Public Consultation on the Evaluation of the Energy Performance of Buildings Directive

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PUBLIC CONSULTATION ON THE EVALUATION OF THE ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE

INFORMATION ABOUT YOU

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Platform representing stakeholders in the area of energy efficient buildings

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A. Overall Assessment

Currently, about 35% of the EU's buildings are above 50 years old. Buildings are responsible for 40% of energy consumption and 36% of CO2 emissions in the EU, and consume, on average, about 25 litres of heating oil per square metre per year. Some buildings even require up to 60 litres.

The Energy Performance of Buildings Directive (EPBD) aims to:

1. improve the energy performance of buildings in the EU, taking into account outdoor climatic and local conditions, as well as indoor environment requirements and cost-effectiveness.
2. require Member States to set energy performance standards for buildings,
3. require Member States to issue buildings with energy performance certificates, and
4. require Member States to ensure that, by the end of 2020, all new buildings are ‘nearly zero energy’ buildings

It sets out concrete ways of achieving the great untapped potential for energy savings in buildings and reducing the large differences in results that exist in energy saving outcomes between Member States.

1. How successful has the EPBD been in achieving its goals?

2500 character(s) maximum

EPBD is generally successful even though there are problems with implementation and some problematic parts (such as energy performance certificates).

2. Has it helped to improve energy efficiency in buildings?

2500 character(s) maximum

Definitely yes. The EPBD has helped to change view on energy-efficient construction, helped implement new technologies. It started a number of financial support programs, and it overall has shifted people's minds. Changes are also evident in the thinking of building developers, some of them even aimed directly at passive or low-energy housing. Number of developers actually implements the environmental buiding certification of such as LEED or BREEAM or SB Tool. It also significantly raised awareness.

3. Has it helped to increase renovation (more than 25% of the surface of the building envelope) rates?

2500 character(s) maximum

Legislatively yes. However, the impact on renovation rates was probably very low because the biggest impact had the Structural funds and Green Investment Scheme. An important discussion was led about EPBD implementation. There was a risk that EPBD could reduce the number of renovations due to higher requirements leading to higher expenditures on renovation. However, moderate requirements of EPBD implementation excluded such negative option.

4. In your view, has the EPBD sufficiently contributed to accelerating investment in improving the energy performance of the EU's building stock? Why/Why not?

2500 character(s) maximum

Yes, EPBD has significant impact on improvement of energy performance of buildings in the following way - clear and complex guidelines to involve energy efficiency as a part of decision making procedure for developers or house owners were set. The effect is similar to "white goods" EE labeling - who wants to succeed on the market has to be different and offer high efficient buildings. Moreover, motivating future owners (customers) is a more sustainable way to achieve the same goals.

5. Overall, do you think that the EPBD is contributing to cost-effective improvements in energy performance? Why/Why not?

2500 character(s) maximum

Partly yes, some cost effective measures are not feasible due to the national legislation - national preference of district heating systems based on local coal vs. small gas boiler houses for individual buildings.

6. Do you think that the aim of ensuring the same level of ambition across the EU in setting minimum energy performance requirements within the EPBD has been met? Why/Why not?

2500 character(s) maximum

No, it should be different across countries with regard to local climate and purchasing power (sometimes not enough purchase power for optimal solutions). However, some EU-wide harmonisation in definitions is needed.

7. Has the EPBD effectively addressed the challenges of existing buildings' energy performance?

2500 character(s) maximum

Yes, partly. The support of the current activities could be much stronger in the EPBD. There might be problems with historical buildings (very costly solutions, no optimal solution) and buildings from 60's-80's (strong motivation due to low initial levels). Moreover, the energy performance led to worse indoor climate.

8. Has the EPBD set effective energy performance standards for new buildings?

2500 character(s) maximum

Yes, the standards are effective. However, it's the implementation where there is a challenge.

9. Will the ‘nearly zero-energy buildings’ targets be met? Why/Why not??

2500 character(s) maximum

Yes, however the question is the definition of the 'nearly zero-energy buildings' in the Czech Republic. This definition rather corresponds to the values of the low-energy building than zero-energy building. In this perspective the target set in the Czech legislation was set up as moderate and feasible. However, there might be problems with financing NZEB in the public sector. Moreover, the question is whether low energy buildings are not sufficient (and more cost-effective).

