

The role of fenestration for less energy consumption and greenhouse gas emission reductions

Energy saving and CO₂ reduction - a common goal

Energy use in the buildings sector (residential and commercial) is responsible for about 40% of final energy consumption in the EU. Therefore the buildings sector is a key in addressing the challenges of decreasing EU energy dependence, reducing CO₂ emissions and increasing the share of renewable energy.

The energy consumption from heating and/or cooling of buildings has to be reduced to take care of the natural resources and to limit greenhouse gas emissions. Renewable energy from the sun, wind, water and geothermal power must increase.

Fenestration does include windows and curtain walls as well as accessories, but also installation, glazing, sun screening, etc. It is one of the important key players as part of the building shell and essential for achieving the ambitious targets. Innovative fenestration products have a better thermal performance and gain more energy to substitute energy for heating and lighting. The right combination of glazing and sun shading is required to prevent high energy use for cooling and to ensure summer comfort. The whole energy approach for new buildings is very important and the same principles should apply when replacing windows to improve energy consumption of the building.

Therefore the fenestration sector is of prime importance for realizing strategic objectives of European Energy Policy, as outlined in the Commission Communication “An Energy Policy for Europe” (COM (2007) 1).

About EuroWindoor

EuroWindoor is an umbrella organization of the European associations of fenestration and door sector FAECF, FEMIB, EPW and UEMV for the three frame materials metal, wood and plastic and the infill material glass. On a European scale EuroWindoor represents more than 50.000 companies and more than one million employees. The European window industry is mostly an industry which consists of small and medium sized companies, with local employees. In view of the construction supply chain, the window industry supplies local construction companies with building components and is thereby a part of a local supply chain with local employment.

EuroWindoor will make a contribution to the protection of the environment by promoting the use of the most energy efficient windows and facades solutions for each application. Energy conservation and the reduction of greenhouse gas emission are not national, but cross-border assignments. Therefore EuroWindoor has developed and published this European position.

EuroWindoor entirely supports energy saving issues i.e. materials and techniques and the continual development and application of these in the fenestration industry. Therefore the focus is on environmental issues by contributing to energy effective construction solutions and dialogue with legislative bodies regarding rules and regulations for glazing applications in architecture and construction.

EuroWindowor want to create a positive market environment for windows, doors and curtain walls in Europe without nationally created barriers to trade and superfluous bureaucracy. The methods and actions used to achieve the objectives of energy saving and greenhouse gas emission reductions must be based on European common technical methodologies.

This will encourage the fenestration industry to generate a wide range of creative solutions for the urgent questions regarding our climate combined with positive market results.

Development of European legislation for CO₂ reduction

EuroWindowor welcomes the current initiatives of European Commission for CO₂ reduction like recasting the Energy Performance of Buildings Directive (EPBD) (2002/91/EC) and revising the Energy Labelling Directive (92/75/EC).

The fenestration industry feels responsible for giving good answers and good solutions to the different urgent questions that our European community is confronted with, such as safety, health, environment and of course energy.

Therefore EuroWindowor and its member organisations take the opportunity to react to this responsibility and are willing to contribute and cooperate to find good and sustainable solutions for energy control, energy conservation, energy generation from renewable sources, energy storage, etc.

Technically speaking, we are talking about photovoltaic elements, light regulation, shading, smart cooling systems, etc.

Multidisciplinary solutions are offered in which different systems co-exist, including electronics, facade technology, ventilation technology, entrance technology, etc.

Energy characteristics for efficient fenestration products

An important focus area is that fenestration products such as windows have different energy performances depending on climate, season, area and orientation. A window is for example related to energy transmission; solar gains reduce the need for heating, solar control and natural ventilation reduce or may prevent the need for air-conditioning and finally a window supplies daylight thus saving energy used for lighting.

In the end requirements for fenestration products should consider information on

- the seasonal energy balance (energy losses vs. solar gain) in kWh/m²,
- the ventilation provided by the window,
- daylight figures and the savings from the utilization of daylight in kWh/m²
- and other important characteristics that are relevant during the lifecycle of a building and the fenestration products

Regulation that takes into consideration all the above items can contribute to climate change, energy gain and energy saving, competitiveness and a sustainable product policy. However if it does not take into consideration all the above and if it does not consider different climatic conditions and characteristics, it can have the opposite effect.

EuroWindoor position, 5th November 2008

EuroWindoor will support the legislation with appropriate proposals where needed, such as a practical solution from industry for a tool for communication of energy efficiency. A proper energy label shall consider the above mentioned situation and focus on end users and those areas where the end users can make a difference when buying. For new windows in new buildings, the decision is often taken by the professionals and in that case the technical values from the CE marking are sufficient.

There is a need for a coordination of the different requirements in the different directives. At the moment manufacturers are preparing themselves for CE marking under the CPD as well as they are preparing themselves to supply the construction sector with information needed from the EPBD. Both the CPD and the EPBD are undergoing revisions that will affect the fenestration industry asking for more information and communication.

Therefore a coherent product policy from the commission is needed and must take into consideration the many different pieces of information the industry is asked to give. This policy must at the same time make sure that the technical basis is identical in the member states in order to secure an open internal market for construction products.

On the long term it will be valuable that the product policy is stable and focused on both short and long terms. With this in mind the long term program from now until 2020 will be beneficial.

Brussels, 5 November 2008

EPW: European Plastic Window Association
FAECF: Federation of European Window and Curtain Wall Manufacturers' Association
FEMIB: Federation of the European Building Joinery Associations
UEMV: European Glaziers Association

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