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CEFS CONTRIBUTION

THE EU CLEAN INDUSTRIAL DEAL

Introduction

CEFS, the European Association of Sugar Manufacturers, represents at once an agricultural and an industrial sector. Beet sugar manufacturing is characterised by high energy- and trade-intensity, making it a carbon leakage sector under the EU Emissions Trading System (ETS). Sugar is the second largest energy user and the second largest CO_2 emitter within the agri-food sector (after animal feed).[1] Our high energy consumption and emissions mean decarbonisation is both an environmental and an economic imperative. Sugar manufacturing is capital-intensive and operators will need to make major investments to get to climate neutrality by 2050. But for this, a stable and predictable regulatory framework and public financial support is needed.

Unfortunately, EU sugar manufacturers must compete with third country sugar producers with ever-increasing access to the EU sugar market that benefit from lower production costs, large economies of scale and an access to alternative markets (e.g. ethanol) to buffer the impact of market fluctuations. Most of these producers make cane sugar, which benefits from the use of woody cane residues ('bagasse').

Sugar manufacturing is different to other industrial sectors. Our factories run on a seasonal basis, since sugar beets are a perishable raw material that must be processed shortly after harvest. This unique element has consequences for factory design and investments.

Because of the specificity and importance of sugar manufacturing to the EU's food system and the EU's decarbonisation goals, sugar manufacturing – and industrial processing of

[1] Ricardo Confidential. 7 July 2021. Decarbonisation road map for the European food and drink manufacturing sector A report for FoodDrinkEurope. P. 6, table 1.

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agricultural raw materials in general – must not be overlooked by the Clean Industrial Deal. Here are our requests.

Energetic use of sugar beet residues

The use of sugar beet residues as an energy feedstock to fuel factory processes is an important decarbonisation pathway for sugar manufacturers.

Residue status, where granted, is sufficient for the zero-rating of upstream emissions under the RED. Zero-rating of upstream emissions ensures that energy produced from sugar beet residues is able to meet the stricter sustainability criteria under the RED III.

The use of sugar beet residues for energy is aligned with the objective of the Clean Industrial Deal to develop the use of renewable energy at affordable cost. It also reduces the need for biomass resources of forest origin (thus avoiding additional pressure on an already strained sector).

The proposal to revise the Energy Taxation Directive is not fit for purpose. The focus of the revision should be to reduce minimum tax rates on electricity and thereby spur electrification. Unfortunately, the proposal goes far beyond this scope by proposing minimum tax rates for biomass fuels. This overreach is in part to blame for the deadlocked discussions in the EU Council. Sugar beet residues should be included in a sub-category in Annex III.

CEFS' request: Annex III should include a sub-category encompassing materials recognised as residues and wastes and not included in said annex.

Electrification

Electricity prices have a significant influence on the feasibility of decarbonisation measures associated with an increase in electricity consumption, such as process electrification.

The sugar industry needs urgently access to long term contracts with competitive electricity prices based on production costs.

Electricity prices can be brought down by reducing demand for gas across the economy, for example by accelerating the electrification of domestic heating and cooling and developing additional low-carbon and renewable energy capacity. The build-out of the latter must be accelerated as a matter of urgency. This is essential to bring electricity prices down and drive electrification forward.

In addition, the upgrade and extension of the EU's electricity grids must be accelerated. Unfortunately, permitting processes to electric grid can be an major obstacle to

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decarbonisation projects based on electrification. Innovative solutions may need to be considered for energy-intensive seasonal industries located in rural areas. The extension of electricity grids must be done in an efficient way to avoid any increase in grid cost to be paid by the consumer.

Reducing taxes, tariffs and levies (e.g. grid usage fees, renewable energy surcharges) is another straightforward way to bring electricity prices down.

CEFS' requests:

- Sugar industry needs access to long term contracts with competitive electricity price based on production costs.
- More build-out of low-carbon energy generation and grid infrastructure that also supports industries in rural areas without increase in costs per energy unit.
- Accelerate connection to electric grid by simplifying permitting procedures for energy intensive industries.
- Energy-intensive industries such as sugar should be exempt from grid tariffs.