10. How successful has the inclusion of Energy Performance Certificates in the EPBD been? Have the certificates contributed to improvements in energy performance of buildings

2500 character(s) maximum

Controversial, often perceived as a bureaucratic nonsense. Certificate can have a positive impact on family houses, but there is a general public but dismissed as unnecessary. The methodology of energy consumption calculations is far from the actual data in case of administrative and commercial buildings.

11. What has worked well in the EPBD? What needs to be improved?

2500 character(s) maximum

Pluses: Minimum energy requirements;
Minuses: Problems is in the field of nearly-zero buildings definition, practical EPBD implementation, and especially in raising awareness of Energy Performance Certificates. Harmonization of the methodology and building certificates design to be the same for all EU MSs. Focus on indoor climate.

12. Is the EPBD helping to contribute to the goals of EU climate and energy policy (Reduce greenhouse gas emissions by at least 40%; increasing the share of renewable energy to at least 27%; increasing energy efficiency by at least 27%; reform of the EU emission trading system)?

2500 character(s) maximum

Yes, there is a clear road map to improve energy efficiency for developers, construction companies and home/house owners of the building stock. The weekest effect is probably in climate domain.

13. Is it in line with subsidiarity? What should continue to be tackled at EU level and what could be achieved better at national level?

2500 character(s) maximum

More or less yes.

EU level: energy performance requirements, support NZE buildings, global financing programmes;
National level: concrete financial schemes, motivation, EPC utilization

14. Are the objectives of the EPBD delivered efficiently?

2500 character(s) maximum

It is probably early to evaluate the efficiency of the measures since the transformation and implementation is not at the end. However, there are definitely problems and the objectives are probably not going to be fully delivered.

15. Has the EPBD created any unnecessary administrative burdens? If so, please provide examples

2500 character(s) maximum

In some cases the EP certificates are only an administrative burden when the building is very old or in a poor shape. EPC is also not necessary for flats and small family houses, where the energy performance is assessed easily. Moreover, regular inspections of heating and air conditioning systems seems to be pointless.

16. Has the EPBD created any unnecessary regulatory burdens? If so, please provide examples

2500 character(s) maximum

No.

B. Facilitating enforcement and compliance

Compliance is recognised as being of critical importance in achieving the full energy efficiency and carbon savings potential of buildings. Strong local and regional verification of compliance with national building codes is required in order to reassure consumers of the quality of buildings.

The 2010 recast EPBD introduced targets for Near Zero-Energy Buildings (NZEBs) and more ambitious minimum energy performance requirements for new buildings. The EPBD defines NZEBs as a building that has a very high energy performance as determined in accordance to Annex I of the directive. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby. The EPBD sets the target for Member States to ensure that by 31 December 2020, all new buildings are nearly zero-energy buildings, and after 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings.

The EPBD also considerably reinforced the provisions for existing buildings, broadening the scope to all existing buildings (removing the 1000 m2 threshold). It set and applied minimum energy performance requirements for the renovation of parts of the building envelope (roof, walls, etc.) with a view to achieving cost-optimal levels. It also set and applied minimum energy performance requirements for technical building systems (large ventilation systems, air conditioning, heating, domestic hot water system or combination of these) whenever they are installed, replaced or upgraded. It applied minimum energy performance requirements to all types of building works. The EPBD introduced a benchmarking system (the 'cost-optimal methodology' which calculates the energy performance level which leads to the lowest cost during the estimates economic lifecycle) to improve the level of ambition of the energy efficiency requirements contained in national or regional building codes while ensuring that these obtain the best value for money and that they are regularly reviewed.

A key aspect to be examined as part of the EPBD evaluation is how proper enforcement of the energy efficiency requirements in regional and national building codes is ensured.

17. Is compliance with the provisions of the EPBD adequate?

2500 character(s) maximum

Compliance with the provisions is adequate. However, the Czech national parameters are not very ambitious. There is also difference between the definition of NZEB. The level of NZEB in the Czech Republic is rather the level of low-energy buiding.

18. Is the definition of NZEBs in the EPBD sufficiently clear?

2500 character(s) maximum

No, there is still room for national modification of NZEB definition. The national definition of NZEB is rather complicated, because it uses so called reference building as a comparative group of parameters.

19. Is the NZEB target in the EPBD sufficiently clear to be met?

2500 character(s) maximum

The NZEB target should be better defined in order to take account of the local characteristics, complicated cost optimum calculations and share of RES. Moreover, the target is not easy to be met.

