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Public consultation for a roadmap for the reduction of whole life carbon emissions of buildings in the EU

Fields marked with * are mandatory.

Introduction

Background

In the European Climate Law, the EU has set the target to reduce its net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels, and to become climate-neutral by 2050. The buildings and construction sector is a major consumer of both materials and energy, making it an important contributor to overall greenhouse gas emissions. While the operation of buildings is responsible for about 40% of the EU' s total energy consumption, and for 36% of its greenhouse gas emissions from energy[1], buildings also contribute to greenhouse gas emissions at other stages of their life cycle, before they are occupied (manufacture and construction) and afterwards, at end of life. The International Resource Panel (IRP), in its Resource Efficiency and Climate Change Report, 2020, and the UN Environment Emissions Gap Report 2019, conclude that the carbon emissions related to the use of materials in construction is estimated to account for about 10% of total yearly greenhouse gas emissions worldwide. The Renovation Wave called for the EU to make our buildings more energy-efficient and less carbon-intensive over their full life-cycle and more sustainable.

The so-called 'whole life carbon' approach to buildings combines the greenhouse gas emissions from the material production and transport, caused by the construction process phase and processes at end of life (also called "embodied carbon"), and the greenhouse gas emissions linked to the operation of the building during its lifetime (also called "operational carbon")[2]. This approach could support Europe's path to climate neutrality in the buildings and construction sector by promoting whole life carbon reduction solutions in the sector, complementary to the existing policies that decarbonise material production, electricity generation, and operation emissions of buildings.

As part of the Renovation Wave, the Commission committed to develop a roadmap leading up to 2050 for reducing whole life-cycle carbon emissions in buildings." The present consultation is designed to inform the Commission's work on this roadmap.

Public consultation

This open public consultation offers all stakeholders in the buildings value chain the opportunity to express their views on how they perceive the relevance of the matter and how to best address the whole life cycle

emissions associated with buildings. Your feedback, together with evidence from different sources including desk-research and other consultations, will contribute to the preparatory analysis and the development of the roadmap. The Commission has recently procured a study, which sheds new light on the building stock and its whole life carbon emissions. You can find a link to the final report of this study, next to the questionnaire.

Individual contributions to this public consultation will not be published. Instead, the contributions will serve as input for analysis by Ramboll Management Consulting SA/NV and an aggregated report will be delivered to the European Commission.

The Commission and Ramboll Management Consulting SA/NV are committed to protecting your personal data and to respecting your privacy. By filling out the questionnaire you agree to the collection, processing and use of your data in line with existing EU regulations, i.e. Regulation (EU) 2018/1725 on processing of personal data by the EU institutions. See the privacy statement, available under background documents for more information.

If you have any questions on the consultation, please contact WholeLifeCarbonRoadmap@ramboll.com

Your opinion matters and we are grateful to you for taking the time to complete this questionnaire.

[1] These figures refer to the use and operation of buildings, including indirect emissions in the power and heat sector, not their full life cycle. The embodied carbon in construction is estimated to account for about 10% of total yearly greenhouse gas emissions worldwide, see IRP, Resource Efficiency and Climate Change, 2020, and UN Environment Emissions Gap Report 2019.

[2] The applied system boundary is 'cradle to grave' as defined by EN 15978, i.e. from the production of building materials to the end of the building's useful life and the subsequent demolition and recovery of the building materials. It is defined in terms of life cycle stages, which are in turn split into modules as defined by EN 15978: the product stage (A1-5), the use stage (B1-6), the end of life stage (C1-4) and benefits and loads beyond the system boundary (D). Emissions are accounted for in the life cycle stage where they occur so, if for example a renovation takes place, the emissions associated with new building materials are allocated to the use stage

About you

This section ask for personal data about you as respondent to the questionnaire. This data will be used to enable the analysis of results in an aggregated way and to be able to reach out with clarification requests if necessary. Your personal data will not be published.

