# UK Emissions Trading Scheme Scope Expansion to Waste: Interim Authority Response

A joint response of the UK Government, the Scottish Government, the Welsh Government and the Department of Agriculture, Environment and Rural Affairs for Northern Ireland.

July 2025

# Contents

# Introduction

The UK Emissions Trading Scheme (ETS) came into operation on 1 January 2021. The scheme is a key part of our approach to addressing climate change, setting a limit on emissions from covered sectors and ensuring an appropriate price is applied to them. The scheme is jointly run by the UK ETS Authority (or 'the Authority') which comprises the UK Government, Scottish Government, Welsh Government and the Department of Agriculture, Environment and Rural Affairs for Northern Ireland.

The UK ETS is our principal mechanism for pricing the 'carbon externality' of greenhouse gas emissions, in line with the polluter pays principle. Expanding the scheme to new sectors and technologies will increase the coverage of the scheme, capture more emissions, and should lead to positive decarbonisation outcomes for covered sectors.

As a result of diverting residual waste away from landfill, emissions from waste incineration increased from 2 to 7 million tonnes of $CO_2e$ over 2012-2022[1] and are continuing to increase. For waste incineration and energy from waste (EfW), we anticipate that the expansion of the UK ETS will provide an incentive for the development and uptake of decarbonisation technologies or practices to reduce emissions. In addition, it will complement existing resources and waste management policies and circular economy ambitions. Across the UK there are a suite of environmental tax measures which work together with non-fiscal policies to support the ambitious environmental objectives of the four nations.

In May 2024 the Authority published a technical consultation on expanding the UK ETS to the waste sector.[2] This followed an earlier consultation and Authority Response covering the development of the UK ETS published in March 2022 and June 2023 respectively.[3]

The 2024 consultation sought views on the scope of the scheme, participating in the scheme, implementation of the Monitoring, Reporting and Verification (MRV) only period from 2026, possible risks and impacts of the scheme, how to adjust the UK ETS cap for waste, and how the UK ETS could potentially incentivise investment in heat networks. 255 stakeholders responded to the consultation.

In making decisions in this Authority Response, the Authority has worked closely with officials across the UK Government, Scottish Government, Welsh Government and Department of Agriculture, Environment and Rural Affairs in Northern Ireland and considered interactions with the wider policy landscape. We have listened carefully to stakeholder feedback, particularly around the wider impacts of our proposals.

We have made the following decisions in relation to a MRV-only period:

- The MRV-only period will commence from 1 January 2026. It will enable operators and customers to better understand participation in the scheme and support further policy development by the Authority ahead of the inclusion of the waste sector in the UK ETS.

[1] DESNZ (2024), 'Final UK greenhouse gas emissions statistics: 1990 to 2022', https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2022
[2] The 'UK Emissions Trading Scheme Scope Expansion: Waste consultation' can be found here: https://www.gov.uk/government/consultations/uk-emissions-trading-scheme-scope-expansion-waste
[3] Both the 'Developing the UK Emissions Trading Scheme' consultation and the 'Authority Response' can be found here: https://www.gov.uk/government/consultations/developing-the-uk-emissions-trading-scheme-uk-ets

- At this stage, participation in the MRV-only period will be voluntary. There will be no legal obligation to participate or penalty for non-participation. This is to enable the Authority to test different approaches to MRV before legislating for the inclusion of the waste sector in the UK ETS.
- Participants will have full access to regulator support during the voluntary MRV-only period without incurring onboarding or regulator upkeep costs. Voluntary participation is strongly encouraged as this will help operators to better understand how the UK ETS works, and to support further development and implementation of UK ETS expansion to waste.
- Data from the voluntary MRV-only period will be shared with regulators and the UK ETS Authority. Taking part in the voluntary MRV-only period will allow operators to provide data in relation to their installation which can be used to support the finalisation of policy decisions, including in relation to MRV methodologies and the pass through of ETS costs from waste incinerators to their customers. Please see the section on monitoring and reporting requirements for further detail.
- The voluntary MRV-only period will apply to combustion and process emissions from EfW and waste incineration processes.
- For the purposes of the voluntary MRV-only period, the inclusion threshold for waste incineration will be based on the small waste incineration plant (SWIP) throughput threshold. This means that installations incinerating non-hazardous waste with a capacity exceeding 3 tonnes an hour, or, incinerating hazardous waste with a capacity exceeding 10 tonnes a day, will be in scope of the voluntary MRV-only period.
- For the purposes of the voluntary MRV-only period, the Authority intends that the existing HSE/USE thresholds will apply upon the inclusion of the waste sector in the UK ETS: in-scope installations with emissions lower than 2,500 tonnes fossil $CO_2$ per year over a baseline period will be considered eligible for the USE scheme, and in-scope installations with emissions between 2,500 tonnes and 25,000 tonnes fossil $CO_2$ per year over a baseline period will be considered eligible for the HSE scheme.
- Clinical waste incinerators and clinical waste treated at non-specialist facilities will be included in the voluntary MRV-only period. The voluntary MRV-only period will allow us to better understand the impacts of including clinical waste, and we will reassess this position ahead of the inclusion of the waste sector in the UK ETS.
- High temperature incinerators that primarily process non-clinical hazardous waste will be exempt from the voluntary MRV-only period.
- The Authority will use an integrated monitoring approach, which will combine Carbon-14 and emissions factors.

Some of the policy issues set out in the technical consultation require further consideration. As a result, the Authority has decided to publish a partial, interim response now, focusing specifically on decisions relating to the design of the voluntary MRV-only period.

The voluntary MRV-only period will inform elements of the ongoing policy decision making process relating to the details of the statutory scheme which will apply in relation to the waste

sector when it is included in the UK ETS. We will set out final policy decisions in that regard in a subsequent Authority Response as soon as reasonably practicable.

This will include both confirmation of the basis on which waste will be included in the UK ETS (including those aspects in relation to which interim decisions have been made for the purposes of the voluntary scheme as set out in this document) and the implication of inclusion of the waste sector on the UK ETS cap.

In the 2024 technical consultation, the Authority committed to plan collectively for the implementation of the UK ETS in this sector. This included a commitment to consider decarbonisation opportunities for fossil fuel derived wastes that do not currently have a decarbonisation pathway or a cost recovery mechanism. In that consultation, the Authority set out an intention for the waste sector to be included in the UK ETS from 2028. We will consider the findings of this work, and the information collected in connection with the voluntary MRV-only period, before confirming plans and details for inclusion of the waste sector in the UK ETS.

Finally, the consultation also asked questions about equality considerations and included a call for evidence on heat networks. We will respond to these questions in a future Authority Response.

## Energy from waste installations in Northern Ireland

The EU Emissions Trading System will apply in Northern Ireland (NI) under the terms of Article 9 and Annex 4 to the Windsor Framework (formerly the Northern Ireland Protocol) in respect of energy from waste installations. This is in order to protect the Single Electricity Market on the island of Ireland. It is important, however, that stakeholders based in NI continue to contribute to UK ETS policy development for this sector, to minimise any risk of divergence in policy design and implementation between both schemes. Any queries with respect to this position should be directed to the Department of Agriculture, Environment and Rural Affairs (DAERA) in NI, at developETS@daera-ni.gov.uk.

# Scope of the scheme

*The consultation sought views on three topics to inform development of government policy on the scope of the scheme. These were:*

- Coverage (Questions 1-4)
- Inclusion threshold, Hospital and Small Emitter Status and Ultra-Small Emitter Status (Questions 5-9)
- Exemptions (Questions 10-15)

## Coverage

### Summary of consultation

In the consultation, the Authority committed to ensuring that expansion of the UK ETS to the waste sector maintained a level playing field across different technologies. We proposed including the following regulated activities: the incineration and combustion of waste, and other energy recovery from waste. This included Advanced Thermal Treatment, Advanced Conversion Technology, other related advanced waste treatment activities and waste-to-fuel activities (including the production of sustainable aviation fuel).[4] We set out an intention not to include chemical recycling and sought views on how to treat facilities that produce both fuels for combustion and polymers and monomers for re-use as raw materials in material products.

**Questions**

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 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 proposal?
4. If yes, how should we treat facilities that produce both fuels and polymers and monomers to be used as raw materials?

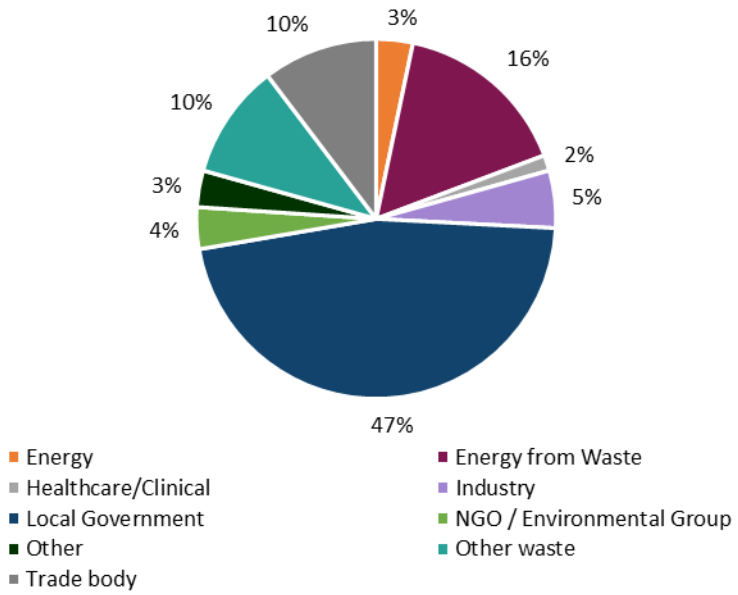
[4] Advanced Thermal Treatment and Advanced Conversion Technology cover a range of technologies but mostly refer to installations that use pyrolysis and gasification to recover energy from residual waste.

## Summary of responses

Questions on coverage of the scheme were answered by 213 respondents in total, with some variation in the number of responses across individual questions.

