Revision of the Energy Performance of Buildings Directive (EPBD) 2021 **9th September** 2021

EuroACE Position Paper **FINAL**

Executive Summary

To achieve climate goals and unleash multiple benefits, we must transform the building stock in the EU to be highly energy efficient and decarbonised before 2050 and a strengthened EPBD that focusses on both new and existing buildings is the best instrument to achieve this vision. To date, the provisions of the EPBD have mostly focussed on the operational energy performance of new buildings. On existing buildings, which make up the vast majority of the building stock, too little progress has been made. It is now urgent that we accelerate our efforts.

For EuroACE, this means applying the energy efficiency first principle (EE1st) within the EPBD which, through integrated and coherent sets of measures at building level, can significantly reduce the energy needs of a building by a very large percentage and deliver multiple benefits such as improved health and indoor environmental quality. The residual or remaining energy needs can then be more readily and cost-effectively supplied via renewable energy sources. Applying the EE1st Principle is a key instrument to reduce vulnerability to increases in energy prices.

Buildings must also be equipped to play a full role in energy system integration. Incorporating the best digital technologies for building automation and control empowers owners and occupiers to better manage their energy consumption and contribute more meaningfully to wider energy system issues such as peak-lopping and demand response. Deploying digital technologies also provides tools that enable occupiers to ensure a better indoor environment and allows for the easy gathering of information on the overall performance of buildings that can be incorporated into accessible databases and be used for planning purposes.

To transform the building stock owners and tenants must be motivated and supported. This means that any mandatory provisions introduced in the EPBD must be accompanied by the provision of independent information, advice, and support all along the transformation process. It is also necessary to ensure that mandatory requirements are performance-based and non-restrictive as to the solutions to be proposed. Setting the level of ambition and allowing flexibility for market actors to propose the best approaches is crucial as local climatic conditions and building cultures impact on the choices that must be available in the EU.

This position paper sets out the recommendations of EuroACE, grouped under three headings:

- New provisions that should be introduced
- Elements that must be strengthened
- The scope of the Directive

The body of the paper describes the recommendations in more detail and the whole paper is supported by an Annexe that recalls the legislative context that the EPBD fits into and that explains why buildings (both new and existing) have a crucial role to play in achieving long-term climate and energy efficiency goals.

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Energy Efficient Buildings

Recommendations

Revising the Energy Performance of Buildings Directive (EPBD) at this time brings a great opportunity to EU lawmakers to significantly improve the legal framework on the performance of buildings in the EU and to ensure full coherence and consistency with other legal instruments also being revised – principally those that are included in the "Fit-for-55" package. The recommendations set out below should be seen as a supplement to the contribution that EuroACE made to the Open Public Consultation in June 2021.

New provisions that should be introduced:

1. Establish an EU framework for the rapid introduction of **minimum energy performance standards** (MEPS) schemes at national level that must:
    a. Be designed to achieve the goal of creating a highly energy efficient and decarbonised building stock by 2050 in all Member States.
    b. Ensure coherent integration with current provisions on LTRS and EPC schemes.
    c. Progressively establish mandatory milestones for each segment of the building stock (residential, public, tertiary, worst-performing buildings etc.)
    d. Be accompanied by a full set of supporting instruments and technical assistance.
2. Introduce a **deep renovation standard** that is based on a definition of deep renovation whose main metric is achieved energy savings.
3. Establish an **EU Energy Renovation Fund,** within the recently announced **Climate Social Fund**, open to Member States to allow them to fund energy renovation works to the homes of the most vulnerable in society.
4. **Embed digitalisation** more robustly in the EPBD.

Elements that must be strengthened

5. **Establish a new definition for NZEB** that reflects increased climate ambition and ensures all new buildings are fully decarbonised in their operational phase, with a target for whole life cycle decarbonisation by 2050.
6. **Strengthen the requirements for LTRS** to reflect the increased ambition of the EU to ensure that LTRS are much more specific about how long-term climate goals will be achieved.
7. **Update the cost-optimal methodology** to include multiple benefits, ensuring that the resulting requirements are at least equivalent to the new definition of NZEB.
8. **Revise the EPC framework** to ensure convergence, making EPC's more reliable, more comparable, and more useful to actors in the value chain. Member States should be required to ensure that:
    a. All buildings have an EPC before 2030.
    b. A new EPC is issued after every renovation to a building.
    c. Accessible databases of EPC's are established.
    d. Recommendations on EPC's should become renovation roadmaps appropriately tailored to the building to which they relate.
9. **Extend inspections of heating and air-conditioning systems** to include ventilation and built-in lighting systems and strengthen requirements to implement recommendations.