* **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**

Sara

*** Surname**

Versano

*** Email**

sara.versano@eurima.org

*** Organisation name**

European Insulation Manufacturers Association (Eurima)

*** Organisation size**

- (•) Micro (1 to 9 employees)
- ( ) Small (10 to 49 employees)
- ( ) Medium (50 to 249 employees)
- ( ) Large (250 or more)
- ( ) Do not know/not relevant

*** Please indicate the sector actor group that best describes your activity**

- ( ) Architects, planners, and engineering
- ( ) Construction, renovation, and demolition contractors
- ( ) Logistics and transport services
- (•) Material manufacturers and suppliers
- ( ) Operational and maintenance service providers
- ( ) Property developers, owners and managers
- ( ) Property investors and financial institutions
- ( ) Sub-contractors
- ( ) Other

If other, please specify

*** Country of origin**

Belgium

*** Privacy statement**

☑ I agree with the personal data protection provisions in line with Regulation (EU) 2018/1725 described in the attached statement.

Your current engagement in this topic

* **Q1: How would you assess your own understanding of whole life carbon of buildings?**

- (●) Good understanding
- ( ) Some understanding
- ( ) Low or no understanding

* **Q2: How often do you or the teams you are working with take into account whole life carbon considerations?**

- (●) It is often taken into account ahead of decisions
- ( ) It can occasionally impact decisions
- ( ) It is rarely considered
- ( ) I don't know / Not applicable

EU policies addressing whole life carbon emissions of buildings

* **Q3: Do you feel that current EU policies [3] relevant to whole life carbon of the building sector are sufficient to ensure that the building stock is aligned with a climate neutral trajectory?**

[3] The EU Emissions Trading System (EU ETS), setting a carbon price and emissions cap on emissions, including from manufacturing installations for steel, aluminium, glass, mineral wool, cement, lime, ceramics; the Effort Sharing Regulation; the EU Emissions Trading System for fuel combustion in buildings and road transport; the Carbon Border Adjustment Mechanism; the Energy Performance of Buildings Directive; Ecodesign Directive; Energy labelling Regulation; Renewable Energy Directive; Construction Products Regulation; Energy Efficiency Directive; and Waste Framework Directive.

- ( ) Yes, there is a sufficient EU policy framework in place
- (●) There is a suitable EU framework in place, but it needs strengthening
- ( ) The current EU policies are not enough, additional policy is needed to complement the existing framework
- ( ) No opinion

Q3a: Please explain your answer [up to 200 words].

2000 character(s) maximum

Our precise answer is “There is a suitable policy framework in place and all measures and instruments that are developed need to be coherent and consistent towards carbon neutrality 2050”. The current multifaceted policy framework, encompassing measures such as ETS, CBAM, EPBD, CPR, RED, and EED, already provides a substantial array of incentives and provisions aimed at fostering industrial decarbonization and reducing the carbon footprint of products. Consequently, the milestones and thresholds proposed by the Commission for Whole Life Carbon (WLC) should align seamlessly with the existing policy landscape, its achievements and objectives to avoid inconsistencies that could lead to un-level-playing fields and additional burden on the European Union's industrial sector. Such an approach is crucial to avoid potential controversies, such as instances where the absence of a functional national renewable energy grid could impede the decarbonization efforts of specific sectors, unfairly penalizing them due to an inadequate level playing field. In light of these considerations, Eurima strongly advocates for coherence between the EU's WLC ambitions and the established policy framework. Furthermore, Eurima calls for the next legislative period to focus even more on enabling the European industrial sector to achieve the ambitious targets set for 2030 and 2050.

* **Q3b: What levels of governance do you think are the most appropriate to tackle whole life carbon emissions? Multiple answers possible.**

- [x] European
- [x] National or regional
- [x] Local

Possible areas for actions to reduce whole life carbon in buildings

Q4: Please assess the following areas in terms of both their potential for reducing whole life carbon emissions and the feasibility to act (via policy or sector initiatives or other) to achieve substantial reduction of emissions.

