



# Discussion of technical recommendations

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# Goal of this session

- Discussion about the technical recommendations drawn from the key technical findings of PROSEU (presented in Highlight #1)
- Capture your opinions and experiences
- Collaboratively identify the most important key aspects for the technical implementation of prosumer technologies

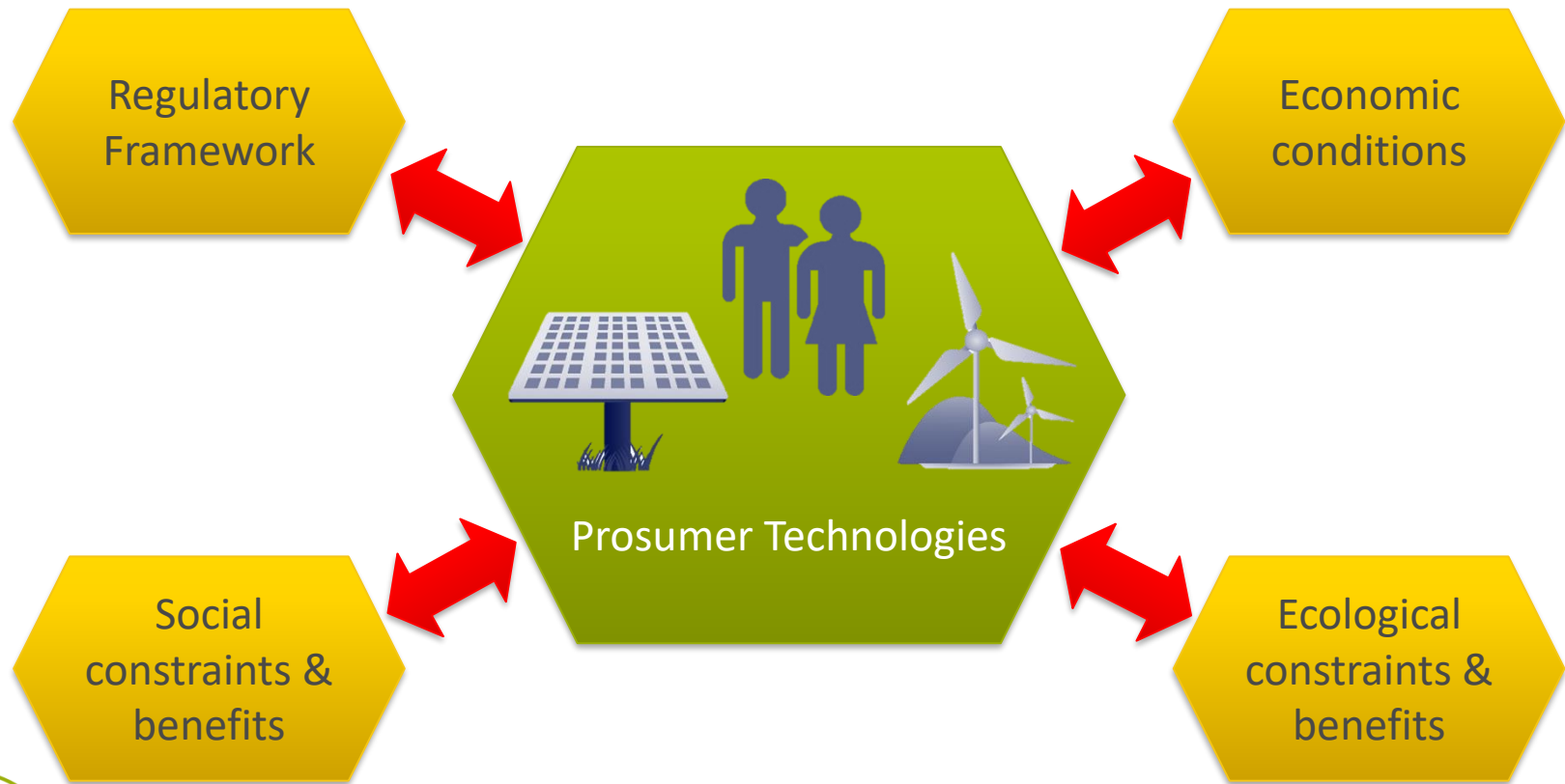


# Agenda

1. What are the technical recommendations of PROSEU for prosumerism? | short Input, Dr. Swantje Gähns, IÖW
2. What is your opinion? | Polling
3. Breakout Groups
  - **Group 1:** Discussion of technical recommendations
  - **Group 2 + 3:** Discussion of regulatory/economic requirements for technical implementation
  - Identify 3 key findings/aspects
4. Key Findings of breakout groups | Presentation & Plenary discussion



