**Smart cities and regions informing the energy transition**

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Smart Energy Transition is defined as a technology driven shift from a fossil fuel based system to a more sustainable energy system. This shift currently plays a major role in the transformation of cities and regions but is characterized by a high level of complexity. What needs to be considered in a comprehensive energy planning process ranges from traditional analysis of spatial dynamics to latest trends understanding e.g. e-mobility impact on energy systems, spatially explicit estimation of renewable energy potential, definition of energy consumption baseline, impacts on socio-economic patterns.

This increasingly calls for a multidisciplinary approach and requires a huge amount of data, with variable accuracy, to produce effective strategic scenarios and policies. In this regard, spatially distributed data can play an important role in defining both the state of a territory and its trends.

The special session is thought as a forum in which researchers, technicians and experts can exchange already tested smart energy transition proofs of concepts and spatial-explicit methods or preliminary procedures specifically designed to support energy planning activities for cities and regions.

The contributions should be able to demonstrate how the new paradigms can support, with suitable tools and methods, the decision-makers in reaching strategic energy goals of a territory. Papers considering one or more of the following dimensions are particularly encouraged:

- Smart cities and regions proofs of concept for energy transition;
- Spatially explicit methods (e.g. using Geographic Information Systems, machine learning algorithms, etc.) for smart energy planning;
- Big and open data (including remote sensing and drones) for smart energy transition;
- Behavioural economics for smart energy transition;
- Use and importance of a correct data management policy for smart energy planning;
- Application of social sciences for scenario analysis in smart energy planning and policies.

**Keywords**: smart city, smart region, smart energy transition, spatial-explicit approaches, sustainable energy planning.