20. If not, what, in your view, are the missing factors that would ensure compliance with:

a. Minimum energy performance requirements in new buildings?

2500 character(s) maximum

Yes, for passive houses it is 15-20 kWh/m2. NZEB according to Energy Performance Certificate is 46 kWh/m2 of heat consumption for heating. There is relatively small share of new buildings in the market, the renovations are the key sector.

b. Minimum energy performance in major renovations of existing buildings?

2500 character(s) maximum

The major renovations should focus on so called deep renovation, i.e. comprehensive approach to the building systems and shell of the building,

c. Minimum energy performance for the replacing/retrofitting parts of the building envelope (roof, wall, window, etc.) and replacing/upgrading/installing technical building systems (heating, hot water, cooling, etc.)?

2500 character(s) maximum

The new building systems require new skills in implementation. Especially the Build Up skills initiative impact should be higher.

d. Minimum renewable energy requirements to meet the NZEB target by 2020?

2500 character(s) maximum

Development of the NZEB requirement should be provided in a close cooperation of the Member States. Each country used a completely different approach.

e. Certification of the energy performance of buildings, including tailor-made recommendations for the improvement of the energy performance of buildings?

2500 character(s) maximum

Comprehensive approach with tailor-made recommendations is provided via building audits. The audit also includes economic and environmental evaluation. The problem is that for passive houses there is 15-20 kWh/m2 and for NZEB according to Energy Performance Certificate is 46 kWh/m2 of heat consumption for heating. Certification level of passive house according to Czech energy standard is different from Austria PHPP standard.

f. Regular inspections of heating and air conditioning systems?

2500 character(s) maximum

The national approach does not use e.g. the standard EN 13779 enough to evaluate the building systems (e.g. SFP calculation and avaluation). The Eurovent uses e.g. chiller classification; it could be used for chiller assessment. There is only evaluated a thermal efficiency during the boilers´ inspections; not the seasonal.

21. Do you think the cost-optimum methodology gives sufficient evidence regarding the actual cost of renovating buildings on top of the additional cost for Near Zero-Energy Buildings?

2500 character(s) maximum

Probably yes, but the evidence of cost could be provided every year.

22. Are there any cost-effective measures for ensuring compliance at local and regional level that could be replicated and used to improve compliance on a larger scale?

2500 character(s) maximum

E.g. so called low cost measures and suitable operation of the building. Typically the users were not motivated to achieve some real savings.

23. What do you think of the various ways of calculating building energy performance at national/regional level? Please include examples.

2500 character(s) maximum

The reference building comparison is used in the Czech Republic. However, the calculation is rather complicated and very far from reality in the case of office and commercial buildings. The calculation should be harmonized not only on regional/national level but also at the level of EU.

24. What measures are missing that could simplify the implementation of building regulations to make sure that buildings meet the required high energy performance levels?

2500 character(s) maximum

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 renewables which could be deployed on or near the development.

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

Building energy efficiency has been increasing at 1.4% per year. This relatively low rate is owed largely to low renovation rates. To reap the benefits of energy efficiency and the use of renewables in buildings, the biggest challenge is to accelerate and finance upfront investments and speed up the renovation rate of the existing stock to above 2% annually. The aim of EPCs is to transform the building sector by setting ambitious energy efficiency standards and incentivise investment in renovating buildings to improve their energy efficiency, and facilitate a single market in and the free circulation of highly specialised workers, solutions and technologies and investments in energy efficiency and renewables in buildings. These aims have been identified as drivers for investment in renovation. In addition, the Energy Efficiency Directive (2012/27/EU, 'the EED') required Member States to establish, by April 2014, a long-term strategy for mobilising investment in the renovation of the national building stock.

25. Are the available data on the national/regional building stock sufficient to give a clear picture of the energy performance of the EU's building stock, as well as the market uptake of energy efficiency technologies and the improvement of the energy performance of buildings in the EU?

2500 character(s) maximum

The available statistical data can get an idea for professionals. High quality statistical monitoring is not available. A lot of missing data will be dected within the Building Observatory project.

26. Are the long-term national renovation strategies adopted sufficient to stimulate the renovation of national building stock? What examples of best practice could be promoted across the EU and how?

