

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

Daniel

* Surname

Bolder

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daniel.bolder@zia-deutschland.de

* Organisation name

255 character(s) maximum

German Property Federation ZIA

* 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.

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* 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
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- 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
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

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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

We support a harmonised definition of a zero-emission building in the EPBD. In this context, it should be considered:

- 1.) NZEB should remain the essential parameter in the consideration of the building. It should be avoided at all costs that the real estate sector has to achieve two different standards. This would reduce acceptance.
- 2.) In addition, a zero-emission building definition might be derived from the NZEB standard (for example conversion of kWh for the NZEB into CO2 equivalents etc.)

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 Member States' target contribution of long-term renovation strategies to the Renovation Wave should be measured in relation to the long-term goal of "greenhouse gas neutrality". This requires a combination of measures, including the integration of renewable energy in buildings. A long-term renovation strategy should ideally express the mission clearly and, at the same time, provide targeted incentives. It is sensible to choose overall energy efficiency as an indicator. In the medium term, this should be supplemented by effective consumption monitoring, for example via digitised consumption data that can be read remotely. Additional indicators of renovation rate and depth of renovation would also support this goal. From ZIA's perspective, energy law should be adapted to CO2 emissions from buildings in the medium to long term.

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

To keep red tape at a minimum, no additional obligations for companies to submit data should be introduced. Instead, Member States should conduct studies on data collection and provide companies in the building sector with the opportunity to participate. Nonetheless, national and European comparability is still crucial. Linking the building sector with the energy sector, e.g. by crediting renewable electricity to the building sector, is reasonable in view of the necessary heat transition.

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?

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Sufficiently comprehensive subsidy programmes at EU level and/or in Member States, e.g. from the European Investment Bank (EIB). Comprehensive information for/consultation of all parties at national and European level. In Germany, old heating systems must, by law, be replaced. No further obligations are needed to achieve the target. In fact, switching to climate-friendly boilers and renewable energies should be made more attractive through sufficient funding (regarding the amount and the extent). A label showing boiler efficiency, which serves to inform the owner/operator of the boiler about the current state of the art, already exists. District and city authorities could provide and promote increased information about the benefit of Individual Building Renovation Roadmaps (individueller Sanierungsfahrplan, iSFP), since an iSFP can point out more options for the climate-friendly design of the individual building in question.

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:

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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

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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The topics of life-cycle balance and grey energy will be relevant issues in the building sector in the long term. However, further in-depth investigations and corresponding studies are still needed. Hasty adoption of these topics in the EPBD will not lead to the desired results and should be taken into consideration for the planned revision of the Directive by 2026. In future, EPBD should provide a framework of requirements on how to calculate direct and grey emissions throughout the life cycle. A reference of factors for grey emissions would

be helpful. Since this topic will continue to gain relevance in the future, suggesting a framework within the context of the 2026 EPBD revision would also help.

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

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

It is critical for the NZEB standard to contribute to achieving climate goals and to remain economically feasible, ensure sufficient funding for new buildings and renovations, and consider the integration of renewable energies – even those not in direct relation to the building (green electricity not generated in close proximity to the building). Implementation without giving preference to any technology. Increased focus on CO2 as the benchmark.

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

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 introduction of mandatory minimum standards for the overall energy efficiency of different types of buildings requires prior detailed examination and impact assessment. In view of the need for additional investments in the building sector, which in the European Commission's Renovation Wave strategy has been estimated at 275 billion euros annually just to achieve the 55% climate goal by 2030, measures need to be designed in an economically sustainable way. The political framework governing the reduction of greenhouse gas emissions and energy saving in the building sector should always be based in the principles

of economic efficiency, unbiased technology use, and market economy. The building sector is fully aware of the enormous task of achieving the climate goals.

