Position Paper

Inclusion of Municipal Waste Incinerators in UK ETS from 2028

Introduction

Emissions trading schemes are cap and trade mechanisms to limit and progressively reduce Greenhouse Gas (GHG) emissions from obligated sectors. UK ETS started with heavy industry and power generation, with coverage progressively expanded to include new sectors.

This expansion now includes waste incineration:

"….waste incineration and energy from waste will be included in the scheme from 2026 for the Monitoring, Reporting and Verification (MRV) only period, with full surrender obligations from 2028."

UK Emissions Trading Scheme scope expansion: waste - GOV.UK

Once included in the scheme, plant operators (an estimated 71 Energy from Waste sites (EfW) plus generally smaller plant managing clinical and hazardous waste) will be required to monitor and report their emissions of Green House Gases (GHG) – including carbon dioxide originating from the combustion of waste materials.

The plant operator is then required to purchase an emissions allowance for each tonne of fossil derived GHG emitted (quoted in terms of carbon dioxide (CO_2)). These allowances can be purchased from government at auction; or bought on the secondary market from traders.

Allowances are created by government with the total issued capped at a level aligned with national decarbonisation targets. The number issued is reduced each year to drive emissions down. The price of allowances is ultimately set by the volume issued by government, the secondary trading markets, and the compliance demand.

An obligated emitter can choose to comply either by investing in technologies and techniques to abate emissions; or pay the market price and buy sufficient allowances to cover the resulting emissions.

Fossil vs Biogenic Carbon in ETS

Within ETS, fossil carbon (largely from oil and gas) incurs an ETS liability, while biogenic carbon (taken from a shallow carbon cycle where trees or plants regrow to recapture the emitted carbon) incurs zero ETS liability.

- Fossil – material in the waste stream that has come from sources such as coal, oil and natural gas that have been locked underground for millions of years. Examples include plastics made from oil.

- Biogenic – material in the waste stream that has come from biological sources and has grown recently (in the last hundred or so years). Examples include food, paper, garden waste, wood.*

Packaging related emissions arising from fossil carbon incur an ETS allowance liability (arising predominantly from the plastic content of combusted packaging material) while the biogenic carbon (arising predominantly from the paper content of combusted packaging materials) incurs no ETS allowance liability as it gets reported as zero fossil carbon on the mandatory annual installation report.

This means that under ETS scheme rules, the paper component of any combusted material (including from packaging) incurs zero ETS allowance liability.

Interaction between ETS and the Extended Producer Responsibility Scheme for Packaging (pEPR)

The cost of complying with UK ETS will increase the operational cost for plant operators. In turn these plant operators are expected to seek to pass increased costs onto their customers, primarily local authorities using incineration as a waste management option.

DESNZ estimates that around half of municipal solid waste is sent to facilities impacted by these changes. The estimated cost impact is around £461m (in 2028) if the full costs are passed through.

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Local authorities, as the largest customers of EfW facilities, were responsible for about 80% of EfW fossil emissions in 2022. It is further estimated that 20-30% of local authority waste by weight will fall under the Extended Producer Responsibility system for packaging (pEPR).

Impact on Local Authorities

As a local authority cost mitigation measure, ETS costs associated with household packaging will be passed to producers via the pEPR system.

This should act as an incentive for packaging producers to reduce plastic and other forms of packaging in the waste stream, reducing the fossil waste being sent to waste incineration facilities and reducing the fossil emissions for which UKAs must be surrendered.*

Given the cost impact is limited to fossil-based materials, the pEPR fee for paper and card should not increase and the cost burden to the paper part of the packaging sector must be zero.

Monitoring, Reporting and Verification (MVR)

Regulators are currently seeking to identify the most effective Monitoring, Reporting and Verification (MVR) methodologies to record GHG emissions from incineration sites:

MRV options for inclusion of Energy from Waste plants and Waste Incinerators within the UK ETS

To deliver the date needed for the cost apportionment required to deliver the pERP proposals, then any approved methodology must:

- Identify the proportion of household waste within the input material into each regulated site and from which local authority the material originated.
- Identify the total GHG emissions arising from this material and seperate between fossil and biogenic.
- Share this cost fairly across the packaging supply industry via the EPR system.

Indirect route for household packaging waste to incineration

UK paper mills are the largest purchasers and processors of materials for recycling in the UK. As such, mill purchases of Paper for Recycling (PfR) from local authority collections – either directly or indirectly via waste management companies – provides an important source of revenue to support these collections. These PfR streams have long been characterised by high levels of contaminants and initiatives such as 'Simpler Recycling' are welcome in driving these levels of contamination down.

Contaminants may be in the form of non-target materials (such as plastic, glass and cans) due to inefficient collection and sorting systems; or due to product design features such as plastic films and laminates.

Non-paper components must be removed during the reprocessing, being separated from paper fibres through sorting, floatation and filtration. As far as practicable these materials are sent for recycling through other routes (plastic bottles, metal drink cans etc), but large amounts of predominantly plastic fragments remain with the only practicable disposal route via incineration or landfill.

When ETS costs are applied to these plastics fractions from 2028 onwards, it's expected that incinerator operators will pass the cost to their customers through increased gate fees.

In turn paper mill operators will have increased operating costs. These costs will be passed through to their customers in the form of lower prices paid for the materials purchased for recycling to cover the increased cost arising from disposing of process wastes. An initial CPI estimate is that the cost impact will be between £3m-£4m pa at 2023 prices. **When this material originates from local authority collections, the cost burden will ultimately return to local authorities.**

Accordingly, there needs to be an agreed methodology to assess:

- the volume of plastic household packaging waste contained within PfR delivered to mills;
- the ETS cost associated with the incineration of this plastic content; and
- a mechanism to ensure these costs are allocated to appropriate obligated producers via the pEPR system.

Conclusions

Combustion of the paper component of household packaging incurs no ETS compliance liability for the plant operator and no additional costs to pass through to any local authority customer. Accordingly, there is no ETS cost liability to pass through to the packaging industry arising from the combustion of paper or wood.

It follows that the inclusion of waste incineration in ETS from 2028 should have no impact on the EPR fee for paper and card. ETS-related costs will be reflected in the Local Authority Packaging Cost and Performance Model (LAPCAP) mechanism and are expected to affect only fossil-based packaging materials.

Further Information

Further information is available from Dimitra Rappou, CPI Executive Director - Sustainable Products (drappou@paper.org.uk), or Steve Freeman, CPI Executive Director – Energy and Climate Change (sfreeman@paper.org.uk).

Confederation of Paper Industries

- The Confederation of Paper Industries (CPI) is the leading trade association representing the UK's Paper-based Industries, comprising paper and board manufacturers and converters, corrugated packaging producers, makers of soft tissue papers, and collectors of paper for recycling.
- CPI represents an industry with an aggregate annual turnover of £15 billion, with 56,000 direct and a further 59,000 indirect employees.
- For facts on the UK's Paper-based Industries please visit: www.paper.org.uk.

Any fossil content of a minor part of a packaging material will lead to a small ETS liability that would be especially complex to calculate and properly apportion. For example any fossil content of the ink on metal cans; adhesives on glass bottle labels; or glue/plastics in laminates.

*Detailed background analysis and the source of quotes:
https://assets.publishing.service.gov.uk/media/664dfb7d4f29e1d07fadccde/ukets-scope-expansion-consultation-waste-analytical-annex.pdf

UK Emissions Trading Scheme scope expansion: waste - GOV.UK

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