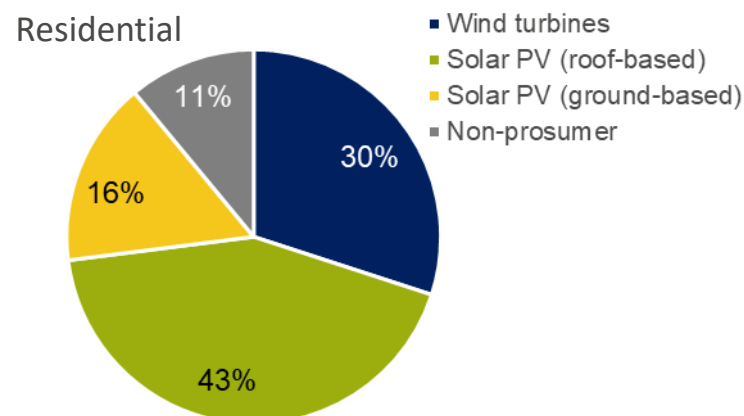
# Technology is not independent



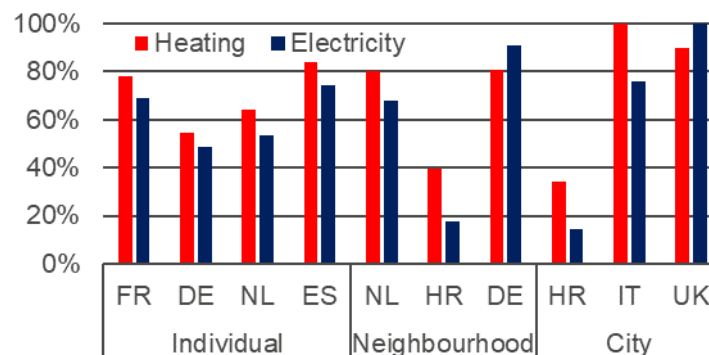
# How does **technology** enable prosumers?

1. **Sustainable technologies for prosumers:** There is a **high technical potential for prosumer technologies** in all EU member states. Regulations need to be adjusted to facilitate electricity sharing and help energy communities to benefit from prosumer technologies, and hence lift the potential of this target group. A **subsidy or loan** from the local or national government could support prosumers to invest in prosumer technologies.
2. **Increasing self-sufficiency mindfully:** The research of the PROSEU project shows that in most modelled cases, prosumers can achieve rather **high renewable self-sufficiency**, up to 100% in some cases, for both the heating and the electricity sector. These figures correlate with the emission reductions and significantly depend on the technology in use and the storage capacity deployed.

Share of technologies used for generation of electricity in 2050 EU-Scenario



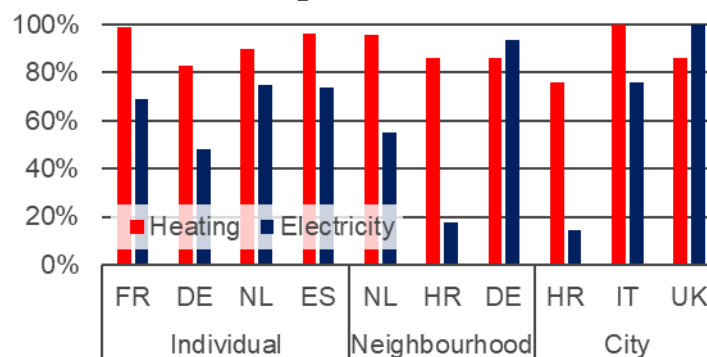
Share of self-sufficiency 2050 Scenario



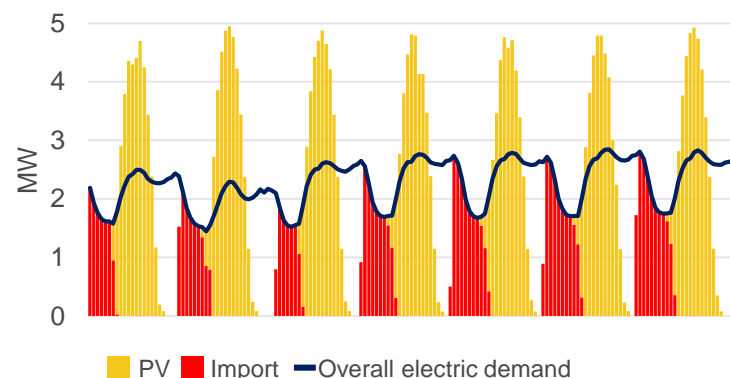
# How does **technology** enable prosumers?

3. **Ecological impact of prosumers:** Prosumer technologies can **reduce CO<sub>2</sub> emissions considerably** by contributing to the share of renewable energies, energy consumption reduction and higher efficiencies. CO<sub>2</sub> emission reductions can reach up to 100% in the electricity as well as heating sector, by combining renewable energy technologies with energy storage.
4. **From individual prosuming to energy communities:** Sharing electricity in a community can **flatten load curves** and **increase self-demand**. Communities should explore options for installing prosumer technologies and schemes for operation. Increasing the level of prosumerism to the citywide community, can raise renewable self-sufficiency to 100% in both sectors, if the installed storage capacity is high enough.

