Questions and Answers on the revision of the Energy Performance of Buildings Directive

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1. What are the core elements of the revision and how does it deliver the Renovation Wave Strategy?

Buildings are one of the largest sources of energy consumption in Europe. Boosting their energy efficiency would cut emissions, tackle energy poverty, reduce people's vulnerability to energy prices and support the economic recovery and job creation. The Renovation Wave Strategy (MEMO) presented in October 2020 set out measures aiming to at least double the annual energy renovation rate by 2030.

The revision of the Energy Performance of Buildings Directive (EPBD) is an essential element of this Strategy. It upgrades the existing regulatory framework to reflect higher ambitions and more pressing needs in climate and social action while providing Member States with the flexibility needed to take into account the differences in the building stock across Europe.

The revised directive sets out how Europe can achieve a zero-emission and fully decarbonised building stock by 2050. The proposed measures will increase the rate of renovation, particularly for the worst-performing buildings in each Member State. It will modernize the building stock, making it more resilient and accessible. It supports better air quality, the digitalisation of energy systems for buildings and the roll-out of infrastructure for sustainable mobility. Crucially, the revised directive facilitates more targeted financing to investments in the building sector, complementing other EU instruments supporting vulnerable consumers and fighting energy poverty.

In line with the Renovation Wave, this proposal introduces EU–wide minimum energy performance standards for worst performing buildings and leaves Member States the scope to set their own standards in addition. The proposal includes a definition of zero-emission buildings, deep renovations and mortgage portfolio standards. It introduces ‘Renovation passports’ and facilitates the use of new performance metrics including final energy consumed and lifecycle carbon emissions. It also address other non-economic barriers to energy renovations and provides reliable building information tools to citizens and data to the public.

2. How does the revision support other legislative proposals in the Fit for 55 package?

The analysis in the EU Climate Target Plan indicated that sharply reducing emission from new and existing buildings is key to deliver on the EU's 2030 and 2050 decarbonisation objectives. Achieving this reduction requires regulation to make buildings use the least amount of energy, reflecting the cost of carbon in the energy mix and providing financial support for investments in renovation. This is what this revision sets out to do, together with the new emissions trading system (ETS) for buildings and road transport and the Social Climate Fund proposed in the ‘Fit for 55' package presented in July 2021.

The three proposals are carefully calibrated to work together and deliver the required emission reductions efficiently, jointly tackling the market and non-market barriers that impair renovations. The new ETS creates economic incentives for building decarbonisation and generates revenues for public support, targeted in particular to vulnerable households. The revised EPBD tackles non-economic barriers and ensures long-term demand. This will spur industry to innovate and lower renovation costs while supporting the mobilisation of targeted finance.

The EPBD will likewise support Member States’ efforts to achieve the enhanced national targets under the Revised Effort Sharing Regulation (ESR) and contribute to the delivery of the overall energy efficiency targets set in the Revised Energy Efficiency Directive (EED). The EPBD proposal will also boost the integration of renewable energy in buildings, supporting the achievement of the indicative 2030 target for the share of renewables in buildings outlined in the Renewable Energy Directive revision (RED). The provisions concerning electro-mobility will complement the Alternative Fuels Infrastructure Regulation (AFIR).
3. How will the proposal support the phase out of fossil fuels used for heating in buildings?

To ensure a decarbonisation of the buildings sector, the EU Climate Target Plan highlights the need to phase out fossil fuels in heating by 2040 when the direct emissions of the buildings sector will have to decrease by about 80%-89%. To encourage the swift deployment of heating systems with zero direct emissions, the EPBD proposal includes the requirement that zero-emission buildings do not generate carbon emissions on-site.

As the lifetime of heating systems is about 20 years, the EPBD foresees that fossil-fuel powered boilers will not be eligible for public support as of 2027. While the EPBD proposal does not mandate an EU-level phase out date for fossil fuel boilers, it introduces a clear legal basis for national bans, allowing Member States to set requirements for heat generators based on greenhouse gas emissions or the type of fuel used. Several Member States consider such measures essential to achieve a decarbonised building stock and to improve air quality and health.

4. What are Minimum Energy Performance Standards and to which buildings will they apply?

The EU Minimum Energy Performance Standards (MEPS) are a system to require the renovation of the worst performing buildings; those in Energy Performance Certificate (EPC) classes G or F. The G rating corresponds to the 15% worst performing buildings in each country, with the remaining buildings in the country distributed proportionately among the other classes between G and A which corresponds to zero-emission buildings. In particular, public and non-residential buildings will have to be renovated and improved to at least energy performance level F at the latest by 2027, and to at least level E by 2030 at the latest. Residential buildings should be renovated from G to at least F by 2030, and to at least E by 2033. Member States must then establish specific timelines for achieving higher energy performance classes through new National Building Renovation Plans, in line with their pathway to achieve zero-emission building stock by 2050. They are also empowered to set national MEPS, in line with their National Building Renovation Plans.

