

# Consultation on the revision of the Energy Performance of Buildings Directive 2010/31/EU

Fields marked with \* are mandatory.

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## Introduction

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As announced in the European Green Deal ([https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en)), the Commission adopted on 14 October 2020 a strategic Communication “Renovation Wave for Europe - greening our buildings, creating jobs, improving lives” (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1603122220757&uri=CELEX:52020DC0662%20>). It contains an action plan with specific regulatory, financing and enabling measures for the years to come and pursues the aim to at least double the annual energy renovation rate of buildings by 2030 and to foster deep renovations. It is expected that mobilising forces at all levels towards these goals will result in 35 million building units renovated by 2030.

The Renovation Wave (<https://www.consilium.europa.eu/en/press/press-releases/2020/12/11/european-council-conclusions-10-11-december-2020/>) confirms that the existing legislative measures on buildings will neither suffice to achieve the increased EU 2030 climate target of at least 55% emission reduction target and the planned increase in the ambition for energy efficiency, nor the 2050 climate neutrality objective. Therefore, the Renovation Wave communication announces a revision of the Energy Performance of Buildings Directive 2010/31/EU (EPBD) together with a number of areas of legislative and non-legislative reinforcement in relation to building renovation and decarbonisation of buildings. The EPBD is the cornerstone of European legislation in the area of energy performance of buildings. It aims at accelerating the transformation of the EU building stock into a highly energy efficient and decarbonised building stock by 2050.

The Renovation Wave already indicated some specific aspects which will be addressed in the revision of the EPBD, namely: the phased introduction of mandatory minimum energy performance standards for all types of buildings (public and private), an update of the framework for Energy Performance Certificates, the introduction of Building Renovation Passports and the introduction of a ‘deep renovation’ standard in the context of financing and building decarbonisation objectives. The requirements for new buildings and measures fostering sustainable mobility are also considered to be updated in line with the enhanced climate ambition of the European Green Deal and the Climate Target Plan 2030. This includes addressing resource efficiency and circularity principles in order to reduce whole lifecycle emissions, digitalisation in design, construction and operation of buildings, climate resilience and health and environmental requirements, as well as accessibility for persons with disabilities, and energy poverty, requires consideration. More information is provided in the Inception Impact Assessment (<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12910-Revision-of-the-Energy-Performance-of-Buildings-Directive-2010-31-EU%20>).

This questionnaire is part of a larger stakeholder consultation which will feed into the Commission’s work on the revision of the EPBD. It builds upon the results from the very extensive and in-depth public consultation for the Renovation Wave that took place between January and September 2020, whose results have been

assessed in a dedicated report

([https://ec.europa.eu/energy/sites/ener/files/stakeholder\\_consultation\\_on\\_the\\_renovation\\_wave\\_initiative.pdf](https://ec.europa.eu/energy/sites/ener/files/stakeholder_consultation_on_the_renovation_wave_initiative.pdf)).

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## About you

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\*Language of my contribution

English

\*I am giving my contribution as

Non-governmental organisation (NGO)

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\*Organisation name

*255 character(s) maximum*

European Environmental Bureau

\*Organisation size

Medium (50 to 249 employees)

Transparency register number

*255 character(s) maximum*

Check if your organisation is on the transparency register

(<http://ec.europa.eu/transparencyregister/public/homePage.do?redir=false&locale=en>). It's a voluntary database for organisations seeking to influence EU decision-making.

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\*Country of origin

Please add your country of origin, or that of your organisation.

Belgium

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Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.

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## Part A. Planning and policy instruments

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### Decarbonisation of buildings

**Question 1.** The long-term decarbonisation strategy (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0773&from=EN>) has introduced the concept of zero emission buildings by 2050, in view of achieving carbon neutrality in the long term. Do you agree that such a novel concept should be defined in the EPBD?

- Yes
- No, it is not needed in the EPBD
- No opinion

If yes,

- It should include greenhouse gas emissions covering the whole life-cycle of buildings
- It should include minimum renewable energy share in buildings and city neighbourhoods
- It should refer to a timeline to gradually phase out fossil fuels, in particular for heating and cooling systems
- Other - please specify in comment box

\*Please specify:

*500 character(s) maximum*

Improving energy efficiency, reducing energy consumption, boosting circularity and phasing out fossil fuels should be the basis for the decarbonisation of buildings. A ZEB definition should include requirements to provide a total figure for both life cycle energy consumption and CO2 emissions, metrics quantifying energy use per person to assess space utility, and reduce by 50-60% the CO2 emissions by 2030, as recommended by UNEP's GlobalABC 2019 report. Article 9 should include these points.

**Question 2.** Long-Term Renovation Strategies (LTRS) set the vision, roadmap, concrete policy measures and actions, and dedicated financing mechanisms to decarbonise national building stocks by 2050. The first 13 LTRS ([https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/long-term-renovation-strategies\\_en](https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/long-term-renovation-strategies_en)) submitted have been assessed by the Commission. Under the existing legal framework the LTRS are due every 10 years, with a possibility for updates as foreseen under the Governance Regulation.

Should the EPBD provisions on the Long Term Renovation Strategies be modified?

