



## Energy Performance of Buildings Directive (EPBD) RECAST

Feedback to the EPBD RECAST Proposal

8<sup>th</sup> of March 2022

### Summary

EuroACE – Energy Efficient Buildings, welcomes the proposed recast of the Energy Performance of Buildings Directive (EPBD). The EPBD must play a more central role in the Fit for 55 Package. In line with the need to strengthen its level of ambition, our main recommendations are:

- **Minimum Energy Performance Standards (MEPS):** we welcome the establishment of MEPS. However, the targeted level of ambition by MEPS needs to be strengthened, as **this instrument should truly deliver against the objectives of the EU Renovation Wave Strategy. In addition, a more prominent role for good planning and holistic deep renovations (whether one-shot or staged) should be secured.** At national level, Member States (MS) shall use their National Building Renovation Plans to establish trajectories for buildings to achieve progressively higher energy classes in line with a defined pathway towards a zero-emissions building stock by 2050. With these trajectories, MEPS can be designed for different building segments, for which the creation of building level roadmaps becomes easier and more economically feasible. In this regard, we welcome the establishment of a Renovation Passport scheme, whose deployment should be accelerated to promote holistic deep renovations which deliver on the multiple benefits.
- **Zero-emissions buildings (ZEB):** the concept is a step forward in terms of addressing both the energy performance and operational carbon emissions of buildings. **When defining a ZEB, Annex III should use both primary and final energy consumption indicators** to adequately consider measures to reduce energy needs. Moreover, the thresholds in Annex III should be more ambitious. A clearer differentiation between **ZEB and NZEB standards is needed, where ZEB must be more ambitious.**
- **Provisions on new buildings:** beyond the considerations on the ZEB standard, a more ambitious timeline and next steps for implementation of these provisions should be better addressed. EuroACE welcomes the requirement for new buildings to report on the Global Warming Potential and agrees that **in the interest of creating a common vision to whole-life carbon, relying on the Level(s) framework and on standard EN15978 is a starting point.**
- **Multiple benefits:** We welcome the new provisions to better factor the multiple benefits (such as health, comfort and indoor air quality) associated with the optimisation of energy performance of the building stock. We suggest going a step beyond by addressing and defining “Healthy Indoor Climate”.
- **Energy Performance Certificates (EPCs):** EuroACE welcomes the introduction of a common template for the issuing of EPCs, which will boost **comparability** across MS. We note the proposal aims at bringing greater convergence to how MS define their A to G scale by the end of 2025. This will support MEPS implementation and secure more **harmonisation. We think it is equally important to ensure better EPC coverage. EPCs should be better linked with other instruments such as Renovation Passports** (to spur deep holistic renovations – combining both active & passive solutions), **Smart Readiness Indicator etc. via Digital Building Logbooks.**
- **Digitalisation:** We welcome the establishment of a common, harmonised EU scheme for rating the smart readiness of buildings.
- **Technical Building Systems (TBS):** changes to provisions on TBS are overall positive. EuroACE **will suggest extending the scope of TBS to electrical installations and introducing a clear provision to require that outdated and inefficient TBS are replaced as part of holistic deep energy renovations.**
- **Inspections:** The inclusion of inspections of ventilation and air conditioning systems is welcomed. **The introduction of a timeline to implement recommendations stemming from inspection reports is needed (3-years, with compliance checks).** We welcome BACS provisions and support introduction of continuous electronic monitoring and control functionalities in new residential buildings and in those undergoing major renovations.