Funding

The EU beet sugar industry needs public funding to decarbonise (or, more accurately, "defossilise"). Certain Member States have offered grants and loans to co-finance decarbonisation of some sugar factories, but this is not always the case.

Due to the seasonality of sugar production, public co-financing of capital expenditure (CAPEX) is essential. Capital-intensive decarbonisation investments include additional evaporation effects, high-efficiency cogeneration, biomethane production, and heat pumps. The seasonality of our industry should not be penalised when awarding public financial support for decarbonisation. That is the case when funding is awarded on the basis of cost per tonne of CO_2 abated, since seasonality can unavoidably multiply these costs by a factor of three or four, skewing the playing field against sugar manufacturers.

Operational expenditure (OPEX) support is also important, particularly in the case of electricity-intensive investments.

There is wide latitude to increase the funding of EU industry from ETS revenues: only 3% of Member States' revenue from the ETS was redirected back to industry in 2023.[2] Unfortunately, existing EU funding programmes do not provide adequate support for the decarbonisation of sugar manufacturing. The ETS Modernisation and Innovation Funds are heavily oversubscribed, and the latter focuses on innovative technologies only,

[2] European Commission. 19 November 2024. REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the functioning of the European carbon market in 2023.

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overlooking that the technologies the EU sugar industry will use to decarbonise have largely already been developed.

The Industrial Decarbonisation Accelerator Act (IDAA) must remedy these shortcomings. It must address the challenges faced by all energy-intensive industries. Sugar must not be overlooked because of its relatively small size and processing of agricultural raw material.

CEFS' requests:
- The seasonality of our industry should not be penalised when awarding public financial support for decarbonisation
- The use of ETS revenues for industrial decarbonisation must be drastically scaled up and not only focused on innovative technologies.
- The Industrial Decarbonisation Accelerator Act should introduce new funding possibilities for energy-intensive industries in rural areas using technologies which have been already developed.

Carbon pricing

The change to the definition of emissions in the 2023 revision of the Emissions Trading System (ETS) Directive to cover emissions that are not released into the atmosphere has led to increased administrative burden and costs for EU sugar manufacturers. These costs will rise from 2028 as the percentage of free allowances for process emissions will fall from 97% to 91%. In addition, the change to the definition contradicts the polluter-pays principle. For these reasons the change must be reversed during the next revision of the ETS Directive in 2026.

The Carbon Removals Certification Framework should provide adequate incentives for industry and farmers to remove and reduce carbon emissions. Bioenergy + carbon capture and storage (BECCS) should be incentivised by the carbon removals methodologies under development.

We are sceptical of an ETS for agriculture. We call instead for an incentive-based framework to drive reduction of our scope 3 (i.e. farm-level) emissions.

CEFS' requests:
- The 2026 review of the EU ETS should re-introduce the phrase "into the atmosphere" into the definition of emissions in the ETS Directive and integrate carbon removals.
- The carbon removals framework should incentivise BECCS in industry.
- Incentive-based framework for reduction in agricultural emissions

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Trade

Sugar is a sensitive and strategic agricultural product. It has traditionally been protected by substantial Most Favoured Nation tariffs. Unfortunately, this protection has been eroded in recent years by market opening in free trade agreements and following successive enlargements. As a result, European sugar must increasingly compete with dumped and subsidised sugar imports from third countries.

The problem is structural: the world sugar market is a residual dump market used to offload sugar that is not needed for domestic consumption. As such, trade defence measures targeting single supplying countries are of limited use to the EU sugar sector.

The EU must take a principled position not to open its markets in free trade negotiations where subsidies or dumping occur in the partner country for the product concerned.

