



smartEn
Smart Energy Europe

Boosting flexible buildings to increase system and carbon efficiency

smartEn recommendations for the EPBD revision

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smartEn welcomes the Commission's intention to revise the Energy Performance of Buildings Directive (EPBD) as buildings can significantly contribute to the achievement of the increased EU climate and energy targets in 2030 if their energy performance and carbon footprint is improved.

To this end, they need to become flexible assets capable of interacting with the grid, their occupants, other buildings and sectors such as transport (electric vehicles). This will ensure consistency with the Energy System Integration strategy and the EU climate neutrality objective.

This can only be achieved through a smart management of decentralised energy resources in buildings and by activating the demand-side flexibility potential of on-site renewable-based generation, storage and demand-response.

While the Commission stresses very clearly the importance of flexible and clean electrification in road transport in the proposed revised Renewable Energy Directive, it falls short in promoting the same approach for buildings. The EPBD revision should fill that gap making a pivotal change in the way buildings can contribute to decarbonise energy demand.

Buildings should no longer be considered as isolated entities and should **become integral part of the energy system contributing to system and carbon efficiency.**

For this to happen, smartEn would like to highlight the following recommendations to be integrated in the EPBD:

- **Expand the current NZEB requirement beyond the individual building performance to cover the building contribution to the local system efficiency**

Expanding the NZEB scope to reflect the building's contribution to the increased efficiency of the energy system will promote a more decentralised energy system where buildings can consume, store and produce clean electricity in a flexible and time-dependent way, also in reaction to external signals from the system they are connected to.

This will ensure that buildings become flexible and integrated assets in line with the Energy System Integration Strategy. The NZEB requirement definition should be linked to the new set of MEPS/Mandatory Minimum Requirements to activate the demand-side flexibility potential of buildings and reduce their carbon footprint.

- **Enhance the funding support and financial incentives to deploy Decentralised Energy Resources (DERs) in buildings**

The uptake of DERs in buildings need to be supported by adequate public funding and financial incentives for renovation. Tax incentives, the creation of one-stop-shops for renovation advice or energy efficiency mortgages as well as new business models like Distributed Energy Service Company schemes (DESCo)¹ are some of the financial tools that should be promoted to help consumers transforming their buildings into a smart and flexible asset.

In addition, Energy Performance Certificates should be used as a targeted level of outcome performance to access financial incentive for buildings renovations.

¹ https://smarten.eu/wp-content/uploads/2021/04/21-04-23_smartEn_QA_paper_FLEX_Buildings_FINAL.pdf

- **Minimum Energy Performance Standards (MEPS) to set Mandatory Minimum Requirements (MMRs)**

The introduction of mandatory MEPS is a positive evolution to accelerate the rate and depth of renovations. Key is to ensure that MEPS set a clear path towards the efficient electrification and decarbonisation of all new and renovated buildings and their integration with the system through the deployment of decentralised energy resources providing flexibility.

To this end, MEPS should include **mandatory minimum requirements** (MMRs) not only to advance energy efficiency but also to unlock the demand-side flexibility potential of different building types supporting integrated renovation where buildings contribute to system efficiency. MMRs should give clear signals to end-users by setting specific milestones on:

- Primary energy consumption
- Final energy consumption
- CO₂ emissions which can be translated into an actual output of CO₂ emissions related to a building's size (CO₂ emission/m²)
- **Digitalisation requirements needed to activate the demand-side flexibility potential** of buildings (e.g. for the uptake smart meters and energy management systems interoperable with the grid)

This last MMR on demand-side flexibility is central to support smart and flexible buildings and should be made mandatory. This will also help to measure the contribution of smart buildings to the achievement of the 10% peak reduction binding national target in 2030 that each Member State should set to stimulate and valorise the role of demand-side flexibility towards a cost-efficient and renewables-based energy system.

