
Cefic Response to the EC Public Consultation on the Energy Performance of Buildings Directive (EPBD)

The EPBD has been effective in promoting energy efficiency in new buildings, but a more concerted effort is required to improve the energy efficiency of existing building stock. The EU must work to ensure long-term investments in energy efficiency in buildings by coming forward with a vision for the whole building stock translated in individual goals and renovation plans.

A. Overall Assessment

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

The EPBD has begun a process of change in the construction sector by influencing planners and investors to take more in to account the need for wide-spread and better energy efficiency measures in new and currently existing buildings. However, it remains too early to conclude if the EPBD will be successful in achieving its stated goals due to the slow uptake of measures and the current rate of renovation in the building sector.

The EPBD has also drawn attention to the fact that as a major source of direct and indirect CO₂ emissions, the building sector must contribute to the 2030 and 2050 GHG reduction goals. We support the role the EC plays in directing the EU-28 when it comes to improving standards, with the EPBD playing the central role in providing the stimulus to effect change in the building sector.

It is unfortunate that there remain Member States who have not yet fully implemented the Directive, slowing progress within the construction industry and (although outside the scope of the Directive) has done little to stimulate improvements in the current building stock (either through renovation, demolition / new construction) has been disappointing.. We encourage the EC to work closer with Member States to ensure full implementation of the EPBD is completed swiftly.

It is also clear that because of the nature of Member States interpretation and transposition of Directives in to national law it is very difficult to compare one country to the next in terms of energy performance standards for buildings.

Other points include:

- Residential consumers have difficulty in calculating their energy performance standard, and being able to translate that in to the real energy cost of a building;
- Most of the national energy performance standards represent a market barrier to innovative solutions that are not sufficiently considered in the calculation method, for example Phase Change Materials;

- Members States are issuing energy performance certificates even though some standards are not stringent enough and the relationship between the certificate and the energy use is not sufficiently clear;
- Whilst attaining an energy performance certificate is the prime goal, it is difficult to gauge if it encourages further efficiency measures that go 'above and beyond' the EPC;
- Most Members States have targets for all new buildings to be "nearly zero energy" by 2020, however, there is no one clear EU definition of "nearly zero", & Member States fail to properly define criteria for cooling demand to prevent overheating.

2. Has it helped improve energy efficiency in buildings?

Combined with other factors like higher energy costs and the growing concern of climate change (changing habits of consumers), the EPBD has been effective in promoting energy efficiency in new buildings, but a more concerted effort is required to improve the energy efficiency of existing building stock.

Likewise, awareness in the whole value chain on the need to improve energy performance is growing. An example of this is in the area of heating. Similarly, the improvement in lighting and electronic appliances is mainly due to measures like eco-design. One area still in need of step-change progress is cooling that currently is not sufficiently addressed.

Future potential remains however, and the EU must work to ensure long-term investments in energy efficiency. As such a vision for the whole building stock translated in individual goals and renovation plans is recommended.

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

More data collection related to renovations across Member States is needed in order for a clear analysis on the impact of the EPBD. The gathering of such information is not harmonised across the Member States. Renovation work also takes place where permits have not been granted, and therefore information is not available.

In future the EPBD should look to ensure that renovation work is implemented to bring existing buildings in line with NZEB or any performance level that is compatible with a long-term vision of the EU building stock.

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?

The EPBD requires Members States to establish financing schemes to fund energy efficiency projects. Unfortunately, it is often the case that national funding schemes fail to provide long-term certainty to investors. This in turn creates barriers to the success of such schemes, and stymies the drive to greater long-term energy efficiency improvement.

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

Some Member States (where there are clear and ambitious political frameworks) have shown that it is possible to drive cost-effective improvements in buildings. However, overall the cost effectiveness of the EPBD is difficult to determine at a macro-scale. The EC could consider an approach that allows for micro-

scale decision making on best practices based on final energy usage goals rather than on procedure or technology specific requirements.

Also, certain cost-effective solutions such as cooling (like PCM), are not sufficiently considered in most MS standards. In this case the EPBD should seek to further support the application of such cost-effective solutions.

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?