Demand for new built space

Q4a: Making use of currently empty buildings

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	○	○	◉
* Feasibility to act	○	○	○	○	◉

Q4b: Extending the lifespan of buildings through e.g. flexible, future-proof design and layout, use of durable materials, climate change resilience, adaptive building systems regular maintenance

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	○	○	◉
* Feasibility to act	○	○	○	○	◉

Q4c: Using buildings more intensively (e.g. by encouraging different activities taking place in a building at different times of day or week)

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	○	○	◉
* Feasibility to act	○	○	○	○	◉

Q4d: Ensuring that residential buildings do not remain under-occupied over the long term by facilitating change of residence through various means (e.g. reduced transaction costs, practical support, urban planning, accessibility of affordable housing, review of rental and ownership models)

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	○	○	◉
* Feasibility to act	○	○	○	○	◉

Q4e: Prioritising of renovation, repair and maintenance over demolition and new construction

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	○	○	◉
* Feasibility to act	○	○	○	○	◉

Demand for materials

Q4f: Construct with less material overall while achieving the same functional result (i.e. resource efficiency)

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	◉	○	○	○
* Feasibility to act	○	○	◉	○	○

Q4g: Design and use elements that can be easily dismantled for re-use at the end of their service life

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	◉	○	○	○	○
* Feasibility to act	○	◉	○	○	○

Q4h: Apply waste prevention strategies, such as waste audits and selective demolition, to divert material from landfill and encourage reuse and recycling

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	◉	○	○	○	○
* Feasibility to act	○	◉	○	○	○

Q4i: Increase the share of re-used construction products on the market

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	◉	○	○
* Feasibility to act	○	○	◉	○	○

Supply of materials

Q4j: Reduce the carbon footprint of materials and construction products in their manufacturing processes, e.g. through the use of renewable energy

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	◉	○	○	○
* Feasibility to act	○	◉	○	○	○

Q4k: Increase the recycled content of new construction products

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	◉	○	○	○
* Feasibility to act	○	◉	○	○	○

Q4l: Encourage the use of carbon storage in construction products, contributing to carbon removals

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	◉	○	○
* Feasibility to act	○	○	◉	○	○

Use of energy in buildings

Q4m: Reduce the greenhouse gas intensity of energy supply

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	◉	○	○	○
* Feasibility to act	○	◉	○	○	○

Q4n: Improve the management of energy use in existing buildings

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	◉	○	○	○
* Feasibility to act	○	◉	○	○	○

Q4o: Promote energy efficient renovation to reduce the energy use of existing buildings

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	◉	○	○	○	○
* Feasibility to act	◉	○	○	○	○

Q4p: Ensure that any new buildings are designed to be high energy performing

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	◉	○	○	○	○
* Feasibility to act	◉	○	○	○	○

Other sources of emissions relating to whole life carbon

Q4q: Reduce emissions from the construction site, e.g. from machinery

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	○	○	○	◉
* Feasibility to act	○	○	○	○	◉

Q4r: Minimise transport related emissions of material and waste

	Very high	High	Low	None	No opinion
* Potential for reducing whole life carbon emissions	○	◉	○	○	○

* Feasibility to act	○	◉	○	○	○

Q5: If you have examples of other areas for action to reduce the whole life carbon emissions of buildings, please share them here [up to 200 words]:

As producers of mineral wool insulation, our industry plays a pivotal role in contributing to the reduction of operational emissions in the EU building stock. At the same time, we are committed to constantly reduce embodied carbon through improvements in the carbon footprint of our products. For more information you can read our full 2050 Decarbonisation Roadmap (bit.ly/42a0hEI).

Undoubtedly, manufacturers have a pivotal role in decarbonising their industrial processes and contributing to reducing the embodied carbon impacts of buildings. Still, Europe's energy-intensive industries require a clear and stable long-term policy framework that facilitates their green transition. The European Green Deal still represents a unique opportunity to deliver such a policy framework. This means putting in place legal mechanisms that provide businesses with certainty over the long-term price of carbon and availability of clean energy, as well as the economic viability of circular business models and state support for breakthrough industrial technologies. Indeed, with the increasing electrification of industrial processes, this will be a critical policy action to guarantee an effective implementation of the roadmap. Here below a few examples of how to ensure that through EU legislation:

- Keep strengthening incentives for companies to implement energy management systems and take up recommendations in energy audits through EED and ETS.
- Continue reinforcing the Strategies on Hydrogen and Energy System Integration to have a more secure, connected and low-carbon EU energy system.
- Keep improving the ambition of the Circular Economy Action Plan by introducing a ban on the landfilling of recyclable materials and by realign the interface between EU Chemicals Legislation (REACH and CLP) and the EU Waste Framework Directive to address regulatory/administrative barriers that would facilitate recycling without interfering with existing EU policy in the fields of environment and/or health & safety.
- Greater long-term certainty on the future of the Emissions Trading Scheme and the newly established Carbon Border Adjustment Mechanism.