- **Expand the scope of Energy Performance Certificates (EPC) to reflect the building's actual energy performance**

EPC should be strengthened to become a more reliable instrument to support the uptake of building renovations, allowing buildings tenants and third parties to collect relevant information for them to drive change. To this end:

- **EPCs should be harmonised and made consistent with MMRs** reflecting **the building's actual energy performance** on the requirements set in MEPS. They should thus be based on smart and accurate data that reflect the actual carbon footprint and demand-side flexibility of a building. To reach this goal, the activation of the flexibility potential from all installed Decentralised Energy Resources, including on-site renewables, EV charging, demand-response and storage should be fully recognised in the building's actual energy performance calculation.
- **EPCs should include recommendations on how to improve a building's energy performance**, integrating key features of the Building Renovation Passports, the Digital Building Logbooks as well as the Smart Readiness Indicator (SRI). Key is to avoid multiplication of tools and ensure clarity for the end-users. SRI should be made a mandatory part of the EPCs at least for large non-residential buildings. This will help raising awareness among Member States as well as further supporting the uptake of smart and flexible buildings.

- **Reinforce the integration of electric vehicles in the energy system by mandating ‘smart-capable’ charging functionalities in all buildings**

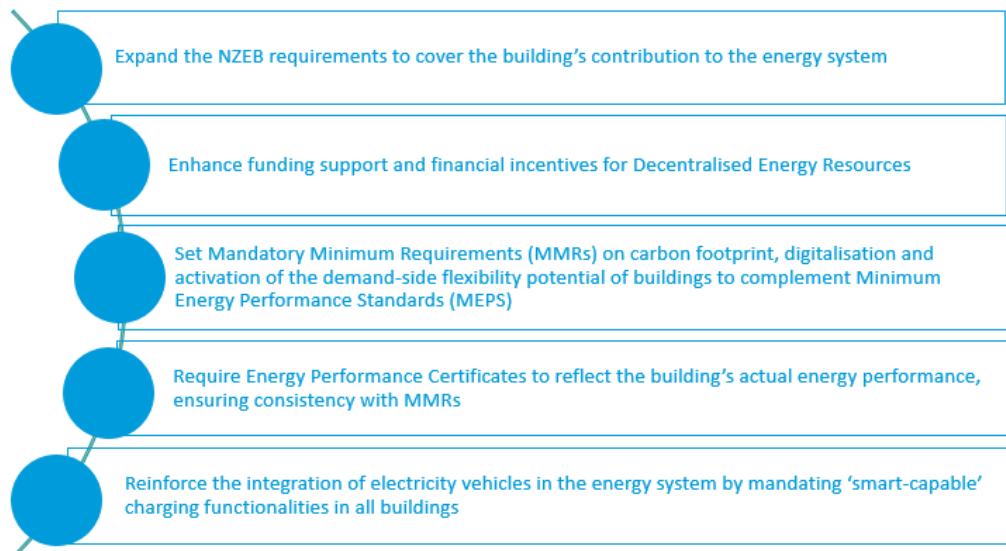
Smart charging is key to support the foreseen increased electricity demand coming from electric vehicles (EVs). It will allow EVs to become DERs able to communicate with other assets, the Building Energy Management System and the grid. This should include V2B and V2H when there is on-site PVs and self-consumption.

Hence, **smart-capable charging functionalities must be required in all buildings**, including existing buildings whenever EV chargers are installed even though no major renovation takes place. The good provisions in both the AFIR and RED proposals supporting the uptake and deployment of smart charging should be accordingly replicated in the EPBD.

Barriers that prevent the efficient rollout of smart chargers must be tackled such as complex connection process, barriers to feed energy back to the grid or the absence of ‘right to plug’. Double taxation should be removed under the revised Energy tax Directive. Centralised and coordinated smart charging installations in buildings should be preferred over individual charging points with their own grid connection and meter when they are more cost-efficient. Finally, financial incentives to smart charging should be supported.

Summary of recommendation to transform buildings into smart and flexible energy assets and increase system and carbon efficiency

Transforming buildings into smart and flexible energy assets



About smartEn - Smart Energy Europe

smartEn is the European business association integrating the consumer-driven solutions of the clean energy transition. We create opportunities for every company, building and car to support an increasingly renewable energy system. Our membership consists of the following companies:



The positions expressed in this document represent the views of smartEn as an association, but not necessarily the opinion of each specific smartEn member.

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