Scope of the Directive

10. **Ensure that the EPBD delivers on its main scope**, namely the operational energy use in buildings, whilst strengthening its provisions on new and existing buildings and cautiously introducing whole life cycle impact and data requirements for new buildings.

We look forward to contributing to the next stages in this process.

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New Provisions that should be added to the EPBD:

Minimum Energy Performance Standards (New Article and changes to articles 1, 2a and 4)
Action at Member State level to boost energy renovation rates and depths have not been ambitious enough. Despite an increase in the awareness of the value of undertaking energy renovation works, there is still a noticeable inertia within administrations and among building owners to face up to the need to renovate our building stock. A clear regulatory perspective is missing to activate demand for energy renovation that other parts of the *Fit for 55* package do not yet address. Notably the expected increase in energy costs that will result from an extension of the ETS to buildings should be supported by a clear agenda to improve the energy efficiency of buildings if we want to avoid energy poverty.

It is therefore time to establish an EU framework for the **rapid introduction of mandatory minimum energy performance standards (MEPS)** that will ensure that all buildings in our building stock are transformed to be highly energy efficient and decarbonised by 2050. The EU framework should require that each Member State sets up a **national MEPS scheme with mandatory milestones to reduce the energy consumption of buildings by 2030, 2040 and 2050, in a way** that is coordinated and synchronised with their long-term renovation strategy (LTRS) to give certainty on this objective. The French Tertiary Decree, requiring final energy consumption reduction milestones for non-residential buildings by 2030, 2040 and 2050 could be used as benchmark[1]. MEPS should be designed to drive the full (deep) renovation of buildings, ensuring that lock-in effects are avoided.

The national MEPS schemes will be tailored to the characteristics and segments of the national building stock and should be provided with the needed financial and human resources to ensure their successful roll-out. The MEPS schemes must be closely monitored to ensure that the anticipated increase in the rate and ambition of energy renovations actually takes place. Links can and should be made to the use of the EPC framework as a means of monitoring progress at both individual building and building stock levels.

The timeframe for the creation of national MEPS schemes should reflect the urgency of the energy renovation challenge, whilst allowing for a phasing-in period at national level. The Commission should prepare detailed guidance in parallel with the negotiations on the revisions of the EPBD, so the national MEPS schemes can be designed immediately after the adoption of the revisions to the EPBD. It is essential that our efforts to upscale energy renovation activity succeed in a short timeframe to build trust and confidence among all stakeholders in the sector, including building owners, banks and financial institutions.

Introduction of a Deep Renovation Standard (Article 2 and potentially a new Article)
To guide Member States in their work on transforming their building stock, it will be useful to introduce a deep renovation standard in the EPBD that will reduce ambiguity in national approaches and will serve as a benchmark against which progress can be measured.

The deep renovation standard should be underpinned by a definition of deep renovation in Article 2 that uses achieved energy savings as the main metric. It is essential that all buildings are brought to a 2050-compatible level as rapidly as possible, which implies a minimum of 60% savings per renovation as a starting point. The standard could also include a CO_2 indicator or target for the operational phase that follows the deep renovation and should be extended in due course to include other indicators such as health, indoor environmental quality and embodied carbon. Such additional indicators should be based on properly assessed and agreed data and metrics.

[1] The French law prescribed all tertiary buildings to reduce their final energy consumption by -40% by 2030, -50% by 2040, and -60% by 2050.

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Establishment of an EU Energy Renovation Fund (Article 10)

The EU Renovation Wave Strategy states that about 34 million Europeans live in energy poverty, meaning that they do not have the means to adequately heat (or cool) their homes. It is well known that energy poverty is most pronounced in the private rental sector and among low-income homeowners. These are segments of society on whom mandatory renovation requirements cannot be rightly imposed unless there are financial and technical supports in place to take the burden.

EuroACE therefore calls for the establishment of an ***EU Energy Renovation Fund,*** within the recently announced ***Climate Social Fund***, which can be used by Member States to draw down funds to **fully subsidise** the energy renovation of this segment of the building stock. This sub-fund should be structured so that all the revenues from the extension of the ETS to buildings are used for deep energy renovation projects. The Fund has the potential to become a revolving fund if the Member States are required to repay amounts drawn down after a set period of, say, seven or ten years.

