Submission to the Consultation on Developing the UK Emissions Trading Scheme (May 2022)

About UKWIN

Q1. What is your name?

Shlomo Dowen

Q2. What is your email address?

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Q3. What is your organisation?

United Kingdom Without Incineration Network (UKWIN)

Q4. Please tell us which sector your organisation fits into:

Other: Environmental group

Q5. Region organisation HQ (or individual if not an organisation) is based

England

Q6. Are you happy for your response to be published?

Yes

Q7. Would you like to be contacted when the consultation response is published?

Yes

Chapter 7: Reducing Emissions from Waste

124. Do you agree with the proposed timing for when waste incineration and EfW could be introduced into the UK ETS?

No, incineration ought to be fully included in the UK ETS no later than 1st January 2024. This would reflect the importance of the polluter pays principle and the urgent need to reduce GHG emissions as soon as possible.

Incinerator operators by-and-large already have CEMS that can monitor CO_2 emissions and the ability to calibrate their flow meters, and some operators are already doing so. If necessary, facilities that are not able to do this can use alternative measures to monitor CO_2 emissions in the interim before they upgrade their equipment.

Please note: throughout this document UKWIN uses the terms 'incineration' or 'incinerators' to refer to all types of municipal waste incineration, including 'energy from waste', gasification, pyrolysis, etc.

126. Do you agree that the UK ETS should be expanded to include waste incineration and EfW? Please outline your reasoning, including alternative options for decarbonisation of the sector outside of the UK ETS.

Yes. In 2020 around 14 million tonnes of municipal waste was incinerated in the UK resulting in the release of more than 7 million tonnes of fossil CO_2 which, based on the BEIS central carbon price, resulted in an unpaid cost to society of around £1.7bn. In 2021 the quantity of material incinerated rose to around 15 million tonnes and the associated unpaid cost to society increased to around £1.9bn.

Estimate of unpaid cost of incineration in 2020 and 2021 (based on industry and Government figures)

Year	Waste incinerated (tonnes)	Fossil CO_2e per tonne of waste incinerated	Fossil CO_2e (tonnes)	Central carbon value	Total cost to society of fossil CO_2e from incineration
2020	13,957,000	0.512 tonnes	7,145,984	£241	£1,722,182,144
2021	14,996,000	0.513 tonnes	7,692,948	£235	£1,884,772,260

For data sources and calculations see: https://ukwin.org.uk/facts/#unpaidcost

The environmental consultancy Tolvik estimated that by 2026 UK Operational Capacity will be around 19.4 million tonnes per annum. Assuming that all of this capacity is used and that the amount of fossil CO_2e per tonne of waste incinerated remains as per Tolvik's 2021 estimate then, based on the BEIS cost of £264 per tonne of fossil CO_2, the total unpaid cost of the direct emissions of CO_2e from incineration would rise to more than £2.6bn.

Estimate of potential unpaid cost of incineration in 2026 (based on industry and Government figures)

Year	Waste incinerated (tonnes)	Fossil CO_2e per tonne of waste incinerated	Fossil CO_2e (tonnes)	Central carbon value	Total cost to society of fossil CO_2e from incineration
2026	19,400,000	0.513 tonnes	9,952,200	£264	£2,627,380,800

If incineration is included in the UK ETS (without the free allocation of allowances) then this would help compensate for these otherwise unpaid CO_2 costs in line with the polluter pays principle.

However, as this would only cover the fossil CO_2 element of the GHGs released by waste incinerators, and as inclusion of incineration in the UK ETS would only reflect some of the direct emissions rather than the embedded carbon, further measures would still be needed to reflect the adverse impacts of the loss to the circular economy of material caused by incineration and to provide a market signal showing a preference for the top tiers of the waste hierarchy for all waste (and not just plastic waste).

As set out in more detail in our Good Practice Guidance for Assessing the GHG Impacts of Waste Incineration available from https://ukwin.org.uk/files/pdf/UKWIN-2021-Good-Practice-Guidance-for-Assessing-the-GHG-Impacts-of-Waste%20Incineration.pdf and our submission to the Scottish Incineration Review available from https://ukwin.org.uk/files/pdf/UKWIN-Submission-to-Scottish-Incineration-Review-February-2022.pdf a significant proportion of the current residual waste stream includes material that could be recycled, composted, or substituted.

Defra's August 2020 'Resources and Waste Strategy Monitoring and Evaluation Report' – available at https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england-monitoring-and-evaluation - found that only 8% of England's residual waste from household sources was "*Difficult to Recycle or Substitute*", concluding that the majority of England's residual waste was readily recyclable.

According to Defra's Report:

> *"The large amount of avoidable residual waste and avoidable residual plastic waste generated by household sources each year suggests there remains substantial opportunity for increased recycling…The message from this assessment is that a substantial quantity of material appears to be going into the residual waste stream, where it could have at least been recycled or dealt with higher up the waste hierarchy."*

"Of total residual waste from household sources in England in 2017, an estimated 53% could be categorised as readily recyclable, 27% as potentially recyclable, 12% as potentially substitutable and 8% as difficult to either recycle or substitute."