- Yes  
 No

\*If yes, how?

*1,000 character(s) maximum*

The LTRS should be aligned to the EU climate-neutrality objective by 2050, which could be more ambitious based on estimates of the remaining carbon budget. The LTRS should triple the rate of (one-step) deep renovations per year; improve the energy performance of buildings based on unique and comprehensive Minimum Energy Performances focusing on one-step deep renovations; establish mandatory complete 100% decarbonisation requirements by 2050; require zero-emission heating and cooling systems, excluding fossil fuels; integrate LEVELs framework to report on building performances; prioritise in the worst-performing buildings but including the whole building stock; ensure good quality data provision; promote the BRP in the short term and technical assistance, and include other criteria such as indoor air quality and safety. Each LTRS should be assessed and approved at the EU level based on both comparable indicators and milestones and a five-year timetable in a continuous monitoring process

**Question 3.** Should the monitoring of the objectives identified by MSs in their LTRS be strengthened?

- Yes  
 No

If yes,

- Through a specific monitoring tool to be developed by the Commission  
 By requiring a 5-year revision of the LTRS  
 By developing a common template and requesting specific data and indicators, in order to make the information provided by Member States more comparable  
 By requesting more data, especially on greenhouse gas emission effects, to allow assessing the contributions to the EU climate policy targets  
 By linking the LTRS to other policies (heating and cooling, renewables, products, etc.)  
 Other - please specify in comment box  
 No opinion

Please specify:

\* 500 character(s) maximum

The Commission and the MSs should evaluate the LTRS in a continuous monitoring process based on LEVEL(s), adjusting the timetable to the delays and linking the LTRS to other policies such as CPR or CDW. The LTRS should refer to actions to prevent rebound effects regarding GHG emissions, structuring the LTRS with the Sufficiency/Efficiency/Renewables framework for action through the inclusion of monitoring requirements on circularity, the decarbonisation of buildings and the renovation rate.

**Question 4.** Which measures would you add in the EPBD to further support district and city authorities to increase energy efficiency in buildings and to accelerate the rate of replacement of boilers by carbon free ones based on renewable energy?

1,000 character(s) maximum

Local authorities need technical assistance and capacity building plans for the implementation of these measures:1)Energy efficiency: support neighbourhood based on EE programmes and the organisation of groups purchasing efficient/renewable solutions; financial incentives for one-step deep renovations; mandatory requirements to reduce overall energy demand/GHG emissions after renovation;2)Circularity: establishing minimum requirements and financial incentives for circularity; supporting sustainable construction waste management, including GPP criteria; providing data on construction materials.3)Boilers: replacing heating and cooling systems with direct electrification in combination with on-site renewable energy production; boosting the use of local energy sources, by promoting distributed energy production; requiring staged and anticipated/visible minimum energy and GHG emissions performances at transaction points and financial incentives only for the most energy-efficient H&C systems

### Resource efficiency and climate resilience in buildings renovation

The European Green Deal points to energy and resource efficiency. Following this, the new Circular Economy Action Plan (CEAP) ([https://ec.europa.eu/environment/circular-economy/index\\_en.htm](https://ec.europa.eu/environment/circular-economy/index_en.htm)) adopted in March 2020 acknowledges that reaching climate neutrality by 2050 requires highly energy and resource efficient buildings equipped with renewable energy, considering life cycle performance and a more efficient use of resources for building renovation and construction. The Renovation Wave equally sets our actions in this regard, such as the development of a 2050 whole life cycle performance roadmap to reduce carbon emissions from buildings.

**Question 5.** Do you think a revised EPBD should include measures to report on whole life-cycle carbon emissions from buildings (manufacturing and construction, use and end of life)?

- Yes
- No, the EPBD is not the right tool for this
- I don't know/ No opinion

If yes,

- For all buildings (new buildings and renovations)
- For all new buildings
- For renovations only
- For all new public buildings
- For renovations of public buildings only

- For a subset of private non-residential buildings such as shopping centres or datacenters
- The opportunity should be considered in the context of the revision evaluation mandated for 2026

Comment:

*500 character(s) maximum*

The EPBD should ensure mandatory and harmonised reporting and implementation on WLC at EU and national levels, including operational energy-use and embodied impacts and minimum performance and maximum carbon requirements. A figure that combines CO2 emissions in the lifecycle should be mandatory to report on the decarbonisation process of buildings based on the LEVEL(s) framework. A WLC approach ensures that reducing energy consumption is not only based on greater fossil fuel use.

**Question 6.** Should the EPBD require that the likely impacts of climate change are taken into account in the planning of new buildings and major renovations?

- Yes
- No, the EPBD is not the right tool for this
- No opinion

If yes,

- For new private buildings (residential and non-residential)
- For new public buildings
- For private renovations
- For renovations of public buildings
- In the case of private buildings, only if they are above a certain size
- In case of private buildings, only for a subset of non-residential buildings such as offices or commercial buildings
- The opportunity should be considered in the context of the revision evaluation mandated for 2026

**Question 7.** As announced in the Renovation Wave, the Commission will develop a 2050 whole life-cycle performance roadmap<sup>1</sup> to reduce carbon emissions from buildings and advancing national benchmarking with Member States. How do you think the EPBD could contribute to this roadmap?

