

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

Fields marked with * are mandatory.

Introduction

As announced in the [European Green Deal](#), the Commission adopted on 14 October 2020 a strategic Communication "[Renovation Wave for Europe - greening our buildings, creating jobs, improving lives](#)". 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](#) 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](#).

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](#).

About you

* Language of my contribution

- Bulgarian
- Croatian
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- Danish
- Dutch
- English
- Estonian
- Finnish
- French
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- Hungarian
- Irish
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* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation

- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

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* Surname

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* Organisation name

255 character(s) maximum

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

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

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- French Polynesia
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- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Lithuania
- Luxembourg
- Macau
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- São Tomé and Príncipe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname

- Bhutan
- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
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- Chad
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- Greenland
- Grenada
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Myanmar /Burma
- Namibia
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Svalbard and Jan Mayen
- Sweden
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
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- Tuvalu
- Uganda
- Ukraine

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- Clipperton
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- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
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Part A. Planning and policy instruments

Decarbonisation of buildings

Question 1. The [long-term decarbonisation strategy](#) 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

What is key is to have a definition of buildings that reflects their contribution towards the EU achieving climate neutrality by 2040 in line with the Paris Agreement's goal. This means buildings that have a minimum energy use, supplied exclusively by sustainable renewable sources, and that minimise their environmental impact across the whole life cycle. If a new additional definition is introduced, it should be clear how this relates to a strengthened NZEB definition.

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](#) 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?

1000 character(s) maximum

The LTRS provisions should be strengthened and aligned with the climate neutrality objective. Setting future-proof strategies and introducing more stringent monitoring and compliance mechanisms is key to address the shortcomings of the current national planning. This implies a requirement to set national binding trajectories with clear targets and measurable milestones that ensure that Member States deliver on the actions and measures needed to achieve a highly energy efficient building stock by 2040, supplied by 100% renewable energy. The LTRS should make clear links with a higher binding energy efficiency target under the EED, detailing the contribution from national actions in the building sector by 2030 towards the achievement of the target. Moreover, the strategies should be combined with a total ban on the use of fossil fuels in new buildings as well as a progressive phase out also from existing ones.

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 options above complement each other in ensuring a better monitoring of national actions. Comparability between LTRS must increase and they should include more data and indicators, e.g. GHG emissions from buildings' whole lifecycle. Provisions on energy poverty must require milestones to monitor relevant national measures. Moreover, a clear link with H&C provisions (e.g. Art. 14 EED, Arts. 23-24 REDII) and other relevant policies (see Q7) is key to decarbonise the sector in a consistent way.

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?

1000 character(s) maximum

Member States should be required to set up plans for the development of integrated renovation programmes at local level, coupling energy efficiency measures with the deployment of renewables in buildings, and promoting citizen-led initiatives. Plans should include scrappage schemes for individual fossil-based appliances towards a complete ban by 2025 at the latest, replacing them with RES solutions. This also requires assessing the feasibility of installing or retrofitting district heating grids. Programme development assistance and financial support to help local authorities in identifying and targeting suitable neighbourhoods are pivotal, while local non-profit one-stop-shops should be set up to provide adequate technical and financial support for all households and local authorities. Citizens' involvement in decision-making is key to ensure an inclusive planning that safeguards housing affordability and tackles energy poverty through targeted renovation programmes.

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 \(CEAP\)](#) 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

Information on emissions from construction materials and processes, as well as on material recovery and recycling options, is key to address the total environmental impact of buildings. Starting from future-proof LTRS, Member States should be required to report on all buildings' whole lifecycle impact, setting progressively-tightened targets for the reduction of embodied emissions. Provisions on new buildings should also be strengthened so as to require sustainable materials and practices.

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 roadmap¹ to reduce carbon emissions from buildings and advancing national benchmarking with Member States. How do you think the EPBD could contribute to this roadmap?

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Due to the carbon intensiveness of the construction sector, it is imperative that the EPBD addresses the issue of sustainability and resource circularity, by introducing a whole lifecycle thinking in coherence with the other relevant legislation, e.g. Construction Products Regulation and Waste Framework Directive. Member States must strengthen their LTRS so as to include national plans and measures (including building codes) to foster circular construction and demolition practices. Provisions on new buildings should promote the use of more sustainable materials (e.g. low carbon and nature-based materials such as sustainably-harvested wood or cellulose-based solutions) and secondary raw materials. Particular importance should be given to raising awareness and strengthening public information on embodied emissions and on how to reduce buildings' lifecycle impact through dissemination of best practices and methods.

¹The 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](#) "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

All new buildings must be fossil fuel-free from 2025 at the latest, with the ultimate aim to phase out the use of all fossil-based systems also from existing ones. CAN Europe calls for a complete fossil gas phase-out by 2035. The NZEB definition should thus be revised towards highly energy efficient and net-zero-energy /positive energy buildings supplied by 100% renewables, while introducing sustainability requirements in new buildings' design to minimise their whole life cycle impact.