Creating such a fund would be a manner by which Member States can strengthen the effectiveness of their long-term renovation strategies and, at the same time, comply with Article 2a(3) of the EPBD.

Provisions on digitalisation (articles 2a, 8 and 10 plus Annex II)

Our understanding of the role, usefulness, and power of digitalisation in the buildings sector has grown significantly in recent years. It plays a central part in the conception and design of building projects (whether new build or renovation works) and an increasingly important role in the manufacturing of products and the construction of buildings. Digitalisation is also of great assistance in the operation and management of buildings throughout the service life of the building, especially when there are multiple technical building systems (TBS) and building automation and control systems (BACS) installed.

With the increased move towards using renewable energy sources in society, we now see that buildings can be producers, storers and consumers of energy (especially electricity). As such, buildings can play a significant role in energy system integration and management, helping through demand response measures to balance energy grids and reducing overall production needs (especially in centrally located power plants). But to optimise this potential, more regulatory attention should be given to digitalisation.

EuroACE welcomed the introduction of the Smart Readiness Indicator (SRI) during the last revision of the EPBD in 2018, but now sees that the advances in digitalisation in the market have accelerated so much that additional measures should be considered in the current revision process.

EuroACE calls on the Commission to consider introducing the following new (or reinforced) provisions in the EPBD to fully embed digitalisation in the EPBD:

i. Require that Member States introduce the SRI, repealing its voluntary nature. A phased introduction, starting with large non-residential buildings, could be envisaged, once all buildings are delivered an SRI by a set future date that is earlier than 2050
ii. Require that Members States establish digital databases for their EPC schemes that respect GDPR rules and are accessible to relevant actors (including innovative stakeholders active in the field of renovation) and that feed into the EU Building Stock Observatory.
iii. Reinforce the digitalisation requirements of the LTRS in Article 2a under points (a) and (f) to ensure full use of digital technologies to provide a useful overview of the building stock to be renovated, and to require that a national strategy for the digitalisation of the renovation sector be initiated via the LTRS.
iv. Require the introduction of secure digital building logbooks as a single digital place where all relevant information on a building, including its renovation roadmap and BRP is held.

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Provisions of the EPBD that must be strengthened or changed:

Definition of Nearly Zero Energy Buildings (NZEB) (Article 2(2))
The current definition[2] is too open to interpretation and has led to a vast range of national definitions that put in jeopardy the achievement of our long-term decarbonisation goals. As a result, **the definition of NZEB must be reviewed** with the objective of ensuring that the full energy saving potential of a building is captured at design stage to make it **highly energy performing with a very low residual energy need**. The revised and EU-harmonised definition should require that national definitions for energy consumption fall within the range identified for different climatic zones by the European Commission in its NZEB guidelines[3] and require that all residual energy needs be supplied by (decarbonised) renewable energy sources. The Commission recommendation for the range of energy needs should be reviewed every five years to support the new definition.

Long-term Renovation Strategies (LTRS) (Article 2a)
Considering the increased climate ambition of the EU for 2030 (at least 55% reduction in GHG emissions compared to 1990) and full climate neutrality by 2050, it is essential that the buildings sector plays its part by significantly reducing its energy needs and enabling a substantial and rapid switch to (decarbonised) renewable sources of energy. To make this transformation realistic and affordable, Member States should be required to **immediately revise their existing LTRS** to reflect this changed level of ambition, recalibrating their interims targets to 2030 and 2040, ensuring that 2030 milestones describe the **role of buildings in delivering the 2030 energy efficiency target** and redefining their measurable progress indicators (MPI). The number of buildings to be renovated in each segment every five years should be one of these MPI. The revised level of ambition should ensure full compliance with the new higher overall energy efficiency target for 2030 to be set in the revised Energy Efficiency Directive (EED).

The LTRS should also be required to include plans on **how to scale up financing, technical assistance, and project development support** within each Member State and for each of the principal actors in the value chain. The LTRS should also be reinforced with an increased requirement on how the labour force will be built up and how and when the necessary training will be provided to these workers.

Setting of minimum energy performance requirements (Article 4)
Because all new buildings in the EU are now required to be built to NZEB performance levels, national minimum energy performance requirements that are the subject of Article 4 of the EPBD, should be revised to inform Member States that they have no choice but to ensure that their minimum energy performance requirements for new buildings are set at (at least) NZEB levels. This has implications for the **cost-optimality methodology** which should be modified to require that Member States **account for the multiple benefits** that accrue to individual users and to society following the implementation of energy efficiency measures. The cost-optimal methodology should support performance levels in line with the EU 2050 climate ambition, or carbon neutral ready buildings. This, together with the inclusion of the multiple benefits in the methodology should ensure that newly calculated cost optimal levels of minimum energy performance requirements are **at least equivalent to the revised definition of NZEB**.