A range of stakeholders responded to these questions including 99 local government bodies, 34 EfW operators, 22 other waste operators, and 22 trade bodies (Figure 1).

**Figure 1: Breakdown of coverage respondents by category**




Pie chart showing coverage respondents by stakeholder category. It's divided into 10 categories: Energy - 3%, Energy from Waste - 16%, Healthcare/ Clinical - 2%, Industry - 5%, Local Government - 47%, NGO/Environmental Group - 4%, Other - 3%, Other Waste - 10%, Trade body - 10%.

Respondents were divided over the proposed scope of the expansion of the ETS to waste, with a slight majority (57%) agreeing with the consultation position. Most local government respondents disagreed with the proposal to expand the UK ETS to the waste sector in general, rather than disagreeing with the specific proposed technologies and processes.

In their written responses, respondents flagged a range of concerns with the proposal:

- **Local authority impact:** 47% of respondents expressed concern that local authorities would be exposed to ETS costs despite having limited ability to reduce the fossil content of their waste. Local government respondents reported that given their existing financial constraints, and limited ability to reduce their cost exposure, ETS costs would reduce their capacity to provide core public services.
- **Policy timelines:** Interventions such as Simpler Recycling in England and wider packaging reforms were flagged as providing options to reduce the fossil content of residual waste. However, 18% of respondents stated that the proposed implementation timeline would mean cost exposure before these policies could take effect.

- **Producer responsibility:** 30% of respondents indicated that government policy should target producers to reduce the fossil content of waste. Some suggested the scope of the materials covered by an Extended Producer Responsibility (EPR) regime such as the packaging EPR (pEPR) which redistribute ETS liabilities to producers, should be expanded to cover more waste streams before expansion of the ETS to the waste sector.

Most respondents (82%) were content that the proposed scope of the scheme covered all appropriate technologies. 18% of respondents flagged the need to continue to assess other technologies, including: pyrolysis and gasification; combustion of chemically treated biogenic waste; composting; landfill; and combustion of Sustainable Aviation Fuel.

The majority of respondents (61%) agreed that facilities that produce monomers and polymers from waste for reuse should be excluded from the scheme, claiming the lower lifecycle emissions compared to the production of virgin products. However, some respondents disagreed, flagging that these facilities still produce emissions. Respondents were divided on how facilities that produce both fuels and polymers/monomers should be treated. Some (9%) suggested that government commission an assessment of the lifecycle carbon impact from these facilities.

## The Authority Response

**The scope of the voluntary MRV-only period will include direct emissions from EfW and waste incineration[5] processes**. This includes advanced thermal treatments and advanced conversion technologies, such as gasification and pyrolysis-based processes, including where the outputs of these processes are combusted on-site, and where these processes are undertaken for the purpose of producing fuels, such as Sustainable Aviation Fuel (SAF). Emissions from the off-site combustion of these fuels will not be in scope of the voluntary MRV-only period. Our intention is to include the on-site emissions of all facilities of a certain scale which incinerate and thermally treat waste in the scope of the voluntary MRV-only period.[6]

**The scope of the voluntary MRV-only period will include non-mechanical (or chemical) recycling processes.** The Authority recognises the important role of non-mechanical recycling in moving waste up the waste hierarchy and recycling monomers and polymers for re-use in support of the circular economy objectives of the UK and Devolved Governments. The Authority is considering how to subtract emissions associated with recycling outputs from the reportable emissions of affected installations upon full inclusion of waste sector in the UK ETS. This would mean that the reportable emissions of such installations would only cover emissions associated with energy recovery (i.e. the combustion of waste or any output of the non-mechanical recycling processes, or the production of fuels), and that operators would only need to surrender allowances to cover these emissions. A subsequent Authority Response

[5] For the purposes of the voluntary MRV-only period, 'incineration' will mean the oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma processes, if any of the substances resulting from the treatment are subsequently incinerated.
[6] Barring certain exemptions, which will be discussed below (see Q. 10-15, Exemptions)

setting out policy decisions in relation to the full inclusion of the waste sector in the UK ETS, including the final scope, will provide further information for installations with a mix of outputs.

# Inclusion threshold, Hospital and Small Emitter Status and Ultra-Small Emitter Status

## Summary of consultation

In the consultation, the Authority proposed that the existing 20 megawatt (MW) thermal input threshold for the inclusion of combustion units in the UK ETS would not be suitable for waste, due to the heterogeneity of waste feedstock.

Separately, we confirmed proposals that similar Hospital and Small Emitter (HSE) and Ultra-Small Emitter (USE) provisions that are currently available to UK ETS participants will also be available to waste incineration facilities. For HSE provisions, we proposed that the threshold of 25,000 tonnes of fossil $CO_2$ per year will apply, but that the 35MW thermal input threshold would not apply. We also proposed that the USE threshold of less than 2,500 tonnes of fossil $CO_2$ will apply.

**Questions**

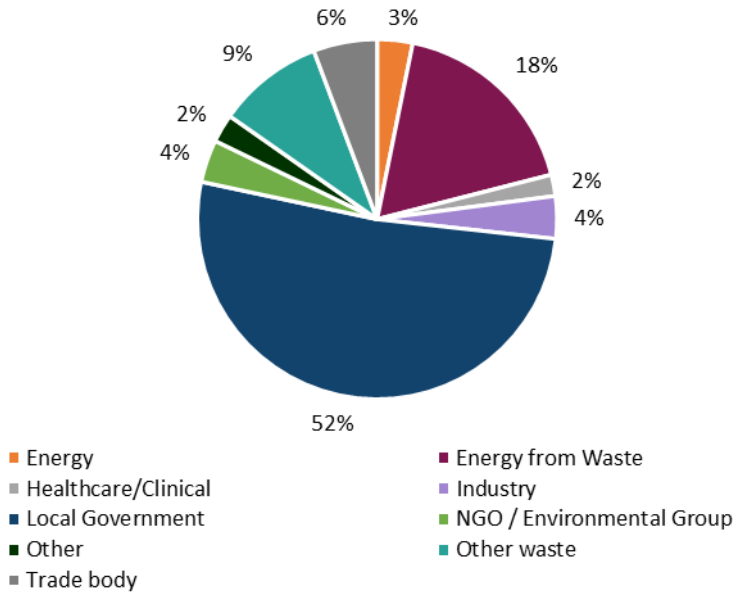
5. Do you have any concerns with our position not to use the 20MW thermal input threshold for inclusion in the UK ETS?
6. Should an alternative threshold for inclusion in the UK ETS be explored (e.g. waste throughput capacities) or will HSE and USE status eligibility sufficiently protect smaller facilities?
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?

## Summary of responses

Questions covering the inclusion threshold, Hospital and Small Emitter (HSE) Status and Ultra Small Emitter (USE) Status were answered by 157 respondents in total, with some variation in the number of responses across individual questions.

A range of stakeholders responded to these questions, including 81 local government bodies, 28 EfW operators, 15 other waste operators, and 9 trade bodies (Figure 2).

**Figure 2: Breakdown of inclusion threshold respondents by stakeholder category**




Pie chart showing inclusion threshold respondents by stakeholder category. It's divided into 10 categories: Energy - 3%, Energy from Waste - 18%, Healthcare/ Clinical - 6%, Industry - 4%, Local Government - 52%, NGO/Environmental Group - 4%, Other - 2%, Other Waste - 9%, Trade body - 4%.

55% of respondents indicated agreement with the Authority's position not to use the 20MW thermal input threshold for waste. Responses indicated that the heterogeneity of waste as a fuel, and the likely variability of fossil $CO_2$ emissions, at a given thermal threshold, make a MW based threshold unsuitable.

Some respondents raised concerns that without the threshold, small plants servicing isolated communities or managing clinical or hazardous waste would fall inappropriately under the UK ETS.

A slight majority (59%) of respondents recommended exploring alternative thresholds to protect small facilities, however there was no dominant alternative presented. Some of the alternatives included:

- **$CO_2$ based threshold:** 9% of respondents suggested a carbon emission-based inclusion threshold would be more appropriate for waste.
- **Small waste incineration plant (SWIP) threshold:** 4% of respondents suggested aligning the inclusion threshold with the existing Environmental Permitting Regulations for SWIP based on processing capacity.

A slight majority of respondents (55%) disagreed with the suitability of applying the existing HSE and USE thresholds for waste. However, there was general agreement (79%) that it is unlikely smaller facilities will be built specifically to gain HSE or USE status. As an explanation, 40% of stakeholders said that small facilities are generally unviable unless they are managing a specialist waste stream. However, some respondents (8%) were concerned that exempting

some facilities may distort the market and result in more waste being processed at smaller, less efficient facilities.

When asked to suggest different thresholds for HSE and USE status, no single alternative stood out as dominant. Some of the proposed alternatives included:

- **Lower threshold:** 4% of respondents argued the proposed thresholds are too high and should be lowered, with some suggesting new thresholds of 2,000 and 5,000 tonnes of $CO_2$ annually for USE and HSE respectively.
- **Higher threshold:** 1% of respondents suggested the thresholds should be raised to target facilities emitting above 50,000 or 100,000 tonnes of $CO_2$ annually.
- **Small Waste Incineration Plant (SWIP) threshold:** 4% of respondents suggested that the UK Authority could align the HSE and USE thresholds to the existing SWIP guidelines in the Environmental Permitting Regulation (England/Wales) and the Pollution Prevention and Control Regulations (Scotland/Northern Ireland).

26% of respondents believe all EfW facilities should be excluded from the UK ETS to prevent cost burdens on local authorities who are unable to control the fossil content of their waste. Conversely, 12% argued for no exemptions or thresholds to avoid market distortions.

