



# EASE Position Paper on the Energy Performance of Buildings Directive and Energy Efficiency Directive

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# Optimising Energy Use: How Energy Storage Can Support European Energy Reduction Needs

## Executive Summary

The reviews of the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED) are great opportunities to speed up decarbonisation efforts in the energy system through the efficient and optimised use of energy.

EASE welcomes these revisions, however calls for a stronger integration of energy storage solutions in EU strategies to tackle energy efficiency and buildings renovation to more effectively support decarbonisation.

These are the necessary steps to be urgently taken to promote faster emission reduction over the next decade:

**1. Optimising energy in buildings:** Capture the benefits of building renovation to optimise energy consumption alongside the installation of renewable energy sources and energy storage, in addition to energy efficiency interventions. To maximise the benefits, the role of energy storage shall be considered when calculating the building's energy performance;

**2. Buildings as active participants in the energy system:** Buildings could play an important role in the increasingly electrified future energy system, by providing flexibility to the system and empowering consumers. In this regard, all necessary assets to reduce and make flexible building consumption must be deployed and monitored through the use of the Smart Readiness Indicator (SRI) and the installation of energy storage solutions;

**3. System integration to support an energy efficient system:** Connecting the building, transportation, and energy sectors is critical to promote system efficiency. When combined with charging points, RES and heating and cooling applications, energy storage solutions directly support this integration by providing additional flexibility to the electricity grid.

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# 1. Optimising Energy in Buildings

## 1.1. High Standards and Renovation Targets Must Be Coupled with Energy Storage Roll Out

Building renovations can be a fairly invasive affair to occupants, owners, and visitors, whether to public buildings, office blocks or residential homes. For this reason, it is far more productive to carry out multiple renovation processes in parallel to reduce the burden on occupants and to achieve greater energy savings. It is best to streamline the installation of renewable energy source and energy storage alongside the insulation of walls and replacement of windows. Therefore, EASE proposes to:

- **Expand the scope of One-Stop-Shops to include energy storage**, allowing for more productive, wide-ranging renovation plans. *EED, Article 21(2)*
- **Strengthen minimum energy performance standards to include onsite renewable energy generation and energy storage** with an emphasis on self-consumption and renewable energy communities to alleviate energy poverty. *EPBD, Article 9 (3)*
- **Consider possibility of energy storage in zero-emission and nearly zero-energy buildings with on-site renewables**, where appropriate, when it is to ensure optimised self-consumption and system efficiency. *EPBD, Article 2 (2) and (3)*
- **Require Member States to encourage public bodies to expand energy performance contracting to energy services including demand response and storage.** *EED, Article 27 (4)*

## 1.2. Accurate Assessment of Energy Storage in Performance Methodologies

Current methodologies used to assess energy performance, technology readiness, and Member States' strategies to decarbonise building stock neglect the role energy storage plays in optimisation of energy use. Therefore, EASE proposes to:

- **Recognise the role of energy storage in the calculation of energy performance.** Electricity and heating from renewable energy sources are correctly considered in Member State methodologies to calculate the energy performance of buildings, however the optimised use of this renewable energy when coupled with storage and self-consumption is notably absent. *EED, Annex I 5 (a)*
- **Assess energy shifting and system integration in the Smart Readiness of Buildings Rating** to accurately reflect a building's capability to provide flexibility. Under the Commission's proposal only demand response and load-shifting are evaluated which neglects the capability of energy storage to provide energy to both the building or the grid at a later time, in addition to its ability to act as demand response when charging. *EPBD, Annex IV 2 (c)*
- **Incorporate energy storage policies and measures as mandatory indicators in the National Buildings Renovation Plans** to better assess the lowering of the barriers to energy storage installation which supports efficient and optimised energy use in buildings. *EPBD, Article 3 (c), Annex II (c)*

## 2. Buildings as Active Participants in the Energy System

Onsite coupling of energy storage technologies with renewable energy sources have provided cost-effective decarbonisation solutions across Europe, supporting system efficiency through reduced energy curtailment [1]. However, there is little harmonisation between Member States on a definition of co-located energy storage as no definition currently exists in EU legislation. In order to clarify how co-located storage facilities qualify under support schemes, how projects should be carried out, and how permitting procedures could be simplified, new definitions would be required. Therefore, EASE proposes to:

