



British Glass

May 2017 to April 2018

Our work for the industry

Getting a good deal for glass

This year British Glass has secured many good outcomes for its members and the wider industry – payoff for the work we put into building collaborative and honest relationships at every level of government and the supply chain.

Glass manufacturing – like all industrial sectors – is operating in the face of significant disruption. And as the UK's exit from the EU is negotiated, the Industrial Strategy takes shape and sector deals are considered – we are far from the biggest of the industrial sectors currently courting government.

But by engaging decision makers with clear and pragmatic solutions, underpinned by evidence, we've won seats at tables that matter. I'm grateful to all our members for working with us throughout this year to ensure that UK glass manufacturing continues to thrive.

Glass is central to a safe and sustainable future. Our industry's continuous improvement of the things we all use daily is reducing energy use, cutting carbon emissions and improving efficiency across every part of life: buildings, vehicles, communications, packaging and more. Meanwhile, the unique chemical properties of glass are solving problems in the bio-medical, power generation and defence fields – to name just a few.

That's why protecting and nurturing the UK's glass capabilities is an economic imperative.

UK business is a long way from reaching calm waters. But I am confident that if we continue to work collaboratively we will do more than meet today's needs, we will be fit for the future.



Dave Dalton
Chief Executive,
British Glass



Getting government closer to glass manufacturing

We invited Lord Prior and officials from the Department for Business, Energy and Industrial Strategy to see glass manufacturing in action – with site visits hosted by members Pilkington UK Ltd and Encirc. We demonstrated all that glass has to offer the UK in building a sustainable manufacturing economy.

Sector deal

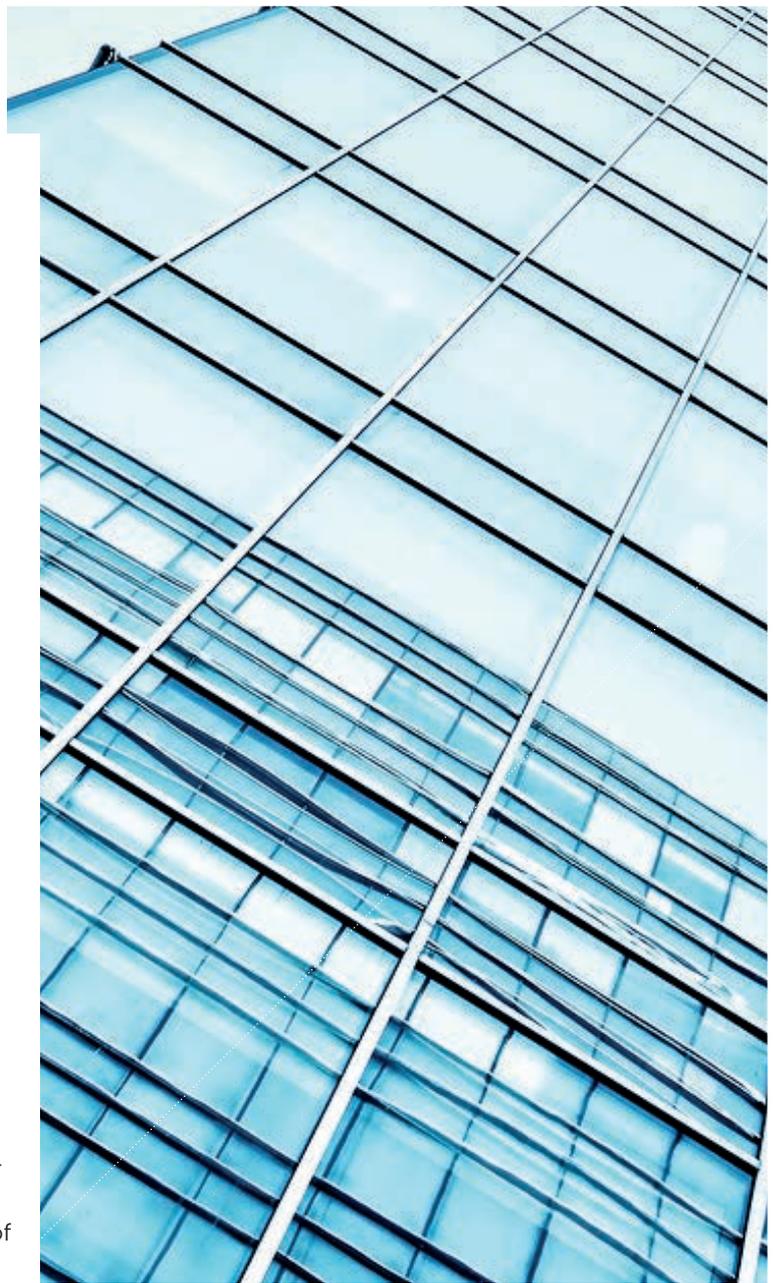
As part of the Industrial Strategy, industry was invited to enter into sector-specific partnerships with government – with the aim of creating opportunities to boost productivity, employment, innovation and skills.