*1,000 character(s) maximum*

The EPBD should immediately reflect an action roadmap targeting WLC performance, which should not be delayed after the EPBD revision and should ensure the radical decarbonisation of the building stock. The EPBD revision should collect information on WLC energy performance and operational and embodied carbon emissions in construction materials and buildings, including energy grid and active building systems. LEVEL(s) should be established as the reference tool to support lifecycle performance assessment by developing metrics and requirements based on real performance audits data, promoting a new Lifecycle Carbon & Energy Performance Certificate that merges carbon emissions and energy consumption. The metrics for energy and CO2 emissions should be presented by m2 and per capita in buildings (i.e. per resident, user or employee) in order to broaden the perspective on the environmental impact of buildings. The cost-optimal approach should also be revised, including lifecycle costing.

<sup>1</sup>The Roadmap is one of the actions foreseen in the Renovation Wave Communication (COM(2020) 662 final) to make the construction ecosystem fit to deliver sustainable renovation.

## Nearly zero-energy buildings (NZEB)

**Question 8.** The EPBD requires all new buildings from 2021 (public buildings from 2019) to be nearly zero-energy buildings (NZEB). According to Article 2 ([https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2018.156.01.0075.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.156.01.0075.01.ENG)) "nearly zero-energy building" means a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent from renewable sources, including sources produced on-site or nearby. Do you think that the current definitions for NZEBs are ambitious enough to contribute towards a fully decarbonised building stock?

- Yes, the current definition is ambitious enough
- No
- No opinion

If no,

- The current definition should be updated to put clear limits to energy use and minimum levels of renewables and incorporate green-house gas emissions targets
- The current definition should be replaced by a definition of "zero emissions buildings"
- Other - please specify in comment box

\*Please specify:

*500 character(s) maximum*

NZEB is not Paris compliant. A definition of ZEBs should be based on WLC emissions and LEVEL(s) and structured around sufficiency; integrate the Sufficiency, Efficiency and Renewable framework to prevent rebound effect in buildings overall emissions; exclude the use of fossil fuels and the H2 use for direct heating. A discount of cumulative lifecycle emissions resulting from the benefits from Module D should not be allowed. Offsetting cannot be a significant leverage and should be limited.

**Question 9.** Numeric thresholds or ranges for NZEBs are not defined in the EPBD. While this allows Member States to set their NZEB levels taking into account their national context, it also results in widely differing definitions from country to country. Is a more harmonised definition of NZEB necessary?

- Yes
- No, it is not necessary
- I don't know/ No opinion

If yes,

- Minimum thresholds for primary energy use in the building's operation should be defined in the EPBD for different climate zones
- Minimum renewable energy sources share should be introduced in the EPBD for different climate zones
- Both minimum thresholds for primary energy use and renewable energy sources share in the building's operation should be introduced in the EPBD for different climate zones
- Life-cycle greenhouse-gas performance should also be included
- Other - please specify in comment box

\*Please specify:

*500 character(s) maximum*

In order to promote zero-energy buildings, common threshold values for energy use and CO2 emissions in the life cycle are needed at the EU and national level, including the establishment of thresholds for the decarbonisation of heating and cooling systems, excluding fossil fuels in buildings, promoting connections with district heating in urban and densely inhabited areas, and establishing maximum thresholds for final energy consumption in the whole life cycle of the building.

## Deeper building renovations

**Question 10.** Deep renovation is understood to be a renovation that should generate at least 60% energy savings, whether carried out in a single stage or in a number of staged renovations. In your view, would it be beneficial to provide a legal definition of “deep renovation” in the EPBD?

- Yes
- No, a definition would add further complexity
- I don't know/ No opinion

If yes,

- The definition should relate to energy savings only
- The definition should relate to energy savings also expressed in terms of greenhouse gas emissions related to the use of energy
- The definition should relate to both operational and embodied greenhouse gas emissions covering emissions from the full life-cycle of buildings
- The definition should cover broader aspects that have an impact on the quality of renovations, such as health and environmental standards, accessibility for persons with disabilities, climate resilience or others - please specify in comment box
- Other - please specify in comment box

\*Other broad aspects? Please specify:

*500 character(s) maximum*

The definition should be based on one-step deep renovations, avoiding staged deep renovations without a progressive project, and covering minimum requirements for adaptability, flexibility and durability of buildings; for circularity; for implementing low-impact solutions, including design-based solutions; for universal accessibility and metrics on health and safety. Information on these requirements must be presented disaggregatedly to support the decision-making processes.

\*Please specify:

*500 character(s) maximum*

One-step deep renovations should be the guide for deep renovations to ensure at least a 60% of minimum improvement of energy performance, increasing to at least 75% by 2030 and lifecycle decarbonisation in a single intervention; the minimum circularity requirements including the use of a volume % of reused and recycled materials; the exclusion of fossil fuels in heating&cooling systems and other indicators included in LEVEL(s). Deep renovations should be the criteria for financial eligibility.