## The Authority Response

### Inclusion threshold for the voluntary MRV-only period

**All facilities that exceed a tonnage-based throughput threshold based on the Small Waste Incineration Plant (SWIP) threshold in the Environmental Permitting Regulation (EPR), will be included within the scope of the voluntary MRV-only period. On this basis, operators of waste incinerators and waste-to-fuel facilities processing three tonnes an hour or more of non-hazardous waste, or 10 tonnes a day or more of hazardous waste, will be in scope of the voluntary MRV-only period.**

The Authority recognises the mixed views of stakeholders on the need for an overall inclusion threshold, and that no particular alternative to the 20 MW threshold was favoured. However, if there is no lower limit, the incineration of any waste by a commercial entity, of any type and at any scale, would require an ETS permit. To ensure proportionate regulatory burden on smaller facilities, we consider it appropriate to reflect the existing regulatory landscape for waste, which places more stringent requirements on larger waste incinerators with a throughput tonnage in excess of three tonnes an hour.[7] We anticipate that this threshold will capture the vast majority of UK waste incineration emissions, and all significant EfW sites. It will prevent disproportionate regulatory burden on the smallest facilities and offer alignment with the wider regulatory landscape for waste.

Stakeholders have indicated that there is limited risk of facilities being built under the SWIP threshold to avoid ETS liabilities due to the high fixed costs associated with meeting environmental and permitting requirements for waste incineration. The Authority will keep the impact of this threshold on the UK incineration market under review, especially where there is

[7] Or, as in the environmental permitting regulations, 10 tonnes a day for hazardous waste.

evidence of perverse incentives or gaming of the threshold. A final decision in relation to the threshold for inclusion in the UK ETS scheme will be set out in a subsequent Authority Response.

Currently under the UK ETS, where a regulated activity is carried out on a site, the combustion of fuels in any combustion unit operated on that site are included within the scope of the regulated activity, unless the primary purpose of the unit is the incineration of hazardous or municipal waste and the unit does not exclusively serve the units where the main regulated activity is carried out. Upon the inclusion of the waste sector in the UK ETS (but not during the voluntary MRV-only period), the Authority expects to remove this provision in relation to incineration units. The result of this would be that:

- If a previously exempt incinerator is operated at an installation already regulated by the UK ETS, that exemption will be lifted, and this incinerator, regardless of size, will be considered when monitoring and reporting that installation's emissions.
- If a previously exempt incinerator is operated at an installation that currently has HSE status, the HSE permit will be varied to include the incinerator. If this brings the installation over the HSE threshold of 25,000 tonnes $CO_2e$, the installation will be required to return to the main scheme.[8] The emissions targets of the facility may otherwise be adjusted to take the emissions of that incinerator into account.

As such, we encourage any operators of any units that are currently exempt under these conditions to participate in the voluntary MRV-only period so they can better prepare for future inclusion in the scheme.

Under current ETS rules, where a regulated activity satisfies the description of a combustion activity (with a rated thermal input threshold), plus another activity which does not refer to a thermal input threshold, it is the latter activity which takes precedence, meaning that it is that activity that will be listed on the permit and the monitoring requirements for that activity apply. With the introduction of the waste regulated activity, we intend to apply the following:

- If a regulated activity satisfies the definition of a:
    a. Non-combustion regulated activity and a waste regulated activity, the non-combustion regulated activity takes precedence.
    b. Combustion regulated activity and a waste regulated activity (subject to point c., the waste regulated activity takes precedence.
    c. Combustion activity where the purpose of the activity is the manufacture of a product and a waste regulated activity, the combustion activity takes precedence.

Therefore, if your installation is, for example, currently included under the ETS because you are carrying out the activity 'Production of cement clinker' and your process includes waste incineration, you will continue to be regulated under the cement activity. If your activity is not currently captured by the ETS but will satisfy the waste activity description, you will be included under the waste activity.

[8] Unless the installation primarily provides services to a hospital, as set out in Sch. 7, para. 2 of the Greenhouse Gas Emissions Trading Scheme Order 2020

This ‘precedence’ rule applies only where the whole installation is carrying out an activity that falls within more than one activity description. It is different from the situation where distinct parts of the installation are carrying out different activities and, in that case, both activities will be listed on the permit.

However, final decisions in relation to the basis on which waste will be included in the UK ETS (including those aspects in relation to which interim decisions have been made for the purposes of the voluntary MRV-only period) will be set out in a subsequent Authority Response.

### HSE/USE Integration

**For the purposes of the voluntary MRV only period, the Authority intends that the existing HSE/USE eligibility criteria of 25,000/2,500 tonnes fossil $CO_2$ per year will apply to waste facilities upon the inclusion of the waste sector in the UK ETS.** Operators above the main inclusion thresholds (incineration of non-hazardous waste at 3 tonnes an hour or incineration of hazardous waste at 10 tonnes a day) with fossil emissions under 25,000 tonnes a year during a baseline period are expected to be eligible to apply for HSE status, so that the status would apply from the date of the inclusion of the waste sector in the UK ETS. Installations with fossil emissions under 2,500 tonnes a year during a baseline period are expected to be able to apply for USE status.

For details on the data gathering, application, and onboarding process for HSE/USE installations, please see the MRV-only section below.

# Exemptions

## Summary of consultation

In the consultation, the Authority set out an intention not to exempt the incineration of any type of waste (including hazardous or clinical) from the UK ETS, in order to maintain a level playing field between different waste types and maximise the emissions covered by the UK ETS. We highlighted that all specialist clinical waste facilities would be eligible for either HSE or USE status under the scheme, and that around a third of the UK’s hazardous waste incinerators would be eligible for HSE status.

We understood the need to consider the implications of not exempting these waste streams, with particular focus on the management of wastes containing Persistent Organic Pollutants (POPs) and decarbonisation pathways for clinical waste.

**Questions**

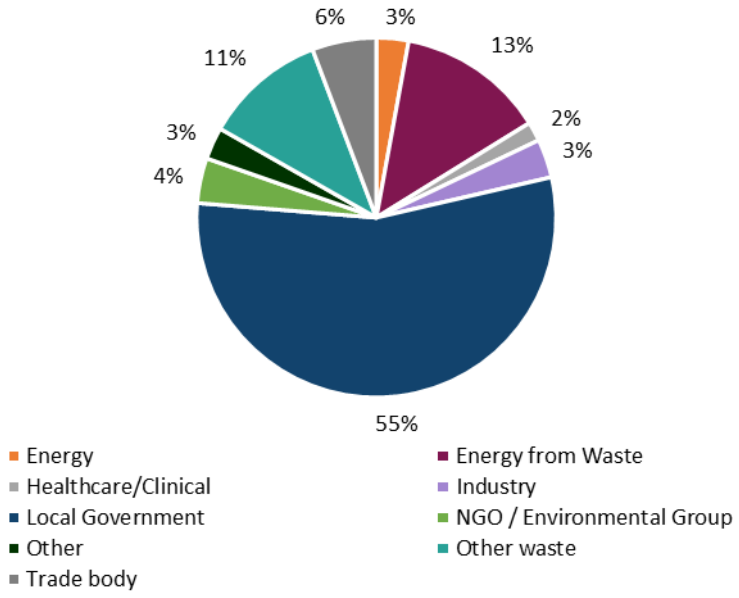
10. Do you agree with our position to include the incineration of hazardous and clinical waste in the UK ETS?
11. What decarbonisation options will be available to hazardous and clinical waste incinerators and in what timescale (e.g. immediately or long-term)?
12. Would the emissions monitoring methods 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?

## Summary of responses

Questions on exemptions were answered by 173 respondents in total, with some variation in the number of responses across individual questions.

A range of stakeholders responded to these questions, including 95 local government bodies, 23 EfW operators, 29 other waste operators, and 10 trade bodies (Figure 3).

**Figure 3 Breakdown of exemptions respondents by stakeholder category**




Pie chart showing exemptions respondents by stakeholder category. It's divided into 10 categories: Energy - 3%, Energy from Waste - 13%, Healthcare/ Clinical - 3%, Industry - 3%, Local Government - 55%, NGO/Environmental Group - 4%, Other - 3%, Other Waste - 11%, Trade body - 6%.

Respondents largely opposed the proposal to include the incineration of hazardous and clinical waste in the UK ETS (74%). However, healthcare, clinical and NGO respondents agreed with the position to include them. Arguments against their inclusion included:

- **No alternative means of disposal:** 66% of respondents noted there are no alternatives for the disposal of this waste stream, many respondents highlighting existing legal requirements for the incineration of these materials.
- **Limited or no decarbonisation options:** 57% of respondents suggested there are limited or no decarbonisation options available for these materials. Some respondents argued the size and location of specialist waste incinerators is likely to make the installation of Carbon Capture and Storage (CCS) technologies unviable.
- **Export risk:** 28% of respondents were concerned that including hazardous waste in the UK ETS may incentivise waste to be exported for treatment, given the exemption of hazardous waste from the EU ETS.

When asked to suggest options to decarbonise, 56% of respondents suggested targeting producers. Other suggestions, though less supported, included better waste segregation and recycling, CCS investment, and supercritical water oxidation.

68% of respondents believe HSE emissions targets would not incentivise clinical waste incinerators or their customers to decarbonise, primarily due to a lack of decarbonisation options. However, the majority of healthcare, clinical and NGO respondents agreed that targets would incentivise decarbonisation.

The main reasons offered by respondents who disagreed included:

- **Size of facilities:** 23% of respondents argued the small scale of most clinical waste incinerators makes the upfront capital costs required to invest in decarbonisation technologies unviable.
- **Necessary use of single use materials in healthcare:** 22% of respondents cited the requirement for clinical practices to use single use sterilised plastic materials for which there are no other alternatives.

Among those who expressed confidence in the feasibility of decarbonisation, the main justifications included:

- **Increased segregation:** 16% of respondents argued customers of clinical waste incinerators can reduce the fossil content of their waste by improving the segregation of waste types and using recycled materials.
- **Financial penalties might drive action:** 15% of respondents stated financial penalties might incentivise facilities to decarbonise, but many warned high costs could lead to illegal activity, requiring careful consideration to avoid unintended consequences.