British Glass has been developing a sector deal for glass manufacturing by coordinating input from its members, the board and the appointed Glass Relationship Manager at the Department for Business, Energy and Industrial Strategy (BEIS).

The glass industry proposal will focus on what the glass industry needs to look like in the next 10-20 years, including:

- workforce development, eg apprenticeships, upskilling and life-long learning
- environmental and social responsibility, eg recycling, eco-design and decarbonisation
- technology and innovation, eg new production processes and innovative products.

As a plan for industry-government partnership, it will also propose actions for government to create a more effective and supportive infrastructure – for example around public procurement, government funding and regulatory regimes that take account of technological evolution.



Trade remedies group

British Glass has continued to participate, throughout this year, in a group of representatives (including the chemicals, steel, fertilisers and ceramics industries) which is acting on the risks and opportunities for manufacturing industry of:

- the Brexit process
- impact of EU state aid and World Trade Organisation rules
- changing border tariffs with the US.

This group has been engaging with government, including discussions with ministers and officials of the Department of International Trade (DIT), backbench MPs and opposition frontbench spokespeople. This included discussion of the content of and amendments to both the Trade Bill and the Taxation (Cross Border) Trade Bill. British Glass has also engaged with DIT on the content of secondary legislation to specify criteria and formula for import tariffs and the composition of the Trade Remedies Authority.

Glass Futures centre of excellence

British Glass' original vision is now coming into being as a £50 million consortium venture with the backing of government, major glass companies and leading universities. In February, plans were unveiled for twin centres in the north of England and Glass Futures supporters lobbied MPs and ministers at a House of Lords reception, hosted by former Business Energy and Industrial Strategy (BEIS) minister Lord David Prior.



Brexit

The UK's exit from the European Union will potentially affect many policies and mechanisms with a direct impact on glass manufacturing. In many cases it's required us to take a twin-track approach until we know whether the UK will operate within or outside of these come 2019. Some of the key areas we are monitoring include:

Trade remedies framework – we've worked with members to ensure that affected sectors responded to the government's call for evidence on UK produced goods currently subject to EU anti-dumping or anti-subsidy measures.

