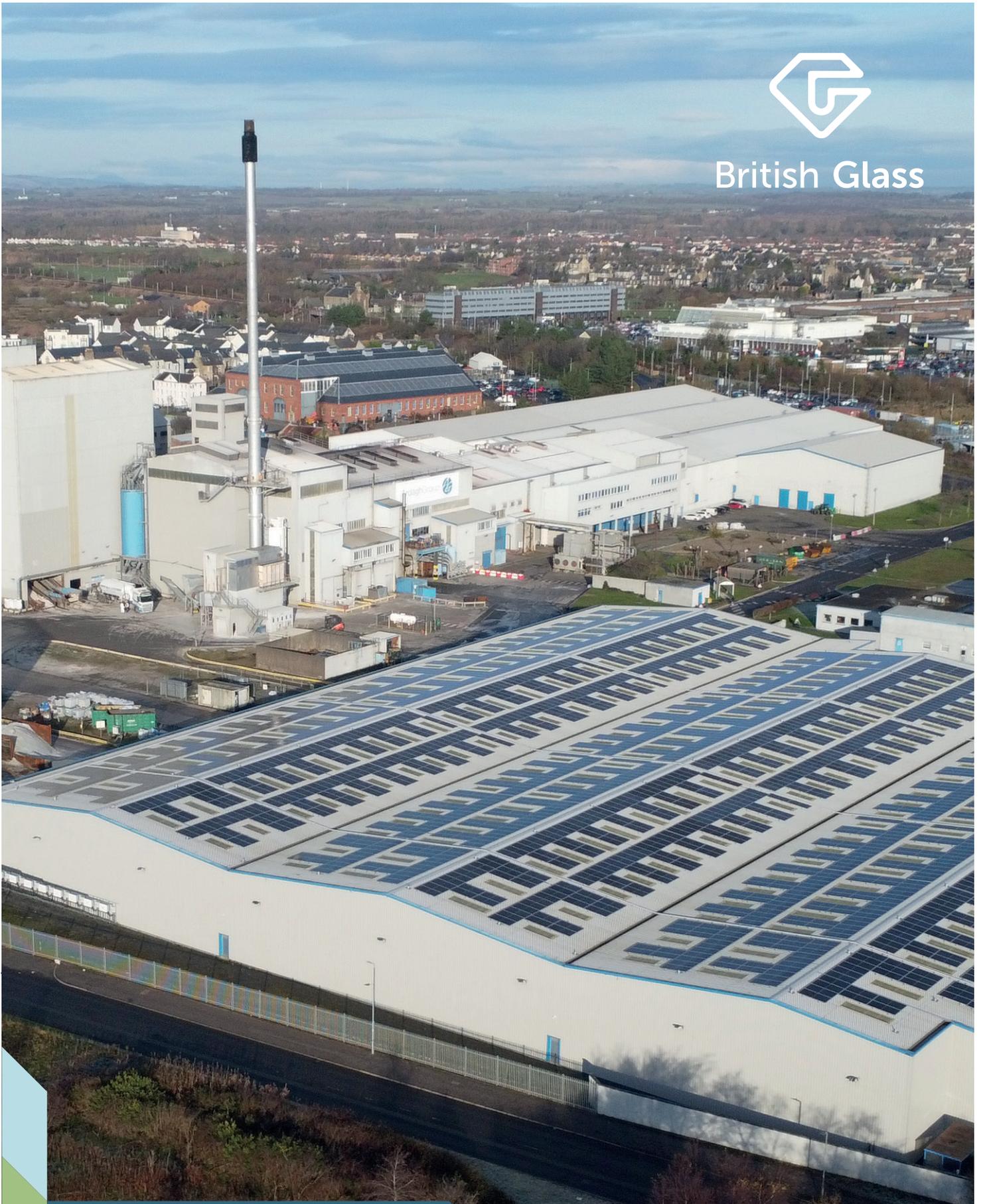




British Glass



## Net zero strategy: Progress Update 2024

Examining progress since the original document and what this means for net zero in the UK glass manufacturing industry

## Foreword

The UK glass manufacturing sector finds itself at a crossroads. A comprehensive understanding of the environmental, ethical and commercial need to radically decarbonise at a faster pace than originally conceived is clearly evident. At a company-level all are demonstrably working hard towards delivering this goal and engagement across the supply chain is already in play. Unfortunately however, prolonged uncertainty in policy development and decision-making, along with much needed fiscal support on this journey, coupled with a lack of clear direction on future fuel strategy, waste policy and 'joined-up' inter-department thinking, has played havoc with foreign direct investment decisions benefiting UK plans to begin implementing these solutions.