"Of approximately 13.1 million tonnes of residual waste generated by household sources in England in 2017, around 7 million tonnes could be categorised as readily recyclable, 3.5 million tonnes as potentially recyclable, 1.6 million tonnes as potentially substitutable, and 1.0 million tonnes as difficult to recycle or substitute."

Charts from Defra's 2020 Resources and waste strategy monitoring report showing how much residual waste is considered avoidable

Chart 13. Avoidable residual waste from household sources, England, 2017, proportion of total residual waste, by category (WP2a)

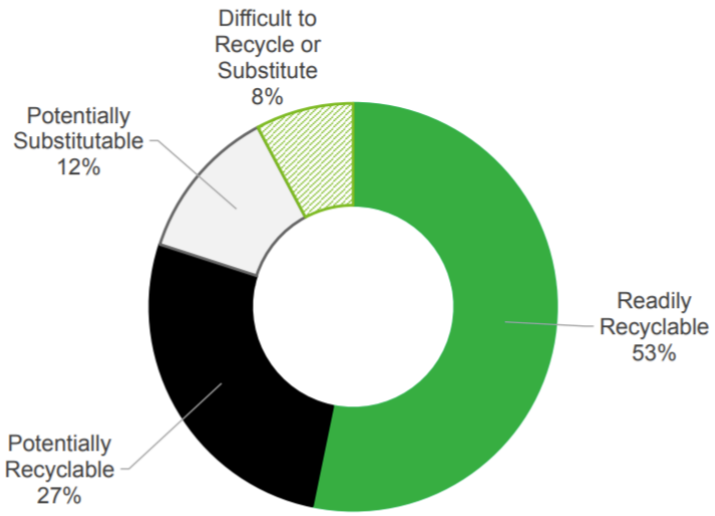
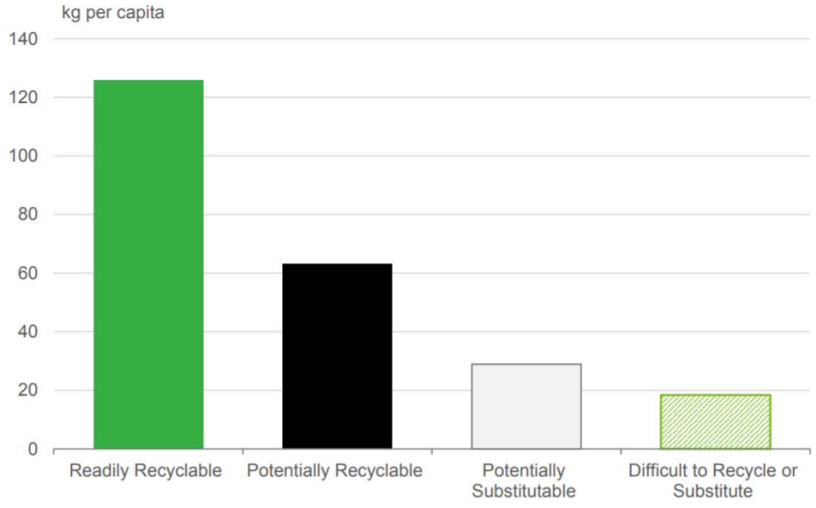


Chart 15. Avoidable residual waste from household sources, England, 2017, kg per Capita (WP2c)



As such, the UK Government should make it clear that inclusion of the incineration in the UK ETS is not the only measure they will be implementing to help get recyclable material out of the incineration waste stream.

As set out in our policy suggestions for moving away from incineration and towards a circular economy at https://ukwin.org.uk/files/pdf/UKWIN-Policy-Suggestions-November-2020.pdf two other measures the Government should pursue are:

- Introducing an immediate moratorium on new waste incineration capacity; and
- Phasing in an escalating incineration tax to complement the landfill tax.

An immediate moratorium on new waste incineration capacity would:

- Prevent further exacerbating incineration overcapacity;
- Encourage the more efficient use of existing incineration capacity;
- Prevent pollution harming air and soil quality;
- Support the transition towards net zero carbon; and
- Enable a more circular economy, with increased reduction, re-use, and recycling.

An incineration tax would:

- Promote environmental justice by implementing the 'polluter pays' principle;
- Incentivise councils and businesses to reduce, re-use and recycle by ensuring that the cost to society of incineration is reflected in the price of incineration; and
- Ensure that the costs passed on to producers offset adverse impacts of incineration, providing an incentive to design products that are suitable for re-use and recycling.

At the very least, the Government should announce that, in line with the 2018 Budget, it remains the UK Government's position that: "Should wider policies not deliver the government's waste ambitions in the future, it will consider the introduction of a tax on the incineration of waste, in conjunction with landfill tax, taking account of the possible impacts on local authorities".

