

REA Response to *UK Emissions Trading Scheme Scope Expansion: Waste*

About the REA

The Association for Renewable Energy & Clean Technology (REA) is pleased to submit this response to the above consultation. The REA represents renewable electricity, heat and transport, as well as electric vehicle charging infrastructure, energy storage and circular economy companies. Members encompass a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are around 500 corporate members of the REA, making it the largest renewable energy and clean technology trade association in the UK.

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Scope of the scheme

1. Do you agree that our proposals should apply to facilities that conduct the following activities: incineration and combustion of waste, and other energy recovery from waste (including the production of fuels)? (Y/N) Please give further details to support your answer.

Yes, the REA are supportive of the expansion of the UK ETS to the listed activities, however, emphasise that there remains significant uncertainty around how specific areas of the waste management sector are to be treated.

In particular, we note the need for clarity around how energy recovery facilities that use bioresources, and do not target fossil feedstocks (e.g. waste wood incineration, anaerobic digestion, biomass boilers using virgin material) are to be treated under the UK ETS. We would welcome the revised ETS document stating that near 100% biogenic facilities are out of scope, or otherwise ensure that the administrative burden of demonstrating exemption from ETS burden is kept to a minimum to ensure they are not subject to burdensome MRV.

In relation to AD plants, if they are to be in scope then it should be noted that unsold food retail store wastes have been packaged using various packaging material types, some of which are fossil-derived plastics. However, this packaging is removed during waste pre-treatment at the AD facility and usually sent to EfW or to landfill, so the fossil-carbon in that AD-rejected packaging is not to be regarded as feedstock for AD.

We also emphasise the need for greater definition around Advanced Conversion Technologies (ACT), recognising that they should be brought within scope but also often produce non-energy-related products.

Emerging sustainable technologies such as ACT/ATT may also require some early protections built in via the ETS to ensure their pathway to commercialisation is not undermined given their work in decarbonising hard-to-abate sectors. Where ACT plants are producing recycled carbon fuels (RCFs), recycled carbon gases and chemicals, additional decarbonisation benefits are present comparative to waste incineration for power. RCF production disposes of waste in a less carbon intensive way while also creating products that can displace use of a fossil fuel in hard-to-abate sectors. Given the relative nascency of the sector and its valuable role in decarbonisation, protections may be considered to protect growth and recognise their environmental benefits within the ETS.

This protection for ACT/ATT could take the form of an ETS discount for the fossil portion of ACT/ATT emissions when the products created target hard-to-abate sectors such as fuel switches for energy-intensive industry and transport. The RCFs methodology used in the renewable transport fuel obligation could be applied to calculate this discount. The methodology is currently already recognised in GHG accounting in the UK and EU within the transport sector and could be applied across.

2. Are there any technologies which we have not referenced in this section, and which would not be covered by the activities we have set out, which you think should be covered by our proposals? (Y/N) Please give further details to support your answer.

No, however technologies evolve quickly in this sector and a process should be in place to regularly review and assess inclusion of new technologies to keep a level playing field, albeit with care not to place burden on smaller pilots of innovative and first-of-a-kind technologies.

3. Do you agree that facilities that produce monomers and polymers from waste that can be used as raw materials (non-mechanical or 'chemical' recycling) for materials to remain in the circular economy should not be included in the scope of our proposals?

We support that non-power products should not be in scope of the ETS. Chemical recycling can displace virgin fossil hydrocarbon extraction which should be encouraged as a sustainable method of both processing products at end of life and supplying precursory materials for popular end products.

However, a blanket exclusion of non-mechanical ACT and ATT processes to produce polymers and monomers may not be appropriate, and the scheme will need to be clear about how system boundaries are defined especially where both energy and non-energy coproducts are being produced. We recommend that the Authority further considers how these facilities might be defined and treated differently under the ETS to avoid unintended consequences.

Firstly, the production of certain fuels and polymers may still involve combustion of carbon in the manufacturing process which is important to account for, particularly for larger industrial operations to maintain accountability. Secondly, monitoring and transparency is important given that larger facilities are more likely to be producing both fuels and chemicals. Boundaries must be set

carefully to ensure that larger plants with multiple processes cannot avoid a portion of their ETS burden via loopholes given the similarities in some waste-to-fuel versus waste-to-monomer processes.

It is also important to monitor unintended consequences here not to crowd out innovation in waste-to-fuel where new technologies that could be harnessed for fuel are more inclined to be aimed at chemical recycling. Schemes incentivising renewable fuel production (like the RTFO) could counteract this potential effect and ensure fuel innovation is still highly attractive. Otherwise, waste-to-fuel may be protected with a built-in allowance via the ETS for ACT/ATT via a discount for the fossil portion of ACT/ATT emissions when the products created target hard-to-abate sectors e.g. RCFs for energy-intensive industry and transport. The RCFs methodology could be applied to calculate this discount. The methodology is currently already recognised in GHG accounting in the UK and EU within the transport sector and could be applied across.

A level playing field must also be ensured across fuel production, so interactions with renewable transport fuels production and the sustainable aviation fuel mandate should be considered carefully.

4. If yes, how should we treat facilities that produce both fuels and polymers and monomers to be used as raw materials? Please give further details to support your answer.

Also see answer to Q3.