Despite the difficult environment for decision-making and planning for detailed investment, UK companies have embarked on this journey with a marked intention to steer policymakers in a more appropriate direction. We require a much clearer indication of where manufacturing can go so that we can realise support and future investment. A strategy for industry and government to collaborate on the delivery of a world-leading plan to both navigate the decarbonisation journey and support a competitive growth model on the global stage is still missing. Yet through the visible commitment and demonstration by UK glass companies, their decarbonisation ambition and plans for the sector and the wider supply chain are more visible and much stronger in a practical sense now.

The UK glass sector is geared and prepared for delivery but awaits detailed policy and plans under which it can make decisions that attract investment and have the surety of support along the journey. We are ready to electrify our plants, close the loop of glass recovery and lead the world in decarbonisation.

Dave Dalton, British Glass CEO

## About this document

In 2021, British Glass published its net zero strategy based on consultation with large manufacturing members<sup>1</sup>. This followed earlier work by industry including a joint industry/government roadmap on decarbonisation within the UK glass manufacturing sector. The document highlighted the role of the industry to provide products that decarbonise other sectors, examined the existing UK sector, reviewed decarbonisation options for scope 1 and 2 emissions, and outlined a potential route to net zero.

The progress described in 2021 assumed that all policy recommendations would be implemented. Much of the technical and background information in the net zero Strategy remains unchanged and the original documents continue to stand as a useful reference point.

This progress report aims to acknowledge changes since 2021, showcase the progress in ambition and carbon reduction within the glass sector, as well as examining which of the policy recommendations have been implemented and whether there is anything further required. All these changes will impact the sector's ability to achieve net zero and we clarify the effects of the changes on the sector's net zero strategy.

The majority of large UK glass manufacturers are part of larger groups owned and headquartered outside of the UK, meaning that decarbonisation commitments apply across the group, rather than directly to the UK site(s). We note that many of our members are aiming for net zero in the context of scopes 1-3, however the UK glass strategy covers scope 1 and 2 emissions and does not account for embedded scope 3 carbon and neither does it look to balance the emissions savings achieved via the products. Whilst most glass companies are purchasing zero carbon electricity, it was not possible to incorporate this into the updated sector model which uses delivered energy multiplied by the UK grid factor for scope 2 emissions. The model includes negative grid factors expected in later years. If the electricity used in glass manufacturing covered by green energy contracts was to be represented as zero-rated, then the glass sector is already lower than the figures shown in this strategy.

<sup>1</sup> British Glass membership covers est >95% of UK glass manufacture

## Executive summary

British Glass and the glass industry published the glass sector's Net zero strategy 2050 in 2021 which shared the route to net zero. Since this publication there has been more clarification on future low carbon technologies and energy availability, enabling UK glass manufacturers to commit to more detailed investment plans based on the latest insights.

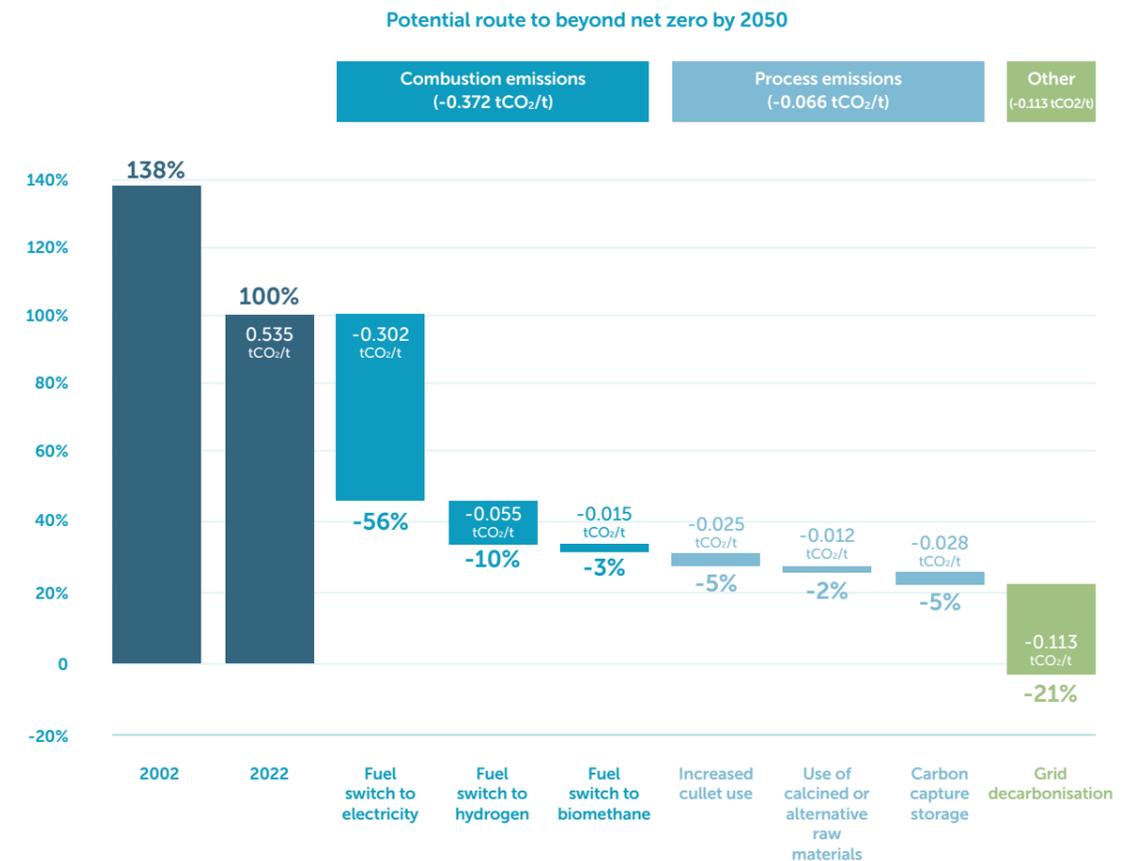
Glass products are essential for a low-carbon economy and will increase the CO<sub>2</sub> efficiency of other sectors, such as renewable power generators, transport and buildings and packaging for the preservation and safe storage of products. Glass is a truly circular material as all glass products can utilise very high levels of post-consumer recycled glass.

