Reviewing the Energy Efficiency Framework to generate a window replacement wave

The window, door and flat glass industry welcomes the publication of the Commission's communication "A Renovation Wave for Europe – greening our buildings, creating jobs, improving lives"[1]. The objective to double the annual energy renovation rate of residential and non-residential buildings by 2030 represents a crucial step toward a Climate Neutral Union and will trigger the transformation of the European building stock as well as create associated green jobs in a post-COVID 19 context, particularly if combined with ambitious national recovery plans with a strong renovation focus.

The window value-chain, which is made of both SMEs and larger firms, plays a strategic role for the sustainable future of the construction industry. The European building stock is equipped with very inefficient windows, mainly single glazed or early uncoated double glazing[2]. **By introducing measures in support of window replacements, national Recovery and Resilience Plans have the potential to deliver long-term energy savings and CO_2 emission reduction.** We are convinced that the 7 areas of intervention identified by the Commission in the Renovation Wave to scale up efficient renovation and trigger the transformation of the building stock will bring powerful tools to rapidly improve the energy efficiency of European buildings and their windows. **To materialize, the Renovation Wave needs to be backed by an ambitious revision of both the Energy Efficiency Directive and the Energy Performance of Building Directive.**

Revision of the Energy Efficiency Directive (EED)

Due to the significant share of emissions originating from the building stock (app. 36% of EU emissions), the green transition towards a climate neutral European Union will rely on our ability to renovate the energy inefficient buildings at national level (currently representing app. 75%[3] of EU buildings).

This constitutes a key success criterion to achieve Union's objective of reducing GHG emissions by 55% by 2030, but also to successfully increase the share of green energies by securing a reduced and stable energy demand.

We support the objective of reducing GHG emissions by 55% and we **recommend introducing in the EED an indicative sector-specific sub-target** for the building sector, to be at least equivalent to the Union's headline energy efficiency target.

[1] COM(2020) 662 final (link)

[2] As reported by the European Commission in A Clean Planet for all (COM(2018)773:2018-10-28), the average insulation performance of windows in the EU building stock is estimated to be U_W = 3.4 [W/(m²K)]

[3] Buildings Performance Institute Europe (BPIE), 2017 (link)

The energy conversion of European buildings strongly depends on our ability to convert the entirety of the building stock. National Governments and local administrations should show the way and increase the renovation rate and the quality of renovation of schools, hospitals and social housing, in addition to the public-owned buildings, as suggested by the Commission in the Renovation Wave communication.

We strongly support the extension of the exemplarity principle to all governmental and public buildings. In Article 5 of the EED, the renovation rate should be adjusted to follow the global renovation objectives of the building stock – the latter being re-evaluated to meet the 55% target of emissions reduction.

Energy Performance of Buildings Directive (EPBD)

The Energy Performance of Buildings Directive will remain a key instrument to secure the technical implementation of the EED's objectives for the building sector. Although several articles have reached an optimal level (e.g. Article 9 on nearly Zero Energy Buildings), some areas of the directive need to be revised to meet the new climate ambitions of the Union and secure that the building sector delivers the expected reductions on greenhouse gas emissions.

The unprecedented level of ambitions set by the Climate Target Plan 2030 requires to prevent all possible gaps between planned and reported energy savings. For the building sector, the most versatile parameter often is the behavioural factor which leads to a well-known "rebound effect". In many situations, the efficiency of energy saving policies is downgraded by the mismatch between theoretical and actual user behaviour (e.g. a home being heated up to 21°C instead of 19°C, increased light consumption due to poor daylight conditions, additional consumption for air conditioning due to overheating etc…).

To avoid a rebound effect on energy renovation, the human factor and its actual comfort expectations should be considered.

We recommend securing the health of European citizens **by introducing in the EPBD a recommendation for Member States to consider health aspects** (daylight, indoor air quality, summer comfort etc..) when setting energy performance requirements in energy renovation policies.

The window, door and glass industry also would like to highlight an important factor to secure the efficiency of energy renovation: the energy balance principle.