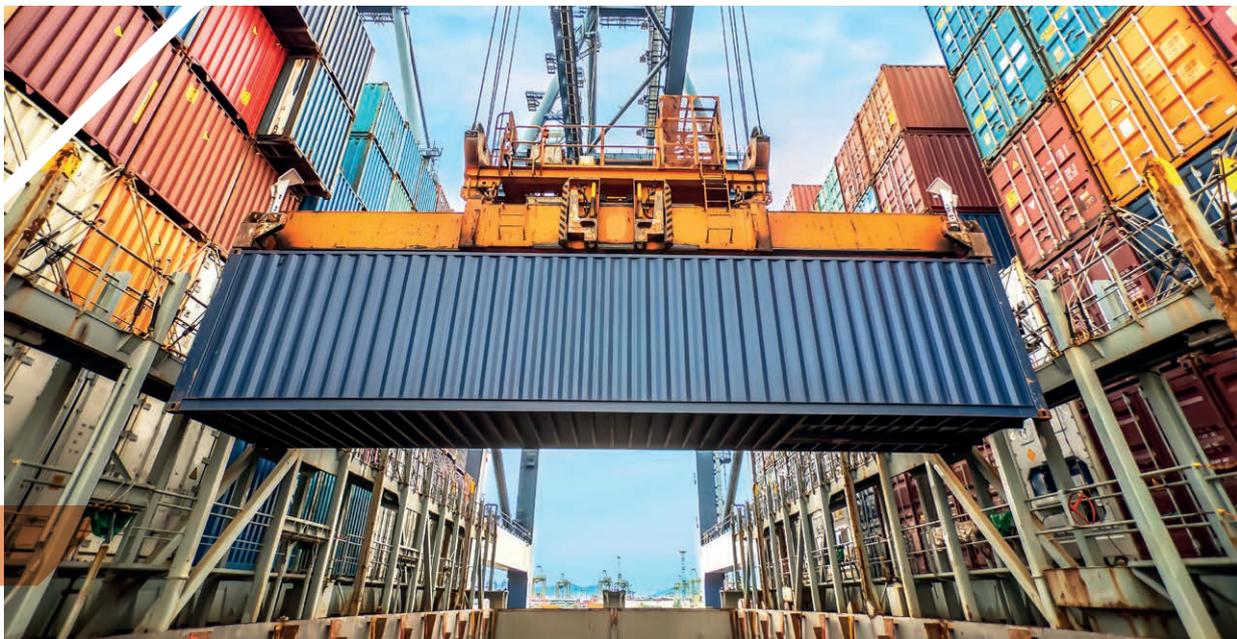
Air quality – we contributed to a cross-sector proposal to the Department for the Environment, Food and Rural Affairs (DEFRA) on emissions permitting and compliance should the UK cease to base regulation on the EU Industrial Emissions Directive.

Climate Change Act mineral and metallurgical exemption – the glass sector benefits from £18 million relief from the Climate Change Levy (which British Glass successfully worked with government to achieve). Protecting this exemption will be a priority for us during Brexit negotiations.

Carbon emissions trading scheme (ETS) – we're pushing for clarity on continued participation in the EU ETS and investigating possible UK scheme alternatives. The Minister of State for BEIS Claire Perry has stated a preference, to British Glass, that the UK remains in EU ETS at least until 2020 (end of Phase 3 and proposed Brexit transition period). We've continued to engage in EU consultation on Phase 4, given withdrawal is not confirmed.

Circular Economy Package and recycling targets – whether and how the EU CEP and recycling targets will be applied in the UK will affect the quality of cullet available to glass manufacturers. We continue to liaise with our contacts at the Department for Environment, Food and Rural Affairs (DEFRA) to understand and influence policy.

Registration, evaluation, authorisation and restriction of chemicals (REACH) – we're liaising with contacts in DEFRA to determine the implications for the UK glass industry, should the UK cease to be part of REACH.



Developing and protecting the workforce

Glass appreciation across the supply chain

In partnership with Glass Technology Services Ltd, we've hosted two *Glass appreciation* courses this year – providing an excellent opportunity for us to engage with people who work with glass at key points in the supply chain – from recyclers to retailers.



"I came away inspired by the versatility and value of glass... The course gave me a new level of respect for the material and – given so much of my job revolves around glass – enthusiasm for my work." Glass appreciation delegate

Trailblazer

The glass sectors' new apprenticeship standards for manufacturing operators are now published. The three routes – *Batch and furnace operator*, *Hot-end machine operator* and *Flat glass operator* – were designed through a glass sector Trailblazer consortium, coordinated by British Glass. This allowed work to begin to design and validate the end point assessment package – due to complete within the year.

4



Willmott Dixon Glass Products Academy

In December 2017 British Glass Technical Director Nick Kirk was invited to be part of the Willmott Dixon Glass Products Academy launch, hosted by Saint-Gobain. He was able to explain to architects, engineers and glazing specifiers the benefits of different flat glass products and considerations when using these. Nick was also able to quash a myth and reassure attendees that windows don't become thicker at the bottom over time!