A majority of the decarbonisation of the glass industry comes from fuel switching, with a significant portion from reducing 'process emissions'. The opportunity to implement decarbonised energy technology tends to be limited to furnace rebuilds, which requires new energy connections to the site and a competitive energy price for the conversion to be commercially viable.

Decarbonising the process emissions will rely on the availability of recycled glass and further development of low-carbon alternative raw materials.

Some UK glass manufacturers have been awarded funding under the Industrial Energy Transformation Fund (IETF) that has assisted in the acceleration and adoption of new technology.

The glass industry calls on government to implement supportive energy and recycling policies and funding that will accelerate the move to net zero, otherwise the UK glass manufacturers will not be able to decarbonise and remain competitive with other materials and imported glass products.



## Key changes

	Changes since 2021	Impact on net zero strategy
Energy policy/reliefs	Supercharger is bringing UK electricity prices more in line with EU which makes it more viable to electrify whilst this policy is in place.	Plans for electrification have been brought forward in some cases but it generally is still not viable. To have long-term impact the policies will need to be extended and UK electricity pricing structure reviewed.
Geo-political	Energy prices and volatility have reduced from the peak in 2022, but are still much higher. The energy market is offering less long-term, low-price contracts.	Increases in energy prices may bring forward the payback time of decarbonisation measures, however, additional cost erodes profits and reduces funds for investment in decarbonisation.
Rising imports	As shipping costs decrease faster than energy prices, we are seeing higher imports of glass into the UK.	Reduced profit margins to compete result in less to invest in decarbonisation. Reduced production leads to lower efficiencies.
Biofuel policy	The UK published its biofuel strategy, prioritising use in sectors where there is no other route to decarbonisation and in conjunction with CCUS.	Whilst there have been several liquid biofuel trials in the UK, it remains viewed as a transitional fuel, or a very small amount of it will be used.
Hydrogen funding	Government focus on hydrogen business models and clusters.	Hydrogen has become more viable as a future fuel in certain locations due to hydrogen business models.
Infrastructure	Plans to decarbonise the gas grid with biomethane in localised areas.	This will be a new low-carbon fuel option for glass manufacturing plants in these areas.
Planning	Most UK sites have specific plans to fuel-switch within the 2050 timeframe and all are actively monitoring the economic feasibility of a few potential options.	Glass industry equipment suppliers are providing more low-carbon options. It's clear now the barriers are linked to uncertainty around infrastructure and access to infrastructure.
Technical	No new technologies were identified, but there is increased understanding of which fuel switching options will be available and viable and how they can be adapted for the glass sector. Barriers around scale-up, site and product-specific challenges remain.	The industry has attracted funding and heavily invested to undertake trials which have incrementally become more and more ambitious. This has accelerated the uptake of fuel-switching, particularly where conditions are optimum for investments and the cost and availability of the low carbon fuel is favourable.
Decarb funding	Industrial Energy Transformation Fund (IETF) funding is reaching the glass industry.	Accelerated plans for energy efficiency and fuel switching improvements.
Recycling policy	UK cullet shortages, exacerbated by delays to government resource and waste policies, are causing uncertainty and additional cost for all glass sectors using cullet.	Replacing raw materials with cullet reduces process emissions and energy needed to melt glass. Cullet shortages prevent these savings. Delays to policy changes create uncertainty.
Membership	Since 2021, British Glass has welcomed a glass wool insulation manufacturer into membership <sup>2</sup> .	The strategy now acknowledges the energy efficiency savings associated with glass wool to homes and buildings.
Customer expectation	Customers of the glass sector are showing increased pressure for lower carbon products to lower their own scope 3 emissions.	Gives a competitive advantage, incentivising decarbonisation, for companies that are able to invest or where costs can be recouped via increased prices. Funding partnerships between glass manufacturers and their customers has proved to be mutually beneficial and will increase the pace of decarbonisation.

