

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
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Irish
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

* 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

* First name

* Surname

* Email (this won't be published)

* 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

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

* Country of origin

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

- Afghanistan
- Djibouti
- Libya
- Saint Martin
- Åland Islands
- Dominica
- Liechtenstein
- Saint Pierre and Miquelon

- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- 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
- Central African Republic
- Chad
- Chile
- 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
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine

- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- 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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- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

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* Contribution publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

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Organisation details and respondent 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. Your name will also be published.

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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

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 efforts made to accelerate the renovation rate of the existing building stock has not been sufficient to drive long-term decarbonisation of buildings. According to the IEA, the renovation rates need to increase from less than 1% per year today to about 2.5% per year by 2030 in advanced economies. The current LTRS should be updated as soon as possible in line with the increased 2030 climate targets. The timely submission and implementation of effective strategies should be linked to funds such as the recovery fund. To achieve optimal decarbonisation of the heating and cooling sector, it is also crucial that the LTRS be aligned with the national heating and cooling assessments in the EED Article 14. The LTRS should cover such elements as resource efficiency and circularity principles to reduce whole life cycle emissions, and digitalisation in the design, construction and operation of buildings.

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

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

Streamlining energy efficiency and increased digitalisation, combined with the introduction of MEPS and appropriate financing support, creating the conditions for diminishing energy demand and optimising consumption. This is a precondition for faster and deeper integration of renewables and the uptake of carbon-free, renewable-based technologies such as heat pumps.

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

Considering the whole life cycle carbon emissions of buildings would allow a transition to circular economy.

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?

1000 character(s) maximum

One of the main objectives of the EPBD is the decarbonisation of the building stock by 2050. In this long-term perspective, it is necessary to reduce both operational and embodied carbon. The role that the EPBD could play in support of a Commission 2050 whole life cycle performance roadmap is to introduce provisions which consider both operational carbon reduction and the reduction of embodied carbon in order to tackle all life cycle emissions by 2050. The EPBD should do this by introducing a common European framework to help design and construct sustainable buildings with the whole life cycle in mind. The deployment of smart technologies and digital processes (e.g. BIM/digital twin) would facilitate whole life cycle performance monitoring, analysis and optimisation.

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

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

Primary energy alone is not sufficient to measure the energy consumed. Electricity appears to perform less well than gas, and the use of such a parameter alone could end up being a barrier to decarbonisation. It is crucial to require MSs to reach the energy performance targets both in primary and final energy to efficiently correlate energy savings and GHG emissions reductions. The energy performance of buildings should be measured through final energy savings, in addition to primary energy.

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 of deep renovation should include a reference to the advantages of staged-deep renovation.

* Please specify:

500 character(s) maximum

As shown by several studies the lower upfront cost enables more renovations and can help achieve a considerable amount of energy savings in a short time. It is less disruptive and allows for more cost-efficient renovation measures by aligning them with given 'trigger points'. The savings accumulated with the first step would enable the further investments that are necessary.

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

Together with aspects related to decarbonisation and energy efficiency, these measures should include some minimum requirements for digitalisation to support the transition to smart buildings. Once a renovation is complete (whether deep or staged-deep), the building is expected to last for several years without further interventions. This is one more reason to make the most of the intervention and to require a minimum level of "smartness" that must be available in the building when the renovation is completed. This goal can be achieved in different ways, for example by requiring a minimum SRI score or by adding more requirements at a horizontal level (BACS requirements after the renovation).

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

All of the above should play a role when considering Minimum Energy Performance Standards.

Please explain your answer:

1500 character(s) maximum

The renovations incentivised by MEPS are likely to remain in place for a generation and should therefore consider all aspects of a futureproof building. Revised EPCs, together with minimum building element performance level, such as a minimum level of digitalisation and Indoor Environmental Quality monitoring, should form the basis for MEPS. Indoor Environmental Quality parameters (temperature, relative humidity, CO2, volatile organic compounds, particulate matter, daylight illuminance level) should be continuously monitored, evaluated and reported. This should include the means to make these values visible to the occupants and to inform them about deviations between actual and target values.

