



## Special Session Proposal

### Towards more Resilient and Inclusive Urban Energy Futures

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#### Abstract:

The ‘four Ds’ of energy system transformation – decarbonization, decentralization, digitalization, and democratization (Soutar, 2021) – present both opportunities and challenges for a more resilient, inclusive, and just energy transition. In the EU, energy is increasingly being produced, distributed and consumed at different scales, ranging from households to community and district levels. This is resulting in changing energy geographies and innovative approaches in urban areas, exemplified by for example energy communities and positive energy districts (PEDs). This is enabling local stakeholders to jointly engage in energy-related activities such as collaboratively producing and sharing renewable energy.

This special session invites papers that aim to shed more light on the opportunities and challenges for more resilient and inclusive urban energy futures, which relate to one or more of the ‘four Ds’ and to one or more actors such as consumers (e.g. households and/or businesses), prosumers, energy communities, local government, grid operators, aggregators, and energy suppliers. Conceptual, theoretical, and/or empirical advances are welcomed.

Topics can include, but are not limited to:

- how energy communities, PEDs and/or other local initiatives contribute to achieving climate goals while addressing inequalities in cities
- aligning energy system transformation with urban economic development (e.g. related to urban planning; new opportunities to improve wellbeing)
- the implications of energy system transformation on energy poverty and other vulnerabilities
- the role of innovative financing models and/or business models, subsidies, or incentives to support marginalized communities in participating in energy system transformations
- synergies among the Ds, such as integrated monitoring and evaluation schemes enabling more optimal allocation of resources
- trade-offs and/or missed opportunities vis-à-vis agglomeration economies and (electricity) grid capacity constraints

- the implications of grid capacity constraints on participation in the energy transition
- how participation in urban energy system transformation can be strengthened in order to foster acceptance; the role of public-private partnerships; quadruple helix
- the new spatial inequalities emerging from digitalization and/or other (urban) energy transition processes
- the role of emerging technologies like AI and blockchain in supporting or challenging resilient and inclusive urban energy futures
- practical experiences, policy insights and/or innovative solutions for more resilient and inclusive urban energy transitions
- risks, trade-offs and consequences of energy system transformation (not limited to the energy system)

Soutar, I. 2021. Dancing with complexity: making sense of decarbonisation, decentralisation, digitalisation and democratisation. *Energy Research and Social Science*, 102230.