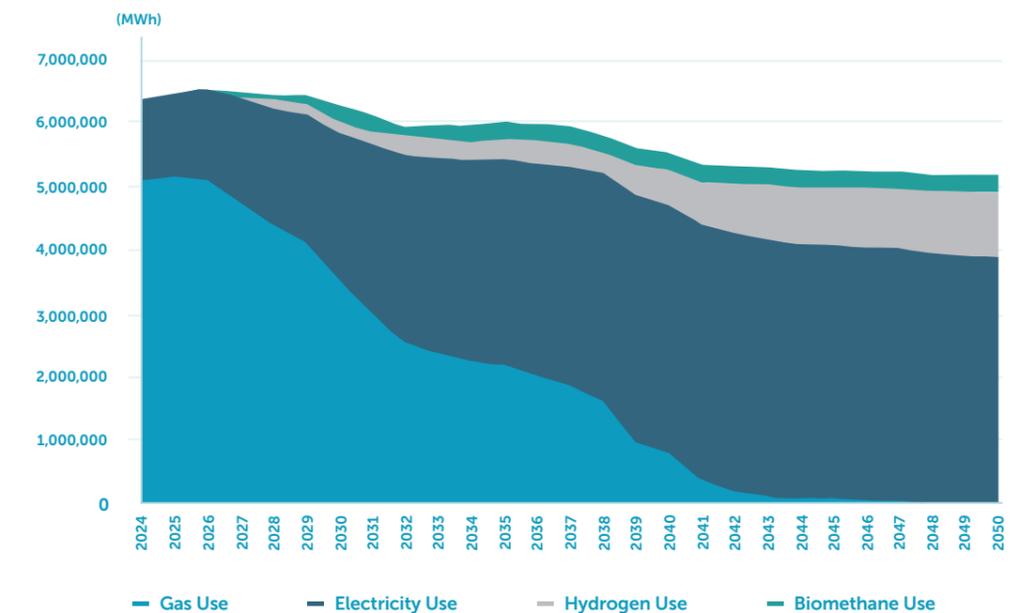
<sup>2</sup> Change in membership alters historical emissions and production data and so it will not be possible to show these side by side with previous years.

## Impact of changes on projected energy mix to 2050

The graph below gives a breakdown of potential fuel use by the sector to 2050. It shows a steady switch from natural gas to electricity and the gradual substitution of natural gas with hydrogen as it becomes available. Biomethane use is restricted to Northern Ireland where it replaces or supplements the current natural gas supply.

Overall, this illustrates that the sector will be heavily dependent on electricity to meet net zero. Given the long investment cycle of a glass furnace (up to 20 years) for the sector to reach net zero, urgent action is required to reinforce the electricity grid and prioritise connections for glass manufacturers together with support for the additional CAPEX and OPEX costs of switching. This highlights the importance of government action on the policy areas that will reduce the cost of electricity in the UK. The glass sector needs electricity at a competitive price for glass manufacturing to remain viable in the UK and meet net zero.

Glass sector energy use by fuel type (2024 version)



## Key changes since 2021

- Sector energy requirement reduced in the short-term: partly due to reduced production.
- Overall level of fuel-switching via electrification: now expected to be higher and quicker.
- Sector energy requirement in 2050 are higher than previously expected.
- Use of hydrogen has been brought forward but overall usage in long-term remains constant.
- Removal of biofuel from the energy mix and the addition of biomethane.

## Glass sector progress

### Ambition

Customer pressure continues to grow for glass manufacturers to reduce the carbon footprint of the product. This has driven a higher ambition in the glass sector, although the customer is not always willing to pay a premium for low carbon goods. Most glass companies operating in the UK have company-wide ambitious targets for 2030 and beyond. Many are science-based and validated by Science Based Targets initiative (SBTi). Even where ambition cannot be overtly stated, every company has already invested - and continues to do so - great efforts into understanding and reducing carbon emissions.

### Science-based targets

The following table collates the science based<sup>3</sup> target commitments by companies operating glass manufacturing sites in the UK that have been verified by the SBTi. We calculate that these commitments alone equate to a CO<sub>2</sub> saving for the sector of 32% in 2030 based on a reference year of 2022. Other members have individual roadmaps and targets, and so the planned saving is likely to be greater than this.

	Reference Year	Target classification	Target reduction by 2030		Carbon neutral target
			Scope 1+2	Scope 3	
NSG	2018	Well below 2°C	30%	30%	-
O-I	2017	2°C pathway	25%		-
Ardagh	2020	1.5°C pathway	42%	12.30%	-
Encirc (Vidrala)	2019	1.5°C pathway	47%	28%	2045
Saint Gobain	2017	1.5°C pathway	33%	16%	2050
Stolzle	2019	1.5°C pathway	50%	15%	-
Verallia	2019	1.5°C pathway	46%	-	-

### Projects

Projects to decarbonise glass manufacturing are occurring all over Europe and the world. Projects happen in regions where:

- There is a customer demand for low carbon products.
- Partial or full government or regional funding is available.
- Geographical and site financial and practical conditions are just right to support project.

