FIEC is the European Construction Industry Federation, representing via its 33 National Member Federations in 29 countries (25 EU, Norway, Switzerland, Ukraine & Turkey) construction enterprises of all sizes, i.e. small and medium-sized enterprises as well as "global players", carrying out all forms of building and civil engineering activities.

Position Paper 15.07.2021

Revision of Energy Performance in Buildings Directive:

Fit for purpose for the Fit for 55 legislative package

Introduction

Although the EPBD was only recently revised in 2018, FIEC has understood that in order to reach the new ambitious climate goals, another revision of the Directive is necessary. Therefore, the Federation commits to working with EU policy makers to make the Directive fit for purpose for the Fit for 55 legislative package. Nevertheless, **the scope of the Directive should not be extended to the point that it becomes a catch-all instrument to regulate all aspects of buildings,** including for example, materials used and construction processes. The EPBD should remain primarily about energy performance, whilst ensuring that deep renovation allows for a holistic approach, to ensure that other essential upgrades are carried out to a building's structure, safety, indoor comfort and accessibility, avoiding further unnecessary disruption for building occupants because separate renovation has to be scheduled at another time for these other improvements.

Key messages

In short, FIEC calls for:

1. Embodied carbon to be addressed outside the scope of the EBPD, so that emissions from infrastructure can also be covered. Whole life carbon (embodied carbon) from buildings should be treated separately from that generated during the use phase of the building, i.e. by energy consumption for heating, cooling and other functions requiring energy.

2. Greater harmonisation of definitions, measures taken at national level and Energy Performance Certificates.

3. Measures to be underpinned by availability of data and digital recording of building performance and renovation and maintenance history; and SRI to remain voluntary.

Detailed analysis and comment

1. **Embodied carbon to be addressed outside the scope of the EBPD, so that emissions from infrastructure can also be covered. Whole life carbon (embodied carbon) from buildings should be treated separately from that generated during the use phase of the building, i.e. by energy consumption for heating, cooling and other functions requiring energy.**

*FIEC strongly believes that the EPBD should remain an instrument for dealing with **energy performance in buildings**.* The scope should not be extended to regulating the embodied carbon from materials, transportation, construction processes or other phases of the life cycle of a building. If we do this, the Directive will become something else altogether. In the long term – and only with a carefully planned and phased approach – maybe we need a different instrument that tackles the many different aspects of building design and construction. However, as there are currently many different policy approaches to buildings, both legal and voluntary, it will take years to unravel the complex web of measures in order to bring them together in one legal instrument. This might not even be possible, but FIEC wants to be involved in such a discussion in the future. This discussion should not be now though in the context of the revision of the EPBD, which, as a key policy initiative of the Renovation Wave should be **easy to implement**.

Embodied carbon should be treated separately from carbon generated during the use phase of buildings. Let's be clear on this. FIEC acknowledges that **embodied carbon must be tackled**. However, not in the same solution as that for energy performance. We have considered other existing regulation such as the Construction Products Regulation, Ecodesign Directive, Waste Framework Directive and Machinery Directive, but all of these target certain contributors to embodied carbon. Furthermore, as embodied carbon is also a relevant issue for the construction and use of infrastructure, this is also an argument against tackling the problem in the EPBD, which is only about buildings. For the moment, we believe that existing voluntary measures for buildings can offer short to medium term approaches. These include Level(s)[1] and the Construction and Demolition Waste Protocol[2]. The latter is also relevant to infrastructure. We are also looking forward to the publication of the **EU Strategy for a Sustainable Built Environment.** In the longer term, **we need a more workable, possibly a regulatory solution, but this needs to be created.** *We are committed to working with policy makers to find such a solution for embodied carbon.*