- **Highlight the services buildings can provide to the grid to ensure system efficiency through flexibility**, considering energy storage technologies and demand-side response as tools for the active participation of buildings. *EPBD, Article 13*
- **Refer to the local grid in the zero-emission buildings definition**. Keeping the grid outside the definition of ZEB is both restrictive and counterproductive, given the potential for supplying zero-emission energy to these buildings. Furthermore, the current definition diminishes the contribution that some zero-emission buildings can make to the grid, such as providing flexibility. The reference to the grid in relation to nearly-zero energy buildings should remain. *EPBD, Article 2 (2)*
- **Broaden the scope of the Smart Readiness Indicator (SRI)**. It is critical that the SRI be applied to new and existing buildings that will undergo major renovations. This will have a broader and more positive impact on measuring a building's ability to provide flexibility services to the grid. *EPBD, Article 13 (2) and (4)*

# 3. System Integration to Support an Efficiency Energy System

## 3.1. Ambitious Roll-Out of Electric Vehicle Charging Infrastructure

The growth in the uptake of Electric Vehicles in the European Union requires an ambitious roll-out of charging points. Currently, the majority of electric vehicle recharging occurs at home or at work, in 2030 private recharging (both home charging and workplace charging) will continue to account for between 60% and 85% of all recharging according to the Commission's impact assessment. The increase in workplace charging should lead public buildings to make use of public procurement rules to play a critical role in accelerating the deployment of charging infrastructure and providing flexibility services. In addition to smart charging solutions, energy storage technologies can support the roll-out of large electric vehicle charging infrastructure in buildings, especially ones with many charging points behind one grid access point, by mitigating grid issues by significantly lowering demand peaks and optimising energy consumption. EASE supports the deployment of smart charging and V2G points in buildings as required by the EPBD revision to pilot EV charging. EASE proposes to:

- Investigate the co-location of stationary energy storage solutions in areas with a high penetration of EV charging points when deemed necessary following assessment by the National Regulatory Authority (NRA) and relevant stakeholders including distribution system operators, e-mobility operators and flexibility aggregators. *EPBD, Article 12*
- Encourage public procurement for charging points installation in public buildings, lowering the threshold to 10 parking spaces for the installation of 1 charging point other than pre-cabling infrastructure for existing buildings owned or occupied by public bodies. *EPBD, Article 12 (2)*
- Assess the inclusion of vehicle-to-grid functionalities of newly installed private recharging points, where the National Regulatory Authority (NRA) consults relevant stakeholders including distribution system operators, e-mobility operators and flexibility aggregators during the assessment. Vehicle-to-grid integration is a crucial strategy to ensure grid reliability as further EVs and renewable energy sources come online. *EPBD, Article 12*

## 3.2. Fair Consideration of Thermal Energy Storage Technologies in Heating and Cooling Plans

As heating and cooling networks become better integrated with the electricity network they will play a bigger role in flexibility and the optimisation of energy. For this reason, it is necessary to ensure thermal energy storage technologies are looked into by Member States when assessing heating and cooling in their National Building Renovation Plans. Therefore, EASE proposes to:

- Introduce thermal energy storage potential for energy efficiency in the heating and cooling assessment. Their deployment in heating and cooling would further facilitate the integration of renewable sources of heating and cooling, increase efficiency and flexibility. *EED, Annex IX (7)*

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About EASE:

The European Association for Storage of Energy (EASE) is the leading member - supported association representing organisations active across the entire energy storage value chain. EASE supports the deployment of energy storage to further the cost-effective transition to a resilient, low-carbon, and secure energy system. Together, EASE members have significant expertise across all major storage technologies and applications. This allows us to generate new ideas and policy recommendations that are essential to build a regulatory framework that is supportive of storage.

For more information please visit [www.ease-storage.eu](http://www.ease-storage.eu)

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Disclaimer:

This response was elaborated by EASE and reflects a consolidated view of its members from an energy storage point of view. Individual EASE members may adopt different positions on certain topics from their corporate standpoint.

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