Unfortunately the level of ambition (as viewed in the requirements laid down in national law) remains markedly varied between EU Member States. Whilst the Directive allows the freedom for countries to take into consideration their own specific local conditions, a revised EPBD should ensure a better comparability between Member States and strive to implement similar levels of ambition from countries within particular geographic zones (i.e. those with drier warmer climates, those with wetter cooler climates).

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

While the EPBD has influenced new building construction to a great degree, it has not effectively addressed the structural issues necessary to fully influence existing building renovation rates. More support to the separation of cost vs. benefit in the owner/renter relationship is necessary to help influence the renovation rate. Additionally the complexities of requirements within the EPBD serve as an incentive to avoid renovation rather than as a stimulant to perform efficient renovation.

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

Yes, in most of the Member States, though mainly related to energy for heating. Energy performance standards are less effective regarding cooling and summer overheating.

9. Will the 'nearly zero energy buildings' targets be met? Why/Why not?

At this early stage it is difficult to predict if the NZEB targets will be met, especially because in many MS's these targets and timelines have not been transposed yet. Also, the target is not clear enough – leaving it open to too wide an interpretation by Member States. Several countries have actually failed to define the term.

In order to make these targets reachable, the EC could consider a simple system such as one which works on the basis of avoided emissions from buildings rather than a complex set of requirements. A technology neutral, performance based set of requirements would also help to create a more certain investment environment for the construction of NZEBs.

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?

The overall quality of EPCs is too low, especially for existing buildings. In several Member States they are only seen as an administrative obligation and therefore are failing to influence the secondary market and the rental market.

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

The EPBD has worked well to reduce the energy consumption for heating in new buildings thanks to the introduction of calculation methods and requirements.

Where improvements can be made is:

- Summer conditions, where there is a need to drive energy efficient solutions for cooling. The EPBD should look to implement indicators for overheating and cooling demand, and calculation methods that consider passive cooling solutions. Annex 1 of the current EPBD is not sufficiently precise

However, the EPBD is not working well enough for the existing building stock. In order to improve that, a long-term strategy is needed, supported by individual renovation strategies and adequate financing schemes.

Finally, the complexity of the EED, delays in transposition, and general lack of understanding of requirements are all areas that could be improved. Addressing structural gaps within the building sector would also help to create appropriate investment opportunities through renovation.

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)?

Yes, The EPBD will contribute to the EU reaching its overall GHG and renewable energy goals. However, greater impact could be achieved.

The EU should look to present a long-term vision for the building sector which goes beyond merely encouraging only short term cost-efficient measures. Suitable financial support for such a goal would be necessary to incentivise efficiency measures.

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?

As a Directive the current EPBD allows for Member States to implement the rules in their own way. Whilst this may be a good approach for some Articles, there are also areas which need to see a more harmonised approach. For example a common NZEB-definition or a mandatory consideration of summer comfort should be clearly defined and regulated at the European level.

Because of the different local circumstance (climate, building typology, availability of district heating, building ownership...), each Member State or region should have enough freedom in the way they achieve the long-term targets, but should be obliged to define the renovation strategy to achieve it.

14. Are the objectives of the EPBD delivered efficiently?

Member States have implemented the EPBD in ways that suit their own national situations which means comparison between countries is difficult (some MS even implement at a regional level such as Belgium, and Italy) and a lack of harmonisation could be seen as inefficient.

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

The administrative burden is reasonable for the objective.

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

The administrative burden is reasonable for the objective.

B. Facilitating Enforcement and Compliance

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

In several Member States, the implementation of the EPBD has not been completed, and it is still not fully compliant.

In most cases, compliance is verified at the design stage for new buildings. However, compliance between the design and the execution, and the quality of the execution can be seen as more complex to verify. This problem is not specific to EPBD but to quality control in construction in general.

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

No. Too many vague terminologies are used, such as: “nearly”, “very high”, “very low”, “to a very significant extent”, “nearby”. A clear EU-wide definition needs to be established.

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

No. Further specificity in the requirements and the calculation methodology are required in order to meet the NZEB goal. Currently the NZEB target is only a high level aspirational target, with no technical definition of what “near-Zero” means. In order to spur investment this should be clarified.

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

a. Minimum energy performance requirements in new buildings?

The definition needs to ensure the exact kind of indicator which should be part of the definition. Besides an indicator on maximal primary energy that is included in all definitions, several important indicators are included only by some of the Member States, such as:

- Indicator on the building envelope performance
- Overheating indicator

Additional to total primary energy needs, we recommend also to include an indicator for the building envelope (e.g. maximum heating need), an indicator for the risk of overheating / summer comfort, and a requirement on maximum cooling need.