Data on embodied carbon is unreliable. FIEC is involved in the #BuildingLife campaign and many of the discussions between partners in this campaign have been about the current baseline for embodied carbon from construction. In short, there is no agreement and estimates in the various available studies vary substantially. For example, a study from 2007 gives a range of *"2–38% and 9–46% of the total life cycle emissions for a conventional building and low energy building respectively".*[3] Furthermore, although it can be done to a certain extent, measuring embodied carbon is not easy and calculation methods need to be significantly improved for both accuracy and comparability. How can we begin to set targets for reduction of embodied carbon emissions if we do not even know the extent of the problem today? **It is clear that the construction industry cannot be asked to aim for a percentage decrease against a non-existent baseline.**

[1] https://ec.europa.eu/environment/topics/circular-economy/levels_en

[2] https://ec.europa.eu/growth/content/eu-construction-and-demolition-waste-protocol-0_en

[3] I. Sartori, A.G. Hestnes (2007) Energy use in the life cycle of conventional and low energy buildings: a review article. Energy and Buildings 39 (3) 249–257. Secondary source World Green Buildings Council.

Furthermore, although we acknowledge that the problem needs to be tackled in collaboration with other stakeholders involved in the life cycle of a building, **it is clear that different phases of the life cycle will require different solutions.**

For example:

- the manufacture of materials will have to be improved both at the point of production but also at the point of design, taking into account both innovation in virgin materials but also opportunities to recycle materials recovered from renovation and demolition projects. The latter might avoid the manufacture of new materials altogether or may be incorporated into the production of "new" hybrid materials, with a mix of secondary materials in their core ingredients.
- for construction processes on site, innovation in machine design will eventually provide solutions, such as battery powered or hydrogen-fuelled machines. Contractors are already investing in cleaner machines, but the transition will take time.

Example: An Oslo initiative, involving importers of construction machinery, is converting diesel-powered machinery to electric. There is strong commitment from the construction community in Oslo, even though the conversion makes the machines two-three times more expensive. As manufacturers are reluctant to start serial production of zero emission machinery for such a small market as that in Norway, the Oslo municipality is looking for other cities to join it in order to scale up the project and incentivise the manufacturers.

There is a difficult trade off, for which no-one yet has a solution. Deep renovation undoubtedly reduces energy consumption. **However, deep renovation uses more materials and may involve more processes, to install these materials.** This is just plain fact. Contractors can be asked to improve their efficiency, by for example reducing errors and needless waste of materials (BIM offers a solution for this); but they cannot achieve deep renovation with short cuts. This trade-off has to be acknowledged and will take time to be solved. BIM is currently being used in less than half of renovation projects[4] and less than 4% of companies believe they will ultimately use the full potential of BIM. Further research into low-carbon materials is required. Likewise for low-carbon processes.

2. Greater harmonisation of definitions, measures taken at national level and Energy Performance Certificates

FIEC believes that implementation of the existing EPBD has been hampered by the lack of a harmonised approach from Member States and that this should be avoided in the revision of the Directive. One way to achieve this is to strive for definitions of key terms and concepts that are applied uniformly across the EU and greater harmonisation in the implementation, by Member States.

1. Common definition of zero-emission building

FIEC accepts that zero-emission buildings are what we should strive for in future, further stretching the ambition and improving on zero-energy buildings. However, before the industry can deliver, we need to know what exactly is meant by "zero-emission building". Furthermore, in order to ensure comparability when measuring progress, as well as to ensure all Member States are aiming for the same objective, **there needs to be one definition of zero-emission building**, **applied EU-wide**. This does not mean that national building codes should be overruled, or that differences in climatic

[4] https://www.fiec.eu/our-projects/current-projects/bim-speed

conditions become irrelevant. Nevertheless, it will prevent some of the confusion and divergence that characterises the implementation of the current EPBD.

2. Common template and specific data required for monitoring of Long Term Renovation Strategies

There is currently too much flexibility for Member States, particularly in terms of setting objectives for renovation and measuring what has been achieved. A **common template and request for specific data** will avoid this. In setting this requirement, some flexibility should nevertheless be granted, for cases where no data is available, amongst other national anomalies.