Supportive policies for reducing whole life carbon

Q6: Please assess the following factors in terms of both their potential effectiveness for driving reduction of whole life carbon emissions and the feasibility for policy to be enacted.

Market push

Q6a: Mandatory reporting of whole life carbon

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	◉	○	○	○	○

* Feasibility for policy to be enacted	○	◉	○	○	○

Q6b: Requirements to set national whole life carbon roadmaps with quantified targets

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	◉	○	○	○	○
* Feasibility for policy to be enacted	○	◉	○	○	○

Q6c: Include consideration of whole life carbon in national construction and new housing plans and targets

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	◉	○	○	○	○
* Feasibility for policy to be enacted	○	◉	○	○	○

Q6d: Include consideration of whole life carbon in national plans for renovation

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	○	○	◉	○	○
* Feasibility for policy to be enacted	○	○	◉	○	○

Q6e: Mandatory carbon footprint declaration of construction products

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	◉	○	○	○	○
* Feasibility for policy to be enacted	◉	○	○	○	○

Market pull

Q6f: Public sector leading by example

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	○	◉	○	○	○
* Feasibility for policy to be enacted	○	◉	○	○	○

Q6g: Link public funding to whole life carbon performance

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	○	○	◉	○	○
* Feasibility for policy to be enacted	○	○	◉	○	○

Q6h: Use of sustainability scores such as the EU Taxonomy for Sustainable Actvities to identify sustainable whole life carbon

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	○	◉	○	○	○
* Feasibility for policy to be enacted	○	○	◉	○	○

Knowledge

Q6i: Support capacity building of public authorities and their mandated bodies to assess whole life carbon

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	○	○	◉	○	○
* Feasibility for policy to be enacted	○	○	◉	○	○

Q6j: Targeted support to facilitate upskilling and/or reskilling of different parts of the supply side (engineers, architects, construction workers etc)

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	◉	○	○	○	○
* Feasibility for policy to be enacted	○	○	◉	○	○

Q6k: Capacity building, education and training for stakeholders not directly involved on-site (e.g. administration, managers, financial sector)

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	○	◉	○	○	○
* Feasibility for policy to be enacted	○	◉	○	○	○

Q6l: General awareness raising and media campaigns

	Very high	High	Low	None	No opinion
* Potential effectiveness for driving reduction of whole life carbon emissions	○	◉	○	○	○
* Feasibility for policy to be enacted	○	◉	○	○	○

Q7: If you have examples of policies to reduce the whole life carbon emissions of buildings at national, regional or local level whole life carbon, please share them here [up to 200 words]:

2000 character(s) maximum

At building level, the EPBD represents a crucial opportunity to set the necessary requirements for low-carbon construction and use for new buildings and renovation over the whole life cycle of the products used – including their post-use phase. In this sense, the EPBD should include provisions regarding harmonised reporting, targets and thresholds for WLC covering all the stages of the building's life cycle.

At product level, the revision of the CPR should ensure the establishment of a material Neutral Level-Playing-Field. Particularly, in order to boost transparency, it is essential that distinctions between construction products are exclusively made on the basis of harmonized, sound science-based methodologies where data are analysed in a consensus-based whole LCA approach, consequently leading to well-balanced conclusions. Simultaneously, sustainability requirements and assessment of construction products in the CPR should go beyond the disclosing of Global Warning Potential (GWP) and be based on the existing standard EN 15804+A2 as reflected in the Environmental Product Declarations (EPD).

Concerning the role of the public sector, there should be a much better use of public buildings as the leading example both for the construction of new buildings and renovation. In this sense, a more spread and harmonised implementation of Green Public Procurement could have great potential to boost the reduction of WLC emissions for the public sector.

Finally, regarding the role of the EU Taxonomy, at the moment, its criteria do not have a significant value in reducing WLC emissions, and they appear less ambitious than the legislation already in place. On the contrary, Eurima believes that, by setting ambitious criteria at the building level, Taxonomy should set the direction of travel for sustainable finance and raise the bar compared to existing legislation.

