

Cerame-Unie position on the revision of the Energy Performance of Buildings Directive (EPBD)

Cerame-Unie welcomes the initiative of the European Commission to revise the EPBD according to the new ambitions of the EU Green Deal, the Climate Target Plan 2030 and the Renovation Wave Strategy and hereby contributes with the perspective of the European ceramic industry for the ongoing impact assessment.

Cerame-Unie endorses the proposed **option 2 of the Roadmap for the revision of the EPBD**: to increase energy renovation rates through **non-regulatory** policy instruments and additional guidance and support measures, such as technical assistance, information campaigns, training, project financing.

Energy efficient construction and renovation contribute to people's well-being and productivity, and help tackling today's challenges: to create local jobs, contribute to reducing energy poverty and to the fight against climate change. The revision of the EPBD is the opportunity to continue and improve the legal framework for the promotion of energy efficient buildings, considering the learnings from the last years. In this context, we would like to make the following recommendations:

1) Use a holistic approach when calculating the energy performance of buildings

- Cerame-Unie **supports the use of primary energy demand as an indicator, as it is the most appropriate for calculating energy performance** of buildings. It enables to take into account the building as a whole, including the building envelope and all technical building systems (equipment for heating, cooling, ventilation, hot water, lighting etc.) as well as the renewable energy produced on-site or nearby. This ensures that the most cost- and energy-efficient choices are made for each building.
- When it comes to planning the optimal energy efficiency of a building, one can usually choose between maximization of the insulation of the building envelope or the improvement of the HVAC system and the use of renewable energy, or a mix of these elements. In the case of old buildings, the optimization of the thermal insulation of the envelope has the highest potential for improving the energy performance of such buildings. However, for new buildings the combination of good insulation, optimal HVAC technology and supply of the building with renewable energy normally leads to the best results. **Only a primary energy indicator can properly reflect similarly the different optimization strategies.**
- **Putting requirements on the performance of single building components taken separately does not make sense.** This has however been done in some implementing legislation at national level, focusing on U-values of building components or thermal requirements on the building envelope. Such situations shall be avoided thanks to a precise definition of energy performance calculation, based on European standards (E.g. ISO EN 13790 and CEN/TR 15615). Furthermore, member states use different methodologies for calculating the

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energy performance of buildings. For instance, some member states only use the U-value. The standard ISO EN 13790 is not considered by some member states but is the best available tool to calculate the energy performance of buildings and takes into account the thermal mass of a building. Energy performance of building calculation methods must also minimise gaps between design performance and real measured performance.

- **Member states shall be encouraged to include all kinds of renewable energy solutions** in the calculation of the primary energy demand, including district heating & cooling. Hence, it shall be possible to use the most suitable energy and cost-efficient renewable energy sources available on-site or nearby a building.
- **Finally, we welcome the fact that indoor air quality will be given more weight in the assessment of buildings.** Keeping a sufficient level of natural ventilation in the building is crucial for the health and well-being of the inhabitants.

2) Consider a twofold approach when calculating the energy performance of buildings: new buildings vs renovation

- The level of thermal insulation of the envelope of new buildings is already very high because of the existing requirements in national buildings regulations. Thus, the calculation of the energy performance of new buildings shall consider a combination of a very good standard of insulation with modern heating/cooling technology and supply of the building with renewable energy. This normally leads to the most economically and ecologically optimal solution for new buildings.
- The renovation of existing buildings is of utmost importance to reach EU's climate and energy targets. The level of thermal insulation of the building envelope in existing buildings is normally poor compared to new buildings. In this case, it is essential to put priority on the optimisation of the insulation of the building envelope in case of renovation of old buildings.

3) Better value the contribution of thermal mass to buildings' energy performance

- **A high thermal mass participates to the well-being and comfort of inhabitants both in summer and winter.** With climate change, heat waves will be more and more frequent, it is thus necessary to avoid overheating of buildings in summer. In addition, cooling is by far more energy consuming than heating. Houses need to be built to last for many decades and must be prepared now for this challenge. It is important to note that the effective thermal mass is determined not only by thermal capacity but also by thermal conductivity and density. In that view **the contribution of thermal mass to the reduction of overheating needs to be better valued in the methodology framework in Annex I.** In point 3(a)(iii), not only passive heating but also passive cooling shall be taken into consideration.
- **In addition to cooling, a high thermal mass contributes to the building's longevity, and plays an essential role in making the living environment more stable and comfortable.**

4) Ensure that housing remains affordable

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- Energy performance requirements need to be established so that housing remains affordable. If one wants consumers to invest in energy-efficient renovation or new construction, **the time for return on investment must be reasonably short** and take into account the lifespan of the concerned building element(s).
- It is also important to **ensure the quality of the products used**. Products with a long lifetime ensure a maximum return on investment.
- **The “smartness indicator” must be defined in that context**. “Smart” shall not necessarily mean “with more electronic devices”. A “smart” building is energy efficient thanks to intelligent building design and combinations of materials, rather than complex and expensive devices. Moreover, the lifespan of such electronic devices can be short and therefore the costs associated with their maintenance and/or replacement cannot be neglected.

5) Promote both renovation and new construction

- It is sometimes more efficient to entirely re-build a building than to renovate an old one. In addition, a new building can be more energy efficient, and will be better adapted to new social needs as well as to recent urban developments around it. Therefore, **renovation and new construction should receive the same fiscal and financial incentives**.
- In this line of action, mandatory examinations should be carried out to determine whether deep renovation (purely energetic renovation) or demolition and subsequent rebuilding is ecologically and economically more reasonable. Thus, **deep renovation should not automatically be pursued**. For instance, many old buildings are unsafe from a seismic point of view and thus, energy retrofitting only achieves a partial purpose. Here, only demolition is the safest, most efficient and cost-effective solution.
- Additionally, The Energy Performance of Buildings Directive also refers to new buildings, therefore a strong focus on energy efficient new buildings should also be included in the updating process.
- Finally, **new construction shall be understood in its two dimensions**: construction of a completely new building or demolish and replacement of an old building.

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