In the revision, Member States should also be required to set minimum energy performance requirements for all energy renovation works, not just for those that comply with the definition of *major renovation*.

Energy Performance Certificates (EPC's) (Articles 11 and 12)
EPC's were the cornerstone of the first iteration of the EPBD and were intended to be market instruments that would strongly influence the purchase and leasing decisions of building owners and occupiers. Member States were offered flexibility in how to establish their EPC framework and this has led to a significant heterogeneity in the

[2] For a recent review of the status of NZEB roll-out in Member States see:
https://www.bpie.eu/publication/nearly-zero-a-review-of-eu-member-state-implementation-of-new-build-requirements/
[3] See: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016H1318&from=RO

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design of EPC's and in the information that they contain. These factors should be revised to ensure convergence towards a **more homogenised EPC framework in Member States** that should be based on a wider use and faster implementation of the EPB Standards developed under CEN Mandate M/480. This should lead to the emergence of a **more transparent, comparable, and reliable approach** within three years of the adoption of the revised EPBD.

The new elements of the revised EPC Framework should be:

1. Certified assessors charged with preparing an EPC should **visit the building** and tailor their recommendations in a ***building renovation passport***.
2. Each Member State should be required to ensure that every building that undergoes an energy renovation be issued with a new EPC and that every building has an EPC before 2030.
3. Every Member State must establish a **central national digital database** that is accessible, under GDPR rules, to the building owner, to policy makers, to the financial sector and to contractors for the purposes of planning renovation strategies at the building level and at building stock level.
4. For new buildings, an option should be introduced that allows Member States to give an indication of the **whole life carbon emissions** of the building. This indication should be based on the EU Level(s) framework and on the EN 15978 2011 Standard.
5. For all buildings, the EPC should give an indication of the expected annual CO_2 emissions that the operation and maintenance of the building will produce.

Reports on the inspection of heating and air-conditioning systems (Article 16)

The EPBD requires that the reports arising from the inspection of heating and air-conditioning systems contain recommendations on how to improve the energy efficiency of such systems without any requirements that the recommendations be implemented. This should be changed to ensure that the recommendations are implemented within a short timeframe (EuroACE suggests three years).

Furthermore, the requirement in Article 16 should be extended to include the inspection of ventilation and built-in lighting systems as these are more and more important in ensuring safe, healthy, and comfortable indoor environments.

Scope of the Energy Performance of Buildings Directive (EPBD).

The EPBD must continue to focus on the operational energy performance of buildings as this remains the main source of carbon emissions from buildings. For new buildings, the NZEB definition should be revisited to reinforce the energy savings dimension in which all residual energy needs must be supplied by renewable, carbon neutral sources of energy and **include a whole life cycle carbon (WLC) reporting** for operational and embodied carbon separately. Decarbonisation of the existing building stock can best be achieved via this EE1st approach.

Reporting mechanisms for WLC (embodied/operational carbon separately) should be introduced for new buildings (possibly extended to large/major renovations starting from public buildings). This reporting should support data gathering, provide a level playing field for assessing, comparing, and designing decarbonised buildings, as opposed to allowing national diverging approaches to persist. It should be based on EU wide harmonised and scientific calculation method and standards, building on the Level(s) framework.

Regarding a broader carbon impact of the building sector and calls to include embodied carbon into the EPBD, we emphasise that a step-by-step approach is necessary towards integrating whole life carbon metrics. It is important to agree on common European metrics and measurement before regulating, and to use existing methodologies and standards. As mentioned above, Level(s) and the EN15978 should be the EU-wide reference framework for reporting whole life carbon emissions. For embodied carbon, the LCAs in use still have data gaps and a very wide variety of material base data. Therefore, gathering data for new buildings could be a first step for the sector to analyse results and determine how to improve and streamline data to get more stable, comparable LCAs.

As set out in this position paper, there are several aspects of the Directive that can be further improved and strengthened and there are several new provisions that should be introduced. However, the recommended changes should not undermine the current basis of the EPBD, as the urgency to improve the energy performance of our buildings has never been greater.

