UK Emissions Trading Scheme Scope Expansion: Waste

Members meeting 25th June 2024

THE ASSOCIATION FOR RENEWABLE ENERGY & CLEAN TECHNOLOGY

UK Emissions Trading Scheme Scope Expansion: Waste

Agenda

REA Updates

Consultation overview

Main consultation questions

- Scope and coverage
- Adjusting the UK ETS cap
- Participating in the scheme
- Impacts of the scheme and reducing adverse risks

Heat network incentivisation via the UK ETS call for evidence

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  - Please note this session is being recorded for note taking purposes.

UK ETS: Waste expansion

Consultation closes 02/08/2024

The consultation sets out further detail in the following areas

Scope and coverage	• Coverage • Inclusion threshold, hospital and small emitter and ultra small emitter status • Exemptions	Q 1- 15
Adjusting the UK ETS cap	• General approach for new sectors • Proposed approach for waste incineration	Q 16 – 18
Participating in the scheme	• Regulatory regime and operator requirements • MRV-only period • Monitoring and reporting requirements • Guidance	Q19 – 35
Impacts of the scheme and reducing adverse risks	• Diversion to landfill and waste export • Decarbonisation pathways • Accurate apportioning of cost pass through • Equality considerations	Q36 – 57
UK ETS and heat networks – a call for evidence	• Incentivising heat networks	Q 58 – 62

Scope and coverage

Scope

- Regulates incineration and combustion of waste, and other energy recovery from waste, including Advanced Thermal Treatment (ATT), Advanced Conversion Technology (ACT), waste-to-fuel, and other related advanced waste treatment activities.
- Only direct fossil CO2 emissions from incineration and associated with the production of these fuels are considered, not but not further life-cycle emissions from their outputs.

Chemical recycling

- Government not minded to capture facilities that break down waste into polymers and monomers for re-use in the circular economy i.e. chemical recycling. Awareness that some facilities may produce both fuels and polymers and monomers to be used as raw materials in the coming years, and will consider this further before coming to a position.

Scope and coverage

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)?
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?
3. Do you agree that facilities that produce monomers and polymers from waste that can be used as raw materials (non-mechanical or 'chemical' Advanced Thermal Treatment and Advanced Conversion Technology cover a range of technologies, but mostly refer to installations that use pyrolysis and gasification to recover energy from residual waste for materials to remain in the circular economy) should not be included in the scope of our proposals?
4. If yes, how should we treat facilities that produce both fuels and polymers and monomers to be used as raw materials?

Inclusion threshold and exemptions

Scope and coverage (Q1—15)

Inclusion threshold: We are not minded to use the existing 20MW thermal input threshold for the inclusion of combustion units in the UK ETS, as we do not think it is appropriate because of the heterogeneity of waste feedstock

The existing Ultra-Small Emitters threshold (less than 2,500 tonnes of CO2e) available to eligible UK ETS will still apply for waste incineration facilities, as will Hospital and Small Emitter threshold (less than 25,000 tonnes of CO2e) will also apply.

Facilities achieving low emitter status (fossil emissions lower than 25,000 tCO2e) will be subject to less onerous emissions monitoring and reporting in line with their HSE/USE status, but must still undertake MRV and will be subject to emission targets rather than requirements to purchase and surrender allowances equal to their fossil CO2 emissions.

Exemptions: No exemptions for any waste, including hazardous or clinical, from the UK ETS. This 'maintains a level playing field between different waste types which will minimise the risk of any perverse incentives (e.g. misdescription) arising to try and avoid obligations under the UK ETS'.

Inclusion threshold

5. Do you have any concerns with our position not to use the 20MW thermal input threshold for inclusion?

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?

7. Do you agree that the proposed thresholds for HSE and USE status are suitable for waste incineration facilities?

8. Do you agree that it is unlikely that smaller facilities will be developed to gain eligibility for HSE or USE Status?

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

Exemptions

10. Do you agree with our position to include the incineration of hazardous and clinical waste in the UK ETS?

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

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?

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?

14. Do you agree that HSE emission targets will incentivise clinical waste incinerators to decarbonise?

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?

Cap adjustment – proposed approach

Adjusting the cap (Q16—18)

Phase I (2021-2030) of the UK ETS is now aligned to a net zero-consistent trajectory. This will equate to a reduction of total allowances of more than 30%, from 1365 million to 936 million allowances.

