

Energy storage in buildings – the potential in the Energy Package

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Hosted by MEP Bernd Lange and the Representation of Lower Saxony, with The Concrete Initiative.

Increasing renewable energy uptake will bring the need for greater energy flexibility and storage in order to match supply with demand. What if buildings could play this role, by offering thermal storage capacity that is currently untapped?

The Concrete Initiative event “**Energy storage in buildings – the potential in the Energy Package**” hosted with MEP Bernd Lange and the Representation of Lower Saxony on 25 September 2017, explored this theme.

In his opening remarks, MEP Bernd Lange noted the importance of the building sector and the huge potential hidden in the renewable energy. Mr Lange underlined that in the current revision of the EPBD, he tabled amendments to propose the review of the Directive again in 2024, with a special focus on existing buildings and their energy performance.

There followed a presentation by Karl Downey (The Concrete Initiative), which made the link between the different elements of the Energy Package, from energy performance of buildings (EPBD) to electricity market design. A recent [study](#) by 3E shows how concrete buildings, thanks to their thermal mass, can provide “structural thermal energy storage” and balance variable renewable energy. Thus, not only is it possible to improve the energy efficiency of an individual building using thermal mass, but also to reduce the CO₂ impact of the energy system as a whole through greater renewable energy uptake.

Sebastian Spaun (VÖZ) presented a case study from Austria that puts these ideas into practice. A house with high thermal mass is heated and cooled at a very low cost by storing and using surplus wind energy. The case study was the perfect example that simple solutions can make an enormous difference in energy consumption and in energy bills.

Sylvain Robert (DG Energy, European Commission) presented the latest developments in the negotiations on the Energy Package. He noted that regarding the EPBD, the possibility to offer demand response and energy storage should be part of the consideration of a building’s “smartness”. He concluded his presentation with the timeline of Directive and invited participants to give their input to the discussion on the smart-readiness indicator.

In the discussion that followed, participants noted the need for standards to promote dynamic energy calculations and recognise demand response. It was also noted that as we move towards a system that is increasingly based on renewable sources, energy performance of buildings cannot only be limited to the absolute energy use per building, but also how a building can offer energy flexibility.

In his closing remarks, MEP Lange thanked the participants for their presence and noted that the event had made clear that the different elements of the Winter Energy Package need to be considered together and not in isolation.