72% of respondents do not think mislabelling of waste is a significant risk if hazardous or clinical waste were exempted from the UK ETS. The primary reasons cited were the substantially higher processing costs for hazardous and clinical waste compared to non-specialist waste (49%), and that existing regulatory requirements and compliance costs will mitigate the risk of mislabelling (29%).

When asked if the emissions monitoring methods described in the 'Monitoring and Reporting' section would also be applicable to hazardous and clinical waste incinerators of the same size, 63% of respondents answered yes. Among those who disagreed, the primary reasons were concerns about health and safety risks associated with sampling hazardous and clinical waste, as well as the potential for radioactive materials in specialist waste to disrupt Carbon-14 methodologies.

## The Authority Response

**The voluntary MRV-only period will be open to clinical waste and clinical waste incinerators, on the basis that we do not currently intend to exempt them from the full scheme, but this position will remain under review**. Health and Clinical sector respondents largely supported clinical waste inclusion, citing opportunities to decarbonise through alternative treatments and source stream segregation.

We anticipate impacts on clinical waste incineration will be limited as the vast majority of clinical waste incinerators will be eligible for USE or HSE status. Some clinical waste or clinical waste flock is treated at regular municipal waste incinerators and will be exposed to increased costs. Inclusion in the voluntary MRV-only period will enable the Authority to better understand any potential impacts on the health sector and reassess if needed. We will ensure that monitoring requirements are proportionate to the nature and scale of facilities, and that they do not pose unreasonable health and safety risks.

**High temperature incinerators that primarily process hazardous waste will be exempt from the scope of the voluntary MRV-only period**. This is necessary to preserve UK hazardous waste incineration capacity and mitigate risk of export of hazardous waste. Given the high cost of hazardous waste incineration, we are not concerned about risks of mislabelling or waste crime, however we will keep this under review. For the purposes of the voluntary MRV-only period, the exemption for hazardous waste incineration will apply to facilities which are demonstrably capable of operating at a temperature of 1,100°C for 2 seconds and whose waste input comprises:

- at least 80% hazardous waste; and
- no more than 20% hazardous and non-hazardous healthcare waste; and
- no more than 1% hazardous waste wood.

**Persistent Organic Pollutants (POPs) will be included in the voluntary MRV-only period**. We recognise the concerns raised by consultation respondents regarding the volume of POPs, and the legal requirement to incinerate with no other disposal options available. We will keep this position under review during the voluntary MRV-only period, taking into account the risk of mislabelling and the development of robust methods to properly segregate POPs waste.

# Participating in the scheme

*The consultation sought views on four topics to inform development of government policy on participation in the scheme. These were:*

- Regulatory regime and operator requirements (Question 19)
- MRV-only period (Questions 20-27)
- Monitoring and reporting requirements (Questions 28-32)
- Guidance (33-35)

## Regulatory regime and operator requirements

### Summary of consultation

In the consultation, the Authority set an intention to apply the same regulatory provisions which exist for sectors currently covered by the UK ETS (compliance cycle, permit requirements, monitoring plan requirements and penalties) to waste incineration facilities from 1 January 2028. We also intended 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. We noted that the requirements for any MRV-only period will depend on whether the period is voluntary or mandatory.

**Questions**

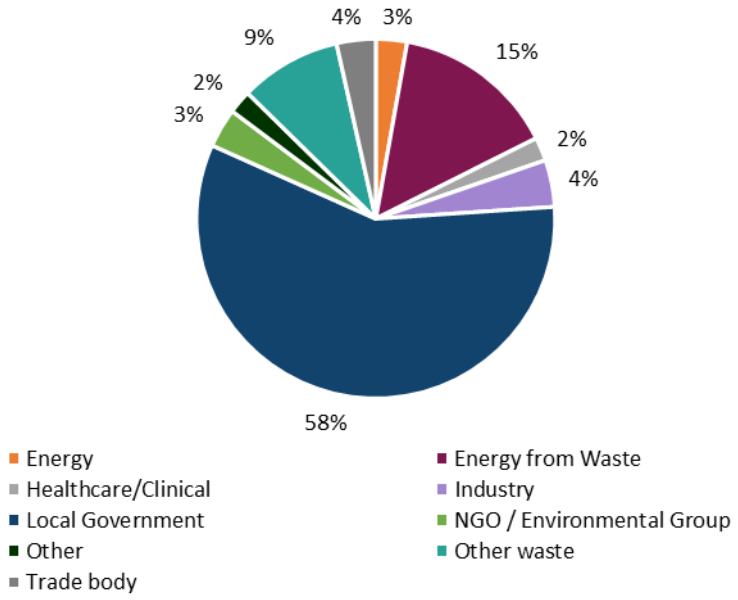
19. Do you agree that it is practicable for existing regulatory requirements under the scheme, such as the compliance cycle, permit requirements, monitoring plan requirements and penalties, to apply to the waste sector?

### Summary of responses

The consultation question on the regulatory regime and operator requirements was answered by 142 respondents in total.

A range of stakeholders responded to this question, including 82 Local government bodies, 21 Energy from Waste operators, 13 Other waste operators, and 6 Industry bodies (Figure 4).

**Figure 4 Breakdown of regulatory regime respondents by stakeholder category**




Pie chart showing regulatory regime respondents by stakeholder category. It's divided into 10 categories: Energy - 3%, Energy from Waste - 15%, Healthcare/ Clinical - 4%, Industry - 4%, Local Government - 58%, NGO/Environmental Group - 3%, Other - 2%, Other Waste - 9%, Trade body - 4%.

Respondents were divided on whether existing regulatory requirements under the scheme can apply to the waste sector, with a majority (65%) agreeing that they are practicable. However, many respondents from the EfW and other waste sectors disagreed.

Commonly cited concerns over the applicability of the existing regulatory requirements to the waste sector included:

- **Penalties:** 19% of respondents were concerned that penalties for failing to surrender allowances may be passed onto local authorities.
- **Compliance cycles:** 19% of respondents cited an incompatibility between the UK ETS compliance cycle, based on calendar years, and local authority budget setting and governance timeframes, based on financial years, may cause issues for local authority budget planning.
- **Costs of participation:** 16% of respondents were concerned that the high costs of participating in the scheme (e.g. costs for monitoring and reporting) will be passed onto local authorities.
- **Regulator capacity:** 11% of respondents were concerned that regulators do not have the capacity to deliver the required permits in time.

### The Authority Response

**The Authority currently intends that standard UK ETS regulatory requirements for stationary installations (compliance cycle, permit requirements, monitoring plan requirements and penalties) will apply to the waste sector once it is included in the scheme.**

**As such, the voluntary MRV-only period has been designed in accordance with existing ETS regulatory requirements (albeit that the surrender obligation will not apply). However, as the MRV-only period will be voluntary, regulatory requirements, including penalties, will not be enforced**

We note respondents concerns regarding the regulatory requirements of the UK ETS for waste operators: in particular, the impact of penalties, monitoring costs, and the UK ETS compliance period for local authorities. We recognise that these are in line with broader concerns around the cost impact of UK ETS expansion to waste incineration on local authorities. We also note concerns around regulator capacity. The regulators are key partners of the Authority, and we have worked closely with them to ensure regulators will have sufficient resource to process and onboard operators in the timelines indicated.

For more detail on how regulatory requirements will apply during the voluntary MRV-only period, see the following section on the MRV-only period.

## MRV-only period

### Summary of consultation

In the consultation, the Authority set out an intention to expand the UK ETS to waste incineration facilities in 2026, which includes a 2-year MRV transitional phasing period from 1 January 2026 to 31 December 2027. We highlighted that the MRV-only period will enable operators to better understand the scheme and help inform our approach to MRV. Data collected during this period will enable us to verify our net zero consistent emissions trajectory, informing post-2030 cap decisions. We noted that this period could either be mandatory or voluntary.

**Questions**

20. Do you agree that an MRV-only period is the best way to meet the objectives of a phasing period for this sector? How will operators and customers use any data from the MRV-only Period?

21. For customers and operators, will knowing expected costs earlier than full implementation provide an early incentive to reduce your exposure to the carbon price?

22. 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)

23. 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?

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

25. 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?

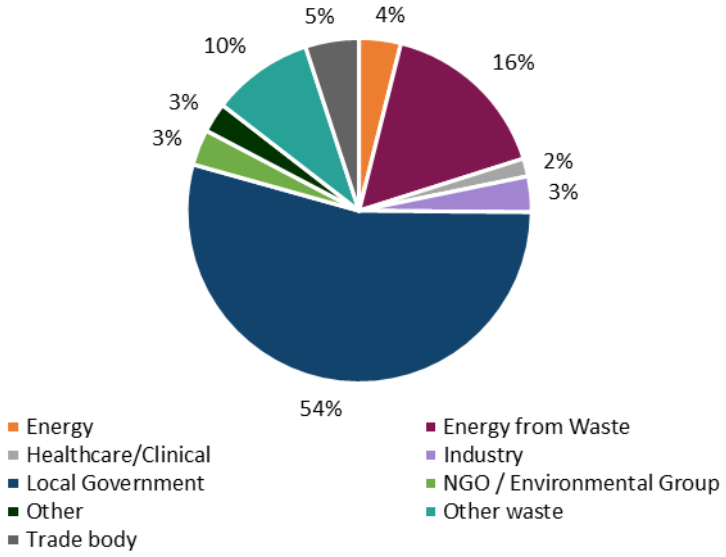
26. Do you have any other comments on the MRV-only transitional period, and either of the options identified?

## Summary of responses

Questions covering the MRV-only period were answered by 179 respondents in total, with some variation across questions.

A range of stakeholders responded to MRV-only questions, including 97 local government bodies, 29 EfW operators, and 17 stakeholders from elsewhere in the waste sector (Figure 5).