Virtual IS machine training

We're currently working in partnership with Glass Technology Services Ltd and VRMT Ltd to help develop an Oculus Rift virtual reality simulator of an IS machine which promises to revolutionise training. It will allow trainee operators to safely get a much deeper understanding of the process – and practice troubleshooting manufacturing issues – without impact on real production.

Health and Safety Forward

Our scheme for the sector has continued to drive continuous improvement in health, safety and wellbeing – aligned to the Health and Safety Executive’s manufacturing sector strategy – including projects on:

Personal protective equipment

– a survey examined levels of satisfaction with the performance and usability of PPE as it is deployed in glass manufacturing. The results were launched at a tour of Arco’s PPE testing facility in Hull – an opportunity for members to challenge the industry to design solutions to some of the specific PPE challenges that glass manufacturing faces.

Occupational health

– working towards sector-specific guidance on workplace exposure limits and establishing the baseline and priorities for glass sector health services.

Transport safety

– work has begun on an updated industry guidance note for the supply chain on the packaging of empty glass containers for safe transport and delivery to customers.

A new and updated swabbing safety poster was produced and distributed to members for free.



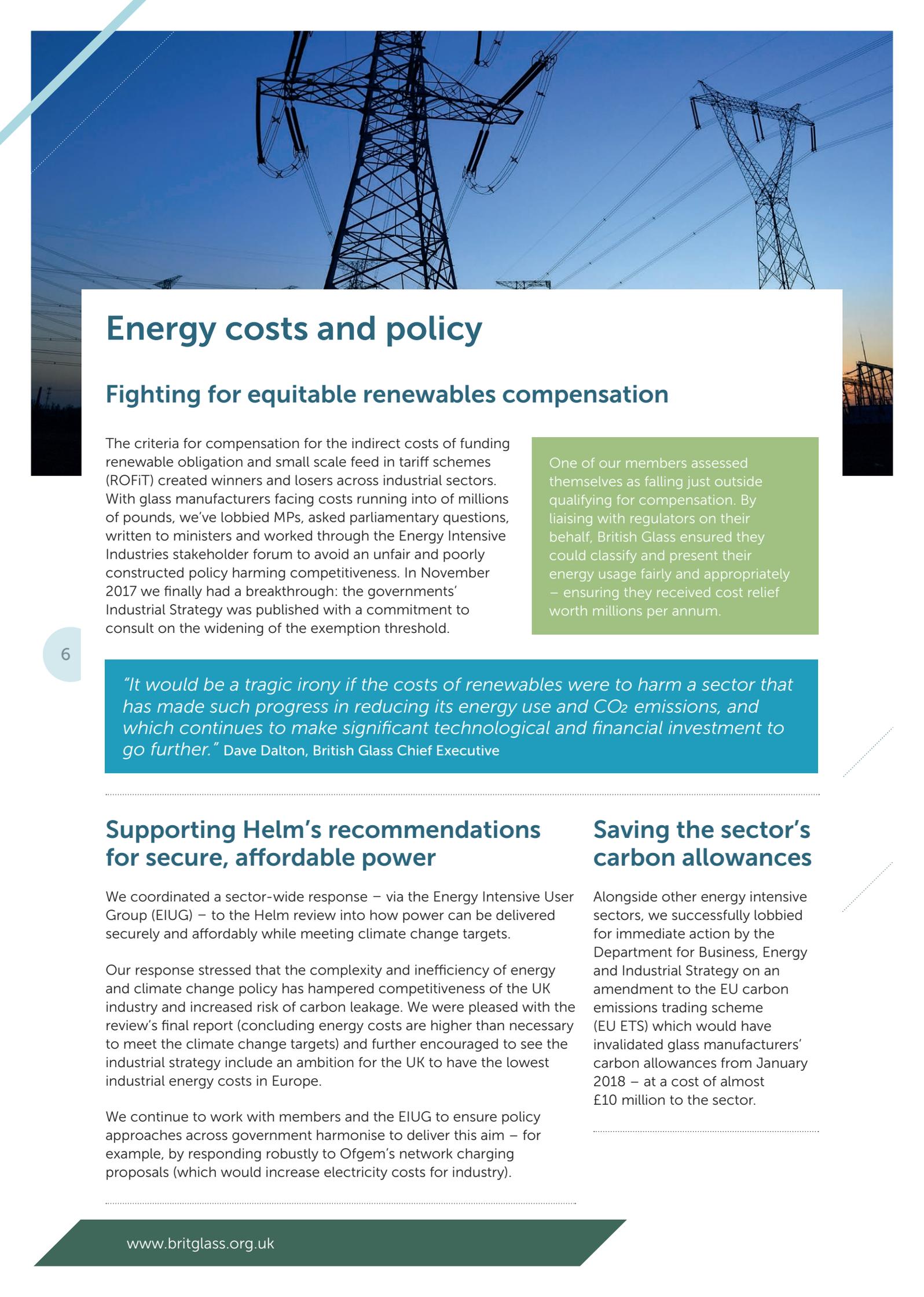
Respirable crystalline silica (RCS) legislation