**General remarks (and links with other Directives of the Fit for 55 Package):**

- EuroACE – Energy Efficient Buildings, welcomes the revised Energy Performance of Buildings Directive (EPBD). In view of the attainment of the EU energy and climate goals, and the multiple societal, health and economic benefits that a well-performing building stock entails for EU citizens, the EPBD should play a central role in the Fit for 55 Package. With its new and revised elements, and its extended scope, the European Commission has made a step forward in enabling our building sector to achieve the goals set out by the Renovation Wave Strategy, but **more ambition will be needed from the building sector at large to make the goals set for 2030 and 2050 a reality.**
- Throughout the negotiations process, we urge co-legislators to preserve consistency across all building-related provisions in the Fit for 55 Package and to agree on a coherent and robust framework for buildings to meet the EU’s 2030 and 2050 targets. More work will be needed to ensure that all measures included in the recast EPBD work in synergy and in **total alignment with the Energy Efficiency First Principle.** In addition, they will have to also work coherently with other instruments included in the Fit for 55 Package, notably the Energy Efficiency Directive (EED), Renewable Energy Directive (REDIII) and the Effort Sharing Regulation (ESR).
- The new emissions trading system for buildings and road transport (ETS2) cannot, on its own, spur both rate and depth of energy renovation across the European Union. In fact, putting a tax on fossil fuels for heating in buildings via the ETS2 can only deliver on this front if its design is fully aligned with the creation of an enabling framework for building renovation, namely via the EPBD. Its success also relies on ensuring that the **revenues generated by the ETS2 are directed to energy renovations** and that a supporting social policy that fully mitigates negative distributional impacts from the ETS2 is established. (See EuroACE [position paper](#) on ETS2/SCF).

**EuroACE Feedback on the main amendments stemming from the EPBD RECAST proposal:**

**1) Minimum Energy Performance Standards (MEPS)**

- **The establishment of Minimum Energy Performance Standards (MEPS) (Article 9) is a crucial, much-needed, new element of the EPBD RECAST proposal.** EuroACE acknowledges the efforts of the European Commission in developing the first steps of what should become a more powerful scheme to deliver under the objectives of the EU Renovation Wave Strategy.
- However, the proposal requires all non-residential buildings to “only” achieve class E (at least) by 2030, and all residential buildings the same energy class (at least) by 2033. This approach falls short of the overall 2030 ambition, **making the road towards 2040 and 2050 milestones a steep climb for Member States.** This will jeopardise our ability to achieve ZEB buildings by 2050, and reducing our ability to tackle **energy poverty**, which is affecting more than 34 million EU citizens, and the opportunity to unleash the multiple benefits that stem from ambitious energy renovations.
- For these reasons the ambition of MEPS needs to be strengthened. **Not only should buildings be renovated beyond EPC class E, but the scheme should also signal how to increase the rate and depth of energy renovations beyond 2030 (and 2033).** Indeed, it is well-known that energy renovations require great effort in both their planning and execution phases and that owners only undertake such works at long intervals of up to 30 years. On this last point we believe that two intrinsic and pivotal elements for a good design of MEPS at national level are **long-term planning**, and **holistic deep renovations** (whether one-shot or staged). Both elements should have been better explored in the proposed recast. In our view, enshrining MEPS in a more ambitious and forward-looking perspective, and where holistic deep renovation (whether one-shot or staged) is the enabler of actual results, is very important.
- There are two levels by which a more future-proof planning could be envisaged for MEPS at national level:
  - **At national building stock level through the National Building Renovation Plans:** As Member States are required to establish timelines for buildings to achieve higher energy classes in line with the pathway to transforming their national building stock into zero-emissions buildings by 2050, the design of MEPS via a segment-based approach becomes more desirable. To make sure that high renovation rates are achieved across the national building stock, the specific features of each



segment (non-residential – public – residential) need to be accounted for in designing dedicated MEPS. The simultaneous activation of MEPS in various front-runner segments, is of prime importance to create relevant market dynamics and economies of scale for rolling out solutions. This is the case in non-residential buildings that can respond rapidly to MEPS, or in residential buildings inhabited by energy poor households, as these renovations deliver immediate societal benefits. We are aware that the need to create trajectories for different buildings is present in both Article 3 and Article 9, but their mutually reinforcing interlinkage should be strengthened and made clearer to ensure high quality implementation at national level. A clear trajectory on how MEPS criteria will be tightened over time for each segment of the national building stock, with a clear timeline, should be communicated to all stakeholders.