**Figure 5 Breakdown of MRV-only period respondents by stakeholder category**



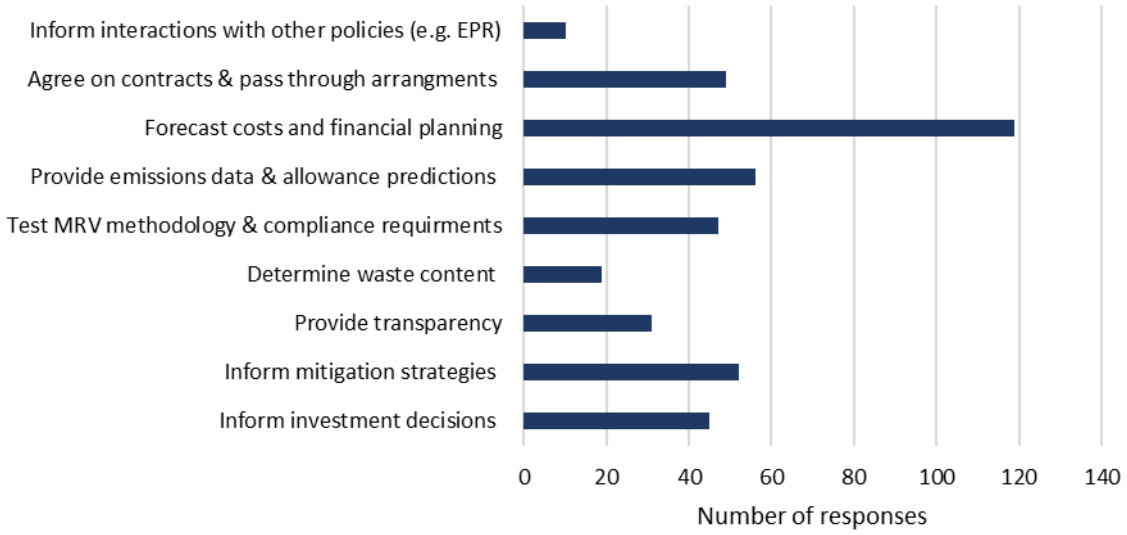

Pie chart showing MRV-only period respondents by stakeholder category. It's divided into 10 categories: Energy - 4%, Energy from Waste - 16%, Healthcare/ Clinical - 2%, Industry

- 3%, Local Government - 54%, NGO/Environmental Group - 3%, Other - 3%, Other Waste - 10%, Trade body - 5%.

Almost all respondents (97%) agreed with an MRV-only period for scope expansion to waste.

Most respondents agreed data collected from an MRV-only period will be beneficial to the sector. They also suggested a series of potential applications for the data which are illustrated in Figure 6.

**Figure 6: Suggest uses for MRV-only period data**




Bar chart showing the frequency of suggestions for MRV-only period data. Inform interactions with other policies (e.g. EPR) – 10, agree on contracts & pass-through arrangements – 49, forecast costs and financial planning – 119, provide emissions data & allowance predictions – 56, test MRV methodology & compliance requirements – 47, determine waste content – 19, provide transparency – 31, inform mitigation strategies – 52, and inform investment decisions – 45.

However, stakeholders raised a range of considerations that may impact on successful delivery:

- **Costs to local authorities:** 52% of respondents are concerned that the MRV-only period will result in additional costs being passed on to local authorities.
- **Timeframes:** 36% of respondents are concerned that the suggested implementation timeline is not sufficient to allow operators to fully prepare for the inclusion of the waste sector in the UK ETS. Some respondents suggesting a longer MRV-only period, or an extended transitional phase would allow better preparation, more time for decarbonisation and alignment with other waste policies.
- **Availability of technology:** 24% of respondents are concerned with the availability of monitoring technologies required to comply with the MRV-only period. In particular,

concerns were raised about the timescale for rollout of Carbon-14-based MRV and lab capacity for analysis. Some stakeholders also raised concerns about the high costs of these technologies, suggesting the Government should consider applying standard emissions factors for specific waste composition streams instead.

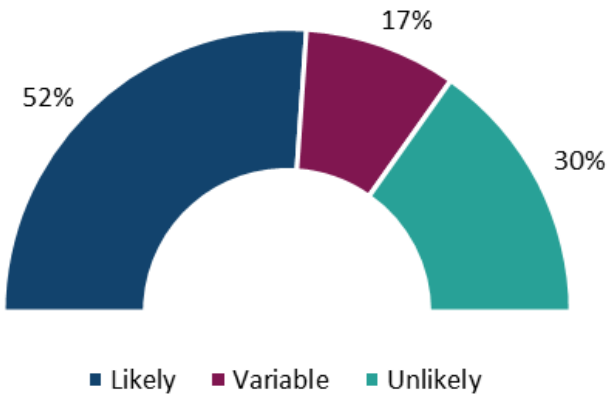
- **Regulator resourcing:** 18% of stakeholders raised the need to ensure the relevant regulatory framework is in place and the regulator is properly resourced for an MRV-only period to be effective.

The majority of respondents (85%) indicated that knowing expected costs earlier than full implementation will provide an early incentive to reduce their exposure to the carbon price. However, concerns were raised about the effectiveness of this incentive, with 69% of local authorities flagging a lack of decarbonisation options.

Of the respondents who indicated a preference, a majority preferred a mandatory MRV-only period over a voluntary period MRV-only period (96%). Stakeholders indicated mandatory MRV is required to develop the MRV process and identify any issues prior to the inclusion of the waste sector in the UK ETS. Concerns were raised that a voluntary MRV-only period would likely lead to inconsistent monitoring, an unrepresentative dataset, and an unreliable picture of the sector's ETS exposure.

Respondents had mixed views on the likelihood of participation in a voluntary MRV-only period. Of the 87 responses that directly addressed this issue, there was a roughly even split between "likely participation" "variable participation" and "unlikely participation". However, a higher proportion of waste sector stakeholders believed that participation was likely (Figure 7).

**Figure 7: Likelihood of participation in voluntary MRV-only scheme (waste sector)**

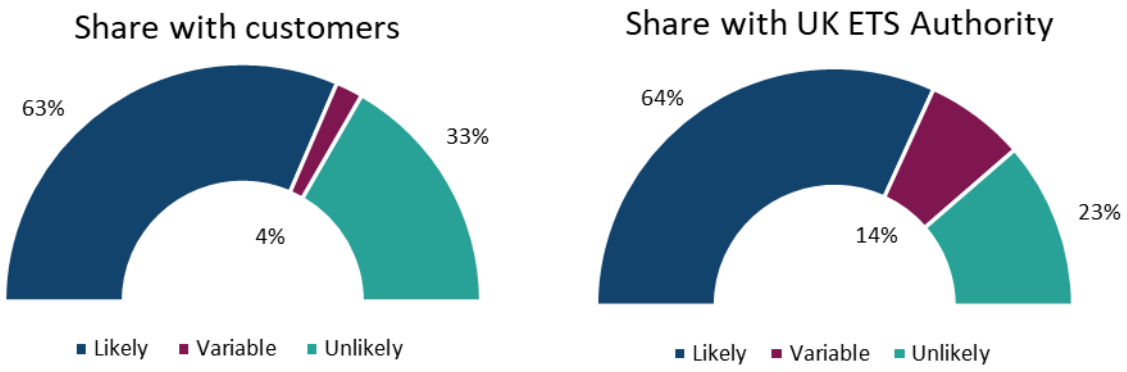



Based on the 23 responses from Energy from Waste and Other Waste stakeholders to question 25 that directly referenced one of the options.

Half donut chart showing likelihood of Energy from Waste and Other Waste stakeholders participating in a voluntary MRV-only scheme. It's divided into 3 categories: Likely – 52%, Variable – 17%, and Unlikely – 30%.

Respondents had mixed views on the likelihood of operators sharing their data under a voluntary MRV-only period, however again operators were more optimistic that data would be shared (Figure 8).

**Figure 8: Likelihood of operators sharing their data under a voluntary MRV-only period (waste stakeholders)**




Based on the 27 responses to question 26a and 22 responses to question 26b from Energy from Waste and Other Waste stakeholders that directly referenced one of the options.

Two half donut chart showing likelihood of stakeholders sharing data with customers of the UK ETS Authority. They are broken into three categories, Chart 1 - Customers: Likely – 63%; Variable – 4%; and Unlikely – 33%, Chart 2 – UK ETS Authority: Likely – 64%; Variable – 14%; and Unlikely – 23%.

The majority of respondents (67%) agreed that if the MRV-only period is mandatory, waste incineration facilities should be subject to the same MRV requirements for the MRV-only period that they will be subject to when the waste sector is included in the UK ETS. Some respondents suggested that there should be no penalties for non-compliance during the MRV-only period.

## The Authority Response

### MRV-only Period

**The Authority recognises the value of an MRV-only period for operators of waste incineration facilities, their customers and the broader waste supply chain. As such, there will be a voluntary MRV-only period beginning in January 2026.**

**The Authority wishes to use this period to review MRV methodologies, gather data and explore a possible link between MRV and ETS cost pass through. Participation in the initial MRV-only period will be voluntary while we test approaches before making final policy decisions. We will engage directly with the sector leading up to and during the voluntary MRV-only period.**

Since the consultation, the Authority has been engaging with stakeholders to consider the most viable MRV approach. Segments of the waste incineration industry have made strong

representations in favour of a nationwide, emissions factor-based approach to MRV, with ETS costs for all customers defined up-front in accordance with established bands based on recycling infrastructure. Proposals have also been made for emissions factors based on compositional analysis and UK recycling data.

The Authority is considering a range of possible methodologies including nationwide emissions factor-based approaches for ETS MRV. We are aware that a well-designed emissions factor-based system, backed by robust calibration against best-in-class Carbon-14 and stack-based emissions monitoring, could reinforce the decarbonisation signal intended by the carbon price.

Whilst no option provides 100% certainty, Carbon-14 analysis combined with Continuous Emissions Monitoring Systems (CEMS) provides the highest accuracy and the greatest consistency of available methodologies. Where possible, emissions factors will be benchmarked against measured emissions. Where this is not possible, emissions factors will tend to be conservative, to ensure there is no under-reporting of emissions.