ENDS

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ANNEXE

Why Buildings are at the Heart of EU Climate Neutrality

The European Union (EU) has set itself the long-term goal of achieving climate neutrality by 2050. In addition, during the negotiation and adoption of the "Clean Energy for All Europeans" package, the European Union set the goal of transforming the building stock in all Member States to become highly energy efficient and decarbonised by the same date.

The Energy Performance of Buildings Directive (EPBD) is the framework Directive that is designed to set the conditions for Member States by which the long-term goal for the building stock must be achieved. It was first adopted in 2002 and has undergone two reviews (one re-cast and one revision) since then. It is now going to be reviewed again because the EU has significantly increased its 2030 and 2050 climate ambitions in its effort to meet the commitments of the Paris Agreement.

Buildings consume 40% of primary energy in the EU and are responsible for about 36% of energy related C02 emissions. They are central to our lives, setting the conditions in which we live, work and play and the EU sets the framework within which Member States must act to ensure that our buildings meet the functional, economic, social and environmental expectations of society.

The overarching challenge faced in the EU is to correct for the very low rate and depth of renovation of our existing buildings. Recent research indicates that only about 0.2% of our buildings are deeply renovated each year, a rate and level of ambition that falls well short of the efforts needed to achieve 2030 and 2050 climate targets. Without raising the deep renovation rate to 3% per year average across the EU, we are very likely to miss our climate targets and miss reaping the multiple benefits that arise after deep energy renovation is completed.

The EU must assess which instruments are best suited for the achievement of specific goals. For the buildings sector, this aspect of the decision-making process is complex as buildings sit at the crossroads of many EU policy fields. Those fields include:

Energy policy – all along the energy value chain because buildings can be producers, transmitters and consumers of energy. Here there is an interface with **renewable energy policies**.
Environmental policy – because the construction and operation of buildings uses natural and mineral resources at a high rate and the extraction, processing, assembly and demolition of buildings has multiple environmental impacts.
Climate policy – as about 80% of the energy used to construct, operate and maintain buildings is derived from fossil fuels, resulting in significant CO2 emissions. The Emissions Trading Scheme and the Effort Sharing Regulation already impact the buildings value chain in a substantial way.
Digital policy – because the design and construction of buildings relies more and more on digital tools and the operation of buildings relies more and more on automation and control systems for the efficient use of energy. These systems can deliver reliable information and data for better management of buildings and as a foundation for better buildings-related policy.
Economic policy – because buildings represent about 50% of all fixed capital assets in the EU and is usually the largest single investment that a person makes in their life.
Product policy – affecting the placing on the market of all the products and equipment that are incorporated in buildings and this impacts on trade policy too.
Social policy – concerns the labour market and rules on health and safety of workers, including posting of workers and mutual recognition of qualifications.
Health Policy – because the quality of our buildings has a large impact on our health and well-being and deliver multiple benefits to all, including those in energy poverty.
Public procurement policy – because buildings account for about 30% of all public procurement in the EU.

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Following the adoption of higher climate ambition for the EU, the "Fit-for-55" package of legislative proposals will be published in Q3 2021 by the European Commission, and it will contain proposals in many of the policy fields listed above. This means that the Commission carries a great responsibility in terms of balancing proposals in each respective field and in ensuring that what will be proposed for the revision of the EPBD in Q4 2021 is delivering on the EU Green Deal and our decarbonisation goals.

The proposal to revise the EPBD arises from the Renovation Wave Strategy of the EU which itself arose from the European Green Deal (EGD). In the EGD, the Commission established the principle of leaving no one behind and for the buildings sector, this means addressing energy poverty as a priority.

EuroACE believes that the current basis for the EPBD – legislating for the energy performance of buildings in the operational phase – must remain the principal element of the revised EPBD. In fact, the main effort should be to consolidate and improve existing requirements in a way that will increase the chances of a much better, more rapid and more complete implementation of the EPBD in Member States. The opportunity to set broader environmental and whole-life carbon-related requirements for new buildings must also be grasped.

This position paper should be seen as a supplement to the submission of EuroACE to the Open Public Consultation on the revision of the EPBD of June 2021 and our comments on the Impact Assessment Roadmap of March 2021.

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About EuroACE - Energy Efficient Buildings
EuroACE represents Europe's leading companies involved with the manufacture, distribution and installation of energy saving goods and services for buildings. EuroACE members employ more than 220,000 people in these activities in Europe and have over 1,100 production facilities and office locations. The mission of EuroACE is to work together with the EU institutions to help Europe move towards a more efficient use of energy in buildings, thereby contributing to Europe's commitments on climate change, energy security and economic growth.

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