- **At building level via the Renovation Passport:** Once MEPS are designed via a segment-based approach, the creation of building level roadmaps becomes easier and more economically feasible for building owners and occupants. In this regard, **EuroACE welcomes the establishment of a Renovation Passport scheme** (Article 10). However, **its deployment should be accelerated as this tool will be instrumental to enable the implementation of MEPS, whilst supporting and promoting holistic deep renovations.** A Renovation Passport not only provides the investor with valuable information on the sequence of the works (i.e., actions on the building envelope; replacement of inefficient technical building systems, installation of smart technologies and implementation of energy monitoring systems etc.) and on the multiple benefits that they entail, but it also contains information on potential financial and technical support, which are crucial elements for a good implementation of MEPS.
- As an additional point of reflection, we feel that to further encourage long-term commitment and effort from Member States within the MEPS framework, **a paradigm shift on building renovation at national level should occur.** Designing MEPS should be undertaken based on a clear overview of the building stock and with a more global vision on energy renovation objectives. Among the EU Member States, France is a pioneer in this sense. The concept of “*rénovation énergétique performante*” is a newly designed national approach that identifies several different actions that energy renovations should always include, and how and when they should be carried out. Each step may present technical and financial difficulties, but thanks to an overall systemic vision of the end goal to be achieved for a building, designing better timelines and tailoring financial incentives to support the efforts needed becomes easier. This example of a granular approach for energy renovation further highlights the important role that Renovation Plans have for the design of MEPS.

## 2) Building Renovation Plans

- The establishment of National Building Renovation Plans (Article 3) is positive as it transforms the Long-term Renovation Strategies into more operational roadmaps for Member States to achieve a zero-emissions building stock by 2050. EuroACE strongly supports the requirement for Member States to include:
  - interim and final targets for their annual renovation rate in their roadmaps,
  - the primary and final energy consumption of the national building stock and
  - the operational greenhouse gas emissions reductions by 2030, 2040, and 2050.

In this regard, **we highlight the crucial importance of the inclusion of timelines for buildings to achieve higher energy classes than those laid out by Article 9 for F & G buildings and ensuring that all buildings are part of deep or staged deep renovation trajectories.** This point should be further reinforced as it will ensure that minimum energy performance standards (MEPS) are designed by Member States in a way that will truly enable their national building stock to achieve the ZEB target by mid-century, while signalling to the building sector the priorities and the effort needed to achieve this goal.

- To design comprehensive Building Renovation Plans, reliable data on the energy performance of buildings and other useful information on the national building stock should be regularly exchanged within the renovation value chain and across different levels of governance. Considering this, **digital tools and approaches for data collection and exchange, at local, regional, and national levels, should be better**



**promoted via the EPBD.** A better linkage between the Energy Performance Certificates, Smart Readiness Indicator, Digital Building Logbooks and other tools should be ensured.

### 3) Zero-Emission Building (ZEB)

- The establishment of “Zero-Emission Building” (ZEB) concept (Article 2§2), is a step forward in terms of addressing both the energy performance and operational carbon emissions of buildings. EuroACE notes that Annex III, sets out the primary energy use thresholds that must be respected in defining a ZEB. Using primary energy consumption as the only indicator may encourage Member States to focus too strongly on their energy mix (where primary energy savings are easier to achieve) at the expense of adopting effective end-use energy saving policies. This would risk leaving behind the multiple benefits that arise from highly energy efficient and well-equipped buildings (in the form of reduced energy costs and improved health and comfort). As a result, **we believe that both primary and final energy consumption should be taken into consideration when defining a ZEB**, with adequate consideration of the reduction of energy needs.
- In Annex III, we also note that the thresholds proposed, which are divided by climatic zone, are overall equal to or less ambitious than those calculated by the European Commission in its guidelines for the promotion of nearly zero-energy buildings<sup>1</sup>. As the guidelines were produced in 2016, and since there is no background explanation available as to why these thresholds have been put forward within the EPBD RECAST proposal for ZEB, we believe that these two standards must be better differentiated. Moreover, in view of the solutions available in the market and the technical progress made in the last years, we believe that **more ambitious thresholds should be proposed**. By putting forward ambitious primary and final energy consumption thresholds for ZEBs, we will make sure that high levels of energy efficiency are achieved faster, which will ultimately make the decarbonisation of their energy supply more technically and economically feasible. Finally, EuroACE believes that the residual energy demand of ZEBs buildings must be 100% supplied from renewable<sup>2</sup> and decarbonised energy sources.