5. What are Energy Performance Certificates and how will they be used?

The EPBD proposal includes measures to make Energy Performance Certificates (EPCs) much clearer, and more reliable and visible, with easy to understand information on energy performance and other key characteristics, to benefit building owners, financial investors and public authorities. Quality and reliability of EPCs has been steadily improving since they were first introduced in 2002. Nevertheless, there are recognised issues with regards to the quality of procedures and, particularly, the perceived lack of consistency.

The proposed measures in the EPBD provide a clearer definition of what is considered a good quality EPC, its purpose and how it should be issued. Control mechanisms and visibility in property advertisement is improved. The EPBD includes a template for EPCs with a minimum number of common indicators on energy and GHG emissions, complemented with a number of voluntary ones, such as on charging points, indoor air quality and Global Warming Potential based on the building’s life-cycle carbon emissions.

The A rating should correspond to zero-emission buildings while the G rating corresponds to the 15% worst performing buildings in each country, with the remaining buildings in the country distributed proportionately among the classes in between. This will allow a clearer and simpler system of classification of buildings, while being flexible and adaptable to the national characteristics of the building stock. It will facilitate the understanding of EPCs also across borders. Finally, the revision also includes common requirements for the databases and the provision of public access to databases on the energy performance of buildings. This will improve the quality of the information available and facilitate the work of public authorities and financial institutions.

6. Will this proposal lead to higher costs for home owners or industry?

Energy renovation pays for itself over time, generating energy bills savings, which are generally a multiple of the investment needed to upgrade a building performance. Despite this, currently energy renovation often does not take place because of a variety of upfront obstacles. This can leave home owners and tenants exposed to higher energy costs and more vulnerable to energy price increases. This is especially true for those living in the worst performing buildings who are also often those with less capital to finance energy efficiency improvements.

By targeting the obstacles to renovation, this proposal aims to lower costs for these home owners and tenants. It does so by focussing on buildings where renovation is the most cost-effective and brings the greatest savings on energy consumption, CO2 price, taxes and tariffs. A home in energy class G consumes on average about 10 times more energy than a nearly-zero energy building or a zero-emissions building. Upgrading these buildings through renovation to energy class F will trigger
between 4.6-6.2 Mtoe a year in energy savings across the EU. An upgrade to energy class E will trigger about 2/3 more energy savings.

Under the Commission's proposal, the renovation from level G to F on the Energy Performance Certificate scale would apply to about 30 million building units. The Commission is helping to mobilise the finance for the upfront investment costs for these units, with up to €150 billion from the EU budget available to implement the minimum energy performance standards, between now and 2030.

Finance comes from several sources, including the European Regional and Development Fund, the Cohesion Fund and the Recovery and Resilience Facility, thanks in particular to the strong 'Renovate' flagships in national recovery and resilience plans. The proposed new Social Climate Fund will also mobilise €72.2 billion from the EU budget for the period 2025-2032 to support households, notably those living in worst performing buildings. To enable an efficient combination of public and private financing, the Commission is also working to make the State aid framework more conducive to the needs of the EU-wide minimum energy performance standards.

National Building Renovation Plans must also ensure the deployment of sufficient funds and support, to provide national-level finance and help leverage private investment.

7. Does the revision of the EPBD stimulate increased funding for energy renovation?

Lack of financing is one of the major barriers to building renovation. One of the aims of the newly introduced National Building Renovation Plans (NBRPs) is to ensure a coherent deployment of funds, identifying the key areas and putting in place the most adequate instruments. NBRPs will pay attention to monitoring the reduction of people affected by energy poverty and of population living in inadequate housing (e.g. leaking walls or roofs). The plans will present an overview of national policies and measures empowering and protecting vulnerable households, of alleviating energy poverty and ensuring housing affordability.

At EU level, there are several sources of finance to support renovation, including the European Regional and Development Fund, the Cohesion Fund and the Recovery and Resilience Facility, thanks in particular to the strong 'Renovate' flagships in national recovery and resilience plans. The proposed new Social Climate Fund will also mobilise €72.2 billion from the EU budget for the period 2025-2032 to support households, notably those living in worst performing buildings. This funding should be matched by Member States. Member States are also encouraged to roll out enabling and financing tools to make private investments more attractive and direct them to the renovation needs.

To enable an efficient combination of public and private financing, the Commission highlights the need to make available technical assistance and is also working to make the State aid framework more conducive to the needs of the EPBD revision, in particular for the EU-wide Minimum Energy Performance Standards (MEPS). In parallel, the Commission is currently reviewing the General Block Exemption Regulation, also as regards State aid for improving the performance of buildings.

In addition, to avoid shallow renovations, the EPBD provides a definition of 'deep renovation'. This helps to target renovation projects and support schemes delivering high energy savings, which will benefit from higher financial incentives and technical support measures. Private financing is also supported through strengthened information tools, particularly via the renovation passport, the energy performance certificate (EPC) and the databases for energy performance of buildings. It will help financial investors monetise the benefits of building decarbonisation and households or commercial actors to better factor in the economic benefits of building renovations and their repayment plans. New 'mortgage portfolio standards' will be introduced as a mechanism to incentivise lenders to improve the energy performance of their portfolio of buildings, and encourage potential clients to make their properties more energy performing.

