

Public consultation on the evaluation of the Energy Performance of Buildings Directive (EPBD)

Annex to the official form

1) Introduction

Preparation of this document was coordinated by the national Energy Efficient Buildings Platform EEB-CZ (<http://www.eebcz.eu>), representing public as well as private entities active in the field of energy efficiency in buildings. This position document is an analytical annex to the official form submitted to the European Commission via the official consultation site. The form has been completed during intensive consultations with leading Czech experts in the field of energy performance of buildings. This analytical text is structured in the same sections as the original consultation form. EEB-CZ has received an official mandate from the Czech Ministry of Industry and Trade to coordinate this consultation across stakeholders operating in the Czech Republic.

2) Summary of respective sections

A. Overall Assessment

The Energy Performance of Buildings Directive (hereinafter referred to as the EPBD) is generally perceived as successful directive even though there are repeatedly reported implementation deficits at the level of the EU Member States and some problematic parts (such as energy performance certificates and the varying methodology of performed energy audits). The EPBD has helped to change thinking on energy-efficient constructions and helped implement new technologies. To some extent it has also helped to increase the rate of renovations, yet this aspect of the EPBD is seen as relatively inefficient. Importantly, the EPBD should differ in Member States according to climate zones and possibly also initial purchasing power. On the other hand, EU-wide harmonization in terminology is needed; confusion in definition is typical for NZEB. The least successful aspect of the EPBD is probably the Energy Performance Certificate (EPC), which is often understood only as an administrative burden.

B. Facilitating enforcement and compliance

In general, compliance with the provisions of the EPBD is perceived as adequate in the Czech Republic. However, the definition of NZEBs is not sufficiently clear and there is still room for national modifications. In the Czech Republic, the definition of NZEB is rather complicated, because it uses so called reference building as a

comparative group of parameters. Moreover, there is a confusing difference between passive houses (15-20 kWh/m²) and NZEBs (46 kWh/m² of heat consumption for heating).

On the whole, more attention should be paid to renovations instead of new buildings. A key measure or tool that would simplify implementation is the creation and promotion of more dynamic building design modelling tools. A key issue at the moment is that design tools do not adequately reflect reality in their construction and make assumptions which do not play out in reality. There is a need to incorporate more granular and location specific weather data, particularly to support in the identification of cost optimal levels of renewable energy resources.

C. Energy Performance Certificates and stimulating energy efficient renovation of the building stock

EPCs are seen as rather ineffective. They have not played an important role neither in increasing the rate of renovations nor in the extent of renovations. EPCs are required for new buildings and for buildings under major renovation. So, the pressure to increase the rate of renovation is not driven by the EPC itself. Nevertheless, the EPC standards need to be harmonized across the EU Member States. In general, EPCs have played a significant role, but the market is not mature enough. In addition, there is one important aspect missing – motivation of the tenants to operate the building properly.

D. Smart Finance for Smart Buildings: Financing energy efficiency and renewable energy in buildings and creation of markets

There is an insufficient take-up of the financing (both financial instruments and grant schemes) available for energy efficiency in buildings. The key reasons are that the market is still not generating sufficient demand for energy efficiency measures, in part because the payback periods remain too long. The complicated administration and necessity of certified suppliers is a hindering issue as well. Moreover, the national traditions and habits still prevail.

Experts providing their opinion for the consultation would welcome and encourage more tax incentives along with measures that would enable commercial financial institutions to offer low interest loans. Educational activities targeting the end customers are still important to stimulate the market demand.

E. Energy poverty and affordability of housing

Even though energy poverty is related to the EPBD, it is not considered as its important aspect. It is mainly connected with social politics and hence a strong national topic with only few EU-wide overlaps. In other words, energy poverty is dealt with on a national level and there is no need to incorporate it in a greater detail in the EPBD.

F. Ensuring new highly efficient buildings using a higher share of renewable energy

In accordance with the energy efficiency 2030 target, incorporating minimum emission performance standards for home heating systems could serve to drive the consideration of alternative low carbon/renewable heating systems to a greater degree – e.g. heat pumps and district heating from renewable sources. Also evaluation of

effect of the building on its surrounding (such as heat islands) could represent an important step forward. Public and private residential sectors should be addressed as a priority due to its capacity for energy savings. Importantly, the EPBD does not address embedded (embodied) energy sufficiently.

