

Industrial Accelerator Act

Recognising the strategic importance of the flat glass sector

Glass for Europe supports the objectives of **strengthening EU manufacturing capacity**, accelerating industrial investment in strategic sectors, and stimulating demand for European-made products.

While the Industrial Accelerator Act may contribute to these objectives, it should sit within a **broader industrial strategy to strengthen industrial resilience and Europe's strategic autonomy**. To create a business environment more conducive to manufacturing investments, Europe needs measures to (i) secure access to affordable low-carbon energy, (ii) reform the EU Emissions Trading System (ETS), (iii) increase the availability of flat glass waste for closed-loop recycling and (iv) use trade defence instruments when faced with unfair competition. These priorities must be advanced in parallel to the Industrial Accelerator Act.

Flat glass is a strategic sector for Europe with over 15 billion euros of turnover, 500 thousand direct and indirect jobs across a diverse value-chain. It is made of world leaders in flat glass manufacturing, but also tens of thousands of small and medium size enterprises processing flat glass to transform it into advanced glazing solutions, as well as glass treatment and recycling facilities.

Altogether, the sector produces innovative products designed to avoid, or significantly reduce, carbon emissions over their lifecycle. The three main end-use sectors for flat glass are those targeted by the Industrial Accelerator Act:

- **Construction**, with high-performance glazing and facades (~80% of the sector's output);
- **Automotive and transport**, with windscreens, backlights, side windows and other safety components for cars, rail, buses, trucks, aviation, etc. (~15% of output);
- **Net-zero technologies**, with solar glass for photovoltaic and renewable energy applications.

Flat glass is one of the very few irreplaceable materials in most of its applications. As the EU pursues sustainable growth, resilience and strategic autonomy, flat glass innovation, performance and demand are expected to grow.

Yet, despite these contributions, **the flat glass sector faces major challenges** that put its European industrial base at risk. High energy, carbon and production costs, combined with aggressive competition from imports from East Asia, undermine the sector and the strategic value chains it supplies.

The Industrial Accelerator Act could provide partial support to the sector with demand-side measures, together with streamlined permitting procedures and the new Industrial Acceleration Areas. These measures however need to be better calibrated to ensure effectiveness without red tape.

Glass for Europe recommends adjustments to the EC proposal in four domains:

1. Enable **accelerated and simplified permitting without creating additional burden** (*Chapters II & V*)
2. **Consider an extension of lead markets to flat glass products, in a second phase** (*Art. 16*)
3. Improve the **definition of 'Made-in-Europe' vehicles** to incentivise the use of European automotive glazing as a strategic component of zero-emission vehicles (*Annex III*)
4. **Fine-tune definitions of 'Union origin' and low-carbon products** for greater effectiveness and avoid red tape linked to duplication of methodologies and standards (*Chapter II*)

1. Enable accelerated and simplified permitting without creating additional burden

- ▶ **Annex I** – Keep “(e) *Manufacture of other non-metallic minerals, as classified under NACE Code C23*” within the annex I for the entire flat glass value-chain to be eligible to faster permitting and Acceleration areas provisions
- ▶ **Chapter II** – Clarify that faster permitting provisions apply both to existing and new installations. If the end goal is to increase manufacturing capacity, the first priority must be to enable existing facilities to maintain their activity
- ▶ **Article 6** – The understanding of “*industry decarbonisation projects*” must not be limited to project aiming at reducing scope 1 emissions linked to flat glass melting. The regulation must consider projects aimed at installing on-site renewable energy, increasing cullet (waste and broken glass) collection and recycling etc, all key to decarbonising flat glass.
- ▶ **Chapter V** – Acceleration areas cannot be the sole recipient of favourable industrial conditions. The regulation must ensure that installations located outside of such areas do not suffer from complications or delays (e.g. regarding access to low-carbon energy)

Glass for Europe **welcomes the inclusion of the flat glass value chain** (both manufacturing and shaping and processing) **as part of the Annex I** which lists a wide range of strategic sectors eligible to faster permitting and Acceleration areas provisions. Flat glass is also covered in this annex under net-zero technologies as per the Net-Zero Industry Act.