### Funding

Region	Funding total	Dates	Description
EU	€40bn <sup>4</sup>	2020-2030	EU ETS innovation fund – for projects that decarbonise the ETS sectors.
Germany	€4bn	-	The scheme aims at helping the German industry reduce greenhouse gas emissions in their production processes.
France	€4bn	2023-2028	Support for investments in electrification of industrial processes and investments in energy efficiency.
USA	\$6bn	-	Inflation Reduction Act - 33 projects across more than 20 states to decarbonise energy-intensive industries.
UK	£0.5bn	2020-2028	The Industrial energy transformation fund – for businesses with high energy use to cut their energy bills and carbon emissions through investing in energy efficiency and low carbon technologies.

<sup>3</sup> <https://sciencebasedtargets.org/target-dashboard>

<sup>4</sup> Based on EUA price of €75

## Decarbonisation in the glass sector



#	Technology	Country	Year
1	All electric	Italy	2017
2	All electric	France	2024
3	All electric	France	2024
4	All electric	France	2025
5	All electric	UK	2026
6	Hybrid	Germany	2022
7	Hybrid	Germany	2023
8	Hybrid	Slovenia	2023
9	Hybrid	Germany	2023
10	Hybrid	Netherlands	2024
11	Hybrid	Italy	2025
12	Hybrid	France	2025
13	Hybrid	Spain	2025
14	Hybrid	USA	2025
15	Hybrid	USA	2025
16	Hybrid	France	2026
17	Hybrid	UK	2027
18	Hybrid	France	2027
19	Hydrogen	Sweden	2024
20	Hydrogen	UK	2027
21	Oxy-fuel	UK	2025
22	Oxy-fuel	France	
23	Oxy-fuel	Italy	
24	Oxy-fuel	France	

#	Technology	Project	Country
25	All electric	Pilot	Germany
26	All electric	Trials	Netherlands
27	All electric	Pilot	Czech Rep.
28	All electric	Research	Germany
29	Hybrid	Pilot/Trials	UK
30	Hybrid	Research	France
31	Hydrogen	Trial	UK
32	Hydrogen	Research	Netherlands
33	Hydrogen	Trials	Netherlands
34	Hydrogen	-	Netherlands
35	Hydrogen	Research	Germany
36	Hydrogen	Pilot	UK
37	Hydrogen	-	Portugal
38	Hydrogen	Research	Italy
39	Hydrogen	Research	EU
40	Hydrogen	Trials	France
41	Hydrogen	Research	EU
42	Hydrogen	Trial	France
43	Hydrogen	Trial	Slovenia
44	Hydrogen	Trial	Japan
45	Hydrogen	Trial	Japan
46	Hydrogen	Trial	Germany
47	Raw materials	Research	UK
48	Raw materials	Trial	UK
49	Raw materials	Research	EU
50	Raw materials	Research	Netherlands
51	CCUS	Trials	UK

See also 'Decarbonising the container glass industry' - FEVE 2024

# Progress on British Glass's net zero strategy policy recommendations

Key: **NP** no progress **SP** Some progress **GP** Good progress

2021 British Glass, glass sector net zero strategy 2050

Work across Whitehall with NGOs and industry to create a long-term industrial strategy that is supportive of UK manufacturing and gives certainty for investors.