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

The extraordinary situation of a very heterogeneous real estate stock needs to be taken into account. Measures that prove to be efficient for one building cannot always be applied analogously to other buildings. We wouldn't expect the introduction of further, more stringent energy efficiency standards to lead to the desired result in the context of making the building sector climate-neutral by 2050. Requirements regarding the thermal quality of building envelopes would be (continued below)

Please explain your answer:

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(continued)
disproportionately high without the necessary reduction in emissions actually being achievable solely via this route. Optimising building operation and increasing the use of renewable energies is an economical way to considerably reduce greenhouse gas emissions. However, monitoring energy consumption in the building stock is a necessary part of a successful energy transition and the basis for optimised operation.

Addition to question 8 (above):

The concrete design of the NZEB standard should still remain at Member State discretion. Appropriate frameworks, new climate-friendly buildings and renovating existing stock will steadily help achieving climate goals. More stringent GEG standards (e.g. KfW 55) would no longer allow heat supply from all energy sources, or involve disproportionately complex requirements regarding the thermal quality of the building envelope. This would contradict technological neutrality and economic efficiency, both essential to reach climate goals. Further promotion of renewable energy by economic incentives and to enable their crediting to

the building, in particular green electricity that is not generated in close proximity to the building, is vital. Climate neutrality is achieved by a combination of energy efficiency, a high-quality building envelope, and a renewable heat supply tailored to the individual building.

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 per ZIA suggestion of CO₂ cost limitation: residential buildings energy efficiency classes G&H considered least energy efficient: <https://zia-deutschland.de/project/positionierung-des-zia-zu-einer-moeglichen-begrenzung-der-umlagefahigkeit-der-co2-bepreisung/>.

Suitable subsets for non-residential buildings require appropriate databases. A market study of heterogeneous commercial real estate stock would be useful. Analysis must distinguish different asset classes of non-residential buildings.

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

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 Options 1-4 above. Additional financial burdens would considerably reduce investments to achieve climate neutral buildings by 2050: Building owners would lack financial resources for modernisation, which in turn would be in conflict with the Renovation Wave goals. Hence, additional burdens must be avoided or offset by funding. Real estate companies, which always have long-term plans, need steady legal frameworks. Short term framework changes should be avoided for reasons of economic planning.

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

Options 1-4 above. An exemplary role of the public sector is of great significance. Public buildings must also achieve efficiency levels supporting the goal of a climate-neutral building stock by 2050. Whether this is implemented immediately or step-by-step in the course of renovations should be left to the discretion of the Member States. Here, too, the topics of life cycle and grey energies should become more and more relevant in the long term.

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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
For refurbished buildings	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
For new non-residential buildings	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
For refurbished non-residential buildings	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
The inclusion of provisions for recharging points for vehicles other than cars (e.g. e-bikes)	<input type="radio"/>	<input checked="" 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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Other measures? Please specify:

500 character(s) maximum

See question 17. E-mobility is to be supported. Individual "rights to plug" go too far (numerous effects on distribution systems, transformer stations, network connections, costs). Excessive costs for the real estate sector are inappropriate, infrastructure is primarily a task of traffic and mobility sectors. EPBD deliberately emphasised unbiased technology use, specifying empty conduits. A "right to charge" would clearly establish a path of development towards e-mobility.

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

Operating a charging point forces the real estate owner in third-party relations (customer-tenant relations) into the role of a power supplier. Consequences of operating charging points for electric vehicles include potentially significant bureaucratic difficulties and economic risks. The necessary reporting obligations are significant and increase the operating risk, particularly if the distributor has recourse to allocation privileges in compliance with the EEG, the KKG, network charges or concession fees. This makes the harmonisation and simplification of energy law crucial. Operation of a charging point can thus be simplified and integrated into the management of the location of commercial real estate with less bureaucratic effort.