Flat glass manufacturing is an energy-intensive continuous process, that runs 24/7, 365 days a year. It **depends on a continuous supply of clean and competitively priced energy and recycled glass**. The high temperatures required (1600C°) and the process emissions derived from the combustion of raw materials explains that deployable technologies for zero-CO₂ emission of flat glass do not exist yet. Yet, the European industry continues to research and trial new manufacturing technologies to massively reduce CO₂ emissions.

The **acceleration, simplification, and harmonisation of permitting procedures** are necessary for the flat glass industry to sustain its efforts. The IAA’s provisions aimed at streamlining permit-granting processes for industrial manufacturing projects, along with the establishment of acceleration areas, are a positive step. These provisions must be extended to existing facilities to ensure they can be upgraded and maintained when these require new equipment and permitting.

Co-legislators must ensure that these measures can effectively deliver improvements across the industrial base. In this respect, it is essential that ‘*industry decarbonisation projects*’ do not exclude de facto projects contributing to decarbonisation despite still using a share of fossil energy, such as ‘hybrid furnaces’. Decarbonisation projects must also consider the installation of on-site renewable energy and systems to increase the collection and recycling of waste flat glass, which constitute a strategic resource for the manufacturing of both flat glass and automotive glazing¹.

¹ The strategic nature of automotive glazing recycling has recently been recognized in the End-of-Life Vehicle Regulation with new obligations to dismantle automotive glazing and divert it to recycling streams.

2. Consider an extension of lead markets to flat glass products in a second phase

- ▶ **Article 16** – Add the flat glass industry to a list of potential industrial sectors that could be subject to demand-side measures in the future, after a thorough impact assessment and in conjunction with stakeholders

Despite its strategic nature for reducing the EU's energy dependence, strengthening its resilience, and helping to achieve its decarbonisation objectives, the flat glass sector is not included in Annex II - Low-carbon and Union origin requirements for energy-intensive industries.

The European Commission has justified the selection of industries targeted in the IAA as industries that are “essential enablers of the clean transition and vital to downstream industries such as construction, mobility, energy systems, and defence”. The **flat glass industry is also confronted with numerous challenges** considered in the selection, i.e. “declining production in Europe, slower decarbonisation investments and growing global competition and market distortions, such as unfair subsidies”².

The flat glass sector meets all the above-criteria and is strategic for Europe.

Flat glass products are essential to reduce CO₂ emissions in most of their applications to the extent that their demand in Europe is expected to grow as Europe pursues its sustainability objectives³. The importance of the flat glass industry has been recently reaffirmed in the *AccelerateEU* communication⁴, which recommends the large-scale deployment of high-performance windows as a key measure to reduce energy costs and increase the EU's resilience.⁵

Construction accounts for 80% of the output for the flat glass sector while **mobility accounts for 15% in volume**. Among the remaining share, the photovoltaic industry, defence and aerospace as well as electronics feature prominently.

Over the last four years, European flat glass production has decreased by over 25% in volume. This trend has coincided with a surge in imports of aggressively priced products from East Asia, particularly China. This market evolution slows down the European industry's investment capacity, which has negatively impacted its ability to maintain an ambitious decarbonisation trajectory.

Glass for Europe acknowledges the novelty and complex nature of the provisions on public procurement and public support schemes. EU authorities may therefore decide to test this new regulatory architecture on a limited number of sectors at start. However, the Industrial Accelerator Act should not establish **unjustified disparities between sectors** but rather ensure that incentives and resources to produce low-carbon materials are opened to all relevant industries.

² European Commission, Questions and answers on the Industrial Accelerator Act, https://ec.europa.eu/commission/presscorner/detail/en/qanda_26_516

³ It is estimated that a doubling of glazing renovation rate in Europe would trigger an increase in market demand for flat glass products of at least 66%. To meet this increase in building glass demand with EU production, the production capacity in the EU would need to increase to over 85 float lines.

⁴ European Commission, AccelerateEU – Energy Union - affordable and secure energy through accelerated action, https://energy.ec.europa.eu/document/download/7fac9eea-5717-4182-a368-bd68c427ff4c_en?filename=Communication.pdf

⁵ Beyond decarbonization and energy security, high-performance glazing contributes to building resilience as the first line of defence against warm and hot climates. It also facilitates grid transformation and grid robustness by reducing energy waste in buildings.