### 4) Revised provision on new buildings

- **The revised provisions on new buildings (Article 7) are welcomed by EuroACE.** However, there are a few elements that should be addressed in the overall definition of ZEBs, as well as a more ambitious timeline and next steps for implementation of these new provisions. **We welcome the introduction of the new requirement for Member States to calculate the life-cycle Global Warming Potential of newly constructed buildings, whose calculation should be based on both standard EN 15978 and the Level(s) framework.** The latter should be the basis for the establishment of a common and unique framework that enables data collection and exchange across the EU as well as the **implementation of a common vision on whole life carbon.** In the interest of the last point, where national calculation tools are in use, those tools should also fulfil the minimum criteria laid down by the Level(s) common EU framework and the EN15978 standard. Additionally, current differences in how environmental product declarations (EPDs) are created need to be addressed, and the way raw material data is used need to be harmonised to ensure a more coordinated use, as well as accurate and comparable whole life carbon data.
- **Building Information Modelling (BIM) and 3D modelling tools do feature prominently in the recast.** Using performance simulation for all construction projects from the conceptual and design phases, helps designers visualise and interact with interrelated performance factors, such as orientation, lighting, thermal properties, and glazing, enabling better decision-making. To fully achieve its objective, **the EPBD should include a recommendation to anticipate, analyse, and simulate a building’s energy use from the conceptual and design phases, using BIM and 3D modelling technologies.**

<sup>1</sup> Commission [Recommendation](#) (EU) 2016/1318 of 29 July 2016 on guidelines for the promotion of nearly zero-energy buildings and best practices to ensure that, by 2020, all new buildings are nearly zero-energy buildings.

<sup>2</sup> As defined in the Renewable Energy Directive (EU) 2018/2001, Article 2§1: “‘energy from renewable sources’ or ‘renewable energy’ means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas;”



- When deployed across the lifetime of a building, these digital technologies make a crucial contribution to the renovation process and ensure a better outcome, as they can readily enable advanced assessments and evaluation of interdependent effects of the existing buildings' active and passive systems. Modelling and simulation at the design stage can also enable streamlined reporting in the operational phase to meet new requirements under the Energy Performance Certificate framework.

#### 5) Energy Performance Certificates (EPCs)

The changes to the Energy Performance Certificates (EPCs) framework will contribute to the achievement of more convergence and reliability of the certificates across Member States. The main points for EuroACE on this aspect of the recast proposal are:

- **EuroACE welcomes the introduction of a common template (Annex V) for the issuing of EPCs**, which requires both primary and final energy use to be displayed on the cover of the EPC. This and other changes will ultimately boost comparability across Member States.
- **We also note the proposal to bring a certain level of harmonisation** by requiring Class A to correspond to ZEB level, whilst Class G must correspond to the 15% worst-performing buildings in the national building stock by the end of 2025. We understand that this change, especially for the G-class buildings, is instrumental to the introduction of MEPS, **but it risks dis-incentivising the renovation of these worst-performing buildings in the in-between years up to 2026**. This risk should be addressed.
- **EuroACE believes that it is important to rapidly increase the coverage of EPCs across national building stocks**. In favour of this objective, we positively note that the validity of EPCs (G,F,E,D) cannot exceed 5 years and that the issuing of an EPC is now required at an extended range of trigger points (construction, major renovation, sale, rent (new/renewal)), and that Member States are required to conduct sample checks to ensure overall compliance of these requirements (Article 17). **We see the introduction of more stringent penalties in case of breach of such requirements will further strengthen their effectiveness**.
- EuroACE welcomes the requirement that the estimate for the energy savings and the reduction of the operational GHG emissions must be included among the recommendations in an EPC. **The latter should include information on financial incentives and technical assistance along with multiple benefits which are broadly associated with the achievement of the reference values** (i.e., minimum energy performance standards, minimum energy performance requirements and zero-emission building requirements), that will have to be included in an EPC along with the energy performance level of a building. **Showcasing the energy, environmental and health benefits stemming from ambitious energy renovations aiming at a specific reference value** (and information on how to achieve them), **will further help the building owner/occupant in comparing and assessing the energy performance of their own unit and incentivise investments in deep energy renovations. This will ultimately make the link between EPCs and the Renovation Passports even stronger**. In addition, indoor climate improvements represent a strong incentive for building owners to conduct energy renovations – something which has not been sufficiently reflected in the design and implementation of EPCs and Renovation Passports to date. **We therefore suggest introducing key components of a “Healthy Indoor Climate” definition<sup>3</sup>, which should be included under Article 2, and within the scope of both instruments**.
- EuroACE believes that EPCs are an extremely important tool when it comes to collecting information on the energy performance of buildings at national level. Therefore, **the establishment of national level databases** (Article 19) enshrining information stemming from the EPCs, the Renovation Passports and the Smart Readiness Indicator of buildings (Article 13), which should be updated at least every two years, **is very welcome**. **We also strongly support the requirement for Member States to ensure that the transfer of such information into the Building Stock Observatory** (via a unique template) **is done at least once a year**.

