

Nordic transition to renewable energy - coherent regulatory and market frameworks

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Expanding the economic bottleneck

Policy and technology in the Nordic countries, are increasingly moving towards energy systems increasingly based on renewable energy. However, the question is if current regulation and markets are up to this challenge. This project identifies market-based and regulatory pathways towards future Nordic and Baltic energy systems, dominated by renewable energy.

Research question

Which regulatory and market-related barriers are present in the sectors of electricity, heat, gas and transport, restraining the transition to a coherent, renewables-based energy system in the Nordic and Baltic countries?

What changes are necessary, in order to diminish the barriers and facilitate the coherent energy system?

Conceptual model/theory

To be defined...

Method

- Data-gathering, primarily conducted through Flex4RES-surveys among Nordic countries. Regulatory framework conditions, financial and economic data.
- Analysis of markets and regulation, hereunder the surveys, to identify regulatory drivers, barriers and potentials.
- Techno-economic analysis, by optimisation-modelling of selected scenarios, varying on years, renewable energy penetration and regulatory frameworks.
- Socio-economic, business-economic and user-economic analysis to identify consequences of energy regulatory changes.

Expected results

- An evaluation of current, medium and long-term regulatory measures for future integration of renewable energy, enabling improved decision-making for policy-makers.
- Clarification of sufficiency in regulation and markets, to accommodate the transition to increased amounts of renewable energy.
- An investigation of best strategies for implementation of policies for integration of large volumes of renewable energy in current energy markets and regulation.



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