

Session	Decarbonizing the Glass Industry (II)
Date	APRIL 11, 2025
Time (CET)	13:45 - 14:00
Chair	Değer Demircan Acıroğlu



The Decarbonisation Pathway for Used Glass

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Biography

Steve Whettingsteel is founder and CEO of Krysteline Technologies Ltd, developer of specialised engineered solutions for the waste management sector, particularly in the recovery and refinement of glass.

In the 1990s Steve was working as a marine engineer on cruise ships, there was an urgent need to change and develop the way glass recycling was being handled onboard. This led to him developing “glass implosion”, the unique, patented technology behind Krysteline’s machinery.

Since its formation in 1999 Krysteline has been exporting, with machines being sold around the world. Early customers including; the British Antarctic Survey, a laboratory in the Falkland Islands, super yachts, hotels and pharmaceutical companies.

Fast forward 20+ years and thanks to years of ongoing investment in research and development Krysteline has also developed an enviable reputation for high quality refined glass suitable for cullet, cement, foam glass, fertilizers, water filtration and expendable abrasives.

Abstract

Glass recycling must evolve to support a more viable low carbon approach. One motivated to change, by setting ambitious carbon reduction targets which mostly revolve around key cornerstones of fuels, lightweighting and efficiency. Can there be significant short-term gains by revisiting our cullet and recycled glass strategy? How can the industry prepare for a positive future, where all glass products have a low or negative CO₂ footprint?

A great challenge for glass recycling is the understanding of CO₂ expenditure in the creation and delivery of cullet to a furnace, in many cases the true cost of CO₂ in its recycling is greater than its claimed benefit.

Sustainable low CO₂ solutions for all glass entering a recycling facility are required for the long-term viability of the glass industry, respecting and monetising all glass equally. Innovation and progressive thinking are developing a clearer strategy for glass recycling, one focused on low CO₂ and the recycling of all types of glass including containers, automotive, flat glass, pharmaceutical and photovoltaic (PV) cells.

We consider how a more inclusive CO₂ strategy with cooperation with academic research facilities and small businesses will impact the recycling landscape by facilitating the discovery and development of ultra-low CO₂ products for current and emerging markets. We will review how the location of glass and facilities affects the viability of use and look at the complexities and market dynamics required to establish a fair and logical national and international approach of glass decarbonization. Resolving to determine a strategy based on CO₂ instead of tonnage and considering CO₂ at every stage from conception along its journey through distribution, filling, packaging, distribution, waste collection, processing at an MRF, transport to beneficiation. To be legislated in a logical way, to mandate change, and motivate policies based on location, available markets, and of course CO₂.