2500 character(s) maximum

Yes. However the international ecological building certification systems (e.g. LEED, BREEAM, SB Tool, DGNB, etc.) are voluntarily accepted very well and seem to be a suitable supplement. EBRD or EIB run energy efficiency schemes on central and eastern Europe. Overally, national renovation strategies are not adopted sufficiently. Quality of the national strategy is relatively low.

27. Have EPCs played a role in increasing the rate of renovation, the extent of renovation, or both? For instance, are EPC recommendations being defined as the most effective packages of measures to move the performance of buildings and/or their envelopes to higher energy classes?

2500 character(s) maximum

They have played a minor role in both. Because the motivation effect was not so strong. EPCs are required for new buildings and for buildings already under major renovation. So, the pressure to increase the rate of renovation is not driven by EPC itself.

28. Is setting a minimum renovation target for Member States to undertake (e.g. each year; percentage of building stock) important and requires further attention in the context of meeting the goals of the EPBD?

2500 character(s) maximum

Yes, it is. However, economic considerations and economic efficiency should play the key role.

29. Are obligations or binding targets for renovation or any other mandatory measure (e.g. mandatory minimum thermal efficiency standards for rental properties) missing from the EPBD to ensure that the directive meets its goals? If, yes, what kind of obligations and targets?

2500 character(s) maximum

The EPBD should motivate also the tenants of the building to operate building properly.

30. Are EPCs designed in a way that makes it easy to compare and harmonise them across EU Member States?

2500 character(s) maximum

No. This needs to be harmonized (EPC classes, design, format, ...).

31. Do you think that the 'staged deep renovation' concept is clear enough in the EPBD?

2500 character(s) maximum

No. It is often used 60% decreasing of the energy demand as an indicator.

32. Have EPCs raised awareness among building owners and tenants of cost-efficient ways of improving the energy performance of the buildings and, as a consequence, help to increase renovation rates across the EU?

2500 character(s) maximum

EPCs have played a significant role, however the market is not mature enough.

33. Should EPCs have been made mandatory for all buildings (a roofed construction having walls, for which energy is used to condition the indoor climate), independent of whether they are rented out or sold or not?

2500 character(s) maximum

Yes. Only the overall usage can bring successful results. Yet there are some logical exclusions such as historical buildings.

D. Financing energy efficiency and renewable energy in buildings and creation of markets

The EU has been supporting the improvement of the energy performance of buildings for many years with a range of financial support programmes. As almost 90% of building floor space in the EU is privately owned and more than 40% of residential buildings date from before 1960, most financing has to come from private sources. The Energy Efficiency Financial Institution Group (EEFIG), an expert group set up by the European Commission and United Nations Environment Programme Finance Initiative, published their final report in February 2015. The report identified the need to engage with multiple stakeholder groups and scale up the use of several financial instruments as part of a clear and enforced 'carrot and stick' legislative framework. The group also made a strong case for combining public funds with private sector investment to address risks and achieve the scale of financing needed.

34. What are the main reasons for the insufficient take-up of the financing available for energy efficiency in buildings?

2500 character(s) maximum

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 an issue as well.

35. What non-financing barriers are there that hinder investments, and how can they be overcome?

2500 character(s) maximum

The need to create genuine demand is required which is why there is a requirement to use well designed regulations to create the right signals. The traditions and habits still prevail. Moreover, complicated decision-making process of bodies to which the aid is intended plays a role; e.g. organizations as Community of Property Owners must have a voting majority (quorum) of 100%.

36. What are the best financing tools the EU could offer to help citizens and Member States facilitate deep renovations?

2500 character(s) maximum

We would encourage much wider use of tax incentives along with measures that would enable commercial financial institutions to offer low interest loans. Still, raising awareness, including educational grants, is necessary.

37. What role do current national subsidies for fossil fuels have in supporting energy efficient buildings?

2500 character(s) maximum

They do not play a significant role.

38. Have energy efficiency and renewable energy projects been combined to maximise their financing? How can the EU help?

2500 character(s) maximum

No, there are no known examples for a combination. However, a combination should focus strongly on resource efficiency and less on energy efficiency. The best option is to lower energy consumption in building sector by implementation of thermal-insulation measures and partly cover the rest of energy consumption from renewable sources attached to the buildings. Sure, EU can help with the guidelines and BAT, EU funds can probably help with financing.

39. How is investment in high-performing buildings stimulated and what is being undertaken to gradually phase out the worst performing buildings? Is it sufficient?