2021 policy recommendations		2024 policy recommendations		
Energy and carbon costs	Establish a funding mechanism to support operational, as well as capital costs associated with switching to low carbon fuels such as hydrogen, biofuels and electricity (CCC recommendation).	SP	Some support on operational costs for hydrogen via the cluster and hydrogen model, and biofuels but not electrification.	<ul style="list-style-type: none"> <li>Maintain and expand existing reliefs for energy intensive industries for energy costs. Increase timescales and protect reliefs so that investors can have certainty in viability of electrification over the asset lifetimes (glass furnace lifetimes are 10-20 years).</li> <li>Reform the pricing of the UK electricity market so that electricity price is no longer set by the marginal gas generation cost.</li> <li>Align the scope and timelines of the UK Carbon Border Adjustment Mechanism with the EU scheme to ensure interoperability and no barrier to trade with the EU.</li> <li>Create and implement a clear strategy for upgrading the electricity grid to allow industry to electrify at pace.</li> <li>Develop national infrastructure for supply of hydrogen and transport and storage of CO<sub>2</sub>.</li> <li>Develop and introduce a government electrification business model to address the higher cost of using electricity versus natural gas.</li> </ul>
	Reform electricity pricing to reflect the much lower costs of supplying low-carbon electricity in the mid-2020s and beyond (CCC recommendation).	SP	No reforms, but the government has introduced a number of measures that reduce the cost of electricity for industrial users: Supercharger	
	The design of policies to reduce UK manufacturing emissions must ensure that it does not damage UK manufacturers' competitiveness and drive manufacturing overseas. (CCC recommendation)	SP	Consultations ongoing on changes to free allowances in the UKETS from 2026 and CBAMs from 2027. Outcome pending.	
	In the near term, taxpayer funding or innovation financial schemes should be used to support deep decarbonisation in manufacturing sectors at risk of carbon leakage (CCC recommendation).	SP	The Industrial Energy Transformation Fund (IETF) has enabled UK glass manufacturers to invest in zero carbon technologies in the UK. It could be simplified and expanded.	
	Clear long-term policy to support industrial decarbonisation and protect UK manufacturers from the risk of carbon leakage (CCC recommendation).	NP	There is less certainty now over the long-term climate change policy in the UK than any time in the past.	
	Clear policy which allows first movers using higher priced low carbon fuels to remain competitive.	SP	Hydrogen business model, but only for hydrogen, not electrification.	
	Ensure all EILs (including glass) are exempt from policy costs on natural gas to protect against carbon leakage.	SP	There is provision to exempt certain users from a levy to fund the hydrogen business models. Pending implemented for EILs.	
Energy infrastructure	Upgrade and future-proof electricity capacity and networks to enable electrification of glass manufacturing.	SP	Department for Energy Security and Net Zero (DESNZ) call for evidence in 2023 on industrial electrification. Summary of outcomes but no new policy.	<ul style="list-style-type: none"> <li>Develop and introduce a government electrification business model to address the higher cost of using electricity versus natural gas.</li> </ul>
	Support for upgrading site electricity connections for electrification of glass manufacturing.	SP	Some plans to reduce timescales and costs for electricity upgrades though they still remain prohibitively high.	
	Ensure that the Biomass Strategy reviews and addresses concerns over availability and sustainability of biofuels.	GP	The 2023 Biomass strategy clearly earmarked biofuels for industries that have no other means to decarb and can be used with CCS.	
	Ensure that hydrogen infrastructure allows non-clusters connections by 2035.	SP	Further hydrogen funding yet to be announced and operational ~2030	
Decarb tech	Continue support for deep decarbonisation innovation projects.	SP	Via Industrial Energy Transformation Fund.	<ul style="list-style-type: none"> <li>Develop and introduce a government electrification business model to address the higher cost of using electricity versus natural gas.</li> </ul>
	Establish funding for large scale industrial demonstration projects which covers additional OPEX costs as well as CAPEX.	SP	Only via hydrogen business models so far.	
Circular economy	Improve consistency across UK glass packaging recycling.	SP	'Simpler recycling' strategy – does not ensure collection consistency.	<ul style="list-style-type: none"> <li>Keep glass packaging out of deposit return schemes across all nations of the UK.</li> <li>Ban the export of unprocessed waste glass.</li> <li>Collect all glass packaging separately at the kerbside to improve quality, ensuring local authorities have sufficient funding to do so.</li> <li>Remove glass from the lower rate of landfill tax to incentivise recycling.</li> <li>Increase flat glass recycling through policy reform.</li> </ul>
	A new reformed extended producer responsibility for packaging.	SP	Government response to EPR consultation but no legislation as yet	
	A new remelt target for obligated producers of glass packaging.	GP	Recycling and remelt targets to 2030 via EPR Regulations.	
	Obligations on businesses across the UK to recycle a core set of dry recyclables including glass.	SP	Only Welsh and Scottish Governments have introduced requirements.	
	Exclude glass packaging from the upcoming UK-wide deposit return schemes.	SP	England, Northern Ireland, Scotland excluded. Wales plan to include glass.	
	Recycling of flat glass written into public sector contracts.	NP	Defra Waste Prevention Plan response refers to cabinet office procurement plans but no specific condition for construction glass to be recycled at end of life.	
	Boost to collection infrastructure for flat glass to improve quality and increase flat glass recycling.	NP	Defra Waste Prevention Plan response did not introduce EPR for construction glass.	
A landfill tax that incentivises flat glass recycling.	SP	Response to landfill tax review published in 2023 recognised potential to remove glass from lower rate, but not enacted.		
Glass Products	Update building regulations for new builds and refurbishments for domestic and non-domestic buildings to be mandated to install the best available glazing products (B standard EPR as a minimum or 1.4 U value).	GP	Latest building regulations reflect good glazing standards.	<ul style="list-style-type: none"> <li>Introduce greater incentives to drive long term energy efficiency renovations with a 'fabric first' approach such as glass wool insulation and high efficiency glazing.</li> </ul>
	The public building sector to lead the way by specifying high efficiency glazing products via the public sector decarbonisation fund.	SP	Many of the projects awarded funding under the fund included glazing upgrades.	
	Ensure that British Glass and the Glass and Glazing Federation are included in stakeholder plans for the Social Housing decarbonisation fund, public sector decarbonisation scheme and the future homes standard.	NP	Stakeholder work has concluded, and British Glass was not included.	
	Ensure that UK manufactured glass fibre is used in the manufacture of UK windfarms.	NP	Government has no work in this policy area, to our knowledge.	