## Mandatory minimum energy performance standards ('MEPS')

Mandatory renovation/minimum performance requirements are one of the most impactful measures for increasing the rate of building renovation and have already been explored and implemented in some Member States. Their aim is to firm up investors' expectations by setting a path for the improvement of the energy performance of different classes of buildings thus gradually increasing the average performance of the national building stock. Mandatory renovation/minimum performance requirements could be introduced progressively and target specific segments as a priority.

**Question 11.** In your opinion, should the EPBD introduce mandatory minimum energy performance standards to be applied in the EU, subject to specific conditions to be determined?

- Yes
- No
- I don't know/ No opinion

Please explain your answer:

*1,000 character(s) maximum*

In order to tackle energy poverty, MEPS should focus on the worst-performing buildings through deep renovations, excluding buildings with good energy performance and not blocking low-income homeowners who cannot afford to renovate their homes. Ambitious mandatory MEPS for any type of buildings should be established based on a harmonised calculation to ensure data comparability, using a common approach across the Member States. Based on the whole lifecycle criteria for both new buildings and renovations, MEPS should support the implementation of more stringent binding requirements, considering local circumstances and building characteristics such as materials or building morphologies. A clear roadmap and timeline for the application of MEPS should be defined in coordination with the MS building codes. MEPS should drive the integration of renewable energy and contribute to the phase-out of fossil fuels in heating and cooling systems.

**Question 12.** What type of minimum energy performance standards do you consider most appropriate?

- Building-level performance standards, focusing on the overall energy efficiency of the building (for example linked to an Energy Performance Certificates ('EPC') class or the energy codes, specific energy consumption, another carbon metric, etc.)
- Building element-level performance standards, setting specific minimum levels of building elements (for the envelope and/or the technical building systems including heating and cooling)
- Minimum quality standards, including also other aspects beyond energy performance, such as thermal comfort - please specify in comment box
- Others - please specify in comment box
- I don't know / No opinion

\*Please specify:

*500 character(s) maximum*

On top of the points above, MEPS should include a complete lifecycle assessment and minimum requirements for CO2 emissions generated from energy consumption during the lifecycle; minimum environmental requirements for construction products and materials and circularity, establishing targets for using local reused and recycled materials; minimum requirements for using energy from renewable sources, phasing out fossil fuels and minimum requirements for indoor environmental quality standards.

Please explain your answer:

*1,500 character(s) maximum*

MEPS should tackle the decarbonisation of buildings by establishing requirements on the whole lifecycle, including lifecycle energy consumption and embodied and operational CO2 emissions, to ensure that the energy efficiency improvement of buildings does not increase CO2 emissions and fossil fuels are phased out. For that purpose, to complement primary Kwh/m2 per annum performance requirements, quality criteria should be defined, including several measures such as minimum environmental performance of construction materials and products, establishing minimum requirements on circularity for using and recovering reused and recycled construction materials. A CO2/Kwh combined metric could support this measurement.

In order to avoid a fragment implementation of MEPS, mandatory quality criteria should be developed at several governance levels. The LEVEL(s) framework could be the reference to establishing the requirements and indicators to measure the WLC and energy performance across the EU, ensuring a common basis that could meet the EU policy goals, taking into account the national contexts.

MEPS should include requirements of each building element to ensure that the main issues are addressed during their renovation.

Beyond the energy performance and CO2 emissions, minimum requirements on environmental quality indoor aspects of buildings should be included, such as air quality, lighting, thermal comfort, and acoustics.

**Question 13.** In your view, for which category of buildings should mandatory minimum energy performance standards be applied?

*at most 2 choice(s)*

- All residential and non-residential buildings
- All residential buildings being sold and/or rented out
- All residential buildings
- A subset of residential buildings to be defined (please specify in comment box)
- All non-residential buildings
- All non-residential buildings being sold and/or rented out
- A subset of non-residential buildings to be defined (please specify in comment box)
- All public buildings (with a total floor area of more than 250 m2)
- Only to worst-performing buildings irrespective of their ownership and use profile
- Other (please specify in comment box)
- I don't know / No opinion

\*Other? Please specify:

*500 character(s) maximum*

MEPS should address all types of buildings but prioritise the worst-performing ones, which offer a high potential for energy improvement. MEPS should be based on deep renovation standards, including at least a decrease of 60% of energy savings and preparing buildings for the next steps in their lifecycle. The specificities of each local conditions, such as climatic conditions, age of construction or ownership structures, should be considered, influencing targets and deadline compliance.

**Question 14.** Do you think that mandatory minimum energy performance standards should be introduced:

- Yes
- No, I don't believe that mandatory minimum standards are appropriate

- I don't know / No opinion

If yes,

- Linked to specific moments in the life cycle of a building, for example a transaction (e.g. the sale, rental or lease of a building)
- On the basis of a timetable for a staged approach to achieve specific energy performance levels
- Other - please specify in the comment box

\*Please specify:

*500 character(s) maximum*

In addition to the points above, a deadline to achieve MEPS and clear targets to improve the entire building stock should be defined, establishing basic harmonised criteria across the EU. MEPS should limit the renting and selling of buildings that not comply with their criteria, avoiding the transfer of ownership or occupancy of building without the required level. Concrete support policies and subsidies should be defined for those owners who cannot invest in renovations to avoid renovictions.