Cap adjustments will be informed by emissions in scope per the Net Zero Scenario trajectories for EfW, EfW CHP, and ACT, aligned to the CBDP and account for the most recent analysis of the impact on sectoral emissions of decarbonisation policies, such as those in the Resources and Waste Strategy in England, Beyond Recycling Strategy in Wales, Waste Management Strategy in Northern Ireland, and Circular Economy & Waste Route Map Consultation in Scotland. Relevant policies also include the Waste Industrial Carbon Capture Business Model.

The Authority Response also outlined that the net zero-consistent cap would be amended to account for the inclusion of new sectors.

	2028	2029	2030	Total
Indicative cap adjustment (millions of UKAs)	**7.9**	**7.2**	**6.8**	**21.9**

Figure 2: Indicative cap adjustment pathway based on the proposed approach, and the following calculation: DDM Net Zero Scenarios, plus EEP projections for waste incineration without recovery, and minus estimated abatement per Track 1 Waste ICC BM projects.[13]

Questions: Adjusting the cap

16. Do you agree that the proposed approach, of adding allowances equivalent to emissions in scope per emissions trajectories aligned to the Carbon Budget Delivery Plan, is the appropriate approach to adjusting the cap, to ensure the emissions reductions required to deliver climate targets?

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? 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.

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?

Regulation and MRV

The regulatory provisions which exist for sectors covered by the UK ETS currently will also apply to waste incineration facilities from 1st January 2028.

The scheme year will run from 1st January to 31st December and the existing reporting and surrender deadlines of 31st March and 30th April respectively will be applicable for the sector.

Waste operators will need to apply for a Greenhouse Gas Emissions Permit prior to participating in the scheme and comply with the conditions of the permit. Any penalties that currently apply to installations under the UK ETS, including those related to the MRV of emissions, will also apply to the waste sector. Waste operators will also need to appoint an independent verifier to verify their annual emissions report.

From 1st January 2028, we also intend for the penalties for failing to surrender sufficient allowances by the relevant deadline to be the same as those for existing operators, as well as penalties relating to emission targets for installations with HSE status.

MRV

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?

20. Do you agree that an MRV-only period is the best way to meet the objectives of a phasing period for this sector?

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

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?

MRV-only period requirements

Option 1: Mandatory MRV-only period

Waste incineration facilities become full participants of the ETS. If the period is mandatory, we propose that waste incineration facilities are required to apply for a Greenhouse Gas Emissions Permit and submit a monitoring plan to their regulator ahead of 2026, although obligation to purchase and surrender allowances will not begin until 2028.

- 23. 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?
- 24 Do you have any concerns with the requirement for all waste incineration facilities to meet MRV requirements, before applying for HSE/USE status?

Option 2: Voluntary MRV-only period

Waste incineration facilities will not become full participants of the UK ETS until 2028. Operators would not need to apply for a Greenhouse Gas Emissions Permit nor submit a monitoring plan for 2026 but could choose to share data with the Authority/customers. How they choose to monitor their emissions could differ from eventual requirements post-2028.

- 25. How likely do you think it is that operators would monitor their fossil emissions?
- 26. 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?

MRV

Option 1 – Measurement-based method tiers: Under the existing Monitoring and Reporting Regulation, installations covered by the UK ETS are assigned a tier (1 to 4). Sampling method assigned based on category.

	Tier 1 - Uncertainty range ±10%	Tier 2 - Uncertainty range ±7.5%	Tier 3 - Uncertainty range ±5%	Tier 4 - Uncertainty range ±2.5%	'Most likely to be suitable' sample method	'Potentially suitable' sample method
Category A ≤50,000 tCO2e p.a.	Can apply	Default			Flue gas sampling and analysis: Radiocarbon method (carbon-14)	Predictive (balance) method: BIOMA Default calculation factors
Category B >50,000 to ≤500,000		Can apply	Can apply	Default	Flue gas sampling and analysis: Radiocarbon method (carbon-14)	Predictive (balance) method: BIOMA
Low emitter	Default				Default calculation factors	

MRV

Option 2 – Determination of biomass fraction tiers: Under the Monitoring and Reporting Regulation, installations that demonstrate the biomass fraction in the fuels they burn are required to do so in line with the methodological approach tiers summarised.