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

* Please specify subset of residential buildings:

500 character(s) maximum

Only new residential buildings and existing blocks of flats.

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

Mandatory energy performance standards shall be introduced when the technical life of the building is over and it is time for renovation.

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

While all of the above are important, the first three are essential. If the finance and the legal framework are in place and the Member States can target the investment in the right direction, and the technology and the workforce will succeed in their objectives.

MEPS should apply at a trigger point when a building is rented/sold or renovated. However, if a trigger point is not reached they should apply regardless to all buildings by a certain year (e.g. 2030 or 2035).

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

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?

	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

* If yes, please elaborate:

1000 character(s) maximum

For example, in Finland the Housing Companies Act and the equality clause it contains may cause problems.

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

Please explain your choice:

500 character(s) maximum

Harmonisation is missing and a common perception across the EU is that EPCs are not reliable. A standardised approach would increase transparency, facilitate independent control systems and provide a tool to map and monitor the EU building stock. This would incentivise cross-border investment and trade by providing a reliable and comparable tool across the EU. Furthermore, synergies with other initiatives such as the SRI and compliance checks should be explored.

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 checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input 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 type="radio"/>	<input checked="" type="radio"/>

Comment:

500 character(s) maximum

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

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

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

* Please specify:

500 character(s) maximum

Effective and consistent implementation of the approved SRI scheme across the EU should be ensured and a multiplication of schemes which cannot be compared should be avoided. In addition, the ambition of the SRI scheme should be increased. After the initial testing phase, it should be mandated for buildings above a certain energy consumption threshold.

Also, the development of links between the SRI and other schemes (EPCs, building renovation passports, building logbooks) should be supported.

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

Linking EPCs with other existing databases and tools such as environmental certification systems (e.g. LEED), SRI and Building Information Modelling (BIM), through the Digital Building Logbook, could overcome value chain fragmentation. At the design phase, the introduction of mandatory BIM with EPCs and SRI in public procurement could reduce costs and boost energy savings. At the operation phase, the SRI has great potential to enable the deployment of digital solutions with the highest impact to decarbonise the building stock. The SRI should be introduced alongside EPCs for non-residential buildings, while the SRI score should be used as a reference to grant the allocation of financial incentives for renovation (i.e. projects funded through the Recovery and Resilience Facility and Cohesion Funds).

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 checked="" type="radio"/>	<input 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 checked="" 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 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

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 financial incentives should prioritise renovations with the highest return both financially and in terms of energy savings. Staged-deep renovations have proven to be cost-effective, as they need a lower investment each time. Incentivising these prioritises the interventions on the buildings with faster returns. Setting these interventions first would enable further investments in the renovation of the building, thanks to the savings accumulated through the first stage. This can be targeted through a mix of tax incentives and grants and by raising awareness of, and support for, ESCOs.

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 intensity of funding should depend on the EPC class achieved (as per the improved EPC) complemented by BRP for the renovation milestones and SRI score. In addition, all public funding schemes for building renovation should be conditional on mandatory sharing of measured building performance data for a minimum of five years after the start of renovation. Support should not be limited based on the depth of a single renovation event, rather the projected final energy savings.

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

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

While new measures are needed to address the increased targets, existing policies should be properly implemented first. Unfortunately, this has not been the case concerning the EPBD revision, as approved in 2018. Even though the deadline for transposition expired on 10th March 2020, many Member States have still not fully implemented this legislation. This results in uncertainty for investors and professionals who are left to navigate their way through measures that are already approved at the European level but still waiting to be implemented at the national level, with many details and parameters still to be defined. As an example, compliance issues exist in other areas like BACS requirements and EPCs.

Contact

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