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

* Please specify:

500 character(s) maximum

Energy certificates in the EU should be comparable. Including greenhouse gas emissions on the energy certificate (if applicable as colour chart also) would provide additional information about buildings' climate impact. EU harmonisation of energy certificates and translation of EPC into national energy efficiency classes would also be useful. The freedom of choice between energy consumption certificate and energy performance certificate should be maintained. (continued in question 21)

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

(continued from question 20) There are large deficits of data availability in the non-residential building sector. Uniform development of energy efficiency classes subject to asset categories is an option. German energy certificates for non-residential buildings do not include a letter-based classification. Due to the heterogeneity of commercial real estate, however, they should also be considered by their asset class. Letter-based classification would also be relevant with regard to taxonomy.

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 checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve quality control mechanisms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>
Include information on non-financial benefits such as increased comfort and climate resilience	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tailor the recommendations towards deep renovations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input 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

* Other? Please specify:

500 character(s) maximum

Relating to question 10:

In this and the context of "deep renovation", the creation of a renovation-friendly and profitable environment without preference being given to certain technologies is important. This could take the form of tax incentives for all types of real estate, a substantial increase in funding or crediting of renewable energies to buildings, or improved opportunities for depreciation.

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

Owners should be given additional opportunities to perform renovations cost-effectively and without preference being given to certain technologies, for instance through tax incentives for all types of real estate, a substantial increase in funding or crediting of renewable energies to buildings and building sector climate goals. The issuance of renovation roadmaps should be supported financially.

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

ZIA supports a low threshold for the collection and pooling of available data in order to create a better data basis. In case of missing data, the Member States should conduct surveys and studies in which companies from the building sector could participate on a voluntary basis.

In addition to questions 14, 16:

If necessary, minimum requirements for energy efficiency should be set for buildings with the lowest energy standards and consequently very high CO₂ emissions. Please refer to the exemplary role of the public sector (see question 16).

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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct grants support to low-income citizens living on worst performing buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
ESCOs financing of low-interest loans payback through on-bill recovery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tax incentives during a period of time to provide additional economic support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
One stop shops for all types of renovation advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support the development of energy efficiency mortgages and other innovative financing options that will enable private financing institutions to offer low-interest loans based on the improvements of energy performance of buildings or on building renovation passports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input 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 checked="" type="radio"/>	<input type="radio"/>	<input 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

Owners should be given additional opportunities to perform renovations cost-effectively and without preference being given to certain technologies, for instance through tax incentives for all types of real estate, a substantial increase in funding (e.g. favourable loans with repayment bonuses or grants for renovations) or crediting of renewable energies to buildings and building sector climate goals. The issuance of renovation roadmaps should be supported financially. Measures should be taken to ensure that renovations pay off – in particular in the commercial sector, as this is not always the case.

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 no,

- It is not necessary, deeper renovation will result in greater savings on the energy bills, the market will regulate itself and adjust in the most cost-efficient way
- Other - please spell out in the comment box

* Please specify:

500 character(s) maximum

It is also vital that individual measures remain eligible for funding and continue to be supported sufficiently since individual measures may also lead to significant CO2 reductions. Analogous to the German "Federal Funding for Efficient Buildings" (BEG), funding should include energy efficiency measures and the integration of renewable energies/heat and have a stronger focus on reducing CO2 emissions.

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

See response question 20. CO2 emissions should be indicated as part of the energy certificate.
 Question 8: NZEB design should remain at Member State discretion. Appropriate frameworks, new climate-friendly buildings and renovated buildings will steadily improve building stock. A more stringent GEG standard (e.g. KfW 55) means heat supply will no longer be possible from all energy sources or cause disproportionately complex requirements regarding thermal quality of the building envelope. This would

contradict the principle of unbiased technology use and economic efficiency (essential to achieve climate goals). It is vital to further integrate renewable energies by means of economic incentives and to enable their crediting to the building – in particular green electricity not generated in close proximity to the building. Climate neutrality is achieved by a combination of energy efficiency, a high-quality building envelope and a renewable heat supply tailored to the individual building.

Contact

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