If the processing plant produces a synthetic gas, or other hydrocarbon, from waste and this is sold to another entity then the waste processing plant should only be held accountable for the fossil CO₂e emissions from processing the waste.

This would still account for the fossil carbon emissions from large incinerators as they would be accountable for the emissions from combustion.

Chemical recycling may also produce a gas co-product which can be used to power the facility, displacing fossil gas CHP or grid power. Flaring this gas to get rid of it, rather than utilising it, would waste this energy if it can be used to displace fossil fuels, so policies to include chemical recycling plants under the ETS should consider how to monitor and treat this. Plants using these processes

will already be monitoring their energy balance so transparency can be requested.

5. Do you have any concerns with our position not to use the 20MW thermal input threshold for inclusion in the UK ETS? (Y/N) Please give further details to support your answer.

We support the decision not to use the 20MW thermal input threshold, if MRV requirements are clear and easy to follow and smaller plants are protected from overly burdensome compliance costs. Basing thresholds on emissions output is more appropriate for protecting low emitters and driving decarbonisation.

It should also be noted that the removal of the 20MW threshold could bring a number of renewable generation assets into scope that utilise predominantly biowaste resources as feedstock, having near to 100% biogenic carbon emissions. This includes waste wood sites, anaerobic digestion or biomass boilers using virgin material. Appropriate and proportional leniencies should be in place where it is clear there is minimal fossil carbon emissions from a site to reduce unnecessary MRV burden. This may include allowing larger waste wood generators to still apply under HSE threshold as CO₂ emissions are primarily biogenic.

6. Should an alternative threshold for inclusion in the UK ETS be explored (e.g. waste throughput capacities) or will HSE and USE status eligibility sufficiently protect smaller facilities? Please give further details to support your answer.

We support that HSE/USE status may sufficiently protect smaller facilities, depending on the MRV requirements to prove status. However, such requirements must align with current waste incineration permitting guidelines, which are already well developed, and create an appropriate starting point for protecting small emitters for this sector.

7. Do you agree that the proposed thresholds for HSE and USE status are suitable for waste incineration facilities? (Y/N) Please give further details to support your answer.

HSE and USE status may work as suitable thresholds. However, further consideration is needed for waste facilities that use bioresources, and do not target fossil feedstocks (e.g. waste wood incineration, anaerobic digestion) given that biogenic CO₂ emissions should be zero rated under the ETS, but larger

plants may still be subject to expensive MRV if unable to fit into HSE status. Clarification on this is needed and we recommend that waste wood plants be allowed HSE status due to their high biogenic content.

8. Do you agree that it is unlikely that smaller facilities will be developed to gain eligibility for HSE or USE Status? (Y/N) Please give further details to support your answer.

We do not have any evidence to suggest developers would cap size to avoid ETS burden, however thought should be given to any plants that sit around the threshold and how they might make processing decisions regarding inclusion. Members indicated that in rarer cases a portion of waste could be diverted to stay under the limit, giving an example that a large sewage sludge site, for example, might try and remove the plastic from the water to send to incineration, to stay under the emission limit, even though processing it all together through ATT may present a larger overall carbon saving.

9. If you disagree with the proposed thresholds for HSE and USE status, what alternatives would be suitable?

Using current waste incineration permitting guidelines may be more appropriate for protecting small emitters for this sector, as they would already have these in place. As mentioned, mindful decisions also needs to be provided in relation to sites that have near total biogenic carbon emissions, e.g. waste wood, anaerobic digestion and biomass boiler sites. If not excluded, then these installations should be subject to the least onerous form of MRV with the same requirements as HSE/USE installations or allowed to sit under these categories.

10. Do you agree with our position to include the incineration of hazardous and clinical waste in the UK ETS? (Y/N) Please give further details to support your answer and set out any concerns that you may have.

We do not agree with including hazardous and clinical waste in the UK ETS. For hazardous waste, there is no other alternative for processing the waste given the very high temperatures required, so incineration is a vital sanitation service that should not be discouraged. Unlike other waste streams and treatments, there is limited option for decarbonising hazardous and clinical waste to reduce ETS exposure, so taxing waste processing will not cause behavioural change and instead increase the cost of health services.

Hazardous waste is also not being included under the EU ETS. This divergence may cause leakage to the EU as there is no alternative to HTI for certain waste types and could create a competitive disadvantage for UK firms utilising HTI relative to EU competitors.

11. What decarbonisation options will be available to hazardous and clinical waste incinerators and in what timescale (e.g. immediately or long-term)?

Hazardous and clinical waste incineration is a specialist service without many decarbonisation options for the facility, so increasing the cost will not encourage emissions reductions but rather increase the cost of vital sanitary services. Reducing energy consumption could make the combustion process less effective.

Implementation of CCUS on such sites may face additional complications given that it is currently against UK policy to concentrate radioactive isotopes which are released in HTI of hazardous waste. CCUS is also very site dependent and tied to current carbon pipeline development. It may be possible that ACTs such as pyrolysis can develop to process harder to treat waste with the addition of specialist feed systems; but further research and testing is likely to be required to know if this can be viable in the future. At the time of the EU ETS expanding to waste in 2028, there will be very limited decarbonisation options in this area.

12. Would the emissions monitoring methods outlined in the 'Monitoring and reporting' section be available to non-specialist incinerators also be available to hazardous and clinical waste incinerators of the same size? (Y/N) Please give further details to support your answer.

