Written evidence submitted by Encirc (IND0045)

Introduction

Many thanks for the opportunity to respond to Energy Security and Net Zero Committee's (ESNZ) call for evidence on the industrial strategy for clean power. While we are not in a position to respond to all the questions contained in the consultation, we wanted to share our experience of and ambition for the decarbonisation of an energy-intensive industry that plays an important role in the economic and social life of the northern England and rural Northern Ireland.

We want to outline some key considerations that should inform any industrial strategy for clean power. Firstly, there is the principle of balanced regional development within GB, which is the jurisdictional focus of the committee's work, as well as balanced regional development across the UK as a whole.

As energy and industrial policy are devolved, it is essential that GB policymakers and legislators understand and mitigate against any unintended consequences of policies for the devolved jurisdictions and the operation of the Single Electricity Market on the Island of Ireland.

As a business that operates across multiple jurisdictions and markets, transparency, consistency, or alignment of legislation, regulation, and incentives is important to us both in principle and in practice. It enables us to operate efficiently and make strategic investment decisions to grow the business, contributing to wider local and UK-wide economic growth.

Secondly, in planning for the future, policymakers need to work with industry to ensure that any transition is both achievable and sustainable. Coordination between different departments is also needed so sectors have the time and space to plan and implement changes.

About Encirc

Encirc is based in three sites: Derrylin, Northern Ireland, Elton, Cheshire, and The Park, Bristol. We employ almost 2,000 people and produce more than 3 billion glass containers for leading global brands each year.

Established in 1998 with our first plant in Northern Ireland, Encirc is the most sustainable business of its kind in the world. It is the UK market leader and has around a 40% market share for container glass sales in the UK and ROI.

Encirc's Clean Energy Transition: Overview

One of the major barriers to decarbonisation for Encirc relates to the furnaces used to melt and make glass. At present, the furnaces in Encirc's plants at Derrylin and Elton predominantly rely on natural gas each year, sourced from the gas network.

At Encirc, decarbonising the container glass industry is at the forefront of our work and our ambition is to almost halve our Scope 1 emissions (47%) by 2030 and reach a full Net Zero position by 2045, helping to make glass the most sustainable packaging in the world.

As an energy-intensive business, we are fully committed to leading the glass industry through our business mission, ZE30, which is to produce zero-emission glass bottles by 2030. We see replacing gas with biomethane and hydrogen, at Derrylin and Elton respectively, as a key component of that mission.

The move to clean power to boost sustainable economic growth is an exciting challenge that is absolutely essential to the UK's long-term success. As such, we welcome the Committee's Call for Evidence on Industrial Strategy for Clean Power.

Our business has ambitious global targets to decarbonise. Encirc's science-based targets include up to a 50% carbon reduction in its scope one and two emissions by 2030, an overall company position of Net Zero by 2045, and a UK Government position that glass must be Net Zero by 2050.

We have pioneered the use of innovative technologies such as biofuels in our Derrylin furnaces, which reduce the carbon footprint of glass production by up to 90%. We are also exploring hydrogen and biomethane technologies to further minimise environmental impact, ensuring that glass remains the most recyclable and sustainable material on the planet.

Ensuring a low-carbon, secure energy supply at our sites is critical for Encirc's job security, future business growth and prosperity, and the wider UK.

Derrylin site: key opportunities and barriers

While beyond the remit of the ESNZ committee, we feel that our operations in Fermanagh provide an insight into experiences across the UK and the devolved jurisdictions and help inform decision-making on any future industrial strategy for clean power.

Encirc fully supports the Northern Ireland Executive's move to inject biomethane into the gas network to decarbonise businesses and homes. It represents a strategic opportunity to decarbonise heavy manufacturing with a like-for-like fuel.

However, considering all commercial factors involved in biomethane production and its by-products, a pricing and policy framework would need to be introduced.

At Encirc, we would need pricing on par with or at similar levels to current gas pricing, or we risk becoming quickly uncompetitive with our EU plants and our competitors.

From a technical point of view, our furnaces will operate as efficiently as they do now on biomethane. Any CO2 reduction in our methane supply will directly reduce our operations' carbon footprint and decarbonise drinks bottles and food jars across the UK and Ireland.

It makes perfect sense to directly inject biomethane, and indeed other sustainable fuels, into the gas network via a series of ADs fuelled by biogenic waste streams, including animal slurry, green stocks, sewage waste, and other biogenic stocks.

