
StromNachbarn: Evaluation der sozialen und ökologischen Wirkungen von Mieterstromanlagen in Berlin

Publication

Report

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Tenant electricity systems generate solar power on apartment buildings and deliver it directly to the households in the building. In a new study, Katharina Umpfenbach and Ricarda Faber evaluate the effects of the existing tenant electricity systems in Berlin. The bottom line: Berlin's tenant electricity projects have positive ecological and socio-economic effects, but these remain low compared to the technically available potential. The government's goal of covering a quarter of the city's electricity needs with solar energy can only be achieved with massively accelerated expansion. Under the existing regime, such dynamism cannot unfold. The framework needs to fundamentally change so that the full potential can be exploited for all plant types and sizes.

According to our data analysis, 74 PV tenant electricity projects with a total installed capacity of 12.6 MWp were in operation in Berlin at the end of 2020. So far, less than 1% of the existing tenant electricity potential has been used. The plants save around 4,100 t of CO₂ per year. This corresponds to just under 0.1% of Berlin's energy-related CO₂ emissions in 2019.

Tenant survey in two building complexes with tenant electricity

Our survey shows that participants view tenant electricity positively - both from an ecological and an economic point of view. Especially for households with a net income below the Berlin median income, the low price is the most important reason to choose a tenant electricity contract. In addition, tenant electricity users rate the energy transition more positively than the population average. The purchase of tenant electricity is seen as an option not only to benefit financially from the energy transition, but also to actively contribute to climate protection.

Various obstacles impede a dynamic expansion of tenant electricity. The regulatory framework enables only a narrow range of projects to reach break-even. Even these projects often use only a share of the available roof areas. Projects on buildings with less than 20 residential units tend not to be profitable.

The research project "Knowledge. Transformation. Berlin."

The report is a result of the ElectricityNeighbours project, which Ecologic Institute and the Institute for Ecological Economic Research (IÖW) are jointly implementing. ElectricityNeighbours is part of the collaborative project "Knowledge. Transformation. Berlin. – Transdisciplinary research for a social and ecological metropolis". In this project, the research partnership Ecornet Berlin is developing crucial insights and recommendations for policy makers and stakeholders for Berlin's sustainable urban development in the three thematic areas of climate change, sustainable economy and digitalisation. This unique project pools the knowledge and research competences of five Berlin-based institutes of transdisciplinary sustainability research and develops impulses for a social-ecological future of Berlin. The project is funded by The Governing Mayor of Berlin, Senate Chancellery – Higher Education and Research.

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ElectricityNeighbours – Can tenants in Berlin's apartment buildings become prosumers through solar power projects and sector coupling?

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Table of contents

- 1 Einleitung
- 1.1 Warum Mieterstrom in Berlin?
- 1.2 Forschungsfragen dieser Untersuchung
- 1.3 Mieterstrom in Berlin: Ausbaustand und Potenzial
- 1.3.1 Stand des Ausbaus der Solarenergie in Berlin
- 1.3.2 Abschätzung des Solarpotenzials in Berlin
- 1.4 Politische Rahmenbedingungen für Mieterstrom
- 1.4.1 Relevante Gesetzesvorhaben auf Bundesebene
- 1.4.2 Vorgaben und Fördermaßnahmen des Landes Berlin

- 1.5 Methodik
- 2 Ergebnisse
 - 2.1 Charakteristika bestehender Mieterstromanlagen in Berlin
 - 2.2 Ökologische Wirkungen
 - 2.2.1 Gesamtstromerzeugung der Berliner Mietstromanlagen
 - 2.2.2 Treibhausgaseinsparungen der Berliner Mieterstromanlagen
 - 2.3 Sozioökonomische Wirkungen
 - 2.3.1 Demografisches Profil der Umfrageteilnehmer*innen
 - 2.3.2 Motivation für Bezug von Mieterstrom
 - 2.3.3 Wirkungen auf Einstellungen zur Energiewende
 - 2.4 Treiber des Mieterstromausbaus in Berlin
 - 2.4.1 Sicht der Wohnungsunternehmen
 - 2.4.2 Sicht der Anlagenbetreiber
 - 2.5 Hemmnisse
 - 2.6 Hinweise auf Zukunftspotenziale
- 3 Diskussion der Ergebnisse
 - 3.1 Zusammenfassung und Diskussion der Ergebnisse
 - 3.2 Erste Schlussfolgerungen zum politischen Handlungsbedarf
- 4 Literaturverzeichnis
- 5 Anhänge

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