



Committee of the Regions

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WORKING DOCUMENT

Commission for the Environment, Climate Change and Energy

Resource efficiency opportunities in the building sector

Rapporteur: **Borboly Csaba (RO/EPP)**
President of Harghita County Council

This document will be discussed at the meeting of the **Commission for the Environment, Climate Change and Energy** to be held **at 2.30 p.m.** on 16 October 2014 in Bologna (Italy).

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Reference document

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Resource efficiency opportunities in the building sector
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I. Introduction

1. The Commission communication focuses on sustainable buildings and develops the system established by the EU policy in this area. It provides a more detailed analysis of current aspects and proposes further steps in this area, with particular attention to construction and demolition waste.
2. The Commission considers that the sustainability aspects of the construction industry need to be integrated into one single system. The new holistic, technical approach seeks to integrate the following areas which have already been analysed:
 - a. total energy use
 - b. material use and the embodied environmental impacts
 - c. durability of construction products
 - d. design for deconstruction
 - e. management of construction and demolition waste
 - f. recycled content in construction materials
 - g. recyclability and reusability of construction materials and products
 - h. water used
 - i. use intensity of buildings
 - j. indoor comfort.
3. The Commission considers that a system of easy-to-use indicators available and accessible to the public sector is needed. This would be very useful for justifying investment decisions and would clearly help reduce the environmental impact of construction.
4. The Commission wishes to work on this single system and the relevant indicators over the next few years, providing it with appropriate R&D instruments, particularly the Horizon 2020, COSME and LIFE+ programmes and the ESI Funds.
5. The Commission communication lists many factors, with particular emphasis on construction and demolition waste and recycling thereof.
6. The Commission communication does not refer to the role of local and regional authorities in this policy field.

II. Issues relevant to the Committee of the Regions

1. In previous opinions, the Committee of the Regions has voiced support for energy efficiency, resource efficiency, reducing environmental impact, green buildings, the sustainable construction industry and waste management. In a similar vein, it now wishes to give its views on resource efficiency in the construction sector.

2. Local and regional authorities play a key role in reducing environmental impact, which is not limited to decision-making: local and regional authorities are in a position to make a proper assessment of appropriate measures adopted in support of energy and resource efficiency, by carefully assessing local features and aspects.
3. Priority must be given to rural regions and small and medium-sized towns, as these regions are less efficient than large towns. Their defining features need to be specified in aid systems, regulations and R&D to prevent them being severely handicapped.
4. According to the results of the market analysis to which the Commission refers, the cost of investing in green construction is only a few percent higher than in traditional construction. However, this is only partly true: the cost of investing in such construction can be many times higher in developed regions than in less developed regions. The technical context of this construction needs to be linked to the economic context. However, in addition to the scale of current and expected differences, it is strongly recommended that less developed regions be made aware of the challenges they are liable to face.
5. The Committee proposes separate analyses in order to determine whether, when construction costs are presented and it is preferred also to present the external costs of the full lifecycle from the point of view of resource efficiency, this might result in a disproportionate rise in costs which would exacerbate the housing problems affecting these regions and hinder the construction industry and economic development.
6. It must not be forgotten that the construction industry is a tool, that buildings can have a town planning, architectural, social, economic and environmental dimension, and that particular importance must be attached to the problem of sustainability. It must be underscored that buildings do not in themselves have a good or harmful effect on their environment, other than in the context of the complex interrelations referred to above. The Committee therefore proposes that the approach centred on buildings be further developed to incorporate the new contexts.
7. Industrial activity linked to construction materials from the green construction industry and demolition would create many jobs. Developing regional and local action plans on these issues, together with appropriate human resource solutions, would contribute substantially to achieving resource efficiency targets.
8. The physical characteristics of construction materials change rapidly after manufacture, and this process does not stop once the materials are in place. It is therefore important to analyse whether, after demolition, certain materials are suitable for reuse and whether it is possible to introduce a separate certification system.
9. Re-purposing construction materials from demolition sites, for example for building roads, should be treated as a key research area. Many construction materials contain harmful,

hazardous or contaminating components and appropriate answers have not yet been found as regards gauging, and where necessary reducing, the inherent risks.

10. Rediscovering traditional construction technologies and materials is a great opportunity for the European construction sector: they are a model of the way in which local resources can be used for efficient solutions geared to local conditions.
11. Analysis is needed of whether renovating existing buildings is an appropriate solution in every case: existing buildings in many regions of Europe, including public buildings, can be renovated to provide a suitable degree of comfort only after substantial investment. These situations draw attention to the fact that, while renovating existing buildings is always more resource efficient than demolishing them or building new ones, the aesthetic, architectural and social value of a new building is much greater. Therefore, alongside the purely technical aspects, consideration must also be given to the architectural, social, economic and environmental aspects.
12. The Committee would point out that as regards construction, the Commission document does not mention the use of renewable energy, although such energy clearly contributes to a building's sustainability. Solar and wind power systems integrated into buildings would greatly reduce the environmental impact throughout the lifecycle, particularly as regards CO₂ emissions. An accurate analysis must take account of the materials and energy used to generate electrical units and energy.
13. Before the holistic approach to resource efficiency can be used, an analysis is needed of results to date of design practices hinging on resource efficiency, and the conditions of the transition to the proposed new procedures. This analysis must also cover higher education and specialised training courses and steps taken to retrain engineers and architects.
14. The communication emphasises that disseminating best practice plays an important role in these provisions. In this respect, cooperation projects between groups of regions with similar features must have priority. In this field, individual best practices and implementation approaches are not feasible: local and regional actors must learn from one another which are the most suitable solutions, and pooling local knowledge from different regions could provide added value. Rural regions and regions with small towns must receive the same attention as regions with large towns, as owing to low population density they are at a disadvantage in terms of resource efficiency. New solutions are imperative in this field.
15. Clarification is needed regarding the difference between terms used interchangeably: passive house, environmentally friendly house, sustainable house, low energy house and zero carbon house. Clarifying these definitions is plainly a matter for R&D; progress is needed urgently as the Commission wants to adopt key measures in this field.

16. Many local and regional authorities have observed that the Member States view institutions established in the area of energy efficiency rules merely formally, as a system alien to the design culture of their regions or countries. This attitude must be addressed as regards resource efficiency, and with this in mind the Committee proposes that a governance policy analysis be carried out.
17. Some regions do not have appropriate knowledge and skills, and so the technology gap – when more developed regions pull ahead – may increase, particularly in less developed regions. With a view to solving this problem, these regions must be supported by cooperation mechanisms focusing on difficulties related to the transfer of knowledge. Consideration must be given to the possibility of maximising the transfer of knowledge regarding design and construction to regions with insufficient skills.
18. Alongside the reuse of metals and glass, which is covered in detail in the communication, the research highlights promising data regarding concrete and wood. As construction materials, concrete and wood are suitable for reuse, easily sorted and simple to use. Local and regional analyses regarding the reuse of these materials should therefore have priority.
19. With regard to the use of wood and other natural construction materials, it must be borne in mind that growing needs in the construction industry will lead to local or indirect changes in land use. It is important that this industry does not repeat past mistakes as regards the production of biomass for energy.
20. Alongside resource efficiency procedures, training for engineers, architects and economists should also include procedures to reduce the amount of additional resources used as a result of changes to the initial plan.
21. With regard to resource efficiency and specifically in the case of recycling construction and demolition waste, the costs and impact of sorting and transport must also be taken into account. Fully standardised analysis procedures are therefore necessary, and policy and R&D processes must also integrate the comparison of options factoring in transport and on site or local recycling capacity.