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

An EU NZEB definition based on numeric indicators would drive further harmonisation across Member States and improve the monitoring of the actions undertaken to increase the number of NZEBs through enhanced comparability. Maximum values for primary energy use in buildings should be set alongside the requirement to ensure a 100% share of renewable energy. Additional numeric ranges on whole life-cycle performance should also be included to promote sustainable materials and processes.

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

* Please specify:

500 character(s) maximum

A legal definition of deep renovation is needed to provide clarity and reliability for all the actors involved in the renovation process, as well as to steer investments towards those interventions that reach the highest levels of performance. It should be based on primary energy savings of at least 75% and linked to the achievement of minimal primary energy needs after renovation. The deep renovation definition should also be clearly connected to the MEPS to be introduced.

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:

1000 character(s) maximum

The existing experiences of MEPS in different countries, including some EU Member States, have proven the effectiveness of this policy tool in driving renovation rates upwards and increasing their depth. MEPS should be introduced for the whole building stock, including the residential sector and prioritising worst-performing buildings. To ensure a socially just implementation, adequate technical (e.g. not-for-profit one-stop-shops) and financial support must be provided, alongside social safeguards and measures to preserve housing affordability. MEPS should be linked to deep renovations, prioritising one-staged deep renovations to prevent lock-ins and avoid, whenever possible, subsequent interventions occurring on the same building. The timeline for MEPS enforcement should be set in line with the climate neutrality objective. To this end, strengthened LTRS should play a key role by setting benchmarks for the performance levels to be achieved by the different segments.

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 explain your answer:

1500 character(s) maximum

In line with the energy efficiency first principle and the pivotal aim of reducing substantially buildings' energy demand, MEPS should rely on building-level indicators of primary energy use (as currently expressed in kWh/(m².y)), accompanied by complementary metrics on GHG emissions in order to support the phase-out of fossil fuels-use in all existing buildings. EPCs could be a basis for setting MEPS, provided that existing schemes are improved and strengthened coherently to support an effective roll-out. Hence, full coverage of the whole stock and increased harmonisation of EPC procedures and calculation methodologies is needed. Minimum standards alone are not enough to decarbonise the sector at the pace needed, thus MEPS must be linked to deep renovations to ensure that buildings are renovated to the highest performance levels, prioritising a one-staged approach. This implies defining what a deep renovation is and setting it as the benchmark and end goal of all renovations. To enable their enforcement, MEPS should be conceived not as a stand-alone measure, but they should be embedded in a supportive framework that provides appropriate funding to low income and energy poor households, as well as practical assistance and adequate financial incentives and support to adopters ahead of the compliance dates.

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

As explained in our answer to Q11, MEPS should be set for the whole building stock, ensuring the residential sector is not left out so as to reap the benefits of energy efficiency in terms of energy poverty alleviation. Public buildings should lead by example through the strengthening of the provisions of Article 5 EED. To avoid double regulations on the public stock, the introduction of MEPS in the EPBD should be done consistently and in synergy with the EED revision.

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

MEPS should be introduced with a clear timeline of compliance deadlines, detailing the pathways for the high performance levels to be reached by the different segments. Deadlines should be set according to the long-term goal of achieving a highly energy efficient and fully renewables-based building stock in line with the climate neutrality objective. Trigger points linked to buildings' natural life (e.g. sale, rent or renovation) can support and facilitate compliance ahead of the deadlines.

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

All the above elements are important for a successful rollout of MEPS, starting from a timeline of compliance deadlines for their enforcement and a target-based legal framework that is set coherently with the complementary priorities to end fossil fuels' use and reduce emissions across buildings' whole lifecycle. A reinforced construction workforce and practical and financial support, alongside social safeguards, are also pivotal to ensure a fair and sustainable transition.

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

Ensuring coherence between the EPBD and EED revisions is key to maximise the transformation of public buildings. Art. 5 EED must be strengthened so as to require the deep renovation of all public buildings without any alternative approach. This should be done consistently with the introduction of MEPS in the EPBD in terms of timetable and targets of energy performance to be achieved. Life cycle aspects should also be included to strengthen the exemplary role of the public stock.

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
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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?

	Yes	No	I don't know/ No opinion
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

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 m² 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

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:

1500 character(s) maximum

EPCs have the potential to be not just an information tool, but also a driver for raising awareness and triggering deep renovations. To this end, mandatory information to be included should be expanded so as to also cover broader aspects, such as GHG emissions, share of energy from renewable sources and comfort levels for occupants (e.g. IEQ). Whenever feasible, EPCs should also promote renewable district heating by including information on the building's suitability for connection to a district system (e.g. distance from an existing district heating grid and flow/temperature of heat distribution). Moreover, in order to help households to undertake energy savings measures, information on funding opportunities and financial support available should be added. This will also support the implementation of the EPC recommendations, which should always be customised to a specific building's needs. In this context, on-site visits ensure better tailored recommendations, and positively influence the perceived quality and reliability of the certificates. Finally, EPCs should become mandatory for all private and public buildings, so as to provide an accurate overview of the current status of the national stocks and thus serve as a basis for strategies and policies aiming at the full decarbonisation of the sector (e.g. MEPS). For this reason, the Commission must introduce an obligation for Member States to ensure that their whole building stock is covered by EPCs by a strict deadline.