Significant work remains to be done to establish, test, and assess the impact of a national emissions factor-based system. The Authority therefore intends to use the voluntary MRV-only period to consider MRV approaches before final policy decisions are made.

Over the course of the voluntary MRV-only period, the Authority will assess possible emissions factor-based approaches against data received from participants and make a final decision on MRV approach. During this process, we will engage with stakeholders from across the sector, at an operator and customer level (particularly local authorities), and across all four UK nations, to ensure the MRV approach is suitable for all participants.

### Implementation of the voluntary MRV-only period

We recognise the concerns raised by consultation respondents that a voluntary MRV-only period will lead to inconsistent monitoring, an unrepresentative dataset, and an unreliable picture of the sector's ETS exposure. To mitigate these risks, the voluntary MRV-only period will mirror standard UK ETS regulatory requirements for stationary installations as far as possible so that participants gain a realistic picture of their ETS exposure and build experience of UK ETS processes.

**Participants will have access to UK ETS systems and documentation.** Through participation in the voluntary MRV-only period, participants will secure a voluntary monitoring plan which will reflect their proposed monitoring requirements. They will be able to engage directly with regulators to agree monitoring requirements in advance of onboarding. Participants will also have access to a Managing your ETS (METS) account, which will allow them to engage with the scheme and submit annual emissions reports as in the main ETS.

**The voluntary MRV-only period will have full regulator engagement, with regulator costs funded by the respective governments**. To encourage participation, participants will have full access to regulator support during the voluntary MRV-only period, without incurring costs for onboarding or regulator upkeep.

Verification of emissions will not be mandatory, but operators will be encouraged to verify their emissions reports to improve familiarity with the UK ETS MRV process.

As above, we intend that the requirements of the voluntary MRV-only period will mirror the regulatory requirements as far as possible when the waste sector is included in the UK ETS. Operators will agree a monitoring approach based on their installation size and conditions, will become aware of any adjustments that may be required of them to comply with the requirements of the full UK ETS, and will have the opportunity to agree mitigations and ameliorations with the regulator. Upon the inclusion of the waste sector in the UK ETS, we intend that the voluntary monitoring plan will be used to populate a full UK ETS monitoring plan when operators apply for a permit.

Participants will be asked to submit additional data on waste flows to regulators who will collect this information on behalf of the Authority. This data will support the development of emissions factors. As well as high level emissions data, data will be requested on waste tonnages, waste source streams, and supporting emissions monitoring/sampling, where available. This data will be used to workshop and refine emissions factor-based approaches and will be treated and processed confidentially. To better support policy making this data may be requested in advance of the normal reporting deadline for the UK ETS (for example, on a quarterly basis).

**There will be no penalties or enforcement during the voluntary MRV-only period.** As participation is voluntary, enforcement action will not be taken by regulators against participants.

**In summary, during the voluntary MRV-only period participants will be asked to:**

- Apply for a voluntary monitoring plan.
- Monitor their emissions in line with the agreed provisions in their voluntary plan.
- Vary their voluntary plan when relevant changes happen.
- Submit an annual emissions report containing the total emissions for their facility, in line with the reporting schedule for the main scheme.
- Where applicable, submit data to support the development of emissions factors on an agreed timescale (e.g. quarterly) (this data will be handled confidentially by the UK ETS Authority and regulators).
- Verify their emissions reports with ETS verifiers, in order to gain experience of the verification process.

## HSE/USE baseline data during the voluntary MRV-only period

Prior to the inclusion of the waste sector in the UK ETS, operators of eligible installations may submit applications for HSE/USE status on the basis of 3 years of emissions data submitted by operators. To ensure a level playing field, HSE/USE status will not be conditional on participation in the voluntary MRV-only period. The data must evidence that emissions during a baseline period are below the 25,000 / 2,500 tonne fossil $CO_2$ thresholds. Operators will be

asked to use data from their Annual Performance Reports (APR)[9] or the equivalent emissions/activity reports required in Scotland/Northern Ireland. for this purpose. There will be no additional verification requirements.

The Authority will determine appropriate nationwide factors to derive fossil $CO_2$ emissions from this data, including for clinical waste. These factors will then be applied to the tonnage/$CO_2$ measurements recorded via APR.

The Authority is aware that reporting standards used for APR vary across the sector. We are considering how to account for any possible uncertainties, including by establishing minimum reporting standards in cases where $CO_2$ data is submitted.

Operators who participate in the voluntary MRV-only period will be able to agree an installation specific monitoring plan in 2026. This will enable regulator consideration of more specific factors if the facility can provide evidence that the nationwide fossil factors are not suitable for their waste streams. Specific factors could then be applied to historical (e.g. 2024-2025) APR data if appropriate.

Our intention is that operators whose emissions do not exceed the HSE/USE thresholds of 25,000 and 2,500 tonnes fossil $CO_2$ per annum in the 3 years prior to the inclusion of the waste sector in the UK ETS will be considered eligible for HSE/USE status and will be entitled to enter mid-phase upon the inclusion of the waste sector in the UK ETS.

The Authority and regulators will provide further guidance on the HSE/USE approach in due course.

# Monitoring and reporting requirements

## Summary of consultation

In the consultation, the Authority set out the emissions monitoring methods that are available to waste incineration facilities to determine the fossil and biogenic split of their emissions. This was based on an external report by Ricardo assessing the accuracy, cost, and practicality of the following methods: feedstock sampling and analysis, flue gas sampling and analysis, and predictive (balance) methods. [10]

We proposed aligning the monitoring and reporting requirements for waste incineration facilities with the tiers that apply to existing sectors covered by the UK ETS. We consulted on the suitability of two existing tiered approaches:

[9] As required under the Environmental Permitting Regulation (England/Wales)
[10] 'MRV options for inclusion of Energy from Waste plants and Waste Incinerators within the UK ETS' report by Ricardo available here: https://assets.publishing.service.gov.uk/media/66a24709a3c2a28abb50d725/uk-ets-waste-MRV-report.pdf

Option 1 was based on uncertainty range tiers assigned for measurement-based methods for the determination of overall $CO_2$ emissions at installations.

Option 2 was based on methodological approach tiers that are assigned to facilities for the determination of biomass fractions in the fuels they burn.

**Questions**

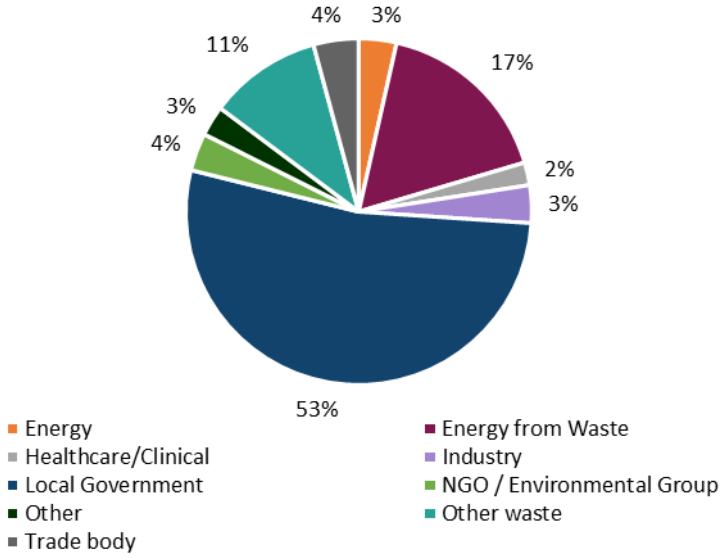
28. Do you agree that a tiered approach should be taken to monitoring and reporting requirements under the UK ETS?
29. Do you think that Option 1 would be suitable for waste incineration facilities?
30. Do you agree with our estimations in Figure 4 on how the available emissions monitoring methods for the sector could correlate with the uncertainty ranges for each tier in Option 1?
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?

## Summary of responses

Questions covering monitoring and reporting requirements were answered by 148 respondents in total, with some variation across questions.

A range of stakeholders responded to monitoring and reporting requirements questions, including 75 local government bodies, 24 EfW operators, and 15 stakeholders from elsewhere in the waste sector (Figure 9).

**Figure 9 Breakdown of monitoring and reporting respondents by stakeholder category**




Pie chart showing monitoring and reporting respondents by stakeholder category. It's divided into 10 categories: Energy - 3%, Energy from Waste - 17%, Healthcare/ Clinical - 2%, Industry - 3%, Local Government - 53%, NGO/Environmental Group - 2%, Other - 3%, Other Waste - 11%, Trade body - 4%.

Respondents were evenly split on whether a tiered approach should be taken to monitoring and reporting requirements. Arguments in support of a tiered approach mainly focused on the need to balance accuracy without disproportionately burdening smaller facilities. The main justifications for disagreement were that a tiered approach would be too complex to implement and that the same requirements should apply to all facilities to maintain a level playing field and avoid perverse incentives.

Some respondents (10%) emphasized the need for the monitoring and reporting methods to be consistent with those used for cost pass through (the method for passing ETS costs from operators to their customers) as using separate methods will compound uncertainties resulting in less accurate results.

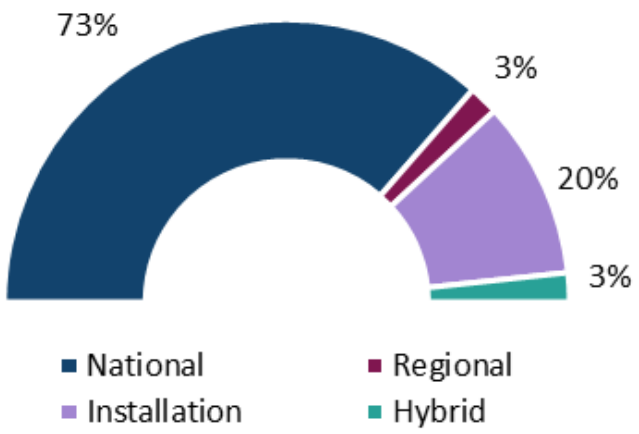
Option 2 (methodological approach tiers) was slightly preferred over Option 1 (uncertainty range tiers), with 51% of respondents supporting its application to waste incineration facilities, compared to 46% for Option 1. Respondents had similar concerns for both options, mainly regarding the tier systems' methods not effectively facilitating cost pass through. Specifically, they mentioned that the Carbon-14 method struggles to accurately identify fossil content for specific customers, while sampling techniques face challenges due to the varied nature of waste streams and their inherent inaccuracies.