Biomass fraction determination	**Tier 1 – Default calculation factor** Government published default calculation factor method	**Tier 2 – Estimation methods** Estimation methods (e.g. bespoke default calculation factor or predictive (balance) method)	**Tier 3 – Analytical methods** Analytical methods (e.g. carbon-14, selective dissolution, or manual sorting).
Category A ≤50,000 tCO2e p.a.	Default		
Category B >50,000 to ≤500,000	Can apply	Can apply	Default
Low emitter	Default		

Regulation and MRV

28. Do you agree that a tiered approach should be taken to MRV requirements under the UK ETS?

Option 1: measurement based method tiers

29. Do you think that Option 1 would be suitable for waste incineration facilities?

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?

Option 2: biomass fraction determination tiers

31. Do you think that Option 2 would be suitable for waste incineration facilities?

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

Cost pass through

Option 1 – Sampling: feedstock sampling and analysis at Material Recovery Facilities (MRF), to assess the quality and quantity of recyclable materials that have been received from different suppliers. Analysis methods could be used to determine fossil/biogenic of waste samples, including manual sorting, selective dissolution, and carbon-14 analysis.

Option 2 – Default calculation factor approach: Development of figures that estimate the biogenic and fossil split of waste at a range of scales (e.g. nationally, regionally or at customer level), multiplied by the mass flowrate of waste arriving at facilities to calculate an estimation of fossil/biogenic split. Could be used by operators to determine the UK ETS cost pass through liability of their customers.

Option 3 – Combined, phased approach: Could involve a simpler approach in the early stages of the scheme during the MRV period, then from 2028 onwards operators and customers would work together to develop more accurate approaches.

Cost pass through

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?

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?

55. Do you think that alternatives to sampling, including default calculation factors, should be explored?

56. Do you think that a phased approach to the development of a cost pass through mechanism would be a practical way to proceed?

Landfill

The potential inclusion of landfill emissions in the UK ETS

Some stakeholders have argued that expanding the UK ETS to cover emissions from landfill would manage any potential risk of landfill becoming cheaper than waste incineration.

The inclusion of landfill in the UK ETS would mean that both waste incineration and landfill face the same carbon price. This option would require additional consultation.

Alternative policies to stop diversion to landfill

The consultation mentions plastic packaging tax, Defra's Collection and Packaging reforms, Scotland's circular economy and waste route map and the ban of biodegradable municipal waste in Scotland from 2025 – of course landfill tax – as other ongoing work to reduce landfill.

Landfill

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?

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

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?

39. Do you think alternative options to manage the landfill risk should be explored?

40. Do you think that either of the approaches outlined above to address landfill risk would give rise to unintended consequences?

RDF/SRF Export

UK ETS Authority would like to explore the possibility of allowing RDF/SRF export to continue to be an option without disincentivising decarbonisation of the waste sector.

- An export ban would rule out this option so is not being considered
- A tax could go against trade openness as some of the UK's free trade agreements prohibit export taxes being levied in certain circumstances, so work is ongoing to identify such agreements.

Permits or charges are being considered alongside other domestic policies protecting against this risk, such as Defra's planned consultation on a non-OECD plastic waste exports ban.

Limiting the number of permits/licenses issued for RDF export	Charging operators for RDF export
• *'one option is the number of permits/licenses that are issued for exporting these forms of waste. Could be challenging to implement from a regulatory standpoint in seeking to fairly allocate permits among exporters.'*	• *'Alternatively, we could implement a charge that would be applied through or alongside existing permitting/licensing requirements, which could be fixed or variable.'*

RDF Export

41. What would be the most effective approach to mitigate the risk of waste being diverted from waste incineration to RDF/SRF export?

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?

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?

44. Would a fixed or variable charge be most effective at managing this risk?

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?

46. Do you think that alternative options to manage the RDF/SRF export risk should be explored?

47. Do you think that any option to address RDF/SRF export mitigation risk could give rise to unintended consequences?

Heat network incentivisation

Heat networks call for evidence (Q58—62)

- 58. Do you agree that the UK ETS should be used to support heat offtake through the ETS?
- 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?
- 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?
- 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.?
- 62. Do you have a view as to whether incentivising heat offtake through the UK ETS could have any perverse consequences?