G. Links between the EPBD and district and city levels, smart cities, and heating and cooling networks

The best policies at district and city level for increasing energy efficiency and use of renewable energy in buildings are the ones which first and foremost start with getting to grips with the spatial strategy for a given local area. Local policies which seek to integrate the social, economic and energy related infrastructure needs of an area in the form of a coherent energy master plan are the bedrock for increasing energy efficiency and use of renewable energy in buildings. Concretely we can name activities such as support of net-grid, support of hybrid networks and electro mobility. Strong regulatory mechanisms and higher impact of municipalities on district heating providers would have a key positive role. However, the price of district heating is still rather high.

H. Awareness, information and building data

In general, there is enough data, mainly on the EU level, national and especially regional and local levels being a big more problematic. There has been a representative survey of building stock in 2004 and partly in 2011. However, the data mining is not user friendly. The data should be mostly public source for studies and presentations, for cost calculations etc. Moreover, it should be used in renovation strategies as the key information source. There is still need for better harmonization on the EU level.

I. Sustainability, competitiveness and skills in the construction sector

The construction sector cost-effectively demonstrate and check compliance with the EPBD while also upgrading the skill and knowledge of salespeople and building professionals the most effectively through professional associations and educational projects. Very suitable is utilization of expert workshops, conferences, and websites. Moreover, it would be useful to extend Eurocodes because of higher pressure on the Member States. If the evaluating metrics are correct, it makes sense when evaluating metrics are uniform. Besides energy, materials, waste, and water are not sufficiently addressed in the EPBD.

J. Building systems requirements

The setting of minimum requirements in the EPBD for technical building systems is missing. Technical building systems minimum requirements would significantly contribute to the improvement buildings' energy performances. Unlike regular inspections of heating and air conditioning systems this measure makes sense.

K. Operational management and maintenance

Generally, the EPBD promote the key approaches to ensure that buildings meet stringent efficiency targets in their operation, at least in the field of households and residential buildings. In this field, the EPBD also promotes the optimum way to close the gap between designed and actual energy performance of buildings.

3) Conclusions

In general, the EPBD is perceived by the Czech experts as a step in the right direction, having significant impact on energy consumption in buildings. However, there are some issues which need to be addressed in order to make the EPBD more efficient and more likely to fulfil its ambitious goals. The most poignant issues mentioned by the experts are:

- The EPBD cannot be the same for each country. It needs to be adjusted according to different climate zones and according to different purchasing power of respective EU Member States.
- On the other hand, there is still space (and need) for greater harmonization, especially in terminology, definitions (such as NZEB), methodology (such as EPC), and data management (such as data availability on the national levels).
- Besides energy performance as such, technical buildings systems should be addressed in the EPBD in a greater detail. Moreover, embodied energy and life-cycle approach should be taken into account more explicitly.
- Educational activities are still needed, even though some public (and professional) awareness has been already raised. It can help to motivate the tenants and address the “split incentive” issue or increase still insufficient take-up of available financing.
- The EPBD principles can also be integrated into other strategic documents (such as spatial and regional development strategies) and thus address energy in a more complex and holistic way.

These issues were identified by the Czech experts as the most important to address in the EPBD. Only after addressing these issues, the experts see the goals set in the EPBD as realistic. Details can be found in the official form submitted to the EC via the official consultation site or by contacting the EEB-CZ platform (info@eebcz.eu).

4) About EEB-CZ

The main objective of the Energy efficient buildings platform (EEB-CZ) is to increase the profiling and participation of the Czech research teams in the international structures, to proactively enforce national priorities in the European policy making process and to improve transfer of information from international structures to domestic research and academic organizations. EEB-CZ focuses on strengthening bilateral and multilateral links among relevant institutions from the Czech Republic and other European countries as well as on support of opening new links and research collaborations. EEB-CZ platform has been supported under the project “Support of International Research Profiling of the Czech Republic in Energy Efficient Buildings” and it is financed from LE-EUPRO II program.