<sup>3</sup> **Healthy Indoor Climate** is an indoor environment that enables the health, comfort and well-being of occupants and is described by a set of indicators and associated target values related to Daylight, Indoor Air Quality, Thermal Comfort (especially Overheating Mitigation) and Acoustic Quality as described in EN 16798-1



- **Energy Performance Certificates should be integrated with other existing databases and tools, such as the Smart Readiness Indicator (SRI), through Digital Building Logbooks**, which could help overcome value chain fragmentation. Member States should be supported to use digital energy efficiency meters to determine the energy performance of buildings within the EPCs, as a complement to calculated performance.
- In addition to specific EPC recommendations on adjustments to heating and cooling systems, **the EPC article should also include recommendations on how to improve energy performance and optimise indoor climate parameters through passive systems in a unit and/or building**. Such passive systems are prioritised in Recital 52, and it is important to put adequate emphasis on their benefits when considering renovation<sup>4</sup>. Passive elements (i.e., natural ventilation, cooling, solar shading, daylight, building location/orientation, insulation etc) and their energy gains should also be better addressed in the EPC template in Annex V. **A definition of passive systems<sup>5</sup> should also be introduced in Article 2.**

#### 6) Smart Readiness Indicator

- As the power of digitalisation is playing an increasingly crucial role in assisting the design, construction, operation, and management of buildings throughout their whole life, **EuroACE sees great potential in the application of a common, harmonised EU scheme for rating the smart readiness of buildings** (as laid out in Article 13). The scheme will raise awareness amongst building owners and occupants of the value behind building automation and control systems and of technical building systems and should give confidence to occupants about the actual savings of those new enhanced services. Considering that the highest levels of energy performance are achieved when both active and passive systems of a building are integrated and work in harmony, we believe that in the context of delivering energy efficient and well-integrated buildings in the energy system, **strengthening the link between Energy Performance Certificates and the Smart Readiness Indicator is of crucial importance.**

#### 7) Data exchange

- **EuroACE believes that the rules for the collection and management of data (Article 14) should be laid out at EU level via a harmonised approach** to ensure full interoperability of services and data exchange with the EU while avoiding market fragmentation. To further strengthen data interoperability, **we support the creation of a “structured data format” to ensure consistency and completeness across different data sets. The access to building systems’ data should be regulated via a harmonised approach as well**, where “eligible parties” are better defined. In the interest of incentivising the delivery of more energy efficiency in the building sector, **we believe that all stakeholders involved in the energy renovation value chain should have direct access to the building systems’ data**. To facilitate the exchange of data, the latter should be as digitalised and reliable as possible. Considering this, **Member States should be encouraged to use and promote building automation and control systems, smart meters etc. to support the usage of real-time metered data when assessing the energy performance of a building.**

#### 8) Financial incentives and market barriers

- **EuroACE welcomes an obligation that Member States shall ensure the establishment of technical assistance facilities, including through one-stop-shops (Article 15§6)**. Assessing energy performance of a building should be combined with advice about technical possibilities to move towards a “zero-emission building”, information about available sources of financing and current legislative requirements on MEPS. Given the scale of the renovation challenge it is fundamental to enable and facilitate the deployment of one-stop-shops across the EU, allowing them access to public financing based on an EU-wide certification scheme to ensure the quality of their services.