**Question 15.** In your view, what is the most important element that could guarantee a successful roll-out of mandatory minimum energy performance standards?

- The availability of financial support to buildings owners
- The correct identification of the worst-performing buildings
- The presence of a stable legal framework
- The availability of adequate workforce capacity to do renovations
- The availability of emerging technologies facilitating rapid renovation works
- Other - please specify in comment box
- I don't know / No opinion

\*Please specify:

*500 character(s) maximum*

In addition to the points above, a successful roll-out of MEPS should: establish staggered minimum performance levels to be achieved through a clear roadmap, timeline and deadlines; establish reference values for MEPS at the EU level based on an assessment and benchmarking; collect reliable, accessible and good quality data based on compliance with the elaboration of EPCs for all buildings, and ensure the political commitment of MS to provide resources and solutions.

## Public buildings

**Question 16.** In your view, which of the following regulatory measures should be envisaged to increase the rate and depth of renovation of public buildings in a sustainable manner?

- Introduction of more stringent minimum energy performance requirements for renovation of public buildings
- Introduction of minimum energy performance standards in public buildings, with an obligation to achieve progressively more ambitious levels
- Introduction of life cycle aspects in the design, construction and operation of refurbished public buildings (e.g. circular approaches like extension of service life, adaptability and flexibility, reuse and recycling of materials)

- Introduction of climate resilience aspects in the design and operation of new and refurbished public buildings
- Other - please specify in comment box
- I don't know / No opinion

\*Please specify:

500 character(s) maximum

To complement points 2,3 and 4 above, the following regulatory measures should be included: achieving progressively more ambitious levels on MEPS, based on a clear roadmap, timetable and deadlines; ensuring the coordination with revision of Art. 5 EED; introducing mandatory features on energy performance and total CO2 emissions in the lifecycle of buildings; establishing mandatory use of only renewable heating and cooling systems; and increasing compliance with the elaboration of EPCs.

## Electromobility

**Question 17.** The provisions on electromobility in Article 8 of the EPBD targeting the installation of recharging points in car parks adjacent to buildings were recently introduced. With the strengthened climate ambition and the increased incentives towards the uptake of electric cars but also with the strong increase in (electric) bike/cargo-bike use, do you think there is a need to strengthen the requirements?

|   | Yes                              | No                    | I don't know/ No opinion |
|---|----------------------------------|-----------------------|--------------------------|
| For new residential buildings             | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>    |
| For refurbished buildings                 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>    |
| For new non-residential buildings         | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>    |
| For refurbished non-residential buildings | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>    |

**Question 18.** In your view, what kind of requirement would be needed?

|  | Y<br>e<br>s                      | N<br>o                | I don't<br>know/<br>No<br>opinio<br>n |
|--|----------------------------------|-----------------------|---------------------------------------|
| The installation of recharging points to support smart charging, allowing to monitor, control and optimise energy usage when recharging electric vehicles              | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>                 |
| The inclusion of provisions for recharging points for vehicles other than cars (e.g. e-bikes)  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>                 |
| To give owners of an apartment in multi-dwelling buildings the right to install a recharging point for their parking spot in the shared parking garage (right to plug) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>                 |

Other measures? Please specify:

500 character(s) maximum

Promoting recharging points for vehicles should only come after promoting a lower use of cars. These charging points should focus on e-bikes, shared parking and shared EVs rather than e-cars for single houses. Promoting smart charging in shared parking can ensure the charging of a growing number of EVs is managed, avoiding grid congestion. Charging stations should be installed based on the criteria of sharing this service, considering that the most common places to charge EVs are home and work.

**Question 19.** Are you aware of administrative barriers preventing the deployment of charging points in buildings in your country?

- Yes
- No

## Part B. Information provision and energy performance certificates

### **Energy performance certificates (EPCs)**

Energy performance certificates (EPCs) is an instrument aimed at informing building owners, tenants and users about the cost of heating and cooling, savings that investments would bring and offer benchmarks to compare similar buildings. EPCs are also needed to link preferential financing conditions to quality renovations. Under the existing EU regulatory framework, EPCs are compulsory for buildings being built, sold or rented and the energy class of the EPC must also be shown in advertisement media. They are also compulsory for buildings over 250 m<sup>2</sup> occupied by a public authority and frequently visited by the public. EPCs can also be used to plan policy or to monitor the performance of measures when these are implemented. However, the coverage of such certificates strongly differs across Member States.

**Question 20.** Do you agree that the framework for Energy Performance Certificates should be updated and their quality improved?

- Yes
- No, it's not necessary
- Other - please specify in the comment box
- I don't know / No opinion

\*Please specify:

*500 character(s) maximum*

Yes. The EPC should include mandatory basic criteria for the total decarbonisation of buildings, including additional information on lifecycle energy and carbon footprint, circularity measures, demand-side flexibility and promotion of energy from renewable sources, metrics to provide information on energy consumption per inhabitant, and data on the environmental performance of buildings based on on-site visits and real-time measurement through the mandatory digitalisation of buildings

**Question 21.** Is harmonization of EPCs needed to accelerate the increase of building performance and how can it be achieved?