2500 character(s) maximum

There is no stimulation for investments in high-performance buildings. High performing buildings are stimulated by market demand only. The same situation is with the worst performing buildings.

40. What is being undertaken to solve the problem of 'split incentives' (between the owner and the tenant) that hampers deep renovations? Is it sufficient?

2500 character(s) maximum

The use of Private Rented Sector Regulations is a way of addressing the split incentive, providing a minimum performance standard that a tenant should be entitled to. Does not really work in the Czech Republic, there is no motivation for renters.

41. Taking into account the experience and achievements to date, would

a) scalling-up of existing public funds alone be sufficient to meet the goals of the EPBD?

2500 character(s) maximum

No, private investments are needed.

b) aggregation of energy efficiency investments in buildings (e.g. enabled by standardisation of Energy Performance Contracts and clarification of regulatory and accounting issues) contribute to the achievement of EPBD goals

2500 character(s) maximum

Yes. EPC/ESCO scheme should be the main source of financing and know-how transfer about energy efficiency in buildings. On the other hand it is neccessary to control the high quality of EPC services. There are a lot of modification and in a lot of cases EPC is not cost efficient.

E. Energy poverty and affordability of housing

Energy poverty affects living conditions and health. It has many causes, including a combination of low income and general poverty conditions, energy-inefficient homes and a housing tenure system that fails to encourage energy efficiency. For example, in Britain, 9,300 people died prematurely due to the cold during the winters of 2012 and 2013.

The Energy Union has identified a combination of measures, mainly in the social field and within the competence of authorities at national, regional and local levels, as the only effective way of tackling energy poverty. When phasing out regulated prices, Member States need to propose a mechanism to protect vulnerable consumers, which could preferably be provided through the general welfare system. If provided through the energy market, it could be implemented through schemes such as a solidarity tariff or in the form of a discount on energy bills. The UK Government is preparing a programme under which doctors will be able to prescribe boilers, insulation and double glazing to fuel-poor patients suffering from health conditions exacerbated by cold homes.

42. What measures have been taken in the housing sector to address energy poverty?

2500 character(s) maximum

Energy poverty policy is not implemented in the Czech Republic. Energy expenses are part of the total dwelling cost (rent, heating, drinking water, sewage, electricity, refurbishment fund contribution) which are subsidized according to the rules of the national social system.

43. Should have further measures tackling energy poverty been included in the EPBD?

2500 character(s) maximum

Some Member states have their own Fuel Poverty Strategies, and are best placed to set the level of ambition and policies to support this. Fuel poverty is mainly a topic of social politics and hence a strong national topic. It has an impact also at energy efficiency improvement.

44. Has tackling energy poverty been a requirements when constructing new buildings and renovating existing buildings in Member States?

2500 character(s) maximum

No.

45. Are energy costs for heating and air conditioning being made available to interested buyers/tenants?

2500 character(s) maximum

Partly yesy some cost effective measures are not feasible due to the national legislation – national preference of district heating systems based on coal vs. smalll gas boiler houses for individual buildings.

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

Directive 2009/28/EC on the promotion of the use of energy from renewable sources ('the RES Directive') requires Member States to introduce in their building regulations and codes appropriate measures to increase the share of all types of renewable energy in buildings. One possible measure is Demand Response, which is a set of time-dependent programme activities and tariffs that seek to reduce electricity usage and provide control systems that encourage load shedding or load shifting at times when the electricity grid is near capacity or electricity prices are high. Demand Response helps to manage building electricity costs and to improve the reliability of the electricity grid.

By December 2014, Member States must, in their building regulations and codes, require the use of minimum levels of energy from renewable sources in new buildings and in existing buildings that are subject to major renovation. These provisions are complementary to the Near Zero-Energy Building (NZEB) requirements in the EPBD, which set clear obligations to reduce the primary energy consumption of buildings and recommend that the resulting nearly-zero or very low amount of energy needed should be covered to a very significant extent by energy from renewable sources. The Roadmap to a Resource-Efficient Europe (COM (2011) 571) proposed that buildings should be renovated and constructed with greater resource efficiency. While the Energy Efficiency Directive ('the EED') and the EPBD have an impact on building and construction activities they are not designed to provide an overall life-cycle approach. For newly-built NZEBs, from a life cycle perspective, the share of embedded energy is almost as great as the share of energy consumed in the building's use phase.