No. UK HTI facilities treat radioactive waste which emit carbon-14 and thus fossil CO₂ emissions cannot be reported. Many labs will also have a policy refusing samples obtained on a site with hazardous molecules.

13. If hazardous or clinical waste incineration was ever to be exempted from the UK ETS, is there a risk of other waste types being mislabelled as either to avoid the UK ETS? (Y/N) Please give further details to support your answer.

Disposal fees for hazardous waste disposal are already significant, which negate benefits of using the label to avoid costs under the ETS. In addition, hazardous and clinical waste coding is also already very well established and has high regulatory burden surrounding the collection, handling, and traceability of these

materials. Instead, enforcement should be maintained, and risks of mislabelling monitored, before any action is taken to include hazardous waste in the ETS.

14. Do you agree that HSE emission targets will incentivise clinical waste incinerators to decarbonise? (Y/N) Please give further details to support your answer.

Different clinical waste types have different options for decarbonisation. Offensive waste, i.e. non-infectious general healthcare waste can undergo pre-treatment and be disposed of in a larger range of incinerators, providing limited options for decarbonise. HSE targets could encourage reduced use of single-use plastics here although this is dependent on wider packaging changes. However, other forms of clinical waste including infectious waste, medicinal waste and anatomical waste must be disposed of via high temperature incineration and thus has limited options for decarbonisation. It is possible that HSE targets could cause positive changes for initial decarbonisation in clinical waste as any low hanging fruit is picked, but significant or continually ramped up decarbonisation pressures may be very hard to achieve.

15. Do you agree that the customers of clinical waste incinerators will be able to take action to reduce the fossil content in the waste they generate and achieve their waste reduction targets? (Y/N) Please give further details to support your answer.

There may be some degree to which clinical operations can reduce fossil content, however this will be severely limited by the necessity of single-use items in sterile environments, as well as the limited ability of clinics to access or try alternative items or utilise sustainable plastics given financial pressures and least-cost public decision making. There may also be no sustainable (e.g. biodegradable or recycled plastic) alternatives readily available yet for certain items. Meaningful behavioural changes are thus difficult to make on a clinic-by-clinic basis, especially given resource pressure, so material change is likely to be highly dependent on wider waste and resource decisions.

Adjusting the cap for waste incineration facilities

16. Do you agree that the proposed approach, of adding allowances equivalent to emissions in scope per emissions trajectories aligned to the CBDP, is the appropriate approach to adjusting the cap, to ensure the emissions reductions required to deliver climate targets? (Y/N). Please

explain your reasoning, including by proposing an alternative approach if appropriate.

It is necessary to add allowances for waste incineration into the cap.

However, while alignment with carbon budgets is important, the current proposed cap adjustments are likely to be too low as the data used does not include wider waste management facilities that are likely to be included within the scope for the ETS waste expansion. These include ACTs, waste wood biomass sites, hazardous and clinical waste if included, and plants currently in construction/planning. Setting the cap too low would have adverse impacts both on the sector and on the wider ETS market.

As such, the cap should be reconsidered to account for all potential project falling into scope by 2030. Adjustments should provide an appropriate timeframe for this including with thought to the delivery pace of wider packaging and collection reforms and CCS. The cap should be carefully set given the important waste processing services the sector provides beyond energy provision, which we would not want to lose by inadvertently forcing an extremely steep ramp up in decarbonisation requirements.

Additionally, economies of scale and ability to utilise CCS installation would favour larger plants however these take longer to build. With the proposed reduction of allowances (30% by 2030), larger plants in planning may become unviable to begin construction given the already-low cap.

Clarity is also required as to how the Authority expects incorporation of the GGR market will work from 2028 regarding impacts on overall allowances. The separate UK ETS GGR consultation also proposes several adjustments to how the cap will work. It is difficult for industry to understand the impact of multiple proposed changes to how the cap operates, especially when spread across a number of different consultations and work streams. Thinking between all proposals and consultations must be joined up.

17. Do you agree with the proposed approach to adjusting the cap to account for the inclusion in the scheme of emissions from the waste incineration sector? (Y/N). Please explain your reasoning, with reference to any alternative approaches or sources of evidence, such as on the impact of policies on the fossil proportion of emissions.

Cap adjustment needs to be carefully considered and modelled. Energy from waste is not just power production but also diverts non-recyclable waste from landfill, avoiding methane and higher carbon emissions. There is a balance to be found between more rapid decarbonisation via cap reductions and avoiding undermining viability of existing assets considering decarbonisation options are still being worked out and present a high cost. It is important not to lose plants to decommissioning due to ETS pressures, given the waste management services they provide.

Adjustments should provide an appropriate timeframe for this including with thought to the delivery pace of wider packaging and collection reforms and CCS. CCS is one of the only major decarbonisation routes plants have available, but implementation is also currently highly dependent on government progress in developing supportive policy, regulation and infrastructure before industry can progress. Additionally, clarity is needed on how permits will be distributed among emitters, particularly between conventional EfW plants and ATT/ATC plants.

18. What would you expect to be the impact of the proposed approach to cap adjustment on participants in the sector and/or the wider UK ETS market? Please explain your reasoning.

Given the proposed cap adjustment is likely to be too low, implementing the current ETS cap adjustment plans would represent an ask for rapid decarbonisation despite limited options to decarbonise in the timeframe, likely resulting in an upward impact on market prices for all participants in the ETS.