Windows and glazed facades enable the intake of free solar gains and daylight, therefore contributing to reduce the heating and lighting needs of a building. Besides, they can also be used to keep buildings cool in summer and mid-seasons by using dynamic solar shading, dynamic glazing, solar control glass and ventilative cooling. Typical requirements are usually merely based on heat losses and are therefore not suitable for the evaluation of transparent components of the building envelope. Modern windows are the dynamic part of the building

envelope with changing characteristics and should be regarded as such when setting minimum requirements for energy renovation (e.g. window replacement).

We recommend supporting via the EPBD **the implementation of energy requirements for renovation based on energy balance** instead of heat losses only to better account for the windows' contribution and to have a more realistic evaluation of expectable energy savings.

Finally, the strengthening of incentives for private building owners will necessarily remain a major instrument to stimulate energy renovation in Europe. The successful implementation of Energy Performance Certificates, energy audits, and the ongoing introduction of building renovation passports will enable Member States to identify key renovation steps and trigger points for each building of the European stock.

Several opportunities within a building's lifespan – like the selling, renting or change of building use – are currently missed to embed energy renovation work, and the idea of introducing phased mandatory **Minimum Energy Performance Standards** (MEPS) will strongly support the energy conversion of the building stock.

We support the phased introduction of mandatory Minimum Energy Performance Standards to trigger energy renovation when key building transformations occur, while financially supporting the renovation works via incentives for private owners.

About

ARGE as the European Federation of Associations of Locks and Builders Hardware Manufacturers was established in 1956 and represents nowadays – through its members, the respective national trade associations – more than 300 companies in 13 countries. These companies develop, manufacture, and distribute mechanical and electro-mechanic/ electronic door and window hardware. ARGE's engagement is focused on European standardisation, EU legislation, specific aspects of digitalisation, and on environmental performance of building hardware.

European Aluminium, founded in 1981 and based in Brussels, is the voice of the aluminium industry in Europe. We actively engage with decision-makers and the wider stakeholder community to promote the outstanding properties of aluminium, secure growth and optimise the contribution our metal can make to meeting Europe's sustainability challenges. Through environmental and technical expertise, economic and statistical analysis, scientific research, education and sharing of best practices, public affairs and communication activities, European Aluminium promotes the use of aluminium as a material with permanent properties that is part of the solution to achieving sustainable goals, while maintaining and improving the image of the industry, of the material and of its applications among their stakeholders.

EPPA, the European PVC Profiles and related Building Products Association represents the manufacturers of PVC window systems and related building products in Europe. About 25,000 employees process about 1,4 million tonnes of PVC creating a turnover of €4 billion with profile systems and building products. Based in Brussels, EPPA provides a common platform for bundling national activities in the fields of PVC window technology, recycling, environment and public affairs.

ES-SO, the European Solar-Shading Organization, is the European umbrella of national solar shading and roller shutter trade associations based in Brussels. The shading industry employs over 450.000 people, mainly in Europe-based SME's, and has annual sales approaching 22 billion euros. Its high growth potential in energy savings and comfort in buildings can provide thousands of new, green jobs, widely spread over the member states, with offering of made-to-measure, smart solar shading to local markets.

EuroWindoor AISBL was founded as an international non-profit Association, in order to represent the interests of the European window, door and facade (curtain walling) sector. Our 19 national associations speak for European window, door and facade manufacturers that are in direct contact with consumers, and thereby having large insights on consumers' demands and expectations. We are at the forefront interacting with dealers, installers and consumers buying windows and doors, and the companies behind the associations cover selling all over Europe.

Glass for Europe is the trade association for Europe's flat glass sector. Flat glass is the material that goes into a variety of end products, primarily in windows and facades for buildings, windscreens and windows for automotive and transport as well as solar energy equipment, furniture and appliances. Glass for Europe brings together multinational firms and thousands of SMEs across Europe, to represent the whole building glass value-chain. It is composed of flat glass manufacturers, AGC Glass Europe, Guardian, NSG-Group and Saint-Gobain Glass, and works in association with national partners gathering thousands of building glass processors and transformers all over Europe.