46. What are the best policies at district and city level to increase energy efficiency in buildings? Have specific targets on renewable energies in buildings been included?

2500 character(s) maximum

There is no district or city level policy regarding energy efficiency of buildings, thus, no specific targets have been set on renewable energies. However, community energy approach or supply of small RE technologies would help.

47. On the basis of existing experience, are provisions on targets or specific requirements for new buildings, beyond the current NZEB targets, missing in the EPBD which could help achieve the energy efficiency 2030 target? If so, in what types of targets or requirements?

2500 character(s) maximum

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 be beneficial.

48. Which building sectors have been addressed as a priority (public/private, residential/non-residential, industry, heating & cooling)?

2500 character(s) maximum

Public, then private residential. Almost no influence on industry.

49. Has having no EU set targets (indicative or binding) for the sustainable public procurement of NZEB buildings by public authorities affected the development of NZEBs?

2500 character(s) maximum

Yes, as its absence means there is a reduced market pull for high performing NZEBs which would also serve to stimulate learning across the entire NZEB supply chain.

50. Has the EPBD framework improved the self-consumption of electricity in buildings?

2500 character(s) maximum

Not as effectively as it could. This step is more suitable for office and commercial buildings. The question is whether not to go the way of total ecological building certification.

51. Does the EPBD address the issue of embedded energy? If so, in what way?

2500 character(s) maximum

No, embedded (embodied) energy is not sufficiently covered by EPBD also data at the national level is missing.

52. Is demand response being stimulated at the individual building level and if so, how?

2500 character(s) maximum

Yes, with national supporting programs for thermal renovation of residential buildings and by awareness of quality.

53. What obligations are missing at EU level and national level, and at regional and local level to meet the goals of the EPBD?

2500 character(s) maximum

Mainly the increasing the awareness is missing to stimulate the market.

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

The EPBD focuses on reducing energy demand and increasing energy efficiency and the share of renewable energy consumption in buildings (mainly on-site or nearby).

Alongside this, reducing transport needs, promoting active mobility, public transport and e-mobility in cities are important policy levers for achieving long-term European policy objectives in the field of climate change, energy and transport. Targeted use of information and communications technology will enable smart solutions that bring together different physical infrastructures and operational technologies. This would facilitate a better quality of services at lower cost, enabling better maintenance planning, for example, and approaches to investment that are focused on real needs.

When examining energy efficiency and renewable energy supply, the considerations at district and city level are different from those at building level. Heating and cooling networks can play an important role in improving the energy performance of buildings, but are also dependent on advance planning and adequate implementation (both at city and district level). Solutions for local renewables, co-generation and storage have in many cases proven to be more cost-effective at district level than at the level of individual buildings.

The EPBD is an instrument that could be used to address the differences at district and city level, and help Member States to develop a comprehensive strategy

54. What are the best policies at district and city level for increasing energy efficiency and use of renewable energy in buildings?

2500 character(s) maximum

Ultimately the best policies are 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 activities such as support of net-grid, support of hybrid networks and electromobility.

55. Are there any separate (new) obligations set at city and district level missing from the EPBD which would help increase energy efficiency and use of renewable energy in buildings?

2500 character(s) maximum

A requirement for urban energy master planning to precede the establishment of building related improvement initiatives and the deployment of new buildings. No, there are no separate obligations set at city level.

56. How has the information exchange on smart technologies which contribute to compliance of the EPBD, been promoted in cities?

2500 character(s) maximum

Some cities have their energy agencies. Promotion is made mostly by NGOs/association as well as information exchange. Very good platform is Healthy Cities of the Czech Republic Network. Information can be exchanged via the Smart City working group as well.

57. Are smart meters and their functionalities contributing to meeting energy efficiency targets and the proper implementation of the EPBD? Are other targeted meters for heat, gas and water such as those for electric meters needed?

2500 character(s) maximum

Smart meters are very good basis for smart buildings, but they have no direct impact on energy efficiency targets so far.

58. Has the promotion of smart cities, smart buildings, sustainable transport solutions, smart mobility, and similar initiatives been linked with the EPBD and its aims? If so, how?

2500 character(s) maximum

Smart buildings have been part of the EPBD promotion - rated with the highest energy class. Yet the connection is very loose.

59. Have obligations been set at a national/regional level in relation to buildings and district heating and cooling, or in relation to buildings and storage? Why/Why not?