Asking plants to decarbonise too quickly risks undermining viability of existing assets which risks the loss of vital waste management and power services rather than decarbonisation of the sector. Additionally, energy from waste represents one of the few routes to negative emissions routes currently available, which would also disrupt plans for delivery of GGRs that are critical to delivering UK net zero targets.

Participating in the scheme

19. Do you agree that it is practicable for existing regulatory requirements under the scheme, such as the compliance cycle, permit requirements, monitoring plan requirements and penalties, to apply to the waste sector? (Y/N) Please give further details to support your answer.

No comment.

20. Do you agree that an MRV-only period is the best way to meet the objectives of a phasing period for this sector? (Y/N). Please give further details to support your answer.

Yes, if there is well-timed guidance and clear requirements in place ahead of the period. This will require extensive and detailed industry engagement ahead of the MRV-only period. We recommend DESNZ establish an industry advisory panel, with regular scheduled meetings to work through and develop proposals. Such panels have proven very effective forms of industry engagement during the development of the GGR business models.

It may also be appropriate to consider a more lenient phasing period for smaller scale and innovative assets e.g. ACTs, where MRV may be less well established.

By the introduction of an MRV-only period it must also be clear how sites with predominantly biogenic carbon emissions are treated within the requirements. Waste wood incinerators currently already report their emissions in detail (involving selective dissolution) to the Ofgem-administered Renewables Obligation scheme to routinely evidence a biogenic content in excess of 95%. To avoid additional or excessive MRV for waste wood plants between 2026 and 2028, lenience should be considered to allow these plants to use pre-existing emissions data for ETS reporting to avoid a double burden.

If the MRV-period is to be required and full compliance needed from waste wood plants, then we would recommend a default calculation factor as the least burdensome additional form of MRV given near-100% biogenic emissions are well-established. Waste wood plants should be allowed to apply under HSE status. Organisations such as the Wood Recyclers Association and the REA would be appropriate bodies via which to organise a group for HMG to work with to establish a default calculation factor for the biogenic content of waste wood fuels.

21. How will operators and customers use any data from the MRV-only period?

Operators and customers will use data to understand their existing emissions and model out costs for liability under ETS, considering what steps need to be taken to manage those liabilities, including decarbonisation options available.

22. For customers and operators, will knowing expected costs earlier than full implementation provide an early incentive to reduce your exposure to the carbon price? (Y/N). Please give further details to support your answer.

Yes. The waste sector and investors will need a firm understanding of costs as soon as possible so that projects are not stalled. We would expect that cost data would provide an early incentive for reducing exposure, with the caveat that the speed of decarbonisation for the sector hinges on wider policy developments for CCS, including the ICC business models, timings for cluster sequencing, and availability of non-pipeline transport (NPT) options, which remain limiting factors for now.

23. If the MRV-only period is mandatory (Option 1): Do you agree that waste incineration facilities should be subject to the same MRV requirements for 2026-28 that they will be subject to from 2028 onwards (e.g. report emissions for all combustion units onsite)?

We support Option 1 while highlighting that responsibility to meet MRV requirements should be tied to the ability of government to provide guidance in a timely fashion, given the number of steps involved before implementation. We also recommend building in a level of flexibility for smaller, innovative, or near-100% biogenic plants while sampling methods are trialled. MRV requirements and eligibility testing for HSE status needs to be aligned and clear.

The MRV-only period should also be lighter touch, with a reduced financial penalty, given the small timeframe for adjustment in the sector.

24. If the MRV-only period is mandatory (Option 1): Do you have any concerns with the requirement for all waste incineration facilities to meet MRV requirements, before applying for HSE/USE status?

During the MRV period, there should be a level of flexibility in sampling methods while plants are categorised correctly. MRV requirements should be aligned with requirements for HSE/USE applications to minimise burden and confusion.

It should also be noted that waste wood biomass assets operate under the Renewables Obligation (RO) or Renewable Heat Incentive (RHI) and are low emitters with less than 25,000t carbon emissions per year. Operators under these schemes are required to maintain a minimum 90% biomass content threshold, undertaking an already-robust MRV process (involving selective

dissolution) that routinely evidences a biogenic content in excess of 95%. As such, care should be taken to avoid burdening near-100% biogenic facilities with extra MRV and related costs where possible. Waste wood biomass assets should be viewed as low emitters and able to apply for HSE status without needing excessive ongoing testing given the established emissions data.

25. If the MRV-only period is voluntary (Option 2): How likely do you think it is that operators would monitor their fossil emissions?

Larger scale assets would likely already be measuring emissions or have the means to implement fossil emission monitoring fairly quickly during a voluntary period, but smaller sites may be less incentivised to do this given the high cost of doing so.

26. If the MRV-only period is voluntary (Option 2): How likely do you think it is that operators would: a) share their emissions with customers so they are better informed about potential future costs, and b) share their emissions with the UK ETS Authority to inform cap decisions and evidence HSE or USE status eligibility?

Different site operators would likely take different approaches to data sharing, but we would expect some openness to sharing information with customers and the Authority when available, respecting commercially sensitive information.