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

It is often the case that buildings receive only periodic, and often small renovations during their lifetimes. However, it should be promoted that during any renovation there is potential to improve the energy efficiency levels of a building, helping reach a long-term goal for the European building stock. In order to achieve this, the EU should seek:

1. To express long-term and intermediate emphasis for the EU building stock to become more efficient.
2. That Member States define a strategy (down to the specific building level).
3. To evolve the energy performance certificate into an individual renovation strategy to achieve a specific building improvement target.
4. To require that each renovation is compatible with this individual renovation strategy
5. To incentivize renovation.

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.)?

The energy performance requirements for specific parts of the building envelope or systems are currently not sufficient as they do not help to ensure a holistic view. A requirement to include this work in a long-term renovation strategy would be needed.

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

The establishment of a minimum renewable energy requirement has led to confusion over the NZEB target. The primary target should be to reduce energy needs. Increasing energy efficiency should always be considered as a valid alternative to any renewable energy requirement.

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

Recommendations are only based on the current situation and the short term cost-efficiency of the possible solution. The EC should revisit this issue so that recommendations are based on the desired future status of a building.

f. Regular inspections of heating and air-conditioning systems?

N/A

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?

N/A

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?

We are not aware of any measures.

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

There is a large disparity in indicators and calculation methods between Member States making comparisons extremely difficult.

Likewise, calculation methods do not always consider innovative solutions and are therefore a barrier for further innovation.

A solution would be to improve the calculation method, another to allow the use of dynamic simulation modelling as alternative calculation method for innovative technologies.

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?

We would strongly support defining long-term objectives for the building stock that would translate in to the required energy performance level for each building. Once the required energy performance level is defined for each building, a renovation strategy can be defined (as part or improvement of the Energy Performance Certificate) in order to indicate how to meet this required level.

Financial incentives would be needed to support such a renovation strategy, especially if a long-term strategy is to be implemented rather than just a short term goal.

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

No, there is a general lack of data on renovation activities and uptake of energy efficiency measures implemented. There is also a lack of centralized and harmonized information at EU level.

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?

No. There is a lack of long-term vision in the Member States and at EU level.

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?

Partially. EPCs will only play a full role in increasing the rate of renovation when they are oriented towards achieving a long-term target.

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?

Yes, the goal should also be to include a reduction in total greenhouse gas emissions and energy use of the building stock.

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?

These obligations should be part of a complete strategy of which the first step is a set of overall EU target.

1. To express long-term and intermediate emphasis for the EU building stock to become more efficient.
2. To define a strategy (down to the specific building level), for each Member State or at a regional level.
3. To evolve the energy performance certificate into an individual renovation strategy to achieve a specific building improvement target.
4. To require that each renovation is compatible with this individual renovation strategy
5. To incentivize renovation.

Obligations should therefore be:

- At EU level : to define an overall national strategy for the building stock

- At Member State level : to define the best strategy to achieve the targets, considering the local conditions, and to establish single building target
- At building level: to have an individual renovation strategy (improved version of the energy performance certificate) and to ensure that each renovation is following this strategy.

Any renovation obligations for building owners should be avoided. Member States or region should define the best way to achieve the target and to incentivize renovation. Market based incentives are preferred in order to achieve maximum energy savings with minimal cost to society.

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

No. And even not between regions in Member States where implementation of EPBD is done at regional level. It leads to situation where within the same real estate market several different EPCs are applied with different formats and classes.

Harmonizing current EPCs should however not be considered as a priority. Improving the quality and transforming it into individual renovation strategies for each building is the primary need, and would deliver a more harmonised system across the EU.

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

N/A

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?

No.

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?

Yes, provided EPCs are improved to include a renovation strategy.

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

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

- a. The lack of long-term vision is missing: e.g. building owners should be encouraged to implement efficiency measures to reach a future goal, and see available financing as an opportunity to help reach such a goal
- b. The lack of stability in current financing schemes, due to a lack of stability in national budgets and policy planning. Financing schemes should be supporting the long-term goal and the renovation strategy as part of a stable framework.