2500 character(s) maximum

Regional energy policies usually set the requirement to connect the new construction to the DH if available in the region. DH connection is not required if the building energy needs are fully covered from renewable. No requirement on district cooling.

60. What incentives are missing, that would help promote efficient district heating and cooling or meeting the goals of the EPBD?

2500 character(s) maximum

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.

61. Have cost-optimal policies been devised that improve the performance of buildings so that they use less heating and cooling, while ensuring a decarbonised energy supply?

2500 character(s) maximum

No, these policies have not been developed.

62. Does the EPBD and its definition of NZEB reflect the requirements that could derive from the energy systems of nearly zero-emissions districts and cities?

2500 character(s) maximum

Yes, via sharing the energy. Only it has missed the connection to mobility.

H. Awareness, information and building data

Public information and awareness play a key role in improving energy efficiency in privately-owned buildings. There is a need for clear and accessible information for citizens, professionals and authorities to enable them to evaluate the energy performance of buildings. If this information is provided in similar formats it would make it easier to compare energy performance and, in particular, help identify best practice solutions, as almost 90% of building floor space in the EU is privately owned (and over 40% of residential buildings were built before 1960). The following questions focus on your experience of the information provided and your suggestions for improving the information flow.

63. What do you think of the quantity and quality of information on the importance of energy efficiency provided to consumers by:

1. the European Commission?

2500 character(s) maximum

Quantity and quality provided by the EC is enough.

2. national authorities?

2500 character(s) maximum

Generally relatively poor, includes: compliance with national legislation and interests, national statistics, national and regional Best Practice, technology news and innovations, regions comparison, financial schemes, subsidy programmes

3. regional authorities?

2500 character(s) maximum

Generally very poor, includes: regional character, support of cities and communities, local examples, strategies for region and micro-regions

4. local authorities?

2500 character(s) maximum

Generally very poor, includes: local character, support of communities, companies, families, strategies for city, streets (districts), typical buildings, family, company etc. Examples from the city, influence to the local environment

5. local companies?

2500 character(s) maximum

Not good enough, possibly only technology news and examples and concrete costs calcualtions

64. Has the directive promoted information on opportunities for consumer-friendly smart meters and interoperable energy efficient appliances?

2500 character(s) maximum

No.

65. What relevant building data has been collected at EU and Member State level, and city and district level? Who has access to this data?

2500 character(s) maximum

There has been a representative survey of building stock in 2004 and partly in 2011. Authorities have access to the results; detailed information has been published. E.g. type of heating, fuel type, building size, number of floors, flats area, number of flats, etc. Czech Statistical Office collets the data, some data are available in tables. The data mining is not user friendly. At the level of the Member state (CZ), the data from energy audits has been collected. Energy audits have been carried out for all buildings with annual energy consumption higher than 700 GJ. State energy inspectorate has access to this data.

66. How can data on the energy performance of a building and its related renovation work, across its life cycle, best be managed and made available?

2500 character(s) maximum

It 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.

67. Has building data harmonisation been achieved?

2500 character(s) maximum

No.

68. Is there a need for a central EU database of EPCs and qualified experts?

2500 character(s) maximum

Probably not, the addition the EPC processing is not uniform.

I. Sustainability, competitiveness and skills in the construction sector

The construction sector plays an important role in the European economy, generating almost 10% of GDP and providing 20 million jobs, mainly in micro- and small businesses. Designers, architects, builders, inspectors and certifiers, financiers, and national and regional supervisory authorities need to have the necessary skills and qualifications to ensure buildings are built effectively and using renewable energies. The sector is still largely craft-based, and there is huge scope for efficiency gains and more user-friendly retrofitting services as part of more industrial approaches, and through financial/planning/construction/maintenance package solutions based on strategic partnerships between SMEs and financing providers.

Through the EU's BUILD UP Skills initiative, between 2011 and 2013, energy efficiency skills needs and gaps for blue collar workers in the construction sector were identified in 30 countries (EU, Norway and the Former Yugoslav Republic of Macedonia). Each of these countries has produced a detailed status quo analysis with the participation of all main public and private stakeholders. From 2013 the BUILD UP Skills initiative has focused on the implementation of the national status quo analysis by setting up national training and qualification programmes for blue collar workers. These programmes have been put in place in 21 EU countries. With the launch of Horizon 2020, a new topic (EE4) on construction skills is now targeting training needs for both blue and white collar workers. Five projects focusing on skills in the construction sector will run until 2018.