Please explain your choice:

500 character(s) maximum

Greater convergence through harmonisation of the national EPC schemes should be achieved not only in terms of design and interface of the certificates (e.g. common template), but also of the procedures to issue the EPCs as well as the underlying calculation methodologies. Moreover, Member States must be required to set up comprehensive national EPC databases that would benefit from increased harmonisation thanks to better comparability.

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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Include further information on estimated costs, energy savings or cost savings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 type="radio"/>	<input checked="" type="radio"/>
Tailor the recommendations towards deep renovations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Comment:

500 character(s) maximum

Better quality EPCs will result from the improvement of different elements of the existing framework so as to increase their coverage, strengthen quality checks, expand the information provided, tailor recommendations and ensure data reliability and accessibility through national databases. A more interactive kind of service is also needed, e.g. through on-site inspections that require the involvement of the occupants/owners. This should be done balancing the affordability for users.

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

As stated under Q21, EPCs should become mandatory for all public and private buildings. To ensure compliance, in addition to the options listed above, a powerful tool could be to make them legally enforceable, as in the French model introduced by Decree N. 2020-1609. According to the new rules, EPCs can also be invoked against the seller or the landlord, who in turn has the possibility to turn against the assessor who issued the EPC, thus ensuring better accountability.

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

With a view to balance the final costs for households, the BRP could be developed as an add-on to the EPC, notably by tailoring its recommendations to the measures needed for a building to undergo deep renovation and replace all fossil fuel-based appliances. BRPs should prioritise one-stage deep renovations, while including information on financing opportunities and drawing a link with the assistance provided by local one-stop-shops.

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:

1000 character(s) maximum

The EPBD revision should address existing deficiencies in monitoring and collecting building-related data in order to underpin strengthened measures to improve energy performance and whole lifecycle sustainability. Firstly, as mentioned under Q21-23, this requires better quality and harmonised EPCs, covering all buildings and feeding into mandatory national databases. Collected information should be expanded to encompass all buildings' phases, from construction to demolition, as well as demand-side flexibility options. Moreover, the proposed introduction of Digital Building Logbooks should look at synergies with EPC databases to ensure consistency in data gathering and storage aiming at a systematic and harmonised scheme. Indeed, existing practices are fragmented and do not guarantee the accessibility for all the relevant stakeholders across the value chain. Increased transparency and availability are key to inform, assess, plan and stimulate more effective and deeper renovations.

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

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 type="radio"/>	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Tax incentives during a period of time to provide additional economic support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
One stop shops for all types of renovation advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" 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

Private banks should also be required to make more widely available zero- and low-interest financial instruments for deep building renovations. This could be done by attaching strict environmental conditions - and a link with energy efficiency measures - to the Targeted Longer-Term Refinancing Operations (TLTROs) programme through which the ECB currently lends money to banks at a negative interest rate.

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?

1000 character(s) maximum

Public funding and financial incentives in the form of direct grants and non-refundable subsidies must be developed to help low income and vulnerable households to undertake zero-cost deep renovations. This is essential to meet the social goals outlined in the Renovation Wave. Public support could also serve as a guarantee for commercial banks in order to allow for the de-risking of energy efficiency investments, streamlining loans and mortgages for owners and buyers. In this context, national measures need to exploit the leverage effect of EU funding, e.g. RRF and structural funds. A key aspect that will further enable the increase of deeper energy efficiency measures is the availability of adequate technical and project development assistance to support local authorities in kickstarting projects' pipelines and in identifying key reforms needed to overcome existing barriers (e.g. split incentives, administrative hurdles, etc.).

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

The use of public funding to support private building renovations should be foreseen to target firstly those most in need, i.e. low income and vulnerable households, with the priority aim to tackle energy poverty. Building renovation entails environmental, social and economic benefits that increase according to the level of energy savings achieved. Hence, public support must be incremental in line with the depth of the interventions and linked to the deep renovation standard to be introduced.

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

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

To address the possible distributional impacts of MEPS or carbon pricing, specific measures to earmark EU /national funds for the renovation of buildings occupied by low income and energy poor households are

needed. Adequate regulation of local housing markets is also key to ensure affordability and prevent arbitrary rent increases. As energy poverty disproportionately affects those living in the private rented sector, Member States should develop regulatory measures to tackle split incentives.

Further comments

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

1000 character(s) maximum

An ambitious EPBD revision cannot miss the opportunity to set a clear goal for the building sector to contribute to the EU's achievement of climate neutrality by 2040 in line with the Paris Agreement. The current deep energy renovation rate must increase exponentially (i.e. at least 3% per year) well ahead of 2030 to reduce buildings' energy consumption and support the switch towards a fully renewable and sustainable energy system. To achieve this, all the multiple benefits linked to energy efficient buildings and renewables must be thoroughly factored in, in particular by updating the cost-benefits analyses so as to overcome the shortcomings of the current "cost-optimality" approach. Strengthened regulatory measures should also be anchored to an adequate support framework that provides technical and practical assistance, financial incentives to steer investments towards the environmental and social goals as well as targeted funding and safeguards to make sure no one is left behind.

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