Share of CO<sub>2</sub>-reduction 2050 Scenario



Example of power load on city level



# How does **technology** enable prosumers?

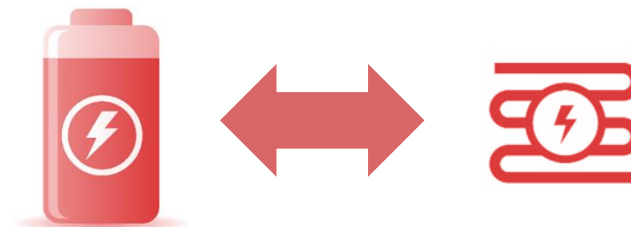
## 5. Increasing enthusiasm and local acceptance:

Despite overly high technical potential, prosumer technologies might not be taken up in a certain area because of little enthusiasm from consumers/citizens and acceptance problems. It is therefore highly important that, specifically larger, prosumer projects are carried out in a manner which is **mindful of potential opposition** and allows for a more **inclusive decision-making** process.



## 6. Using the most efficient way to store the energy:

Storage is one way of increasing self-consumption and relieve the grid at the same time. The **best choice of storage** from an ecological and economical viewpoint, however, depends highly on the climate, the consumption patterns and the regulatory framework.



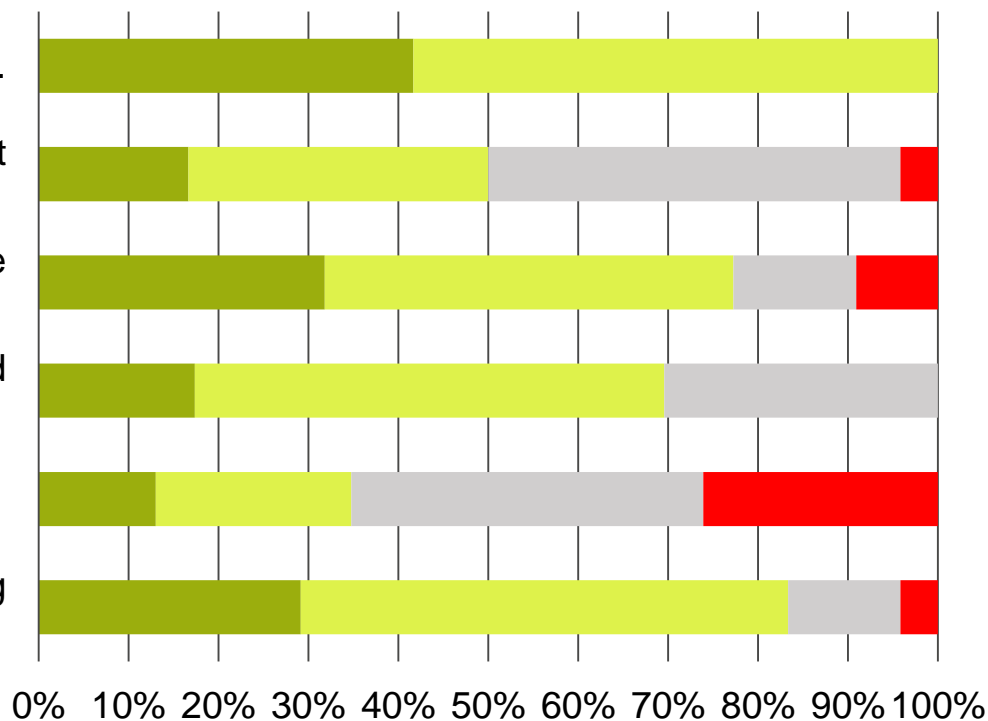
What is your Opinion?



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# Polling on different statements

- Solar energy is the key technology for prosumers.
- Building energy communities is the most efficient way to achieve renewable self-sufficiency.
- Consumption patterns should be adjusted to the varying energy production.
- Prosumer technologies need to smart in order to add value to the energy system.
- The ecological impacts of battery storage are too high to support renewable energy production.
- Local governments are key actors for encouraging collective prosumer initiatives.



■ I strongly agree. ■ I agree. ■ I neither agree nor disagree. ■ I disagree. ■ I strongly disagree.

Which key aspects are most important for the technical implementation of prosumerism?

# Key Findings

## Group 1 (Technical)

1. Automation of energy system (make it accessible also to people not energy literate)
2. Sector integration into smart energy system
3. Energy efficiency needs to be considered

## Group 2 (Regulatory)

1. Make technologies more accessible and open up through Apps or visualisation (demystification of Blockchain for example)
2. Make markets and systems more transparent and accessible, lower entry boundaries and innovate regulation to include new (energy and digital) technologies
3. Take the perspective of data and the public value into account

## Group 3 (Regulatory)

1. Regulatory sandboxes: Try out before more regulation
2. Need of storage depends on scale and what is desired



# Thanks for your attention! Any questions?

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