Additionally, respondents (68%) were concerned that the estimated correlation between the emissions monitoring methods and the uncertainty tiers in Option 1 do not align. Some respondents cited the Ricardo report, which highlighted limited data on the uncertainty of these methods and suggested that meeting proposed UK ETS requirements may be challenging.

One trade body proposed an alternative approach, applying calibrated emissions factors to all facilities for the MRV-only period and Phase 1 ETS to 2030. The proposal involves calculating banded emissions factors for local authority waste, based on the types of recycling collection offered by the council, with a single emissions factor for commercial and industrial waste. The emissions factors for each band would be adjusted annually based on Carbon-14 analysis. The trade body suggested that the approach be reviewed after 2030, at which time customer-by-customer approaches may be agreed upon. 13% of respondents (primarily Energy from Waste operators) preferred an emissions factor-based approach.

When asked about the scale on which default calculation factors should be developed, 73% of respondents indicated a preference for nationally consistent factors (Figure 10). Additionally, 20% of stakeholders emphasised the importance of reflecting the different waste compositions of EfW customers to acknowledge decarbonisation efforts. Furthermore, 22% of respondents recommended using Carbon-14 and compositional sampling to inform and regularly update emissions factors.

**Figure 10: Stakeholder preferences for default calculation factor scale**




Based on the 59 responses to question 32 that directly referenced one of the options.

Chart showing respondents preferences for calculated emissions factors scale. It's divided into 4 categories: National – 73%, Regional 3%, Installation – 20%, and Hybrid 3%.

## The Authority Response

In the consultation, the Authority proposed either tiered uncertainty-based or methodology-based approaches for MRV.

**As set out in the Authority Response to the previous section, we are now considering integrated approaches, which combine $CO_2$ monitoring, Carbon-14 analysis and emissions factors.** The following principles remain important for policy development:

- **Proportionality**, with stricter requirements for operators with higher emissions.
- **Fixed requirements for measurement-based monitoring**, with minimum uncertainty standards set for monitoring approaches where appropriate/possible.
- **Accuracy,** where operators aim for the highest achievable accuracy, unless this is technically not feasible or incurs unreasonable costs.

We remain committed to testing MRV approaches and will set out final MRV requirements in a subsequent Authority Response. We therefore propose that during the voluntary MRV-only period:

- Category B (50,000-500,000 tonnes fossil $CO_2$) and Category C (500,000+ tonnes fossil $CO_2$) facilities will be expected to monitor emissions using Continuous Emissions Monitoring Systems (CEMS) and Carbon-14 equipment, unless they can demonstrate to regulators that this is technically infeasible or would incur unreasonable costs.
- Category A (25,000-50,000 tonnes fossil $CO_2$) facilities will be encouraged to carry out CEMS and Carbon-14 monitoring but can apply to regulators to use emissions factors if they can demonstrate this expectation is not possible or not proportionate to their facility.
- Operators will be expected to meet a minimum standard of uncertainty for $CO_2$ monitoring through CEMS, and to comply with set standard procedures for measurement of the percentage of fossil $CO_2$ through Carbon-14 but **will not be required to meet an overall uncertainty standard for both technologies combined.** Further guidance on standards and uncertainties for Carbon-14 and CEMS will be published later this year.
- During the voluntary MRV-only period, facilities using emissions factors will be able to use conservative national emissions factors developed by the Authority. The voluntary MRV-only period will be used to codevelop more granular emissions factors with stakeholders.
- During the voluntary MRV-only period and the first years of the inclusion of the waste sector in the UK ETS, operators will report additional data to the Authority to enable the testing and improvement of more granular emissions factors. This will be in addition to annual reporting of emissions.
- The Authority will continuously improve a set of representative emissions factors pegged to CEMS and Carbon-14 during the voluntary MRV-only period. Prior to the inclusion of the waste sector in the UK ETS, the Authority will make a final decision on the use of these emissions factors for MRV. We recognise the need for certainty and for sufficient notice for both operators and customers to make preparations for the inclusion of the waste sector in the UK ETS MRV. We will publish our final MRV proposal well in advance of full inclusion.

The Authority will circulate detailed guidance for operators on MRV requirements for the voluntary MRV-only period later this year.

# Guidance

## Summary of consultation

In the consultation, we acknowledged that waste incineration facilities will require support to implement the measures discussed. We set out an intention to work with the relevant regulators and across the UK ETS Authority to develop guidance as needed to support participants to meet their UK ETS obligations. This included guidance for both waste incineration facilities and their customers.

**Questions**

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?

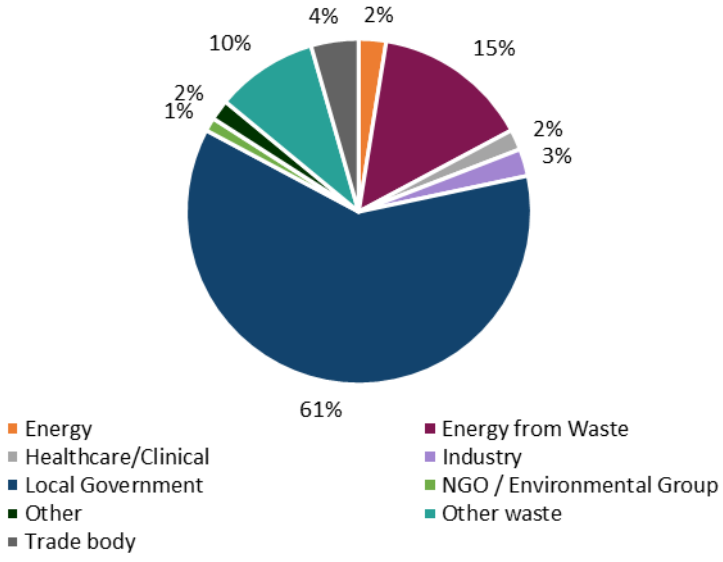
35. To what timescale should guidance on different aspects of the policy, and for different audiences, be produced?

## Summary of responses

Questions regarding the guidance were answered by 157 respondents in total, with some variation across questions.

A range of stakeholders responded to guidance questions, including 96 local government bodies, 23 EfW operators, and 15 stakeholders from elsewhere in the waste sector (Figure 11).

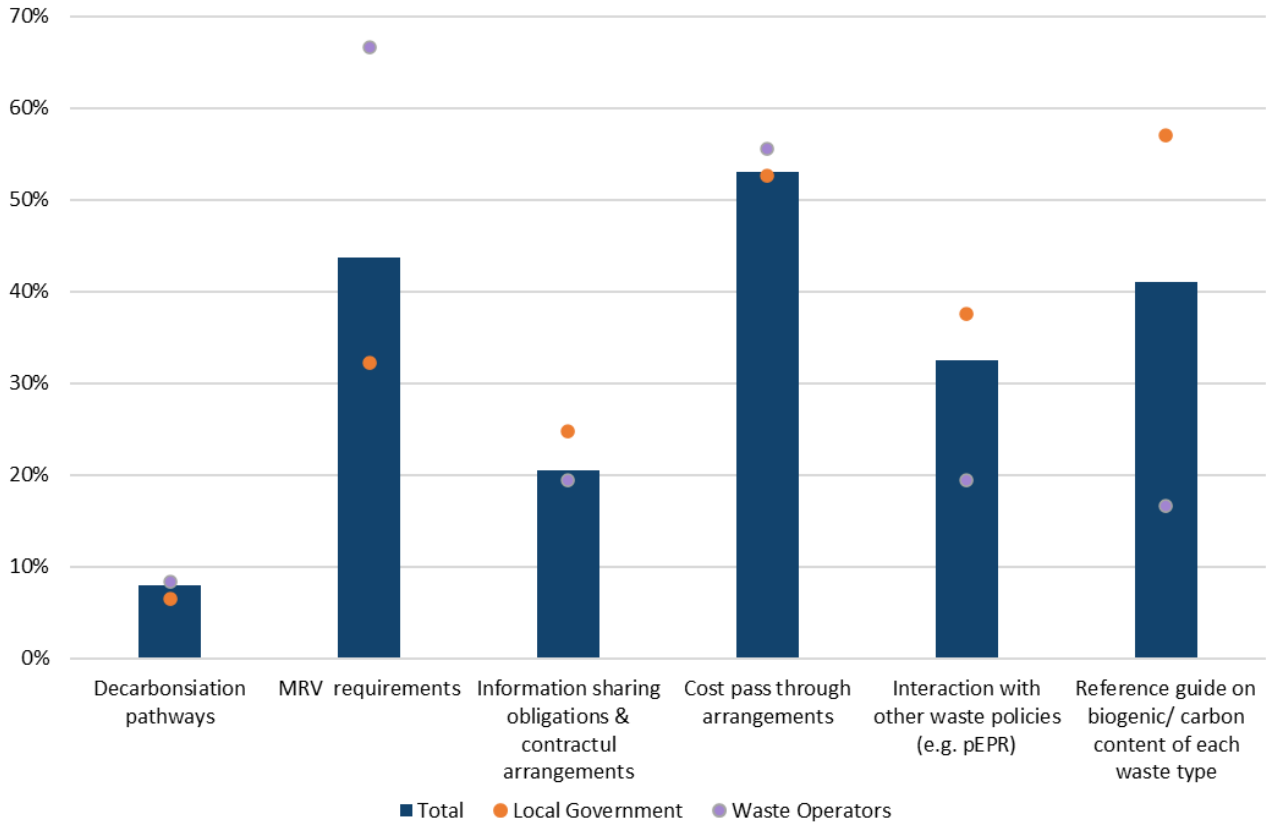
**Figure 11 Breakdown of guidance respondents by stakeholder category**



Pie chart showing guidance respondents by stakeholder category. It's divided into 10 categories: Energy - 2%, Energy from Waste - 15%, Healthcare/ Clinical - 2%, Industry - 3%, Local Government - 61%, NGO/Environmental Group - 1%, Other - 2%, Other Waste - 10%, Trade body - 4%.