27. Do you have any other comments on the MRV-only transitional period, and either of the options identified?

There should be a date set for an official review after the first year of the MRV-only period for feedback and assessment, well ahead of full implementation, to ensure the chosen method is fit for purpose for the sector.

The MRV-only period should also be lighter touch, with either no financial penalty or a greatly reduced penalty, given the small timeframe for adjustment in the sector.

MRV requirements

28. Do you agree that a tiered approach should be taken to monitoring and reporting requirements under the UK ETS? (Y/N). Please give further details to support your answer.

A tiered approach to MRV could be acceptable, however it must maintain a level playing field and only assign measurement options that are proven feasible for operators or already in use in the sector.

More consideration is needed regarding measurement method suitability before prescribing methods to operators, as industry members have expressed concerns regarding deliverability of advanced sampling methods and analysis, including with processing capacity and availability across the UK e.g. limited capacity of carbon-14 analysis in UK labs. Choosing expensive and less established measurement methods could impose high costs on generators and could also result in outsourcing processing abroad given capacity constraints, which should be avoided.

Waste wood biomass plants should be placed in the lowest tier given near-100% biogenic emissions. Ongoing testing to evidence this is already in place as well as large historic data sets.

29. Do you think that Option 1 would be suitable for waste incineration facilities? (Y/N). Please give further details to support your answer.

No. We do not believe that Option 1 is suitable for waste incineration facilities given the difficulty in calculating uncertainty levels and the difficulty in implementing widespread flue gas sampling and analysis across the sector at this time. Uncertainty tiers should be achievable by existing methodologies employed by the sector, at least for the initial rollout. It is important to consider the current capacity available in the UK for undertaking sampling, as it is preferable to avoid burdening the sector with high MRV costs or forcing the export of waste for sampling to fill any gaps in processing capacity.

30. Do you agree with our estimations in Figure 4 on how the available emissions monitoring methods for the sector could correlate with the uncertainty ranges for each tier in Option 1? (Y/N). Please give further details to support your answer.

No comment.

31. Do you think that Option 2 would be suitable for waste incineration facilities? (Y/N). Please give further details to support your answer.

Yes. Option 2 would be a more suitable and preferred option for waste incineration facilities to avoid burdening medium emitter size sites with costly

measurement methods. Allowing a larger range of plants to use default emissions factor approaches creates a level playing field and is deliverable given the small timeframe.

32. What approach (e.g. national, regional or installation specific) should be taken to the development of default calculation factors for smaller installations? Please give further details to support your answer.

A national approach should be possible and reduce the administrative burden, this should still be able to be broken down by carefully chosen factors to properly capture a range of indicators to avoid gaming and reward decarbonisation efforts. Installation-specific calculations may still be more appropriate in the first instance for innovative or first-of-a-kind plants to ensure nuances aren't oversimplified in case this cannot be captured by a range of other factors.

33. On which aspects of the policy should we produce guidance, either for operators, their customers, or both? Please explain your reasoning.

We agree with the listed areas for guidance needed for operators and customers. Additionally, guidance should be released on how sector allowances will be distributed. Guidance may also be considered for wider UK ETS participants on how the waste expansion could impact their obligations.

How costs will be attributed needs to be fully identified in advance and in detail, so that there isn't a risk of operators being left with liability they can't cover or a risk of having to open up individual contract negotiations with local authorities.

In addition to guidance, we would encourage the department to consider how support may be given through other avenues, such as through industry wide webinars and advice surgeries where appropriate.

34. How should we seek to test any guidance either for operators, their customers, or both? Please explain your reasoning.

Working with trade associations can provide opportunities for feedback on the process. The REA are happy to circulate draft guidance for feedback and convene relevant roundtables for discussion between regulators and industry.

As previously stated, we would also encourage DESNZ to establish an industry advisory group, with scheduled meetings, to work through proposals with civil servants as the guidance is being developed. This approach has proven

successful in the development of the carbon capture businesses models and should be replicated. The REA are happy to help in coordinating such engagement.

35. To what timescale should guidance on different aspects of the policy, and for different audiences, be produced? Please explain your reasoning.

Guidance must be in place well in advance of any requirement, including the MRV-only period. Clear guidance on cost passthrough should also be provided well ahead of time to avoid the need for individual negotiations and to help decarbonisation planning downstream.

Impacts of the scheme and reducing adverse risks

36. Do you expect waste incineration gate fees to become more expensive than landfill or export as a result of UK ETS expansion? Is this expectation the same for all material types and regions? Please provide evidence to support your answer.

We would expect the cost of waste incineration gate fees to rise, unless the ETS burden is separated out to make it clear to customers, similar to a tax like VAT. Regardless, the cost of waste incineration will rise overall – but whether the *relative* price exceeds that of landfill or export will depend on other policy measures to sufficiently safeguard against this. Waste export may be a larger risk if not addressed, as the UK currently does not have a mechanism for demand adjustment.

37. If waste incineration gate fees were to become relatively more expensive, with consideration of non-price factors when taking waste disposal and management decisions, how significant is the risk that waste is, in practice, diverted back down the hierarchy to landfill or export?

The UK ETS will push up the cost of incineration and energy recovery so it may be expected to make landfilling comparatively cheaper. Some operators may be able to add CCS to their sites but by no means all, and none of them by 2028. As such, there will be some risk of residual waste moving down the waste hierarchy, including potential diversion to landfill or export. EfW plants are businesses, and local authorities also have an obligation to balance their books under financial pressures, so the cheapest waste disposal route is likely to be procured.