<sup>4</sup> As reported in the JRC [Report](#) “EU challenges of reducing fossil fuel use in buildings”

<sup>5</sup> 'Passive system' means a design principle or a building element that maintains or improves energy performance and/or one or several indoor climate parameters (i.e., daylight, IAQ, thermal comfort, acoustic) with little or no assistance from an energy source



### 9) Technical Building Systems

Provisions on Technical Building Systems, laid out in Article 11 are overall a step in the right direction but could be further strengthened/expanded:

- **Scope of Technical Building Systems (TBS):** the scope of Technical Building Systems should be extended to include electrical installations. Monitoring these installations can typically lead to 10% energy savings; however, such energy monitoring is not yet included in the provisions of the EPBD. To include the efficiency of electrical installations, we would recommend the following policy adjustments:
  - o The definition of technical building systems should be extended to include electrical installations and **technical equipment for monitoring, that should include monitoring of electrical installations;**
  - o Energy performance definition should be updated to include electrical installations;
  - o **Annex I regarding the “Common general framework for the calculation of energy performance of buildings”** should cover electrical installations and electrical loads. Beyond this point, we note that Annex I has undergone significant improvements. In addition to the need for an accelerated implementation, the Commission fully understood the need for a harmonised implementation of EPB standards, which now relies on the EU Ecodesign Framework.
- **Replacement of inefficient TBS:** A clear provision to require that outdated and inefficient technical building systems are replaced as part of holistic deep (staged or one-shot) energy renovations should be included. This requirement should lead to additional reductions in carbon emissions during the operational phase of buildings in line with the findings of the recent JRC Report on this topic<sup>6</sup>.
- **Focus on Indoor Air Quality (IAQ) and “Healthy Indoor Climate” (blending active and passive strategies):** Considering that building occupants spend 90% of their time indoors, and considering the current COVID-19 pandemic, EuroACE welcomes the importance given to IAQ in Article 11. Measurement and control devices for the monitoring and regulation of IAQ are an important tool to ensure healthy indoor spaces. However, in our view, IAQ is one of the many aspects that constitute a “Healthy Indoor Climate” (as mentioned above). The latter should, in fact, also address other more structural aspects of a building, such as natural indoor lighting, ventilation, thermal comfort, solar shading etc. In this regard, we also believe that the right combination of active and passive building design and renovation strategies should be deployed.

### 10) The new rules on inspections

- **EuroACE welcomes the inclusion of inspections of ventilation and air conditioning systems in Article 20, whose reports must contain recommendations for the improvement of the energy performance of the inspected system (Article 21).** By implementing the recommendations, the energy performance and IAQ of the building can be improved. Therefore, a defined timeframe for their implementation must be included, and **we will suggest that a requirement to implement the recommendations within a three year-period, accompanied by a verification process, be included as negotiations progress.**
- In order to ensure consistency throughout the different sections of Article 20, §4 should specify that inspections should also include the assessment of the heating generator and air-conditioning generator.
- EuroACE welcomes the requirement for Member States to install building automation and controls systems in non-residential buildings (with a rated output for thermal systems or combined thermal and ventilation systems over 290 kW) by the end of 2024 and to reduce the threshold to 70kW thereafter.
- Finally, EuroACE supports the introduction of continuous electronic monitoring and of effective control functionalities in new residential buildings and in those undergoing major renovations.

ENDS

<sup>6</sup> JRC [Report](#) “EU challenges of reducing fossil fuel use in buildings”



**For further information**

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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.

**EuroACE Members (2022)**