The IAA should foresee an extension of lead market provisions to other sectors after a thorough impact assessment and feasibility study conducted within a maximum of two years after entry into force. The flat glass sector should be listed among those industries that ought to **be studied for future Union-level demand-side measures**. The study should be based on **objective criteria** such as the ones listed in Art. 16 (2)⁶ as well as the indispensable role of products for Europe’s strategic autonomy and sustainability agenda. It should be designed in conjunction with relevant stakeholders to ensure effectiveness of the measures and minimal compliance burden and costs⁷.

3. Improve the definition of ‘Made-in-Europe’ vehicles to incentivise the use of European automotive glazing

- ▶ **Annex III, Parts I & II** – Set dedicated Union origin requirements for critical glazing components (windshields, windows, and glass canopies) or components whose treatment is regulated by the End-of-Life Vehicles Regulation’s Annex VII
- ▶ **Annex III, Parts I & II** – Harmonise all “made in the EU” rules for vehicles under one set of criteria, based on what is proposed by the European Commission

Glass for Europe **supports market activation measures** for the automotive value chain, including well-calibrated **Union origin requirements**.

For the IAA to consider vehicles to be “Made in the EU”, among other criteria, the vehicle must be *“assembled within the Union, the ratio between the total ex-works price of components originating in the Union and the total ex-works price of all components should be 70% or more, and some strategic equipment must originate in the Union.”*

Automotive glazing is a safety-critical component of vehicles with essential system-level functions that contribute to safety and advanced mobility. It enhances vehicle safety by enabling drivers’ visibility, protecting from external impacts, and mitigating risks during accidents. Advanced glazing systems are backboned to integrate cameras, sensors, and displays for Advanced Driver-Assistance Systems (ADAS) and automated driving. It also contributes to vehicles’ energy efficiency through solutions such as solar-control coatings and heatable layers for defrosting/defogging⁸

Yet, automotive glazing represents a relatively low ex-works price value in vehicles. For a standard vehicle, glazing usually represents 1% of the vehicle’s total economic value. A 70% threshold on ex-works price of components will therefore be of very limited impact for automotive glazing manufacturers.

Additional criteria must therefore be envisaged to support the European manufacturing of such critical components via either:

- A dedicated union-origin requirement for critical glazing components (windshields, windows, and glass canopies) in Annex III, Parts I & II.
- Or a union-origin requirement for automotive components whose dismantling and recycling in Europe is incentivised by way of the End-of-Life Vehicle Regulation, as is the case of

⁶ Technological progress, contribution of the requirements to the Union’s objective of economic security, resilience and climate neutrality, demand for the relevant products or technologies etc.

⁷ See annex I for further elements on the production of lower carbon products by the flat glass industry

⁸ For an overview of how advanced glazing can contribute to vehicles’ efficiency, see: Glass for Europe (2023), Advanced glazing systems to curb air-conditioning energy consumption, <https://glassforeurope.com/advanced-glazing-systems-to-curb-air-conditioning-energy-consumption/>

automotive glazing components. This would reinforce the sustainability and EU competitiveness pillar of the IAA beyond glass components.

Such a revised definition, including the 70% ex-works price ratio of components and a more targeted criteria should also be adopted for defining small zero-emission vehicles made in the EU (Annex III, part III) to achieve **a fully harmonised framework across the relevant legislations**, including on Clean Corporate Vehicles and CO2 emission standards for cars and vans

4. Fine-tune definitions of Union origin and low-carbon products

- ▶ **Article 7** – Precise the rule of origin definition to ensure that it cannot be easily circumvented
- ▶ **Article 8 (2)** – Ensure that content equivalent to EU origin provides from countries which have similar industrial sustainable measures such as an ETS system in place
- ▶ **Article 10** – Maintain the use of existing methodologies such as the Environmental Performance Declaration under the new Construction Products Regulation to define low-carbon products

The implementation of lead markets is intended to support European industries. The flat glass sector recommends calibrating the requirements for Union origin and low carbon to ensure their usefulness and functionality. The regulation must provide **clarity on the methodology and scope** and **prevent the creation of administrative burdens**.

Rules of origin (Art. 7)

To be consistent with a materials-based approach and a product sustainability dimension, **deviating from the standard rules of origin suggested in the EC proposal is desirable**. In the case of flat glass for example, it would make sense to define the **Union origin of flat glass products by looking at where the glass has been melted**. Such material-based approach is essential to ensure that future requirements apply across the entire value chain. Without such a definition, the system can be easily circumvented, for example, by importing float glass produced from outside of the EU and shaping or processing it within Europe for it to qualify as Union origin.