Whole life carbon values for individual buildings

* **Q8: Do you think that whole life cycle emissions of individual buildings should be measured in the same way across the EU?**

- (●) Yes
- ( ) No, regional or national variations should be allowed
- ( ) No opinion

* **Q9: Do you think it is necessary to define maximum values for whole life carbon for some or all categories of individual buildings?**

- ( ) Yes, mandatory
- (●) Yes, but start with voluntary and later on make them mandatory
- ( ) Yes, but keep them voluntary
- ( ) No
- ( ) No opinion

Q9a: Please explain your answer [up to 200 words]:

2000 character(s) maximum

Introducing WLC dimension needs to be phased in, in a progressive manner: reporting, benchmarking setting limit values. Timely introduction of disclosure obligations ahead of binding targets creates regulatory and investment certainty, and allows companies to develop the necessary skills and practices, which in turn helps to create a market for low carbon products and approaches.

Public buildings and large non-residential buildings (>5000 m²) should serve as front-runners, before the reporting framework is expanded to all new buildings. Such obligations could also be applied to large renovation projects, which follow the same planning, design, construction and commissioning path as new constructions. Such an approach should prepare the ground for a sound policy evolution.

* **Q9b: At what level of governance should these maximum values be set?**

- ○ At EU level
- ◉ At national level with guidance from suggested indicative EU values
- ○ At national level, with no particular role to play for the EU
- ○ Other
- ○ No opinion

* **Q10: If maximum whole life carbon values were to be applied, what type(s) of values do you consider most appropriate?**

- ○ Building-level maximum values combining operational and embodied emissions in a single indicator of whole-life carbon
- ○ Building-level maximum values with separate indicators for embodied and operational emissions
- ◉ Building-level maximum values with separate indicators for embodied and operational emissions and a combined whole-life carbon indicator
- ○ Others, including whole life carbon maximum values for groups of buildings or at the entire building stock level, as opposed to on individual buildings – please spell out in the comment box
- ○ No opinion

Q11: If maximum whole life carbon values were to be applied, for which categories of buildings should they apply?

* **Q11a: New residential buildings**

- ◉ All new residential buildings
- ○ A subset of new residential buildings to be defined – please explain your answer
- ○ No maximum thresholds should be applied
- ○ No opinion

* **Q11b: New non-residential buildings**

- ◉ All new non-residential buildings
- ○ A subset of new non-residential buildings to be defined – please explain your answer
- ○ No maximum thresholds should be applied
- ○ No opinion

* **Q11c: Renovations of residential buildings**

- ○ All major renovations of residential buildings

- (●) A subset of major renovations of residential buildings – please explain your answer
- ( ) No maximum thresholds should be applied
- ( ) No opinion

Please briefly explain your answer [up to 200 words]

2000 character(s) maximum

*** Q11d: Renovations of non-residential buildings**

- ( ) All major renovations of non-residential buildings
- (●) A subset of major renovations of non-residential buildings – please explain your answer
- ( ) No maximum thresholds should be applied
- ( ) No opinion

Please briefly explain your answer

2000 character(s) maximum

Q11e: Do you have other comments on the categories of buildings for which maximum values should apply? [up to 200 words]

2000 character(s) maximum

Identifying frontrunners to have max WLC carbon values applied involves several key considerations, besides, distinguishing between new constructions and renovations and between residential and non-residential buildings.

- Evaluating public versus private building projects.
- Comparing large-scale structures with buildings of all sizes.

It's worth noting that in newly erected buildings, the proportion of embodied carbon tends to be higher, especially in regions where the energy supply's carbon density is already relatively low. However, it's important to acknowledge that not all participants within the value chain possess the same capabilities to meet their commitments. Among them, those overseeing substantial renovation endeavours (spanning over 5000 m2) follow a trajectory akin to new constructions in terms of planning, design, construction, and commissioning. These players are equipped with superior capacities in existing data collection methodologies, a proficient workforce, and comprehensive product knowledge.
In this sense, public buildings and large non-residential buildings (>5000 m^2) should serve as front- runners, before the reporting framework is expanded to all new buildings.