However, it is essential that this be accompanied by appropriate pricing mechanics to ensure that glass produced in Northern Ireland remains competitive. Any increase in furnace fuel costs could leave energy-intensive manufacturers like us unable to compete in Northern Ireland. Hence, the importance of the principle of balanced regional economic development.

For example, because glass is a low-value product and energy-intensive to produce, energy pricing accounts for more than a third of the total cost of each and every one of the 1 billion containers we produce each year in our Co. Fermanagh plant.

Even a small increase in pricing for methane can add on a substantial cost to the product for consumers, and quickly make it uncompetitive, particularly in comparison to EU competitors, who may see little or no energy price increases when switching to cleaner fuels.

The current price of between 12 and 14p for biomethane is up to three times more expensive than natural gas and is not viable.

Encirc wants to work with the NI Department of Economy and the UK Government to help develop an effective policy and fiscal framework to support the development of biomethane production.

We would urge the Department of Economy to adopt a pricing model that considers the full lifecycle of the biomethane and the commercial by-products it produces, such as CO2 and digestate (to reduce the unit pricing).

A clear policy framework considering all these factors would be necessary.
At Encirc, our preference would be for the gas network to decarbonise using biomethane.

Should this be too costly, Encirc will seek to power its operations with its own AD and, in the long term, go “off-grid.” However, in the interest of achieving government objectives on decarbonisation and for energy security, we believe the first option should be implemented.

Decarbonising glass in Northern Ireland will be extremely challenging without alternative sustainable fuel sources being made available at commercially affordable levels. In comparison, other countries are already making substantial progress in decarbonising glass plants.

Our sister plant in Cheshire and competitor plants in the EU are well linked to planned hydrogen production plants, for example, which are likely to have competitive subsidy policies in place.

Northern Ireland risks becoming uncompetitive in the near future as the global food and drinks brands we work with look to source glass with the lowest possible carbon footprint. It is imperative that we act now to ensure that this region is actively decarbonising and building economic growth around this opportunity.

Elton site – transition to hydrogen energy production

Encirc plans to build a new hydrogen-powered, ultra-low-carbon hybrid glass furnace in Elton, Cheshire, and begin glass production in the next few years.

The hydrogen used to power the new furnace will come from Vertex Hydrogen, a partner of the government-backed HyNet North-West cluster – the UK’s leading industrial decarbonisation project.

Decarbonising glass packaging is key to the UK Government's commitment to reach net zero by 2050. Our work in Cheshire is an example of leading UK companies partnering to innovate in using green energy to manufacture at scale.

Low-carbon alternative energy sources are an essential part of the solution for net zero. Hydrogen has the potential to be a crucial clean energy source for businesses and industries across the UK and global economies.

In October 2024, Encirc was delighted to welcome the Prime Minister, Chancellor, and Energy Secretary to our production facility in Elton (see here). The Government used the visit to announce its £22 billion carbon capture and storage programme, which includes emissions from energy, industry, and hydrogen production.

The Government's decision to announce the programme at our site demonstrates that they view Encirc as a model business to help power the green transition and boost sustainable economic growth.

As we move to delivery of this ambitious project, we look forward to continuing our work with the Government, building on their commitments to achieve sustainable economic growth, clean energy industries, and a favourable regulatory environment.

An immediate threat

A key threat in the glass manufacturing sector is the Extended Producer Responsibility (EPR) scheme. Introduced this year, the fee structure is set to be finalised over the coming months. The scheme charges producers rather than the taxpayer for the end-of-life costs of packaging.

While we have supported the policy objectives, we remain hugely concerned about the irrationally high price placed on glass products within EPR. The costs are so high that they represent an immediate threat to the sustainability of the glass manufacturing industry. Because the EPR metric is still largely weight-based and not unit-based (weight is only used in part of the metric), the end-of-life cost for glass bottles and jars will be between 20 and 60 times more expensive than various competitor materials such as plastic bottles and cans. This has been compounded by the fact that cans and plastic bottles will not be in an EPR scheme, with these products mooted for a future Deposit Return Scheme in the UK instead.

There is no other EPR example in the world where such a price disparity exists between materials.

DEFRA officials have argued that the high cost of glass will help drive a reuse scheme for glass in the UK. While we would be open to future reuse schemes, experience from elsewhere shows that establishing a nationwide reuse scheme will take between 10-20 years. EPR is putting the UK glass manufacturing sector at immediate threat now.

While it is argued that EPR will create new jobs (officials have suggested 20,000+), we need the glass sector to exist to enable its successful decarbonisation and the development of a sustainable reuse system.

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