Regarding border protection against emitting imports, our preliminary assessments show that the Carbon Border Adjustment Mechanism (CBAM) would provide no effective protection for the EU sugar industry and may even exacerbate the competitive disadvantage faced by EU sugar manufacturers vis-à-vis cane sugar producers when combined with the accelerated phase-out of free allocation under the ETS. This is because the CBAM GHG methodology only allows fair comparison for products where scope 1 and 2 emissions are the hot spot. Where field and transport emissions are hot spots and significantly differ between domestic and non-EU production – which is the case for sugar – the method fails. The EU's energy infrastructure is not yet sufficient to enable the full scope 1 and 2 decarbonisation of EU sugar manufacturing.

CEFS' requests:

- No market opening to dumped or subsidised sugar imports from third countries.
- No inclusion of sugar in the CBAM until the expiry of free allowances under the EU ETS.

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ANNEX: EU BEET SUGAR BASICS

Beet sugar production: seasonal processing of a perishable raw material

Sugar beet processing is highly seasonal due to the natural cycle of beet cultivation. Energy is required to extract sugar from beets over a period of 90-150 days a year (the 'campaign'). In most parts of Europe the campaign runs during autumn and winter (mid-September until the end of February), with sowing taking place in the spring. It is impossible to store the beets for more than two and a half months, since the root (living matter) degrades considerably beyond this period.

Sugar is an energy-intensive industrial sector

Sugar is the second largest energy user and the second largest CO_2 emitter within the agri-food sector (after animal feed).[3] Our industry consumes over 30 TWh of energy per year, and emitted 6.4 million tonnes of CO_2 in 2021. Sugar is covered by the EU Emissions Trading System (ETS) and is on the carbon leakage list due to its energy- and trade-intensity. Energy can make up to 30% of industrial manufacturing costs.

Seasonality has a major impact on sugar factory design

Seasonality has led to investment in industrial facilities sized to operate 90-150 days a year. Most beet sugar factories are equipped with high efficiency combined heat and power (CHP) installations of 50-300 MW, 3-4 times larger than similar factories working 365 days a year. They need sufficient capacity to manage the variations in the volume of beets for processing within 3-5 months that can result from changes in weather conditions from year to year. Because of the high capacity of sugar factories' energy-consuming stations, security of energy supply is key.

The financial and administrative consequences of seasonality are substantial. Due to the seasonality of sugar production, factories' energy consuming stations are sized 3-4 times larger than non-seasonal installations operating all year round. Because of this, all investments costs 3-4 times more than in non-seasonal industries. Sugar factories also have a longer lifetime of equipment than in industrial sectors operating all year round: because equipment only operates for 3-5 months a year, it has to be kept and maintained more years to come to the same lifetime than in the case of industrial units operating 365 days/year. As a result, beet sugar manufacturers have very high capital intensity, similar to that of heavy industry.

[3] Ricardo Confidential. 7 July 2021. Decarbonisation road map for the European food and drink manufacturing sector A report for FoodDrinkEurope. P. 6, table 1.

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Table 1: Financial impact of seasonality compared with installations operating all year round (example)

Type of industry	Investment	Annual production
Seasonal (110 days/year)	30	100
Non-seasonal (330 days/year)	10	100

Sugar factories are almost all located in rural areas

All factories that process beet in the EU today produce sugar as their primary product. As sugar beets contain approximately 75% water, sugar production is characterised by a high raw material intensity. To save on transport costs, sugar factories aim to minimise the radius within which they source sugar beets. This distance is 40km on average in France and 50km in Germany. Many operators pay a premium for sugar beets cultivated close to the factory.

The necessary proximity to sugar beet fields means in most cases isolation from high-voltage electricity grids, which generally supply urban areas. This, combined with significant energy requirements, has driven the development of Combined Heat and Power (CHP) systems to produce steam for the heat required for the extraction of sugar and electricity to power mechanical and electrical processes. CHP systems are highly efficient with an overall energy efficiency of over 90%. Historically these systems are equipped with steam turbines that provide only the electricity needed for the production process without any excess for sales to the public grid.