However, relative waste disposal method attractiveness will depend on a huge range of factors, including landfill tax, RDF export rules, measures to tackle waste crime, the cost of decarbonisation and CCS for the EfW sector, wider packaging and waste reforms, and the international implications of policies such as the EU ETS and CBAM.

The risk of diversion down the hierarchy will need to be carefully managed across government departments while acknowledging that will be an adjustment period for markets given the number of changes being made simultaneously, and potential lag in decarbonisation given the limited options for the sector i.e. largely being dependent on CCS developments.

38. Considering possible benefits and challenges that could arise, do you think that further UK ETS expansion to landfill should be explored as a mechanism to protect against the diversion of waste from waste incineration to landfill? (Y/N) Please give further details to support your answer.

No. The vast majority of emissions from landfill are from methane, and biogenic. As such, the ETS would not capture the most damaging emission from landfill sites. Incorporating landfill gas into the UK ETS would provide a perverse incentive to reduce focus on capturing methane and turn efforts to CO₂.

The primary purpose of the UK ETS is to encourage behavioural change and decarbonisation, but landfill emissions are primarily from behaviour that has already happened. Additionally, Landfill sites are coming to the end of their Renewables Obligation support for landfill gas capture from 2027, reducing financial viability with a risk of sites being abandoned. In this context, anything that puts up the costs of continuing to operate a landfill site (particularly one that has no ongoing income stream by accepting more waste) would have to be considered very carefully. There are also significant technical complexities involved in accounting for landfill emissions due to the legacy emissions they produce making it extremely challenging to attribute these emissions back to the producer, so calculating ETS liability would be difficult.

Landfill tax remains a sensible and highly successful option for stopping more waste going to landfill, i.e. behavioural change, without disincentivising the useful capture of methane. The impacts of the ETS on landfilling rates should be carefully monitored. Landfill tax can be adjusted relatively easily if the ETS does appear to be distorting behaviour. We encourage government to model the

impact of the ETS waste expansion and set out the required change to landfill tax rates to ensure the cost of landfill remains uncompetitive to energy recovery.

39. Do you think alternative options to manage the landfill risk should be explored? If so, please give further details on which options and why.

In order to change behaviour and stop waste going to landfill, landfill tax should remain the primary lever for the aforementioned reasons (Q38). Landfill tax is set to go up significantly in April 2025, with the standard rate seeing an increase of 21.6%, to catch up with inflation having fallen behind recently. Further upwards adjustments should be monitored and adjusted carefully, potentially at more regular intervals with indexing to waste energy recovery if we do see an impact from the ETS.

However, it is also important to note that landfill tax must be raised carefully and not just as a precautionary measure, as doing so carries increased risk of avoidance. This can happen through export, waste crime/fly-tipping, or through mis-classification (i.e. higher rated material being classified as lower). Instead, any changes from the ETS should be carefully monitored before additional landfill tax hikes are implemented.

Wider waste and packaging reforms will also be important and should continue to be a priority. Defra's near-elimination of biodegradable waste to landfill by 2028 will be important in the first instance. Eventually, a combustibles to landfill ban could provide a further pathway to landfill reduction, once CCS technologies are in place in ERFs.

40. Do you think that either of the approaches outlined above to address landfill risk would give rise to unintended consequences? (Y/N) Please give further details to support your answer.

Including landfill in the UK ETS could risk a reduction in methane capture rate and increased site abandonment. Landfill sites are coming to the end of their Renewables Obligation support for landfill gas capture from 2027, reducing financial viability with a risk of sites being abandoned. In this context, anything that puts up the costs of continuing to operate a landfill site (particularly one that has no ongoing income stream by accepting more waste) would have to be considered very carefully.

Increases to landfill tax will be a useful countermeasure for any increase in landfilling due to the UK ETS but must be based on considered analysis of the market to determine causality. Significant raises without this analysis risk the unintended consequences of avoidance, e.g. through export, waste crime, or mislabelling.

41. What would be the most effective approach to mitigate the risk of waste being diverted from waste incineration to RDF/SRF export? Please give details to support your answer.

We believe that a tax on RDF/SRF export in line with the UK carbon price is likely to be the most effective approach to mitigating diversion. This tax would remove incentives to export, while maintaining flexibility in waste processing capacity for plants when needed.

Increased export to EU incinerators may be a risk early on in ETS implementation given the slightly later date of EfW inclusion under the EU ETS with states able to opt out initially. The impacts of a tax and tax rate should be carefully monitored given the number of moving parts shaping market reaction e.g. CBAM, EU ETS, other market incineration taxes and wider waste policy reforms.

42. Do you think that limiting the number of RDF/SRF export permits/licenses issued would be an effective mechanism to reduce the risk of waste diversion from waste incineration to export abroad? (Y/N) Please give further details to support your answer.

No. Restricting permitting runs the risk of disrupting vital waste management services while also creating difficulties in permit allocation. Many plants fall into the category of occasional exporter, where while they do not rely on waste export they do need to do so occasionally e.g. if the site is shut for maintenance, as the waste must be processed. Having the option to export for a short amount of time is an important mechanism that should not be limited to those with permits.