- Yes, it is needed and can be achieved by introducing a common template
- Yes, it is needed and can be achieved by other means - please specify in comment box

- Yes, it is needed but some national specification should be retained - please specify in comment box
- No, harmonisation is not needed
- I don't know / No opinion

\*Other means? Please specify:

*1,500 character(s) maximum*

A digital EPCs template should be developed at MS or EU level, including energy consumption and CO2 emissions across the lifecycle of buildings. Still, EPCs should provide a National database system based on a European harmonisation with compatible and homogeneous data, ensuring the report of EPCs at a EU level. Digital technologies could support this collection of data in a continuous assessment of the real performance of buildings. Calculation methods should be harmonised in an EPC rating, including WLC and energy consumption, to ensure technical and comprehensive comparability across the MS, facilitate the analysis across the EU, identify the worst-performing buildings, and monitor the implementation of MEPS. These measures could guarantee a single letter or performance level across the EU, strengthening the integration of MEPS into the EU Green Public Procurement criteria.

EPCs should specify energy consumption per square metre but also per occupant and functional unit of use as well as other additional metrics related to decarbonised heating and cooling systems, SRI information and the introduction of renewables.

LEVEL(s) could ensure a harmonised reporting across the EU through their indicators, including the lifecycle of buildings, climate resilience, and lifecycle cost.

EPCs should be based on MEPS, providing data and milestones to achieve them but promoting the achievement of at least 60% (one-step) deep renovations level, providing clear guidelines and measures.

Please explain your choice:

*500 character(s) maximum*

The EPBD revision should ensure compliance in the implementation of EPCs across MS, strengthening its requirements and harmonising certain core elements. The EPC should be the tool for MEPS to be based upon. The harmonisation of the calculation method and the data provided would allow for comparability of data, reducing the uncertainties and the lack of trust towards existing EPC schemes, ensuring a European assessment of the building stock and promoting market uptake.

**Question 22.** How would you rate the following elements in order to improve the quality and impact of EPC requirements?

- 0 – No opinion
- 1 – Not important
- 2 – Of little importance
- 3 – Moderately important
- 4 – Important
- 5 – Very important

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|---|

|   |                       |                       |                       |                       |                                  |                                  |
|---|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|----------------------------------|
| Improve training for independent experts  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            |
| Develop professional qualification schemes or labels for installers of technical buildings systems  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            |
| Improve quality control mechanisms  | <input type="radio"/>            | <input checked="" type="radio"/> |
| Include further information on estimated costs, energy savings or cost savings  | <input type="radio"/>            | <input checked="" type="radio"/> |
| Include information on non-financial benefits such as increased comfort and climate resilience  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            |
| Tailor the recommendations towards deep renovations   | <input type="radio"/>            | <input checked="" type="radio"/> |
| Develop an accessible EPC database with further information on the EPC, explanation of the different terms, benchmarks and comparison with similar buildings  | <input type="radio"/>            | <input checked="" type="radio"/> |
| Increase the number of mandatory indicators to include: greenhouse gas emissions, generation of renewable energy, breakdown of different energy uses (e.g. heating, ventilation, lighting, etc.) or type of systems installed | <input type="radio"/>            | <input checked="" type="radio"/> |
| Increase the interoperability with other tools such as digital building logbooks, SRIs and renovation passports.  | <input type="radio"/>            | <input checked="" type="radio"/> |

Comment:

*500 character(s) maximum*

EPCs should include recommendations on circularity; alternative measures to reduce the energy consumption; clear steps to develop (one-step) deep renovations, including a timetable based on EU environmental targets; recommendations on phasing out fossil-fuel appliances; measures to promote renewable solutions and deep technical studies for each building, including on-site visits, providing detailed recommendations on both envelope and facilities and avoiding standardised recommendations.

**Question 23.** Which elements are the most important to ensure compliance with EPC requirements?

*at most 3 choice(s)*

- Provision of detailed guidelines for EPC (including use of visual identity, common logo, recommended indicators)
- More stringent penalties in case of non-compliance, for instance in relation to the advertisement of sales or rent of buildings
- Extend liability to all the market actors involved in the selling/renting of properties
- Making EPCs mandatory to access any financial incentive targeting buildings renovations
- Accessible EPC database with benchmarks allowing comparison with similar buildings
- Introduce information flow and cross-checks between EPC databases and other databases containing information on buildings or products (e.g. national building registry or cadastre, energy labelling database for products, digital building logbooks, other national statistics, etc.)
- Other measures - please specify in comment box

\*Please specify:

*500 character(s) maximum*

In addition to points 2,3,4,5 and 6 above: establish a timetable and deadline introduced by the European institutions; ensure technical assistance for tenants and landlords; upload EPCs to the national and European database to be officially approved; update EPCs every five years, combined with continuous monitoring; develop EPCs for all renovations, measuring both baseline and the level of improvement; ensure financial support for households without financial capacity.