An incineration tax and inclusion in the UK ETS would not be duplicative because the former would relate to the direct fossil CO_2 emissions while the latter would seek to address the harm being caused to recycling by incineration alongside the wider adverse impacts of material being lost to the circular economy and the Government's preference for all waste to be managed at the top tiers of the Waste Hierarchy.

UKWIN further notes the very recent findings of the Scottish Review of the role of waste incineration, and in particular the Review's statement – available at https://www.gov.scot/publications/stop-sort-burn-bury-independent-review-role-incineration-waste-hierarchy-scotland/pages/10/ - that:

> "At a strategic level, it could be advantageous for incineration to be included in the UK Emissions Trading Scheme, as this would help provide a set of incentives on operators to reduce their GHG emissions".

Because most of the biogenic CO_2 released by incinerators relates to the burning of material that could have been collected for recycling or composting, the loss of those materials and nutrients to the circular economy should be considered unsustainable. As such, biogenic CO_2 from incineration should be treated in the same manner as biogenic CO_2 from biomass schemes that do not meet the sustainability criteria and as such all of the CO_2 from the incineration of waste should be included within the UK ETS scheme.

The inclusion of all CO_2 from waste incineration, i.e. biogenic and fossil based, within the UK ETS would simplify the monitoring, reporting, and verification processes because operators could simply monitor the total CO_2 emissions from their incinerators using calibrated CEMS and flow meter without the need to determine the origin of that CO_2.

127. Do you agree that all types of waste incinerators should be included in the UK ETS? If you believe certain incineration activities should be exempt, e.g. incineration of hazardous or certain healthcare waste, please provide details and specify which waste stream.

Yes, all types of waste incineration should be included in the UK ETS in line with the polluter pays principle.

128. Do you believe ATT should be included in the UK ETS? What challenges could arise as a result of including ATT, if any, that are different to conventional waste incineration plants?

Yes. The UK ETS should cover all cases where material is gasified or pyrolysed and the gasses are subsequently (or immediately) burned. With respect to close-coupled gasification we note Government's December 2017 statement – available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/668382/Contracts_for_Difference_for_Renewable_Energy_Consultation_on_proposed_Amendments.pdf – that:

> "Some ACT projects are a form of the technology referred to as 'close-coupled' gasification - where the conditions necessary to generate syngas are present, but the syngas is generated and combusted in the same chamber, or one which

> is closely and substantially linked, in order to produce heat for steam production. The government has concerns that this type of plant could blur the distinction between ACT and conventional combustion technologies such as dedicated biomass and energy from waste".

As a result of these concerns the UK Government consulted industry and others regarding whether or not there was a meaningful distinction between close-coupled gasification and conventional incineration. This consultation found that there was no meaningful test to distinguish between the two forms of incineration.

On page 24 of the Government's August 2018 response to the consultation on proposed amendments to the Contract for Difference scheme – available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/736588/Part_B_Consultation_Response.pdf – the UK Government reported that:

> "120. Question 17, which received relatively few responses, sought information on close-coupled combustion systems, that could be clearly differentiated from direct combustion technologies, and capable of delivering affordable and efficient low carbon electricity.
>
> 121. No respondents believed that close coupled systems could be clearly differentiated from direct combustion technologies, while also being capable of delivering affordable and efficient low carbon electricity."

As such, nobody in the gasification industry appears to have provided a meaningful dividing line that could be used to distinguish between close-coupled gasification and conventional direct combustion incineration (or none could cite a system that would be both environmentally and economically feasible and distinguishable from conventional incineration).

129. Do you agree that the point of MRV obligation for the UK ETS should be placed on the operators of waste incinerators and EfW plants? Please outline your reasoning in as much detail as possible and provide evidence to support your views.

Yes. The point of MRV obligation for the UK ETS should be placed on incinerator operators, with strict oversight provided by the industry regulators.

130. If the point of MRV obligation is placed on operators of waste plants, should waste companies/operators or customers (either LAs or commercial and industrial customers) be responsible for meeting compliance obligations? Please outline your reasoning in as much detail as possible and provide evidence to support your views.

Incinerator operators should be responsible for meeting MRV compliance obligations.

Operators are the only party with the ability to control what materials are accepted for incineration at their facilities. Operators are free to carry out pre-treatment (e.g. to remove plastics), and to limit the types of material that they accept (e.g. to prohibit the incineration of plastic), and/or to charge their customers differential rates depending on feedstock composition.

Measures are already in place that impose obligations on those supplying waste for incineration, including separate collection requirements. Obviously, these requirements should be bolstered to further promote the top tiers of the Waste Hierarchy, but such measures fall outside the scope of the proposed inclusion of incineration in the UK ETS.

131. Do you believe that the Small and Ultra Small Emitter schemes that are currently available to eligible UK ETS participants should also be available to waste incinerators and EfW plants? Please provide details including, where relevant, whether your organisation is likely to be eligible for these schemes based on current rules.

No, all types of waste incineration should be included in the UK ETS in line with the polluter pays principle.