Position Paper

European Insulation Manufacturers Association

Brussels, 20 June 2008

Subject: Moving Towards Very Low Energy Buildings by 2015

1. The EPBD recast - the golden opportunity to introduce requirements

One of the prescribed actions on buildings in the European Energy Efficiency Action Plan[1] is for the European Commission to develop before 2009 a strategy for the more widespread deployment of very low-energy or passive houses by 2015.

The current recast of the EPBD [Directive 2002/91/EC] offers ***the opportunity*** which must not be missed by the European Commission to follow up on the ambition highlighted in the European Action Plan. Eurima calls on the Commission to introduce a request to the Member States to:

- Draw up a national strategy towards the very low energy buildings to become the standard for residential and non-residential buildings by 2015;
- Draw up a national long term strategy for upgrading the energy performance of the entire existing building stock;
- Introduce minimum energy performance requirements to the building envelope as well as other energy related components when renovation/replacements are taking place;
- Request the public sector to lead by example and show the way on very low energy buildings;
- Ensure that the Energy Performance Certificate enables a clear identification of very low energy buildings
- Introduce initiatives on up-front financing;
- Increase and improve the training and education of all actors involved in the building chain.

2. The houses of tomorrow are built today

With new buildings representing on average 1% of the buildings stock, and a renovation cycle for existing buildings being not less than 25 years[2], there is no time to loose in implementing building regulations containing very high requirements in energy efficiency for both new and existing buildings of all dimensions. This is critical for Europe in order to achieve the ambitious target of reducing CO_2 emissions by 60% to 80% in 2050 compared to the 1990 level. Actually a well acknowledged target for buildings, which represents 40% of energy consumption, is to reduce its emissions by at least 80% compared to those of 1990.

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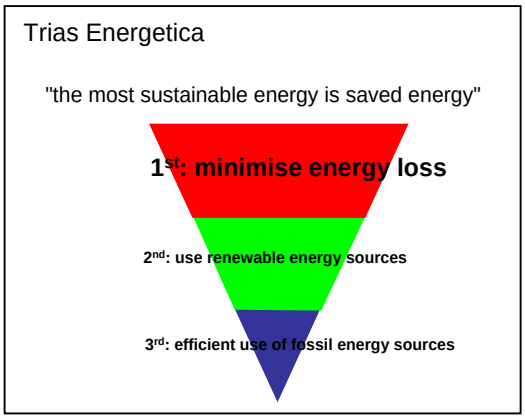
Furthermore, several recent reports - McKinsey[3], CEPS[4] - demonstrate that improving energy efficiency in buildings, specifically through insulation, is the most cost-effective measure and provides the greatest benefits for society, addressing critical issues such as security of energy supply or fuel poverty.

3. New buildings lead the way

Several Member States such as Austria, Denmark, France, Germany, The Netherlands and the UK (England & Wales) have already approved a national strategy to ensure that new buildings follow the standard of very low energy buildings (or positive energy buildings) by 2020 or earlier.

Eurima welcomes these approaches, providing they respect the principle of the *Trias Energetica*. First: reduce energy consumption as much as possible, second: use renewable energy, and third: only use high efficient fossil fuel system if needed. Eurima strongly believes that agreeing and communicating a national strategy is the first move to change the direction and to prepare all the stakeholders in the building sector towards this important development, which needs to take place in a relative short time frame.



Whilst one could try to give a unique characterization of very low energy building, a quick overview of the already existing programmes amongst Member States demonstrates that such definition would not serve the purpose. Actually climate conditions, construction methods and materials, building types and national ways of defining requirements are, amongst others, elements that play an important role in the development of a scheme in any given Member State.

Nevertheless, Eurima believes that *Very Low Energy Buildings* can be defined as: *buildings that are designed to provide high standards of energy efficiency and low environmental impact. They are commonly designed without traditional heating systems and without active cooling, resulting in a saving of energy consumption of 70 to 90% compared to the existing building stock. Main elements to contribute to this low energy performance, taking into account high level of requirements for health, comfort and cost-efficiency, are:*

- *Very high level of energy performance of the building envelope,*
  - *High thermal resistance*
  - *Avoidance of thermal bridges,*
  - *Excellent air-tightness,*
- *Controlled and energy efficient ventilation.*

Examples of such buildings are: Passiv Haus (Germany), Bâtiment Basse Consommation/Haute Qualité Environnementale et Energétique (BBC/HQEE) (France), "zero" carbon house (UK) … as described in the SBi/EuroACE report[5].

4. Existing buildings must follow

By far the major part of energy used in buildings is consumed in the existing building stock. Therefore, it is essential also here to ensure that the energy performance is upgraded as much as technically and economically possible ***every time*** a renovation/replacement takes place in a building. The report Ecofys VII[6] shows the minimum level of ambition Member States should have for cost effective renovation; but only very few Member States have plans for strengthening the requirements for existing buildings when renovated or when a national goal setting for a renovation plan for upgrading the existing building stock.

5. Eurima calls for action

While most of the technical solutions for the deployment of very low energy buildings exist, there remain significant barriers to this becoming the standard across the EU. A lack of regulatory requirements specifying that level of energy performance, a lack of knowledge and understanding of the benefits (financial, comfort, limiting fuel poverty …) and lack of skills and training within the building chain are some of the major barriers to a greater take-up of this approach to buildings.

Also it is important to recognize that very low energy buildings need to be seen in the light of the development of sustainable construction, and as such life cycle costing should be promoted as the unique calculation method for evaluation of projects.

As such the re-cast of the EPBD is a golden opportunity to give at EU level the kick start of this critical development.

References
(1) COM(2006)545
(2) Ecofys III to V reports
(3) Mc Kinsey, A cost curve for green house gas reduction (2006)
(4) CEPS, Revisiting EU policy options for tackling climate change (2005)
(5) SBi/EuroACE report National European strategies to move towards very low energy buildings (March 2008)
(6) Ecofys VII, U-values for better energy performance of buildings (2007)