8. How does the revision of the EPBD address the use of sustainable building materials?

The construction sector faces the challenge of providing people with access to affordable and better housing, while reducing the environmental impact of new construction or major renovations. This proposal takes a first step towards addressing greenhouse gas emissions during the whole lifecycle of the buildings.

The EPBD will address carbon emissions over the full lifecycle of a building, through mandatory calculation and disclosure of this information for new construction, to inform citizens and business and raise awareness. This approach builds upon experiences from several Member States and will be gradually introduced (starting with large buildings of over 2000 square metres as of 2027, and applying to all buildings after 2030) to allow enough time for data to be available.

Emissions from the manufacturing of materials, transportation, construction, maintenance and deconstruction of a building are known as “embodied carbon.” Carbon emissions linked to the use
phase of the building are “operational” carbon emissions. Making good choices about efficient building practices and materials can have a huge effect on both operational and embodied carbon emissions. This is why this proposal is not only about looking into reducing energy efficiency and operational carbon emissions, but is also the start of a forward-looking approach to match energy performance with resource efficiency, circularity and sustainability.

9. How does the revision of the EPBD support the deployment of electric vehicles and bicycle use?

The rollout of electric charging infrastructure needs to accelerate together with the expected increase of the electric vehicle fleet on EU roads, which is projected to reach at least 30 million cars by 2030. The AFIR proposal sets a target for the publicly available recharging infrastructure and the revised EPBD is complementing the AFIR with requirements for recharging infrastructure in private buildings, at home or at the workplace. It is expected that a large share of recharging will take place in these types of buildings.

The proposal further requires Member States to remove barriers to the installation of recharging points for residents in multi-family buildings. The EPBD proposal also addresses another important barrier to sustainable mobility - the lack of safe bicycle parking - by introducing requirements for parking places in new and renovated buildings and in existing large non-residential buildings.

The EPBD proposal introduces a requirement for recharging points to support smart charging, which is also in line with the proposal for the Renewable Energy Directive. With smart charging, cars can be charged when energy prices are low or when renewable energy is abundant. As technology evolves, it will also be possible to feed electricity back to the grid and use the car battery as a storage facility. Smart charging facilitates the integration of renewable energy such as wind and solar to the grid and helps decarbonize the energy system.

10. How does the EPBD contribute to the increase of renewable energy in buildings?

With this revision, the EPBD requires that in all new buildings, where technically feasible, 100% of on-site energy consumption is covered by renewable energy as of 2030, with an earlier adoption as of 2027 for public buildings. Member States should plan policies and measures with a view to a complete phase out by 2040 of the use of fossil fuels in buildings. The revision of the EPBD also provides enhanced visibility to the integration of renewables in the energy performance certificates (EPCs). The new template for EPCs includes the requirement to clearly showcase renewable energy production, how much it represents compared to the building's needs and how much it improves the overall building's emissions. Finally, the revision improves the recognition of renewable energy sources in the calculation of the overall performance of the building, particularly when a building is part of a larger energy grid, such as a district heating or cooling system.

11. How will the revision of the EPBD support better indoor air quality and indoor environmental quality?

Member States will retain the competence for regulating indoor air quality and indoor environmental quality. However, the EPBD supports high indoor environmental standards by requiring that new zero-emission buildings are equipped with measuring and control devices for the monitoring and regulation of indoor air quality. This is also the case for buildings undergoing major renovations.

These devices will monitor and regulate the building's technical systems to ensure that they operate optimally and provide the required indoor air quality conditions at maximised efficiency levels. The energy performance certificates and smart readiness indicator will provide visibility to the buildings that have control and monitoring systems for indoor air quality installed.

12. How are Member States performing against their current commitments and Long Term Renovation Strategies?

The national long-term renovation strategies received by the Commission show that countries typically have measures in place for easier access to financing, technical support, promotion of advisory tools such as one-stop-shops, tackling energy poverty and better information. However, the analysis also shows that the measures are often not targeted or detailed enough to be able to compare the provided data and give certainty about their levels of effectiveness. In particular, the variety of different national milestones made it difficult to assess the ambition level of these strategies. Some national strategies were also lacking ambition or clear financial commitments to reach EU's decarbonisation target.

Based on this analysis, the Commission proposed to review the long-term renovation strategies framework to foster more transparency, better comparability, better implementation and monitoring procedures, reflecting the higher ambition at EU level towards building decarbonisation. This is why the Commission has proposed new requirements in the EPBD proposal, including converting the
strategies into actual action plans with a harmonised template, including national targets, requiring outlines of investment needs and financing measures, better synchronisation with the Governance Regulation framework and improved follow-up procedures on the national plans. The latter includes competences for the Commission to assess the national plans and take appropriate follow-up measures such as country-specific recommendations to Member States.

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