to hire two (2) Doctoral Candidates to work on the Project. We offer a training program that covers various aspects, such as advanced technical skills and collaborative communication, critical thinking, problem-solving, and adaptability. The doctoral candidates will work to develop their doctoral thesis at TUB in one of the following topics:

Topic 1: Sustainable Microgrid Design and Control Strategies for Communities

The PhD candidate will explore optimal design, control methodologies, and innovative approaches to ensure reliable, sustainable energy access. By integrating technological, economic, and social considerations, the goal is to develop microgrid solutions that can enhance energy resilience and sustainability in community settings.

Topic 2: Microgrid as a Service (MaaS): Examining New Business Models for Microgrid Implementation in Remote Agriculture Communities

The PhD candidate will investigate the emerging concept of Microgrid as a Service (MaaS), focusing on new business models for microgrid deployment in remote agricultural communities. The aim is to develop sustainable and scalable solutions to improve energy access, reduce emissions, and promote agricultural productivity.

Responsibilities:

The Doctoral Candidates will actively participate in comprehensive training programs aimed at enhancing both technical and transferable skills. This includes workshops, seminars, and conferences that cover areas such as advanced control systems, resilience strategies, and economic planning for microgrids. Additionally, each Doctoral Candidate will collaborate closely with the industrial partner MicroEnergy International in Berlin through 18-month secondments, where they will apply their research in real-world industrial settings, gaining hands-on experience and refining practical solutions for energy systems. The Doctoral Candidates will also contribute to project reporting, provide regular updates on their research progress, and ensure project milestones are met. Their findings will be communicated and disseminated, e.g. through presentations at international conferences and contributions to peer-reviewed publications.

Requirements:

- Successfully completed university degree (Master, Diplom or equivalent) in the areas of studies such as economics, engineering, or a related field that permits the access to the doctoral studies.
- Very good working knowledge of optimization, simulation, and modelling software such as Julia, Homer Pro, etc.
- Specific professional experience/other competencies: experience in one or more areas related to renewable energy,

microgrids, smart grids, energy systems, rural electrification, or environmental sustainability.

- Excellent knowledge of written and spoken English
- In line with the rules of the Marie-Slodowska-Curie-Doctoral-Networks-Action Plan, applicants must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting organisation for more than 12 months in the 36 months immediately before their recruitment date.

Desired:

- preferable knowledge of other languages, such as Spanish/French/German. (Or the willingness to learn it.)
- Experience in preparing technical reports and presentations on energy matters
- Strong quantitative, analytical, and problem-solving skills.
- Good communication and interpersonal skills
- Strong ability to manage multiple duties simultaneously, prioritizing tasks and meeting deadlines

Please send your application with the **reference number** and the usual documents (combined in a single pdf file, max. 5 MB) **only by email** to Prof. Hirschhausen via jobs@wip.tu-berlin.de.

By submitting your application via email you consent to having your data electronically processed and saved. Please note that we do not provide a guaranty for the protection of your personal data when submitted as unprotected file. Please find our data protection notice acc. DSGVO (General Data Protection Regulation) at the TU staff department homepage: https://www.abt2-t.tu-berlin.de/menue/themen_a_z/datenschutzerklaerung.

To ensure equal opportunities between women and men, applications by women with the required qualifications are explicitly desired. Qualified individuals with disabilities will be favored. The TU Berlin values the diversity of its members and is committed to the goals of equal opportunities. Applications from people of all nationalities and with a migration background are very welcome.

Technische Universität Berlin - Die Präsidentin - Fakultät VII, Institut für Volkswirtschaftslehre und Wirtschaftsrecht, FG Wirtschafts- und Infrastrukturpolitik, Prof. Christian von Hirschhausen, Sekr. H33, Straße des 17. Juni 135,

The vacancy is also available on the internet at <https://www.personalabteilung.tu-berlin.de/menue/jobs/>