Q12: Are existing European standards and methodologies sufficiently mature to define whole life carbon reporting formats and maximum values?

- ( ) Yes, they are ready to be used for this purpose
- (●) Yes, with some harmonisation work, this will be ready to apply
- ( ) No, much more work is needed to develop a new methodology for this purpose

No opinion

Q12a: Please explain what further work is needed [up to 200 words]

2000 character(s) maximum

when addressing the actions that policymakers at the EU, national, and local levels should take to facilitate the effective implementation of the roadmap, it is essential to emphasize the necessity for improved methodological consistency in measuring buildings' whole life cycle (WLC) emissions. The variations in pace between the EU and national levels, coupled with the absence of mandated employment of a standardized EU methodology, have led to diverse national approaches being adopted throughout Europe in recent years. Consequently, this divergence has compromised the dependability and comparability of environmental impact data associated with buildings. To successfully achieve the goal of decarbonizing Europe's building portfolio by 2050, it is imperative to establish a unified approach grounded in a standardized methodology. This approach will enable the establishment of benchmarks, facilitate comparisons, and ultimately contribute to the mitigation of the overall carbon footprint of buildings. To this end, the development of national tools for calculating building life-cycle emissions should increasingly align with the Level(s) common Union framework and fully adhere to the EN15978 standard.

Concluding question

Q13: Do you have any further comments on policy aspects relevant to whole life carbon of buildings, which are not covered in your answers? [up to 200 words]

2000 character(s) maximum

Even if operational carbon will decrease in the next decades and embodied carbon will keep increasing, this should not mislead to believe that operational carbon emissions reduction should not keep being the priority. By representing around 80-90% of building emissions, reducing operational carbon through energy efficiency improvements should remain the priority to decarbonise the EU building stock.

On top of that, renovations of the existing building stock should always be prioritised over constructing new buildings. This would allow to both reduce the operational emissions by implementing energy efficiency improvements and avoid additional upfront carbon emissions.

Finally, in the context of Europe's heat supply electrification goals, low energy buildings are essential companions to the deployment of renewable energy, including for the manufacturing of low embodied carbon products. Energy-efficient buildings play a crucial role in managing energy demand peaks, preventing strain on Europe's power grid. It is crucial to recognize that all energy usage, including renewable energy, necessitates valuable resources that should not be wasted. In this sense, building renovation efforts and energy efficiency improvements in industry serve to reduce the environmental impact of the current fossil fuel-based energy system and the future demand/offer of renewables-based energy.

Q14: Do you have any other remarks? [up to 200 words]

2000 character(s) maximum

Notwithstanding our support to the academic effort made by Ramboll, BPIE and KU Leuven and sharing the common final objective of achieving climate neutrality for the whole EU building stock, Eurima wishes to articulate reservations concerning certain limitations of the technical study:
- The modelling used should have considered the decarbonisation processes already embarked on by different material streams. Given the critical effect that such improvements will have on the embodied carbon emissions of the EU building stock, this dimension should be better accounted for in the comparison over time rather than only considering the current footprint of materials.
- The key construction materials included in the study are not modelled at the foreseen decarbonisation rates triggered by existing EU policies, such as ETS/CBAM and the possible developments of the current EPBD.
- It appears unclear why the study suggests that “a shift to biobased material in a maximum of 75% of insulation use is possible by 2040” when the EU COM has already put in place a dense policy framework that should, in any case, lead fuel-based insulation to carbon neutrality by 2050.
- Concerning encouraging the use of carbon storage in construction products, Eurima believes that the EU WLC Roadmap should not exclude or prescribe the use of specific materials.
- The study should have also focused more on the potentiality of switching to renewable energy and increasing circularity to reduce embodied carbon.
- The study should have focused on the carbon footprint of all the building components (e.g. building automation).
- We would like to raise concerns about the abundant availability of raw materials for alternative law-carbon products. Global wood consumption already overshoots by up to 67% the lowest risk boundary of what global forests can sustainably provide, with EU Member States’ climate plans forecasting 40-100% more demand for forest resources that will be sustainably available.

Useful links

Final technical study report (https://c.ramboll.com/whole-life-carbon-reduction)

Background Documents

Privacy Statement

Contact

WholeLifeCarbonRoadmap@ramboll.com