## Updated potential net zero route

As part of the net zero strategy published in 2021, British Glass developed a model which looks at how the glass sector can work towards net zero by 2050. The model covers scope 1 and scope 2 emissions and ends at the factory gate. Savings associated with the glass products are not represented. This model has been updated for 2024 based on interviews with members.

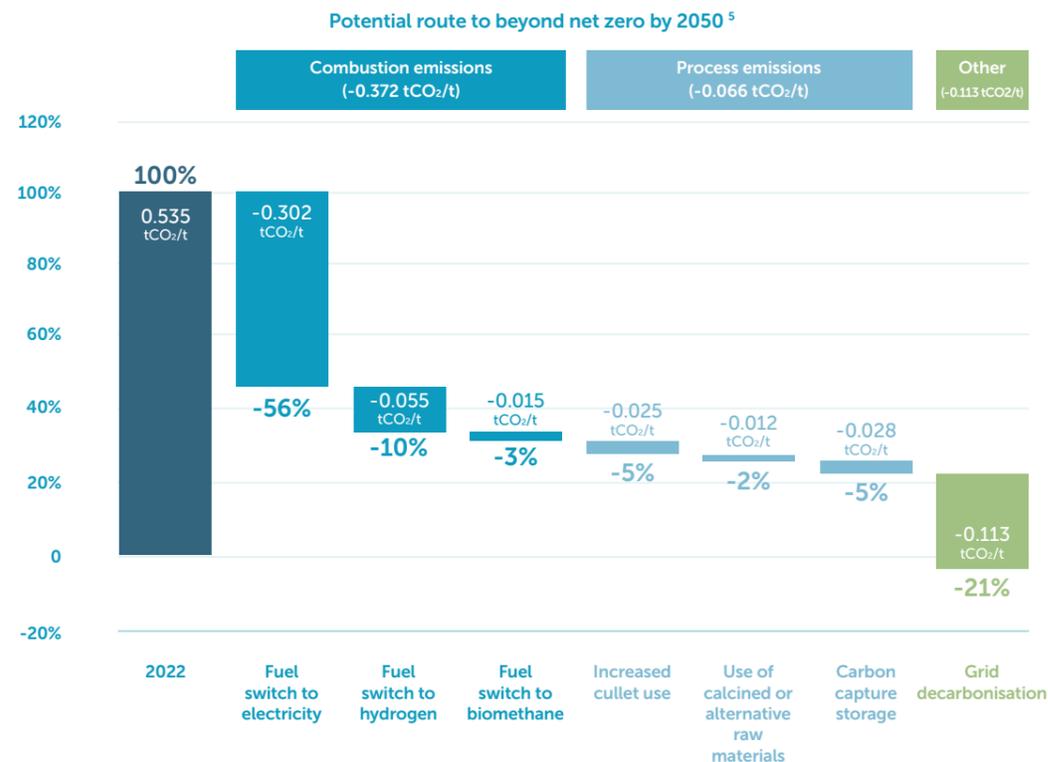
### Key changes

- Inclusion of two UK glass wool sites.
- Improved modelling of the container glass sector based on expected rebuild dates for individual furnaces and company decarbonisation plans.
- Update of historical grid factors using National Grid hourly data.
- Inclusion of biomethane following the announcement on plans to convert a local natural gas supply to biomethane.
- Removal of liquid biofuels due to the conclusions of the biofuel strategy and their expected limited use for small production runs of lower carbon products.

### Assumptions: The model is based on the following assumptions for the industry to transition to net zero at a cost that enables the sector to remain competitive.

- All necessary research and large-scale industrial demonstration of new technologies takes place.
- The grid decarbonises and becomes carbon negative by the mid-2030s, bringing the wholesale price of electricity down for UK consumers.
- The government implements the policies outlined in this strategy document.

The results from the model for 2050 are summarised in the graph below<sup>5</sup> and show that the sector has the potential to go beyond net zero by 2050.



<sup>5</sup> Overall tCO<sub>2</sub>/t values are smaller than in 2021 due to improvements in the last three years.

