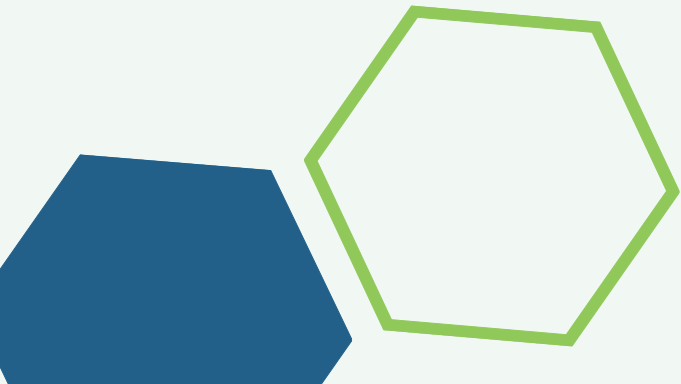
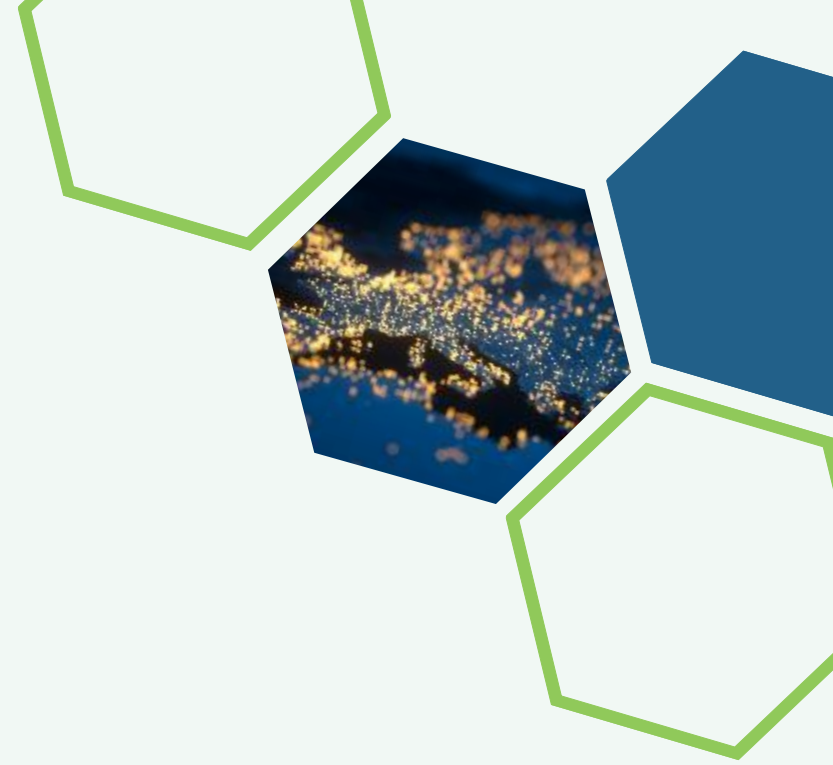


SP 5 Transition pathways modelling



Mission

- ▶ Provide state-of-the-art tools and methods for assessment of policy, social and environmental aspects of clean energy transition and energy system development and ensure the integrity of these in the contribution to transition pathway development.

Background

- ▶ Pathways with technology choice, timing of investments, policy measures and socio-technical aspects.
- ▶ Sufficient representation and understanding of the operations of the system with the balance between the roles of different energy vectors such as electricity and hydrogen and the interplay between sectors as well as local political criteria.
- ▶ Physical limitations to the deployment but also economic, environmental, societal, political and regulatory features of a country or region.
- ▶ Macro-economics on a European level but also including global aspects and impact from and on our European neighbours is within the interest areas of JP e3s SP5.
- ▶ Modelling will provide the high level actors with tools for analysing what happens and how the system develops.
- ▶ Connecting the social and policy dimensions to the energy system modelling will give more realistic results and provide new knowledge of importance to the clean energy transition narrative and for forming of new policies and regulations on EU level.
 - ▶ Energy justice, empowerment and fighting energy poverty
 - ▶ social and policy dimension of both the energy system modelling and modelling of transition pathways is important.

Areas of intervention

- ▶ regulation of the energy market
- ▶ policy ex-ante assessment and ex-post impact evaluation
- ▶ robust transition pathways
- ▶ socio-technical energy system modelling
- ▶ environmental impact evaluation of pathways
- ▶ decision-support systems and scenario planning

Objectives

- ▶ The objective of JP e3s requires ability to consider the social science aspects and socio-economic modelling of the energy transition across economic sectors in Europe. SP5 will contribute to the competence base and research capacity needed within socio-economic models across sectors and societal needs including the modelling of policy and tools for assessment and evaluation of the progress of clean energy transition. The subprogram will work with the following topics:
- ▶ Build competence and models for analysis of different regulations for the energy market including tools for assessment of market operation of the at-all-times active energy market regulation. This includes actor-based models for understanding the competition levels in the energy market.
- ▶ Build models and methodology that are suitable for pre-assessment of policy measures and for post-impact evaluation of current policies. Do research on which policy that effectively pushes forward the energy transition and suggest policy changes that will benefit the transition and the development of the energy system and energy market.
- ▶ Ensure the integrity of the environmental, social and policy aspects in models used for analysis of the integrated European energy system modelling and include policy and social impacts into the modelling of transition pathways.
- ▶ Analyse the impact of uncertainty and how do design robust transition pathways



Thank you
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