43. Do you think that a permitting/licensing charge on RDF/SRF exports would be an effective mechanism to reduce the risk of waste diversion from waste incineration to export abroad? (Y/N) Please give further details to support your answer.

Yes. Charging for waste export is the most appropriate way to stop leakage while maintaining flexibility in waste processing capacity when needed. An export tax fee based on the non-biogenic carbon fraction by energy could allow calculation of fossil CO₂ to tie export prices to the UK ETS, presuming that the RDF/SRF is being combusted abroad. The tax should be equivalent to the carbon price to level the playing field without excessively penalising export, given the need for utilising waste management capacity abroad for flexibility in certain circumstances.

Charges should be kept as predictable and simple as possible to allow for clear modelling and consistency so that the market can respond easily, with transparency in what people will pay.

44. Would a fixed or variable charge be most effective at managing this risk? Please give further details to support your answer.

A variable charge tied to the UK carbon price would be effective at managing this risk. The charge may be tied to the differential between the UK carbon price and end destination carbon price.

45. If we were to proceed with the development of a variable charge rate: a) Would it be sufficient for the charge rate to reflect the UK ETS carbon price? b) Will consideration need to be given in the charge rate calculation to the carbon price (if any) in the destination country to which RDF/SRF exports are bound? c) How frequently will variable charge rates need to be updated?

a) It may be sufficient for the charge rate to reflect the UK ETS carbon price, but consideration of international carbon prices is likely to be required.

b) Carbon prices in destination countries should also be considered whereby the tax reflects the differential similar to the CBAM mechanic. Opportunity for waste exporters to take advantage of lower prices in other countries should be minimised.

c) Using up to date or daily carbon prices may be the most appropriate, however monthly or quarterly updates could be considered for simplicity of calculation for decision making and/or in line with accounting periods. Depending on the outcome for recent consultation on CBAM, it may make sense to use the same interval for updating.

46. Do you think that alternative options to manage the RDF/SRF export risk should be explored? (Y/N) If so, please give further details on which options and why.

No.

47. Do you think that any option to address RDF/SRF export mitigation risk could give rise to unintended consequences? (Y/N) Please give further details to support your answer.

Yes. Limiting export of waste via a permitting system would reduce operators' flexibility in waste processing, which could interrupt vital waste management and sanitation services during unusual occasions where extra capacity is required, such as site maintenance. Legal challenges regarding permit distribution may also occur.

48. Do you agree with the decarbonisation pathways for waste incineration facilities detailed above? (Y/N) Please give further details to support your answer, including information on the ability of local authorities and/or waste incineration operators to undertake the decarbonisation pathways detailed. Please also provide any information on additional decarbonisation activities or pathways that are available to local authorities and/or waste incineration operators.

The brunt of ETS cost is likely to flow back to local authorities as residual waste collectors, so consideration to areas in which local authorities do and do not have power to decarbonise waste should be considered carefully. We are supportive of the acknowledgement of cost pass through linking to packaging Extended Producer Responsibility, but some waste streams are not covered under this. In such cases, new ways to pass costs back to producers should be considered in a full analysis of waste, and burden funding provided where no mechanism exists for pass through or where LAs have limited power over decarbonising waste streams.

For decarbonising EfW plants, work on delivering NPT options and appropriate support via business models will be essential for harnessing the CCUS potential of the EfW sector given the spread of plants across regions.

Additionally, consideration should be given to plants currently receiving support under the Renewable Obligation scheme, which begins to expire in 2027. A

considerable amount of low carbon baseload power is produced under the scheme from EfW as well as waste processing capacity. Additional support mechanisms should be considered if capacity is to be maintained given the dual financial pressures of end of ROCs and incoming ETS burden.

Any changes in packaging to allow better recycling of plastics and metals will reduce the emissions of heavy metals and increase the biogenic fraction of the RDF/SRF. It may be, however, that it becomes difficult to meet the SRF quality standard for GCV with less plastic in the feedstock.

49. Do you have any evidence on the costs, savings and potential profits that could be generated from decarbonisation technologies such as CCS and heat networks? (Y/N) If yes, please provide further details. We would particularly welcome evidence for the whole contractual period and/or lifetime of the facility.

No comment.

50. Please provide any comments on cost savings from decarbonisation technologies such as CCS and heat networks and whether these will be passed back to customers, including local authorities.

Ability to pass through costs will depend on individual contracts, but it will likely be plant operators investing high capital expenditure in fitting CCS technology, who will want to recoup investment. Eventual savings may be passed back to customers, but this would be on an individual basis.

51. Do you agree there is a need for guidance on decarbonisation for local authorities and waste incineration operators? (Y/N) Please give further details to support your answer, including any information on the type, form and content of guidance needed.

Yes, detailed guidance should be provided, particularly on cost pass through to reduce disputes between operators and LAs. Guidance should also be provided separately for cost pass through for abated facilities, and on any interactions with the Waste ICC.

Trade associations could help facilitate industry-based roundtables on what they would like to see, but similar roundtables should be conducted with LA groups. All parties should be made aware of available technologies and commercial realities to ensure that expectation and realistic delivery are aligned.

52. Beyond the mechanisms listed above, are there any other mechanism(s) you would recommend to support local authorities to decarbonise? (Y/N) Please give further details to support your answer, including any information on the type of support mechanism(s) recommended and details on the type of materials that may fall outside the scope of the proposed support mechanisms detailed above.

