



Peer-to-peer energy trading as cooperative microgrids' enabler

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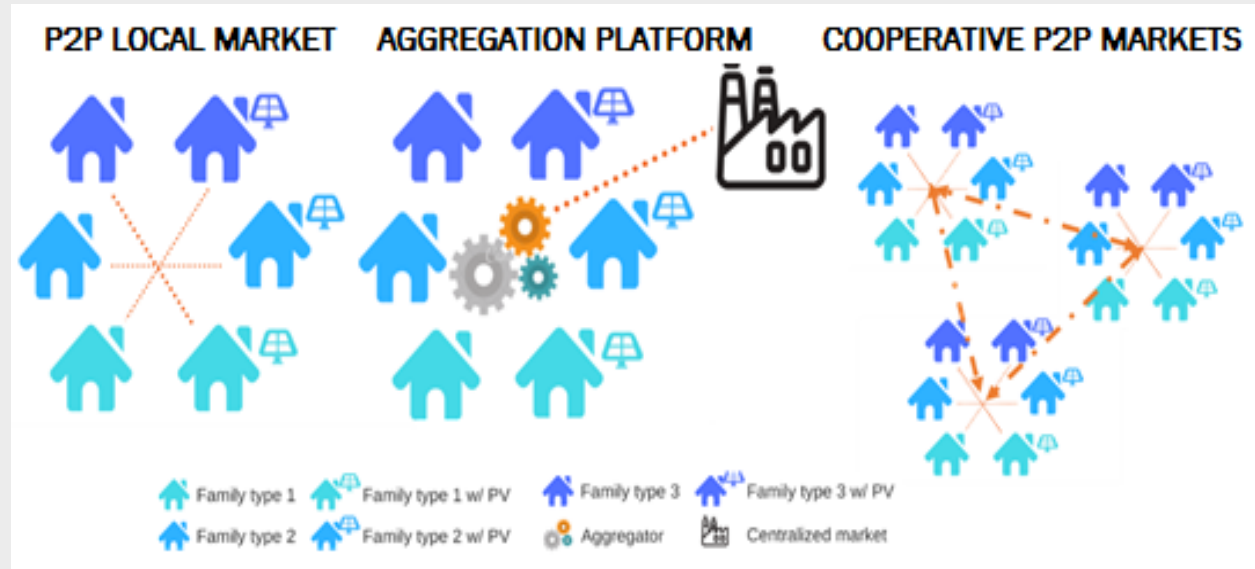
The Topic

- **Peer-to-Peer (P2P)** energy trading has been proposed as a **future model for the electricity system**.
- It proposes to **increase local self-sufficiency** and encourages the uptake of both **renewable energy** and **demand response services** by end-users
- In the end it **provides autonomy**, competitive electricity prices and a sharing economy

P2P offers a new set of challenges

- The **current regulatory** framework is clearly centralized and defined to keep the monopoly of energy retailing. However, in the long term, it **has to be adjusted** to reflect the requirements of decentralized transaction models, in particular in microgrids

The Research



- P2P research has been ...
 - Testing transaction models within the existent framework
 - Developing their own modelling tools
 - Implementing pilots in industry
- New legislation on Clean Energy Package (Article 21 & 22) promotes self-consumption and local communities

Future Goals

- Determine the types of interaction and outcomes that should be encouraged in a P2P electricity market
- Design and Modelling of a **local energy market** that reflects a P2P paradigm to test market designs and identify possible beneficial pilot projects
- Implement the design in a **pilot project** to demonstrate real world outcomes and identify practical barriers
- Research on the interaction and cooperation of multiple P2P local markets



THANK YOU

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