

EU waste legislation & building glass recycling

Adapting the Waste Framework and Landfill Directives to increase glass recycling

At a time when Europe's flat glass manufacturers are faced with high energy costs, grasping the energy saving potential associated with an increase use of recycled glass could become a cost-effective solution to support industrial competitiveness. By way of an increase in the share of post-consumer recycled glass used in flat glass manufacturing, primary raw materials would also be saved and CO₂ emissions avoided. Thanks to enhanced recycling, European flat glass manufacturers could contribute further to a competitive low-carbon and resource-efficient Europe.

To that end, Glass for Europe reflected internally on policy measures to improve the dismantling and separate collection of end-of-life building glass. It came to the conclusion that **the current regulatory framework does not provide incentives for the recycling of building glass**. Consequently, policy measures at both EU and national level are needed to increase building glass waste recycling, reduce virgin raw material use and reduce the carbon intensity of flat glass manufacturing.

As far as the EU waste legislation is concerned, Directive 2008/98/EC (Waste Framework Directive) and Directive 1999/31/EC (Landfill Directive) needs to be revised to virtually eliminate landfill deposit of recyclable glass, improve collection of building glass waste and increase recycling rate. **The upcoming revision of the EU waste legislation thus provides a timely opportunity to increase building glass recycling in Europe.**

Current situation of end-of-life building glass

Despite its recyclability, end-of-life building glass is almost never recycled into new glass products. Instead it is very often crushed together with the other buildings materials and put into landfills or recovered together with other C&D waste. This is facilitated by its inert characteristics. It currently has a low market value because there is a lack of properly organised collection systems to generate what would be a valuable glass-making 'secondary raw material'. Most of the flat glass products used in buildings could be dismantled, collected and recycled in glass furnaces.

Key EU legislative requirements to increase building glass recycling

- ▶ Set individual targets on specific types of C&D waste such as glass, in line with the general 70% target for C&D waste.
- ▶ Introduce mandatory provisions on dismantling and sorting of glass in renovation and demolition works.
- ▶ Mandatory audits should be carried before demolition or renovation of large tertiary buildings.
- ▶ Ban landfill deposit of economically recyclable glass such as single clear glass panes and insulating glass units.
- ▶ Complement legislative requirements with **technical recommendations for Member states on collection, sorting and recycling of end-of-life building glass** from the EU Commission.



1. Recycling target for waste glass and on-site separation of C&D waste

The Waste Framework Directive (WFD) sets a general 70% target for reuse and recycling of C&D waste. As glass represents less than 1% of C&D waste, this target does not serve as an incentive to set up flat glass collection scheme. In theory this target can be achieved with 0% of flat glass being recycled. The lack of recycling target on specific types of building waste (such as glass) acts as a disincentive to glass sorting, since glass is mixed with other building materials instead of being separately recycled.

Against, this backdrop, Glass for Europe believes that **individual targets on specific types of waste (such as glass) should be set in the revised waste framework directive** in line with the global 70% target on C&D waste. As an alternative to an individual target for glass waste, **separation of C&D waste on-site including provisions to dismantle the windows or glazing and recover the glass through adequate collection schemes should become mandatory.**

2. Mandatory audits for large tertiary buildings demolition or renovations

Audits before demolition or renovation of large tertiary buildings could significantly boost recycling of windows or glazing. Audits should lead to recommendations and obligations as to the sorting and recycling of glass material per type of glass (e.g. clear, laminated, enamelled, etc.), when it proves both feasible and cost effective. These types of audits are already required in France and in the UK as part of granting of demolition permits. **A mandatory requirement to carry out audits before tertiary building demolition or renovation should also be introduced in the revised WFD.**

3. Ban landfill disposal of end-of-waste flat glass products

The majority of C&D waste flat glass is currently not recycled in any glass furnace and goes to landfill, despite the fact that a significant proportion could be easily treated and recycled. Often, landfill costs are cheaper than the cost of collecting separately and treating building glass, particularly in countries with low landfill taxes/fees in place.

Consequently, glass that can fulfil the end-of-waste criteria after economically viable treatment should be banned from landfill. **A ban on landfill disposal of single clear glass panes and insulating glass units should be introduced in the revised version of Directive 1999/31/EC.**

4. Technical guidance for Member states

Glass for Europe also suggests that in addition to the legislation, EU guidance is drafted with technical recommendations for Member States on collection, sorting and recycling of end-of-life building flat glass across Europe. For example these guidance documents could describe available technical solutions for dismantling glazing and/or windows, separating glass from window frames and treating flat glass cullet.

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 entire building glass value-chain. It is composed of flat glass manufacturers, AGC Glass Europe, Guardian, NSG-Group, Saint-Gobain Glass Industry and Siseçam-Trakya Cam, and works in association with national partners gathering thousands of building glass processors and transformers all over Europe.