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

A one-stop-shop is missing in this process where building owners can find all the relevant information on regulation and incentives, find assistance (e.g. architect, energy advisors construction products and systems manufacturers, construction companies and installers etc)

It is also increasingly important to address some of the structural issues hindering investment. These include unclear or inconsistent policies, a distinct gap between the investor and the beneficiary of efficiency projects in a lease/rent situation, a skilling-up of the workforce and increasing the capabilities of accreditors, and incentives to overcome the inefficiencies and disruption involved with a prolonged renovation period.

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

In general it is those that bridge the gap between owners/renters in existing building stock (commercial and residential), create viable investment cases for use of industry heat as input into DHC systems, and are planned for the life of the efficiency investment understanding the long payback period of many energy efficiency investments. Likewise, pre-financed works that are paid back directly via the energy bill is another possibility.

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

Subsidies for prime energy, from either fossil fuels or renewables, can influence consumption of energy and not necessarily the efficient use of energy. Subsidies in general should be used for pre-commercial technologies, be time limited, and phase out as technologies become commercially viable.

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

For space heating and cooling, the priority should be to renovate buildings to reduce the energy demand (increasing of energy efficiency). Combining this goal with renewable energy project is increasing the need for financing and an obligation to do it is an additional barrier.

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?

Investments are often stimulated via subsidies.

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?

In some cases such as in Germany, the problem is solved via rental regulations, that allow the owner to increase the cost of rent a proportion to the energy savings made. In other cases, the rent is including the heating cost, which encourages the owner to invest in energy efficiency.

41. Was

a) the scaling-up of existing funds sufficient to meet the goals of the EPBD?

N/A

b) the creation of aggregated facilities (through standardisation of Energy Performance Contracts and clarification of regulatory, fiscal and accounting issues) sufficient to meet the goals of the EPBD?

Accounting rules for public authorities do not favour energy efficiency investments, as these investments can't be amortized over a long period and contribute directly to the public debt.

E. Energy Poverty and Affordability of Housing

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

N/A

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

The EPBD has proposed multiple pathways to energy efficiency, but has focused on several renewable pathways that currently are more expensive than existing technological solutions to providing energy to the at-risk population. To help alleviate energy poverty the EPBD should focus on the pathways of lowest cost to society.

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

N/A

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

N/A

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

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?

For space heating and cooling a renewable energy target should not necessarily be included as the priority for buildings. Additional requirements on renewable energy usually increase the level of investment required. Policies and investment should first and foremost focus on energy efficiency of buildings, which can also be seen as a lower cost option.

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?

In future any new targets and requirements should focus on existing buildings. Likewise, the EC might wish to systematically include an indicator for the building envelope, an indicator for the risk of overheating / summer comfort, and a requirement on maximum cooling need.

For the time being though, it would be advisable to allow the existing targets to become fully active in Member States prior to introducing overlapping targets. The current NZEB concept is of a sufficient ambition level.

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

The priority was on heating. More attention should be paid on cooling and passive cooling solutions.

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?

Public authorities have an important role to play as early adopter of NZEB buildings to support market development. This role has proven to be a key success factor where it has been considered seriously.

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

N/A

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

When addressing embedded energy, the energy that a particular material or device prevents from being used during its use phase should count against any energy used during its creation. This concept of avoided emissions will be critical towards reaching energy efficiency goals.

Embedded energy should not be considered a primary focus.

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

No.

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

There should be obligations at all levels to have a long-term target for energy efficiency in the building stock, supported by intermediate targets and a binding renovation strategy.

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

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

The overarching objective should be to increase energy efficiency, be it at building level or at district or city level.

Heating and cooling policies will of course need to differ based on location and the normal climate conditions, just as energy efficiency policies will vary based on quality of existing building stock and local renovation rates. To that end local policies must have the ability to remain flexible, but also broadly align on key points. Local policies should align with the concepts of technical neutrality, incentives and accreditation for avoided emissions through efficient material use, and a preference for market based solutions.

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?

N/A

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

N/A

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 have specific provisions such as those for electric meters needed?

Smart meters are an example of a technology that can be of assistance to improving energy management and occupant awareness.

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?

Buildings form an integral part of the energy system and will have a key role to play, as long as they are designed in a way that minimizes their own energy consumption.

