



On the effects of tariff structures to the revenue streams of local energy systems

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Full paper: <https://doi.org/10.1049/icp.2023.0466>

Summary

Local energy systems (LES) and distributed energy resources constitute the backbone of the decentralised paradigm for the energy system transition to the net-zero era. The realisation of the full value of flexibility that can enhance decentralised investments require appropriate signalling. Tariffs that combine the market value of the final product with efficient network charges can promote the optimal operation of decentralised assets and support their fair and sufficient remuneration. This paper, by utilising a modular optimisation modelling approach evaluates the effects the different structures of tariffs have to the revenue streams of LES in Spain and Austria under the energy service provision business model, which is more sensitive to tariff variations.

Highlights

- Local Energy Systems (LES) and distributed energy resources are key enablers of the decentralised energy transition to the net-zero era, with flexibility as a crucial component requiring effective tariff signalling.
- Tariffs combining market value with efficient network charges can optimise decentralised asset operations and ensure fair remuneration for energy service providers.
- A modular optimisation modelling approach evaluates the impact of different tariff structures on LES revenue streams in Spain and Austria under the energy service provision business model, emphasizing its sensitivity to tariff variations.



The TradeRES project will develop and test innovative electricity market designs that can meet society's needs of a (near) 100% renewable power system. The market design will be tested in a sophisticated simulation environment in which real-world characteristics such as actors' limited foresight into the future and risk aversion are included.



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Start date
1 February 2020

End date
30 November 2024

Overall budget: € 3 988 713,75



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 864276