As the EU Parliament proposed amendments to the Carcinogens and Mutagens Directive, British Glass joined forces with Glass Alliance Europe. We worked to ensure that the proposed 0.1mg/m³ limit was not lowered further, and that best practice from NEPSi (the European network for silica) is recognised as appropriate to control exposure of RCS to below the limit value.



Glass-specific IOSH training

Our Institution of Occupational Safety and Health (IOSH) accredited courses – which British Glass developed with its members and Serious About Safety – have continued to prove popular this year. More than 60 delegates have completed Managing safely in the glass industry or Working safely in the glass industry via in-house courses or open courses hosted at British Glass.



Energy costs and policy

Fighting for equitable renewables compensation

The criteria for compensation for the indirect costs of funding renewable obligation and small scale feed in tariff schemes (ROFIT) created winners and losers across industrial sectors. With glass manufacturers facing costs running into millions of pounds, we've lobbied MPs, asked parliamentary questions, written to ministers and worked through the Energy Intensive Industries stakeholder forum to avoid an unfair and poorly constructed policy harming competitiveness. In November 2017 we finally had a breakthrough: the governments' Industrial Strategy was published with a commitment to consult on the widening of the exemption threshold.

One of our members assessed themselves as falling just outside qualifying for compensation. By liaising with regulators on their behalf, British Glass ensured they could classify and present their energy usage fairly and appropriately – ensuring they received cost relief worth millions per annum.

6

"It would be a tragic irony if the costs of renewables were to harm a sector that has made such progress in reducing its energy use and CO₂ emissions, and which continues to make significant technological and financial investment to go further." Dave Dalton, British Glass Chief Executive

Supporting Helm's recommendations for secure, affordable power

We coordinated a sector-wide response – via the Energy Intensive User Group (EIUG) – to the Helm review into how power can be delivered securely and affordably while meeting climate change targets.

Our response stressed that the complexity and inefficiency of energy and climate change policy has hampered competitiveness of the UK industry and increased risk of carbon leakage. We were pleased with the review's final report (concluding energy costs are higher than necessary to meet the climate change targets) and further encouraged to see the industrial strategy include an ambition for the UK to have the lowest industrial energy costs in Europe.

We continue to work with members and the EIUG to ensure policy approaches across government harmonise to deliver this aim – for example, by responding robustly to Ofgem's network charging proposals (which would increase electricity costs for industry).

Saving the sector's carbon allowances

Alongside other energy intensive sectors, we successfully lobbied for immediate action by the Department for Business, Energy and Industrial Strategy on an amendment to the EU carbon emissions trading scheme (EU ETS) which would have invalidated glass manufacturers' carbon allowances from January 2018 – at a cost of almost £10 million to the sector.

Decarbonisation and energy efficiency

Roadmap action plan published

The glass industry published its Decarbonisation and energy efficiency roadmap action plan in October 2017. All ten of our UK-based, large-scale glass-manufacturing members have committed to this bold blueprint of measures that industry and government can take together.

It is the culmination of the government's three-year programme of fact-finding and collaboration with seven energy-intensive industries to help the UK meet its legally binding CO₂ emissions targets.