## Smartness of buildings and wider modernisation

**Question 24.** The objective of the Building Renovation Passport (BRP) is to provide a long-term, step-by-step renovation roadmap for a specific building based on quality criteria, following an energy audit, and outlining relevant measures and renovations that could improve the energy performance and the quality of the building. The BRP schemes and initiatives in the EU are diverse and most of them have not reached their full potential, while some are still at the research phase. Which measures do you think could best support the uptake of a building renovation passport?

*at most 3 choice(s)*

- Guidelines and best practice exchange on how the BRP can support the objectives of the Long Term Renovation Strategy
- National/regional communication campaigns to increase awareness of the BRPs
- Training of energy experts
- Making funds, such as the European Energy Efficiency Fund or ELENA, available to the Member States for BRP development and implementation
- Guidelines on how to support and enable banks to offer a favourable interest rate on loans/mortgages which are linked to a BRP
- Legal requirement to be introduced in the EPBD review for the Commission to develop a common template for BRPs
- Legal requirement to be introduced in the EPBD review for the Commission to develop a voluntary BRP scheme
- Legal requirement to be introduced in the EPBD review stating that BRP becomes mandatory for certain building types (replicating the EPC regulations, buildings for sale, etc.) after 2030.
- No measure is necessary
- Other - please specify in comment box
- I don't know / No opinion

\*Other? Please specify:

*500 character(s) maximum*

BRP should ensure the quality and comparability of data across the EU and consider a potential coupling with other tools such as Digital Buildings Logbooks, EPCs and SRI. These tools should provide recommendations and guidelines to carry out one-step deep renovations. If a staged deep renovation needs to be developed because a one-step deep renovation could not be done, a BRP and a specific staged renovation project must be mandatory to guide the process and ensure efficient financial management

**Question 25.** The Commission has created a uniform scheme for Smart Readiness Indicators in the EU. The scheme is currently voluntary, and has the potential to promote the digitalisation of buildings and the role that buildings can play in smart sector integration.

What would you consider to be the best ways in which the Smart Readiness Indicator could support the role of buildings in smart sector integration?

- Continue with the current framework and focus on its implementation on a voluntary basis
- Introduce SRI as mandatory requirement for non-residential buildings
- Introduce SRI as mandatory requirement for all new buildings
- Introduce SRI as mandatory requirement for all buildings
- Support the development of links between the SRI and other schemes (e.g. EPCs, building renovation passports, building logbooks, etc.)
- Other - please specify in comment box
- I don't know / No opinion

**Question 26.** Do you think that the EPBD can contribute in making a wider range of building-related data on the energy performance of a building and its related construction and renovation works, across its life cycle, available and accessible? (note: building related data can come from a variety of sources: SRI, logbook and EPCs, Level(s), grant schemes, building permits, digital models)

- Yes
- No
- No opinion

Please explain your answer:

*1,000 character(s) maximum*

The EPBD should ensure an open, harmonised, standardised, comparable, detailed, disaggregated and intelligible building database as an essential issue to ensure the decarbonisation of the building stock, including upfront and operational embodied CO2 emissions. Data should be accessible to tenants, landlords and the public administration, provided its compliance with the GDPR rules. A better implementation of all these data tools and monitoring of data quality must be ensured. MS should develop annual energy and WLC performance data by developing a national central database that provides data to the EU. Building database should be dynamic and updated regularly through digital tools to provide information about the current situation of buildings and their ongoing transformation. The harmonisation of digital tools would be necessary, creating links to other tools such as Environmental Product Declaration schemes and Construction Products Passports.

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## Part 3. Enabling more accessible and affordable financing for building renovation

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**Question 27.** The Renovation Wave Communication identify the need of sensible additional investments in building renovation in order to double the yearly renovation rate across Europe, decarbonise the building stock and achieve 2030 energy efficiency targets. Public financing alone will not be enough to achieve these objectives; it will be seminal to enable more accessible and affordable private financing options for building renovation. How would you rate the following possible forms of support to renovations?

- 0 – No opinion
- 1 – Not important
- 2 – Of little importance
- 3 – Moderately important
- 4 – Important

5 – Very important

|  | 0                     | 1                     | 2                     | 3                                | 4                                | 5                                |
|--|-----------------------|-----------------------|-----------------------|----------------------------------|----------------------------------|----------------------------------|
| Public guarantee for commercial banks to offer low-interest loans for renovation of worst performing buildings   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| Direct grants support to low-income citizens living on worst performing buildings  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> |
| ESCOs financing of low-interest loans payback through on-bill recovery   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| Tax incentives during a period of time to provide additional economic support  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> |
| One stop shops for all types of renovation advice  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| Support the development of energy efficiency mortgages and other innovative financing options that will enable private financing institutions to offer low-interest loans based on the improvements of energy performance of buildings or on building renovation passports | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/>            |
| Technical assistance facilities supporting the development of building renovation project for the building stock of local and regional authorities   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            | <input checked="" type="radio"/> |

Other kind of support? Please specify:

*500 character(s) maximum*

Financing, including finance taxonomy, should be aligned with Paris agreement compliance. For this purpose, private banks should also be obliged to make low and no-interest financial instruments available for the public for deep renovation of buildings, ensuring strict environmental conditions. To support renovations, grants should also be allowed per square metre/per storey if the buildings - new or renovated - are zero C buildings.