The competitiveness of construction companies is an important issue, not only for growth and employment, but also to ensure the sustainability of the sector. The sector could contribute significantly to job creation by increasing its activity in promising areas such as the renovation of buildings. Construction and use of buildings in the EU account for about half of all extracted materials and energy consumption. 5—10% of total energy consumption across the EU is related to the production of construction products. The goal of the European Commission is to help the sector become more competitive, resource-efficient and sustainable. The EPBD is an instrument that could help work towards this goal.

69. How does the construction sector cost-effectively demonstrate and check compliance with the EPBD while also upgrading the skill and knowledge of tradespeople and professionals?

2500 character(s) maximum

The best communication channel are professional associations, educational projects. Very suitable is utilization of expert workshops, conferences, websites. The Czech Republic has still considerable reserves in this area.

70. Would it have been useful to extend Eurocodes to include energy performance in buildings and other relevant aspects? If so, why?

2500 character(s) maximum

Yes it would. Because of higher pressure on member states. If the evaluating matrics are correct, it makes sense when evaluating metrics are uniform.

71. Are energy, materials, waste and water use addressed in the EPBD?

2500 character(s) maximum

Besides energy only very marginally. There should be applied more LCA / ecodesign principles.

J. Buildings systems requirements

The EPBD requires Member States to set minimum energy performance requirements for technical building systems (means technical equipment for the heating, cooling, ventilation, hot water, and lightning or for a combination thereof, of a building or building unit) in existing buildings. National provisions should not target specific products only (e.g. boilers) but should instead address building systems while also taking into consideration the building as a whole. Whilst the Ecodesign Directive governs the placing on the market of individual products, the EPBD sets requirements for their energy-efficient performance as part of the technical systems serving a building. The EPBD also requires regular inspections of heating and air conditioning systems. While the Directive does not specify what would be regarded as a 'regular inspection', it is the view of the European Commission services that inspections carried out at least every 7–8 years would be considered acceptable, whereas anything less frequent than every 10 years is likely to be problematic.

72. Based on existing experience, do you think the setting of minimum requirements in the EPBD for technical building systems is missing? Would have technical building systems minimum requirements contributed to the improvement of buildings' energy performances?

2500 character(s) maximum

Unlike regular inspections of heating and air conditioning systems this measure makes sense.

73. Based on existing experience, do you think in the EPBD minimum requirements for technical buildings systems focussing on other factors than heating, air condition, large ventilation systems and domestic hot water e.g. certain building categories, building size, etc., is missing?

2500 character(s) maximum

No.

74. Based on existing experience, do you think in the EPBD requirements is missing for regular inspections of the technical building systems to ensure:

a. that systems' performance is maintained during their lifetime?

2500 character(s) maximum

No.

b. that owners/occupiers are properly informed about the potential improvements to the efficiency of their systems?

2500 character(s) maximum

No, it does not. This is covered by regular safety or service inspection.

c. that replacement/upgrading of the technical building systems is triggered?

2500 character(s) maximum

Yes.

75. Have inspections required by the EPBD, been incorporated into or more tightly linked to other inspection/certification/energy auditing activities and schemes under other EU or national directives?

2500 character(s) maximum

No, it need to be linked better.

76. Are the requirements for building elements set by Member States optimised to avoid market barriers limiting the installation of building products complying with EU requirements/standards e.g., under eco-design requirements?

2500 character(s) maximum

Yes.

K. Operational management and maintenance

After the completion of development and/or renovation works, buildings still use energy in a way that impacts building occupants and operators (e.g. via energy costs). Ongoing operation is a key part of a building's life cycle and is related to the goal of building NZEBs by 2020.

77. Based on existing experience, does the EPBD promote the key ways to ensure that buildings meet stringent efficiency targets in their operation?

2500 character(s) maximum

In the field of households and residential buildings, yes.

78. Based on existing experience, does the EPBD promote the best way to close the gap between designed and actual energy performance of buildings?

2500 character(s) maximum

In the field of households and residential buildings, yes. Partially in office and commercial buildings

79. Based on existing experience, are the provisions provided by the EPBD to stimulate a proactive, innovative maintenance market effective?

2500 character(s) maximum

Yes.

L. Further Comments

Please include any further comments that have not been covered in the consultation

5000 character(s) maximum

Contact

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