British Glass has facilitated work between glass manufacturers and government throughout – bringing the sector increased influence with policy-makers, including:

- a designated point of contact in the Department for Business, Energy and Industrial Strategy to whom we can address questions and deal with arising concerns
- a seat at the energy intensive industries' decarbonisation meetings, with access to the energy efficiency and waste heat recovery funding sub-group.

Proactive stance brings recognition for UK glass sector

We were finalists for the Department for Business, Energy and Industrial Strategy Sector Representation of the Year award – part of the Trade Association Forum's Best Practice Awards – for our work on the glass sector decarbonisation road map and action plan.

At the start of the year British Glass Technical Director Nick Kirk was invited to present the UK's glass sector decarbonisation action plan to the EU Commission to inform allocation of innovation funds from the EU ETS.

Cullet counts

A key driver for environmental performance and market competitiveness of glass is the amount of waste glass available for recycling (cullet). Our *Glass circular economy strategy* is bringing together members and stakeholders across the glass product life cycle to identify the most effective way to increase quality and availability of cullet.

7



Funding for decarbonisation workshop

Our seminar on funding decarbonisation and energy efficiency projects brought together specialists from manufacturing, funding, finance and equipment supply. Delegates got an industry-specific overview, insight to options many had not considered and the opportunity to directly question real-live experts and learn from each other. The event was part of our ongoing work to provide members with individually tailored help to secure financial support for investment in energy efficiency.

"We regularly provide individual, confidential advice to members to help them secure financial support to invest in energy efficiency – from funding streams and eligibility to technical input and contacts at equipment and service suppliers. The funding seminar was a complement to that and a chance to cast the net wider." British Glass Senior Environment Health and Safety Adviser Mark Pudner

Recycling

Getting glass back from buildings

Our activity under EU funded FISSAC project – working to get more glazing, refurbishment and demolition glass waste back for re-melt or use in secondary raw materials – has continued this year with:

- securing access for flat glass recycling innovations to Scotland's £18 million Circular Economy Investment Fund – a call for applications was launched via a joint event with Zero Waste Scotland where key stakeholders came together to pool ideas and network with potential bid partners
- presentations at the Circular Economy Thinking in Construction conference and EcoBuild – both held in London, as well as the FERVER flat glass recycling conference in Brussels.

An ongoing series of workshops and roundtable discussions is exploring how to overcome barriers to recycling flat glass and ensure best practice is shared.



Making Friends of Glass among the public

British Glass continues to manage the Friends of Glass work in the UK and has run a programme of activities to promote recycling and the benefits of glass packaging to consumer audiences. This has included social media competitions, press and radio coverage, blogs, video promotion and more....

Glass Guardians

In March 2018 we launched a suite of educational resources and associated competition for 7-11 year olds, via the National School Partnership. The materials – including a video and take home leaflet – explain why glass should never be seen as rubbish and how to make sure it gets recycled.



Packaging under the spotlight

Outcry over plastics has led to a flurry of policy activity around packaging waste in the past year. British Glass has provided government with evidence to defend against policy changes that would undermine glass recycling, or availability of cullet for re-melt. This has included stressing that:

- glass recycling is already broadly effective – minor adjustments to existing systems may be as effective and far cheaper than more radical, untested measures
- patterns of glass packaging use are different to other materials – it's rarely used 'on-the-go'
- there are clear end markets for reprocessed glass with high demand
- glass has a key role in a sustainable, resource efficient consumer society and the circular economy because it is a non-toxic, single material, 100% recyclable packaging solution.

All of this work was underpinned by British Glass' evolving *Glass circular economy strategy* – being formulated with a leadership group of our members and the input of stakeholders across the glass product life cycle.



We were pleased to have Tesco Packaging Manager Paul Earnshaw join a meeting of our container manufacturing members senior executive in March 2018. He gave key insights to Tesco's packaging strategy priorities for the coming five to eight years and what retailers want from the glass industry.



Closing the loop on container recycling

Representatives from each stage of the glass packaging life cycle joined a workshop – run by British Glass – to share perspectives, discuss the challenges, explore possible solutions and understand unintended consequences of actions taken.