Thank you for attending. Slides from today will be circulated shortly.

Consultation closing date: 02 August 2024

We will aim to get a draft out mid July.

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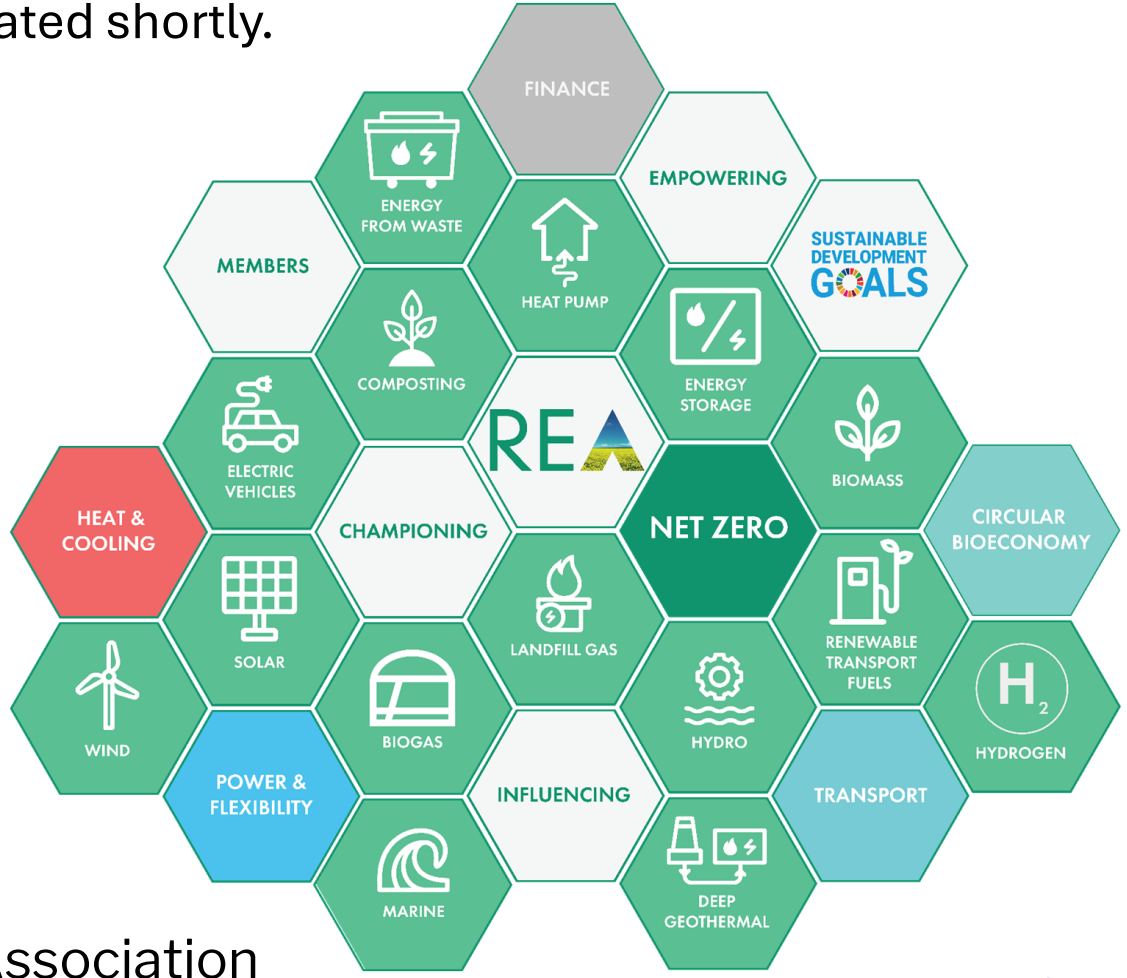

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Guidance and decarbonisation for local authorities

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

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

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

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? We would particularly welcome evidence for the whole contractual period and/or lifetime of the facility.

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.

51. Do you agree there is a need for guidance on decarbonisation for local authorities and waste incineration operators?

52. Beyond the mechanisms listed above, are there any other mechanism(s) you would recommend to support local authorities to decarbonise?