### Fuel Switch to electricity (-0.343 tCO<sub>2</sub>/t)

Improvements to the electricity grid infrastructure and timescales for upgrading grid connections combined with policies on electricity pricing for large industrial users and an electrification business model to support the additional CAPEX and OPEX costs, enable the sector to gradually transition from natural gas to electricity. The successful full-scale industrial demonstration of an oxyfuel hybrid furnace by Ardagh Glass in Germany during 2023, which is capable of running on up to 80% electricity, gives the container glass sector the confidence to adopt this technology for future rebuilds. Hybrid furnaces with a lower electricity input are utilised by the flat glass sector. Some smaller furnaces (<250 t/d) are converted to all-electric. No change to the percentage reduction at 56%. Full or partial electrification can only occur if electricity prices are competitive enough to allow glass manufacturing to remain viable in the UK - this is entirely in the hands of policymakers.

### Fuel switch to hydrogen (-0.054 tCO<sub>2</sub>/t)

Innovation projects and large-scale industrial demonstrations have shown that hydrogen is a viable option to replace natural gas. Hydrogen will be available inside the clusters by 2027. Sites outside the clusters will start to receive electrolytic hydrogen in the 2030s which is either produced on-site or is piped to the site from a local electrolytic hydrogen producer. Initially, hydrogen is blended with natural gas. As hydrogen production volumes increase and furnaces are rebuilt with refractories that can withstand 100% hydrogen, hydrogen fully replaces natural gas where electrification is not possible. Percentage savings up to 10% from 9%.

### Fuel Switch to biomethane

Expansion of the biomethane sector in Northern Ireland results in 100% substitution of natural gas with biomethane in the supply.

### Increased cullet use (-0.016 tCO<sub>2</sub>/t)

Changes to policy together with industry campaigns to increase the collection of container glass will result in an increase in the availability of container cullet for remelt. A ban on the export of unprocessed cullet significantly boosts the availability of cullet for UK remelt (approx. 300 kt increase) increasing the recycled content of all glass colours. It is assumed there will still be a colour imbalance between what is placed on the market and produced in the UK so there will be a shortage of good quality cullet to produce some glasses especially clear (flint). Policies which require the separate collection and recycling of flat glass from the renovation and demolition of buildings increase the availability of cullet which is suitable for flat glass production. Percentage reduction up to 5% from 3%.

### Use of calcined and alternative raw materials (-0.013 tCO<sub>2</sub>/t)

Successful research into calcined and alternative raw materials followed by large-scale industrial demonstration allows sites to replace some carbonate raw materials in the batch, where economically feasible. No change to the percentage reduction at 2%.

### Carbon capture storage (-0.045 tCO<sub>2</sub>/t)

By 2050 research into CCS in the glass sector finds a technically and economically viable solution to capture CO<sub>2</sub> from glass furnace emissions. Government investment in infrastructure allows for the transport of CO<sub>2</sub> from sites in and around the industrial clusters (road transport is not seen as economically viable). CCS is only seen as an economically viable solution for larger furnaces (>500t/day) running on lower cullet ratios. Reduced to 5% from 7%.

### Grid decarbonisation (-0.198 tCO<sub>2</sub>/t)

The grid continues to decarbonise in line with the National Grid, Future Energy Scenarios forecast and becomes carbon negative by the mid-2030s due to electricity generation from biomass combined with CCS (BECCS). The high proportion of electricity used by the sector and the negative grid factor result in the sector going beyond net zero in 2050.

## Summary

- Ambitious UK glass sector decarbonisation is driven by customer demand for low carbon goods with a high recycled content.
- Technical route to achieve net zero is available with supportive policies.
- Majority of the decarbonisation of the glass industry comes from fuel switching, with a small but significant portion of 'process emissions'.
- Decarbonisation projects will happen in geographical locations where there are supportive interventions and where the conditions are the most complementary.
- There has been some helpful policy and funding in the UK, but the conditions are still not right for UK glass manufacturers to decarbonise whilst remaining competitive, which would mean that companies choose to prioritise decarbonisation investments elsewhere.
- Overall, the update indicates that the pace of decarbonisation has accelerated in the short term, but further policy intervention will be required to ensure medium- and long-term plans are realised.

### Key policy asks:

- Long-term decarbonisation policy certainty.
- Competitive energy costs for UK industry, particularly electricity costs.
- Infrastructure available for fuel switching and access to infrastructure.
- Funding for capital investment and running costs.

The UK glass sector contributes in excess of £2bn to the economy each year and provides more than 120,000 jobs across the supply chain. As the representative body, British Glass and our members are committed to working collaboratively with all relevant stakeholders to promote sustainable practices and drive innovation within our industry.

### Flat Glass



### Container Glass



### Wool and Fibre Glass



Size of the market  
**£2.2 billion total**

Size of workforce (direct and indirect)  
**120,000 employed**

Tonnes manufactured  
**3 million tonnes**

Number of UK manufacturing sites  
**19**



**British Glass**

9 Churchill Way  
Chapelton  
Sheffield S35 2PY  
T **0114 290 1850**  
E [information@britglass.co.uk](mailto:information@britglass.co.uk)  
W [britglass.org.uk](http://britglass.org.uk)