**Question 28.** Deep renovations do not always result in a rapid return on investment. In your opinion, how public financial incentives can be used to stimulate deeper renovations across the EU?

*1,000 character(s) maximum*

In order to achieve the EU social objectives, a portfolio of public funds and financial incentives at the national and local level in the form of direct and non-repayable grants should be developed to help vulnerable households to carry out (one-step) deep renovations at zero-cost. Upfront cost reduction should be the first and foremost concern of support scheme, especially in low-income families and MS with lower per capita income. Sustainable finance taxonomy could support this process, establishing clear criteria for financial incentives going beyond MEPS and using EPCs to measure the level of performance of buildings both on energy efficiency and WLC carbon emissions. The cost-optimal approach should include lifecycle costing to provide a clear vision of returns on investment. National measures should be developed to increase the impact of the EU funding. Technical assistance to both local governments and citizens could identify reforms needed to facilitate this implementation.

**Question 29.** Do you think that funding support to renovations should be linked to the depth of renovation?

- Yes
- No, it is not necessary
- I don't know / No opinion

If yes,

- The intensity of funding should depend on the depth of renovations based on the Energy Performance Certificates ('EPC') class achieved
- All public funding scheme for private building renovation should consider a mandatory minimum requirement of at least 60% energy savings
- All public funding scheme for private building renovation should consider a mandatory minimum requirement of at least 30% energy savings
- Other - please specify in the comment box

\*Please specify:

*500 character(s) maximum*

Deep renovations, in particular one-step deep renovations, should be the aim of financial support, ensuring a minimum improvement of 60% of energy performance, not including buildings close to MEPS, to address the worst-performing buildings and tackle energy poverty. Staged deep renovations must present a staged renovation project to achieve MEPS, including a multi-stage deep renovation plan with connected steps to ensure cost economies and maximum efficiency improvements, supported by data tool

**Question 30.** In your view, which of the following measures would help to further support the renovation of public buildings?

- Technical assistance for public authorities (national, regional, local) to design and implement comprehensive renovation programmes (ELENA model), including linkages other related climate-resilience policies in urban and rural areas
- Enhanced deployment and capacity building for energy performance contracting in the public sector (including accounting rules)
- Financial incentives to support companies providing energy performance contracting
- Public-private partnerships to inform and assist efforts of public authorities for building renovation and ease access to financing
- Framework contracts at national, regional or local level with the specific objective of renovating public buildings
- Other measures - please specify in comment box
- I don't know/ No opinion

\*Please specify:

*1,500 character(s) maximum*

The public administration could be a trigger point at the local level, as they are one of the main customers of construction companies. For this reason, the Green Public Procurement should be mandatory in MS, including ambitious criteria for the renovation of buildings. Public authorities should take advantage of European funding to promote a new dynamic market on circularity and achieve zero CO2 emissions in deep renovations at the national and local level. Good practices should be shared among public administrations in a capacity building process where the main resource should be the knowledge beyond the financial capacity of each public authority. A timeline and targets to renovate public buildings, supported by financial and public incentives, should also be established.

**Question 31.** As part of their Long-Term Renovation Strategies (LTRS), Member States must outline relevant national measures to reduce energy poverty. The Renovation Wave Communication indicates a number of measures to tackle energy poverty and renovate worst-performing buildings, including social housing. It also states that vulnerable households must be shielded from rent increases that may follow renovations. What do you think are the most important policy areas addressing energy poverty to be further reinforced?

*at most 3 choice(s)*

- Targeted financial support for lower and middle income households
- Minimum energy performance standards coupled with financing that limits the monthly net expenditure of the inhabitants
- Other additional legislative measures (please specify in the comment box)
- The Affordable Housing Initiative
- The Energy Poverty Observatory
- Other measures (please specify in the comment box)
- I don't know / No opinion

Other legislative measures? Please specify:

*500 character(s) maximum*

Ensuring an adequate regulation of local housing markets to avoid renoventions, e.g. establishing a period of time when tenants cannot be evicted and their contract cannot be changed after a renovation. To avoid urban gentrification, policies should focus on occupied buildings, but establish a previous agreement set by the competent authorities on price limit per square metre for empty buildings, and distribute financial support for renovations evenly across neighbourhoods simultaneously.

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## Further comments

**Question 32.** Do you have any further comments on policy aspects relevant for the decarbonisation of building which are not covered above?

*1,000 character(s) maximum*

This EPBD revision is a key step toward the achievement of the EU environmental targets. EEB expects an ambitious revision that includes: ensuring that circularity is a crosscutting topic across the revision, promoting targets for using recycled and reused materials, specifically on recycled insulation materials with low CO2 emissions; extending from the efficiency first principle to the Sufficiency Efficiency and Renewable (SER) framework to help mitigate rebound effect, promoting the coordination between energy efficiency, energy renewables, circular economy and sufficiency measures, and promoting sharing services in buildings, such as laundries, garages, or recharging points to improve the energy consumption of buildings. Moreover, a holistic overview and coordination between building policies (CPR, CEAP, the Green Deal, among others) should be developed. The European Strategy for a Sustainable Built Environment would be the first step for it, and its development must be a priority.

## **Contact**

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