Dedicated funding mechanisms from government for public sector decarbonisation should be expanded alongside continued commitment to policy reforms for packaging/producer responsibility and for reducing biogenic waste to incineration.

53. Do you think that sampling (e.g. MRF requirements) would be an effective approach for supporting accurate cost pass through from EfW operators to customers? (Y/N) Please give further details to support your answer.

Sampling could be an effective approach for calculating cost pass through from EfW operators to customers. Waste operators already have to sample waste for landfill diversion figures to supply to local authorities. However, sampling should be at appropriate frequencies given the significant costs involved. Some sites have vehicle congestion or space constraints already and vehicle turnaround times would be severely affected if additional waste sampling was too intensive, impacting service.

54. Do you think that the outlined sample analysis techniques (e.g. manual sorting, selective dissolution, and carbon-14) would effectively support accurate cost pass through? (Y/N) Please give further details to support your answer.

Advanced sampling methods may provide greater accuracy in apportioning costs fairly for waste suppliers but also have drawbacks in convenience and speed, so a balance should be struck. Given the number of waste streams that may be coming into a plant with charges needing to be calculated fairly quickly for customers, a faster and more transparent approach may be preferable to a more advanced and accurate sampling but slower method e.g. carbon-14.

55. Do you think that alternatives to sampling, including default calculation factors, should be explored? (Y/N) Please give further details to support your answer.

Yes. We would support the consideration of default factors given the small timeframe for implementation and in line with MRV considerations, which should be harmonised. Default calculation factors are already in use within the ETS and, if carefully chosen to reflect important aspects, could capture a range of facilities accurately while still rewarding decarbonisation efforts.

56. Do you think that a phased approach to the development of a cost pass through mechanism would be a practical way to proceed? (Y/N) Please give further details to support your answer.

Yes. A simpler approach, such as using default calculation factors, may be especially preferable in the early stages of implementation for simplicity given the timeframe, to reduce disputes over cost pass through, and given that advanced sampling methods are costly and lack capacity currently in the UK to keep a level playing field.

57. Do you consider that the application of the UK ETS to waste incineration will lead to any impacts for any groups with protected characteristics under the Equality Act 2010? Do you consider there to be any further equality considerations? Do you consider any elements of the UK ETS expansion to waste incineration could be designed to advance equality of opportunity and/or foster good relations? Please explain your response, providing evidence where possible.

No comment.

UK ETS and heat networks call for evidence

58. Do you agree that the UK ETS should be used to support heat offtake through the ETS? (Y/N) Please outline your reasoning and provide evidence to support your views.

Yes, we are supportive that the UK ETS should be used to support heat offtake. Using the ETS to unlock heat decarbonisation has clear environmental benefits and provides a useful path to unlocking investment into heat offtake for EfW plants.

Subsequent impacts on technologies outside of the ETS e.g. AD, waste wood, heat pumps and non-obligated industries that have high heat load or power demands, not having same incentive to connect should be considered.

Within the recent DESNZ Future Biomethane framework consultation, the Government acknowledged that as the UK ETS currently counts biomethane the same as fossil-based gas, that this may disincentivise future production emissions. The consultation sought to investigate ways this could be changed to account for biomethane. Therefore, although we are mindful that this work may be duplicated, it is important to recognise that AD and other forms of biogas and biomethane production may also be considered as possible sources of heat offtake.

59. Do you have a view on what incentive mechanism (e.g. free allowances, subtraction of a number of allowances from the UK ETS obligation, etc.) would work best to encourage the export and utilisation of heat? (Y/N). Please provide as much detail as possible to support your answer.

Given the ongoing move toward phasing out free allowances, we prefer that the mechanism used is a subtraction of allowances from the UK ETS obligation for heat exporters.

60. Do you think that policies to incentivise heat offtake should apply to surplus or waste heat, as well as heat produced for the purpose of export? (Y/N). Please provide as much detail as possible to support your answer.

Yes. It is difficult to define between the two heat types so clarity would be difficult, including recognition that heat can be used in several ways including private pipelines or on-site as industrial heat. Regardless, including all forms of heat is preferable incentivising efficient use of all heat and helping to deliver on the UK's heat network to deliver decarbonisation.

61. If an incentive is provided, how should the level of incentive be determined e.g. should it be linked to emissions that are offset by exporting heat, the volume of emissions associated with the production of heat, etc.? (Y/N) Please provide as much detail as possible to support your answer.

In addition to quantity of heat, the incentive should also be linked to volume of fossil emissions associated with heat production, as if biogenic content is higher,

lower emissions are counted and thus offtake of sustainable heat is more greatly rewarded.

This approach is also likely to be more comparable with other industries included in the ETS. Technical study and further modelling of the different approaches impact on the sector should be undertaken.

62. Do you have a view as to whether incentivising heat offtake through the UK ETS could have any perverse consequences? (Y/N). Please provide as much detail as possible to support your answer.

Yes. The impact on other heat producers not included in the ETS needs to be considered to avoid disincentives for those not receiving the advantage. Secondly, advantages need to be equivalent to CCS so that both actions are incentivised and not encouraging one over the other so that sites can make the best decision.

Lastly, the provisions should make sure that heat should be clearly needed and replacing a fossil heat source, ensuring that the received advantage is leading to demonstrable decarbonisation.

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