



## Focus Group 7 - Transformation of the Energy system: centralisation vs further decentralisation

Focus group 7 was organized around three presentations tackling the topics of centralization and decentralization of the energy system. The first presentation focused on optimization tools developed in the H2020 MERLON and PLANET projects enabling the planning and operation of decentralized flexibilities in integrated local energy systems. The second presentation was set up in an interactive manner to gather input from the session attendees to flesh out a case study about the decentralization of investment decisions in power systems to be carried out within the OpenEntrance project. The third talk presented the key results of a case study from the H2020 project AURES II, assessing the impact of coordinated auction mechanisms by European countries on renewable energy sources investments. Each presentation was followed by a poll (via slido.com) initiating interactions and discussions with the attendees. The major takeaways emerging from the discussions are:

- Decentralization is a major trend of current energy systems because it promotes acceptance and active participation of communities in the energy transition. This is essential to be able to exploit the whole potential of local flexibilities such as variable renewable potential, multi-sector coupling, demand-side management...
- Investments are a key challenge that are difficult to organize efficiently in a decentralized way. Many techniques have been considered with limited success: subsidies, capacity markets, CO2 markets, Auctions mechanisms,...
- Crude decentralization induces inefficiencies in both operation and investment decisions. Coordination mechanisms are required both at the operation and investment level to recover efficiency.
- Modelling tools are critical to assess various mechanisms designs and propose new relevant coordination schemes.