

1. Title of the Project: *Solidarity-Based Balcony Solar Systems: Potential Analysis and Cooperative Financing Models for Plug-in Solar Devices in Rental Contexts*

2. Please select one from each column of the following table

Topic of the project

We are dealing with this ...

site:

p.e. ideas to prevent the destruction of a certain building, biological feature, or social context; or ideas to build/grow such a feature

type:

e.g. cooperative dwellings, suburban office estates, single family houses

Initiative: *works towards new, non-exploita*

that works towards new, non-polluting and non-exploitative living patterns, and that is anchored in space (cooperative, NGO, ...)

planetary boundary (Stockholm Resilience Center)

With our project we want to help fixing ...

Climate change

Increased greenhouse gases and aerosols in Earth's atmosphere trap heat that would otherwise escape into space. The climate change planetary boundary assesses the change in the ratio of incoming and outgoing energy of the Earth. More carbon dioxide in the atmosphere and more trapped radiation causes global temperatures to rise and alters climate patterns.

Freshwater change

The alteration of freshwater cycles, including rivers and soil moisture, impacts natural functions such as carbon sequestration and biodiversity, and can lead to shifts in precipitation levels.

Land system change

The transformation of natural landscapes, such as through deforestation and urbanization, disrupts habitats and biodiversity and diminishes ecological functions like carbon sequestration and moisture recycling.

Biosphere integrity

The diversity, extent, and health of living organisms and ecosystems affects the state of the planet by co-regulating the energy balance and chemical cycles on Earth. Disrupting biodiversity threatens this co-regulation and dynamic stability.

type of project

We want to do this with a ...

plan

An urban design proposal on a certain site. As a matter of principle, we avoid land take and the creation of impervious surfaces as well as demolition.

strategy

develop a framework or strategy outlining principles and guidelines for the desired change in a given spatial setting

intervention

create an intervention in urban space through iteration and reflection that addresses an urbanistic issue. Only BA Thesis, only Summer semester ("Interventionsklasse").

start-up

develop an urbanistic business idea, or an idea for a new institution.

3. What is the occasion? Why is your project necessary and why now?

The energy transition is currently taking place primarily on the rooftops of privately owned homes, while tenants in dense urban areas are often excluded from participation. In light of the climate change crisis, it is essential to unlock underused surfaces such as balcony railings as an energy resource—without sealing additional land (avoidance of land take).

Why now?

Regulatory context: New legal simplifications for plug-in solar devices significantly reduce bureaucratic barriers for tenants.

Social equity: Rising energy prices disproportionately affect tenants. A solidarity-based model between landlords (investment/provision) and tenants (use/rent benefits) creates a non-exploitative living pattern that strengthens social acceptance of the energy transition.

Don't forget the second page!

EMERGENCY MEASURES THEME REQUEST SHEET

4. How do you want to accomplish this? Which scientific or artistic methods do you want to use and with which partners do you want to work?

Scientific methods:

Potential analysis: GIS-based mapping of a selected neighborhood to identify balcony orientations and shading factors.

Economic modeling: Development of a financing framework in which investment costs are covered by landlords or cooperatives and offset through solidarity-based allocation models using tenants' electricity savings.

Artistic/urban design methods: Visualization of the "solar façade" as a new element of urban space to increase the visibility of decentralized private energy generation.

Partners: Collaboration with local energy cooperatives or tenant initiatives to validate financing concepts.

5. Participants:

name	Matrikelnummer	e-Mail	program	semester

6. Are you open for more Participants?

yes no

7. Sent everything to [info.ud\(at\)ed.tum.de](mailto:info.ud(at)ed.tum.de)