3. Common definition of deep renovation and deep renovation standard

FIEC is strongly in favour of deep renovation as the norm, where this is economically viable for the building owner. For the same reasons as those given above in relation to a common definition of zero-emission building, we call for a **single definition of deep renovation**, to be applied EU-wide and along with that, **a standard for deep energy renovation** at EU level. This standard should be **material and technology neutral**, allowing for the best choice of materials and processes for the local climatic conditions and building practices. Furthermore, although the upgrade of non-energy-related aspects of the building should be strongly encouraged, such as accessibility, structural safety etc., only the energy performance aspects of the renovation should be mandatory.

4. Mandatory minimum energy performance standards for all public buildings and all non-residential buildings being sold and/or rented out.

*These should be **cost-optimal** and must be accompanied by*:

- available financial support to incentivise the building owner and ensure that he/she is able to undertake the level of renovation necessary, without risking never achieving a return on investment;
- correct identification of worst performing buildings and focus on these buildings;
- presence of a stable legal framework, including a revised EPBD that has longevity and will not be revised again in the short-term, as is the case now;
- available work force to accelerate the renovation rate across the EU. Contractors are currently struggling to find the numbers of workers they need, at all levels of qualification.

5. *Improvement and harmonisation of Energy Performance Certificates*, to enable comparability and ensure significantly improved quality and reliability, which is lacking in some countries across the EU at the moment.

EPCs should:

- include recommendations for renovation (such as the recommendations made in renovation passports), which also address the reduction of the CO2-footprint of the building. Today it is hard for the tenant/real estate owner to fully understand what needs to be done to improve the energy performance of the building because the measures are often not described in enough detail. A follow up meeting between the building owner and EPC auditor would enable the owner to better understand the result and learn how renovation could really be done to maximise energy savings;

- eventually become digital only. Furthermore, the set of data should be incorporated into building renovation passports. (See also below);
- be registered in a central EU database. This could also be done by linking any relevant national database to this central EU database;
- be comparable across the EU. As well as the EU database mentioned above, the methodology/calculation method should be harmonised;
- be prepared using a common EU-wide template.

In addition:

- auditors (for the EPC) must acquire comprehensive information about the building, for instance by visiting the property;
- there should be better surveillance/control/supervision of the audit that takes place before issuing the EPC. Today this is weak (and differs from country to country) with surveillance (where it is required) only checking that the EPC has been done, but not that it is correct. A common, stricter approach to on-site audits could be introduced, with comparably qualified auditors. Enforcement could be a measure under the revised EPBD.

3. Measures to be underpinned by availability of data and digital recording of building performance and renovation and maintenance history; and voluntary Smart Readiness Indicator.

There is some confusion between renovation passports and digital log books, both European Commission initiatives. Renovation passports seem to be related more to existing buildings and contain much detail about the kind of renovation that needs to be done. This passport can be used to track the renovation and can be used for the future (e.g. to determine what materials were used in the renovation.) On the other hand, digital log books seem to be for new buildings. FIEC supports both; but confusion between these two passports needs to be resolved. Companies are not yet well informed about the passports, as they still only talk about BIM.

FIEC also supports the Level(s) voluntary assessment framework for buildings, but urges the European Commission to bring coherency to this and the above approaches.

We support the Smart Readiness Indicator (SRI), for which the Delegated Act was adopted in 2020. However, as the use of this is so far very limited, it must remain voluntary.

Conclusion

FIEC will support a revised EPBD that takes the above requests into account. In the longer term, we commit to working with EU policy makers and other relevant stakeholders, to find alternative solutions for the reduction of embodied carbon in construction. In the meantime, the EPBD needs to remain an instrument focused on the energy performance of buildings and not be further complicated with objectives that are related to other aspects of building performance.

Contact: Sue Arundale
Email: info@fiec.eu

www.fiec.eu
info@fiec.eu
@FIEC_Brussels
FIEC EU

FIEC - European Construction Industry Federation
BE - Brussels / **Tel.** +32-2-514 55 35
Transparency Reg. 92221016212-42
aisbl Nr Entreprise : BE 0688 919.140