Secondly, interfaces need to be created to enable their full integration in smart environments. E.g. buildings installed with power generation capacities can be used to recharge electric cars.

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?

N/A

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

When planning efficient district heating networks, the long-term implications of reducing the heating / cooling demand of buildings through renovation needs to be taken into account. Otherwise, generation capacities and networks might be put in place that in fact de-incentivise ambitious renovation projects.

Requirements regarding the energy efficiency of the district heating and especially the insulation level of the heat distribution pipes are also needed to ensure good efficiency of the heat distribution.

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?

N/A

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?

Yes. Minimizing a building's energy demand as a priority, and covering the remaining demand by renewable energy sources (as much as possible) could contribute to the creation of zero-emissions districts and cities.

H. Awareness, Information and Building Data

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

a. the European Commission?

N/A

b. national authorities?

National and regional authorities should promote further the societal importance of energy efficiency in buildings, provide good neutral technical information about solutions, and avoid misleading information from other parties.

c. regional authorities?

National and regional authorities should promote further the societal importance of energy efficiency in buildings, provide good neutral technical information about solutions, and avoid misleading information from other parties.

d. local authorities?

Local authorities have an important role to play to support citizens with specific information related to their situation and project.

e. local companies?

N/A

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

N/A

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?

There is a lack of harmonized and centralized 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?

The EPC should be further developed to become an individual renovation strategy.

Core data related to energy rating, improvement works already undertaken etc. should be made available in a public database.

67. Has building data harmonisation been achieved?

No.

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

More harmonization is needed as a primary aim.

I. Sustainability, Competitiveness and Skills in the Construction Sector

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?

N/A

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

No. Building energy performance has a far wider scope than the Eurocodes as they currently exist.

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

The scope of the EPBD is energy use of buildings. Other aspects of environmental impacts along with the life cycle are addressed by other initiatives (CEN/TC350 mandated by the Commission, GPP, Ecodesign, PEF, new resource efficient buildings project of DG Environment and DG Growth). The EPBD should not be expanded to include other areas.

J. Buildings Systems Requirements

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?

Minimum requirements for technical building systems are not required. The EPBD sets an overall target (NZEB), but leaves Member States / designers the choice of which measures to use in order to achieve the goal (building envelope, technical building systems, renewable energy generation etc.). This approach should not be changed.

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?

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?

This should be part of the normal system warrantee and maintenance programme.

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

This should be part of the improved EPC (individual renovation strategy).

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

This should be part of the improved EPC (individual renovation strategy). Replacement of technical building systems should always be integrated in a more holistic approach considering the more structural options to reduce the energy demand (building envelope, thermal mass,...).

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?

N/A

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?

N/A

K. Operational management and maintenance

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

Partially. A key way is to put the priority on structural solutions to reduce the energy demand (building envelope performance) and passive systems.

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

The EPBD does not include specific provisions for this issue. In-situ tests like the blower door test or co-heating test can be applied to control the performance of the envelope but at additional cost. Some tests are for some Member States required in national regulation implementing the EPBD.

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

N/A

L. Further comments

80. Please include any further comments that have not been covered in the consultation (5000 characters maximum)

In the last decades the European chemical industry has significantly reduced its primary energy consumption via a combination of process intensification and integration, novel energy-saving processes, catalysts, Combined Heat and Power (CHP) and progressive introduction of alternative (renewable) energy sources within the process cycle. The chemical industry is committed to further reducing its energy intensity.

The chemical industry is also a key enabler to smart and sustainable growth across all sectors making significant contributions as a supplier of energy efficiency solutions including in the construction industry, agriculture (including bio resources), information technology, automotive, aerospace, homecare products (e.g. washing clothes at lower temperature), textiles. Our smart solutions for energy efficient buildings include products such as chemical-based insulation products, which significantly reduce the energy needed to heat residential and commercial buildings.

As highlighted in the Energy Union communication of February 2015, the EU should place more emphasis on energy efficiency measures in areas where the potential is still largely untapped. As around 40% of all the energy used in the EU is used for buildings and little progress has been made to reduce this up to now, the opportunity to tap in to its immense potential should be supported.

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About Cefic

Cefic, the European Chemical Industry Council, founded in 1972, is the voice of 29,000 large, medium and small chemical companies in Europe, which provide 1.2 million jobs and account for 17% of world chemicals production.