"It was good to get an appreciation of the challenges facing glass recycling in the UK and to understand what others are doing on their recycling ambitions...we're very keen to learn more about what our sector colleagues are doing in the same field and where there are opportunities for collaboration." Rob Thompson, Food Policy Manager at The Co-op

Air quality

Balancing waste and emissions regulation

In May 2017 we hosted the Glass Link Group – which is made up of the local authority and Scottish Environmental Protection Agency (SEPA) representatives who set emissions and waste regulations. Alongside members, we presented our study into secondary uses and markets for glass plant filter dust. While no secondary market for glass factory filter dust has been identified (yet), the results help establish workable approaches for regulating waste and emissions. British Glass has also produced a guidance note on assessing the waste classification and properties of filter dust.

Balancing sulphur dioxide emissions and filter dust production is a challenge the industry has been looking at as part of a two year review of glass plant emission regulation – which will culminate in the regulators setting the sector's derogations from 2018 onwards.

"To have the people responsible for regulating major glass manufacturing sites with us, face to face, was very productive. We're delighted to have had the chance to explain this aspect of our business to them in some detail."

British Glass Senior Environment Health and Safety Adviser Mark Pudner

Sticking up for standby generation

Our response to consultations by government in England and Wales, Scotland and Northern Ireland ensured stand-by generators on glass sites were not covered by additional controls attached to the EU Medium Combustion Plant Directive coming into UK law. Glass factories use of stand-by generators to protect staff and essential machinery that must run 24/7 – their inclusion in the controls would have been disproportionately punitive.

10

Fairness to glass in emissions permitting

To protect the glass industry from unnecessary costs, this year we made sector-level responses to three consultations on emissions permitting – two of which contained proposals detrimental to our industry. We objected to the Environment Agency's proposals to charge based on the time to complete permitting work: sites could end up paying more if inspectors lack experience or knowledge of the process. The Scottish Environment Protection Agency postponed introduction of a proposed new compliance assessment scheme: the proposals were inappropriate to the scale and complexity of glass manufacturing and would have increased charges disproportionately.



Sharing expertise and celebrating success

A mine of information

Over the past year our library collection and reputation as a glass hub has allowed us to provide for members:

300+ answers to specific information requests

£8,000 worth of access to standards documents from the UK, EU, USA and China

375 customer referrals.

British Glass has the UK's only dedicated library on glass technology, from raw materials to end product. It includes scientific journals, standards and regulations, conference proceedings, factory data, trade publications and access to patent searches.

If you have a question you think we could help with, email: information@britglass.co.uk

Turning glass science fiction into fact

Our experts and members continue to support research and development in glass technology, including:

- EnviroGlass, led by Sheffield Hallam University (SHU) and Glass Technology Services Ltd (GTS), successfully identified a number of novel raw material mixes, from waste streams, that allow glass to melt at lower temperatures. These could reduce energy use and CO₂ emissions significantly. GTS and SHU have secured funding for the next phase of work – which will investigate furnace dynamics and supply chains for the materials involved
- a new coating with potential to make any glass product stronger. Work to date has shown an increase in strength of 15-20% for glass containers (compared to uncoated bottles), which could enable a 10% weight reduction. Work continues to optimise the coating to meet industry standards.

Lead and cadmium in food contact materials

As a member of the European Commission working group on food contact, we have been working with Glass Alliance Europe colleagues this year to supply evidence to the ongoing review of regulations around lead and cadmium. Testing regimes appropriate to other materials would be disproportionately onerous and costly for glass (given the potential lead and cadmium migration is minimal). We continue to lobby for a risk-based approach and material-specific testing regimes.



Sharing expertise and celebrating success continued

Glass Focus Awards 2017

Glass Focus Awards 2017

Our annual awards showcased the excellence which underpins our industry's contribution to the economy, to society and to customers, staff and stakeholders. The ceremony and dinner, held in June at the Royal Armouries in Leeds, saw awards made for achievements across sustainability, health and safety, innovation, investment in staff and apprentices and design.



The Glass Focus Awards 2018 will take place in the autumn. To be the first to hear about any of our events register for our updates at www.britglass.org.uk/sign-up