Countries within scope for Union Origin requirements (Art. 8)

Glass for Europe supports a narrower scope of countries qualifying as Union origin. Under the current proposal, too many third countries would qualify as 'Union origin' thus rendering the legislation somewhat meaningless. Alternatively, a scope limited to EU countries only would not recognise the continental nature of most material industries targeted by such a legislation.

Glass for Europe suggests that only products coming from **third countries implementing industrial sustainability measures comparable to those of the EU, qualify**. Materials and components originating from a sector that is covered by the ETS system in the EU; should qualify as Union origin only if comparable carbon pricing obligations are in place for the same process in the said third country. For instance, countries of the EEA, the UK, or Türkiye, all of which have or are putting in place equivalent carbon pricing systems would remain within scope. Such an approach would reinforce the Industrial Accelerator Act's sustainability pillar while preserving free and fair competition.

Low-carbon products (Art. 10)

There is **no EU-wide definition of what constitutes a "low carbon product"**. However, nearly all flat glass products that, are placed on the market for the building or automotive sector have an Environmental Performance Declarations (EPDs) based on EN or international standards.

These **EPDs will become mandatory** with the implementation of the new Construction Products Regulation, and they will be required for the calculation of building's whole life-cycle impact foreseen with the new Energy Performance of Buildings Directive. To ensure consistency and minimize compliance obligations, the IAA must be **aligned with pre-existing frameworks** and methodologies for carbon calculation and reporting. It is also essential that **classification systems** used for the purpose of the IAA account for the entire life cycle impact of products rather than an overly narrow embodied carbon value.

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 Şişecam, and works in association with national partners gathering thousands of building glass processors and transformers all over Europe.

ANNEX I

Lower carbon flat glass is characterised by significantly reduced embodied carbon compared to conventional alternatives, achieved primarily through **advanced manufacturing technologies** and **increased use of cullet** (recycled broken or rejected glass) in float glass production.

The **higher cullet content contributes to reducing the consumption of raw materials and energy** used in production and thus embodied CO₂ emissions. Currently, in a standard air-fuel fired furnace, approximately 30% of the flat glass sector carbon emissions come from the calcination reaction in the melting process of our raw materials hence part of the impact of cullet to lower this share of carbon emissions.

Lower carbon glass available on the market offers the same aesthetics, quality and technical performance as traditional float glass products. However, the uptake of low carbon products remains limited due to several key barriers:

- **Limited supply capacity:** Access to key enabling technologies and affordable low-carbon energy in the required scale, such as hydrogen, renewable electricity, and alternative fuels, remains uneven across Europe. Moreover, the availability of cullet on the market is insufficient to meet growing industrial demand, making it both difficult and costly to source the quantities required for low-carbon production. Price for cullet can vary widely (based on availability, proximity, demand etc.) and has been increasing over the last years hence higher production costs for these products.
- **Low-carbon product comparison tools:** Environmental Product Declarations (EPDs) are voluntary tools already made available by the flat glass industry. They offer a transparent and robust tool to report about environmental performance, including greenhouse warming potential, and their use will become even more mainstream to all construction products when implementing the new Construction Products Regulation and the recast Energy Performance of Buildings Directive.
Most low-carbon glazing products are defined as such by using EPDs to compare product offerings and substantiate the low-carbon claim. Rather than developing novel methodologies, EPDs' should be used if flat glass and glazing products become subject to lead market provisions.
- **Cost considerations:** Price nowadays dominates decision-making from clients, especially in today's depressed markets, leading to value engineering that can easily remove low carbon options down the supply chain.
- **Low sustainability literacy:** Understanding of sustainability varies widely across the construction sector, even within companies, limiting informed decision-making.

According to a study conducted by a Glass for Europe member¹ regarding architectural glass, 41% of UK-based architects and specifiers considered **cost compared with standard products as one of the main barriers**. A third (33%) said that a **lack of information or awareness** about sustainable glass options was a barrier, while the same proportion reported **resistance from clients**.

¹ Low-carbon glass is poised for growth, but barriers continue to affect adoption, 2025, <https://www.windownews.co.uk/low-carbon-glass-is-poised-for-growth-but-barriers-continue-to-affect-adoption/>