Respondents requested guidance on a range of policy aspects for both operators and customers (Figure 12). Guidance was most frequently requested for cost pass through arrangements. Furthermore, many respondents expressed the need for any guidance to be clear and communicable for a non-technical audience.

**Figure 12 Suggested guidance content**




Bar chart showing the percentage of stakeholders requesting guidance on each policy aspect. Decarbonisation pathways: Total: 8%, Local Government: 6%, Waste Operators: 8%; MRV requirements: Total: 44%, Local Government: 32%, Waste Operators: 67%; Information sharing obligations & contractual arrangements: Total: 21%, Local Government: 25%, Waste Operators: 19%; Cost pass through arrangements: Total: 53%, Local Government: 53%, Waste Operators: 56%; Interaction with other waste policies: Total: 32%, Local Government: 38%, Waste Operators: 19%; Reference guide on biogenic/carbon content of each waste type: Total: 41%, Local Government: 57%, Waste Operators: 17%

Stakeholders expressed a desire to be involved in the development and testing of the guidance. 54% said government should consult widely on any draft guidance and 32% said that the government should involve stakeholders early in the drafting process and co-develop guidance iteratively.

Almost all the respondents (84%) stated the need for any guidance to be developed as soon as possible given the MRV-only period is proposed to start in 2026. In particular, respondents emphasised the importance of early guidance for local authorities to assist with financial planning, contract negotiation and to prepare for the MRV-only period. Some respondents recommended the Government reassess the implementation timeline for the inclusion of the waste sector in the UK ETS, especially if there isn't sufficient time to develop and distribute comprehensive guidance to the sector beforehand.

## The Authority Response

**Guidance on how to participate in the voluntary MRV-only period will be provided directly to participants before the end of 2025, enabling operators to submit monitoring plans by 1 January 2026.** Given this guidance is only for the voluntary MRV-only period, and not full scheme participation, it will only contain information on monitoring, reporting and verification, and not on other aspects of the scheme. We recognise the need to provide clear guidance before the voluntary MRV-only period begins so that the sector is informed and supported during the commencement of the expansion. We will work with the relevant regulators and across the Authority to develop tailored guidance as needed to support operators to participate in the voluntary MRV-only period and to utilise the UK ETS reporting system, METS. Before the end of 2025, we commit to providing guidance on how operators should share information with the UK ETS Authority and customers. During the voluntary MRV-only period, guidance on compliance with the scheme will be provided via METS.

# Impacts of the scheme and reducing adverse risks

The consultation sought views on four topics to determine the impacts of the scheme and ways to reduce adverse risks. These were:

- Diversion to landfill and waste export (Questions 36-47)
- Decarbonisation pathways (Questions 48-52)
- Accurate apportioning of cost pass through (Questions 53-56)

## Diversion to landfill and waste export

### Summary of consultation

In the consultation, we acknowledged concerns that expanding the UK ETS to waste incineration facilities may increase the cost of incineration relative to landfill, which could undermine the waste hierarchy by incentivising landfill. We also welcomed views and evidence on whether expanding the UK ETS to landfill would be feasible and would provide an effective decarbonisation incentive, while noting the role of wider waste policy in managing landfill risk.

The Authority also asked for views on managing the risk of increased diversion of waste to export abroad in the form of Refuse Derived Fuel (RDF) or Solid Recovered Fuel (SRF). We set out a potential alterative option to an RDF/SRF export tax or ban in the form of permitting/licensing systems as a mechanism through which we could seek to influence the flow of RDF/SRF exports.

**Questions**

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 and management decisions, 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?

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?

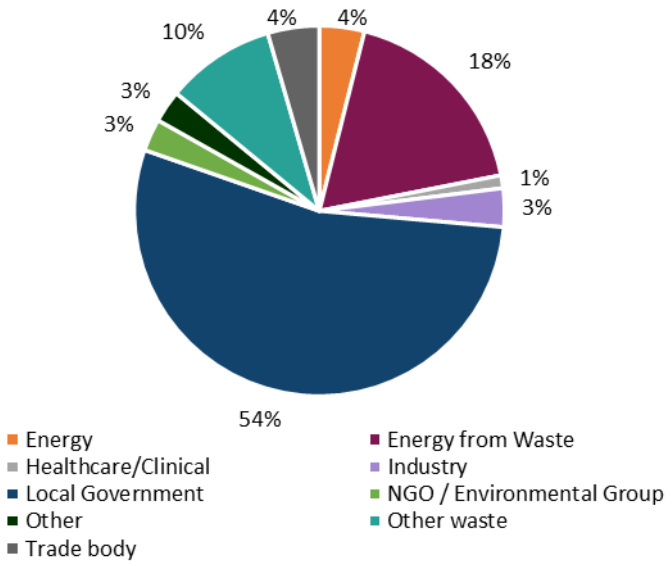
47. Do you think that any option to address RDF/SRF export mitigation risk could give rise to unintended consequences?

## Summary of responses

Questions regarding diversion to landfill and waste export were answered by 178 respondents in total, with some variation across questions.

A range of stakeholders responded to these questions, including 96 local government bodies, 32 EfW operators, and 17 stakeholders from elsewhere in the waste sector (Figure 13).

**Figure 13 Breakdown of diversion to landfill and waste export by stakeholder category**

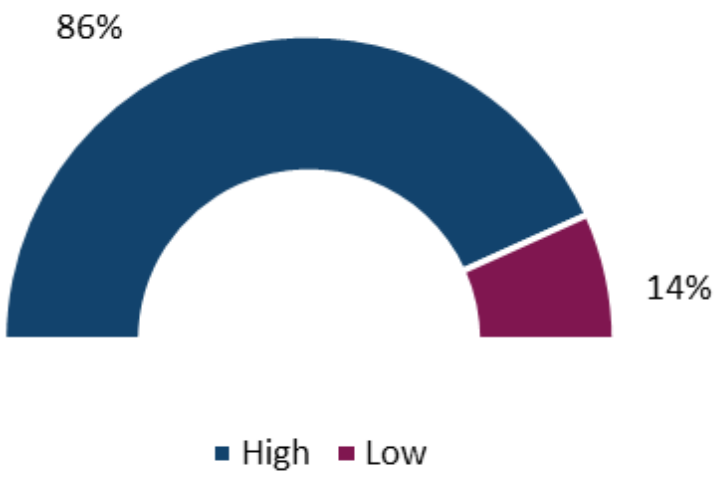



Pie chart showing diversion to landfill and waste export respondents by stakeholder category. It's divided into 10 categories: Energy - 4%, Energy from Waste - 18%, Healthcare/ Clinical - 1%, Industry - 3%, Local Government - 54%, NGO/Environmental Group - 3%, Other - 3%, Other Waste - 10%, Trade body - 3%.

The majority of respondents (85%) were concerned that the UK ETS expansion to waste may cause waste incineration gate fees to become more expensive than landfill or exports.

Respondents noted there are a variety of non-price factors that may prevent waste from being diverted down the waste hierarchy despite higher incineration gate fees. However, 46% of respondents stated that ultimately waste suppliers will attempt to manage their waste via the most cost-effective option. Thus, most respondents believe there is a high risk of waste being diverted down the hierarchy due to increased incineration gate fees (Figure 14).

**Figure 1414: Risk of waste diversion down the hierarchy due to increased gate fees**




Based on the 74 responses to question 37 that directly referenced one of the options.

Half donut chart showing respondents likeliness of waste diversion. It's divided into 2 categories: High risk - 86%, Low risk 14%.

Respondents flagged a range of factors that may impact the risk of waste being diverted down the waste hierarchy to landfill or export:

- **Regional variation:** Some respondents (18%) noted that regional risks depend on local policies, EfW capacity, CCS installations, and landfill tax rates and bans.
- **Material variation:** Some respondents (19%) noted that the impact on waste streams may differ. For instance, Scotland's prospective ban on landfilling biodegradable municipal waste will likely prevent most residual waste from being landfilled due to the presence of biodegradable waste.
- **Long term contracts:** Some respondents (11%) noted many local authorities are tied into long term contracts with EfW facilities with minimum tonnages to fulfil preventing them from diverting waste down the hierarchy.
- **EU ETS expansion to EfW:** Some respondents (7%) noted RDF and SRF exports to the EU would be exposed to the EU carbon price, should the EU proceed with their plans to include waste incineration in the EU ETS, which would reduce the competitiveness of exports compared to EfW incineration in the UK.

Landfill

The majority of respondents (72%) did not support UK ETS expansion to landfill to prevent waste diversion. Concerns were raised about the difficulty of ensuring stakeholders were not burdened with the costs of legacy emissions from historic waste and that the majority of emissions produced by landfills are biogenic methane, which are not in scope of the UK ETS.

89% of respondents believe alternative options to preventing waste from being diverted to landfills should be explored. Suggestions included increasing the landfill tax in line with the carbon price, as outlined in the consultation, implementing landfill bans similar to the ones in place in Scotland and Wales, and targeting producers to prevent undesirable materials entering the waste stream.

Most stakeholders (89%) believed that any approach aimed at addressing landfill risk may have unintended consequences, including an increase in waste exports and waste crime.

Exports

In response to questions about mitigating the risk of diverting waste from incineration to RDF/SRF exports, 46% of respondents cautioned that some level of exports is necessary. They argued that exports provide a contingency option for waste treatment when EfW incineration capacity is constrained and may be the only alternative to landfill in certain regions.

There was limited consensus in consultation responses regarding the best method of disincentivising waste export:

- The majority of respondents (79%) did not believe limiting the number of RDF/SRF export permits/ licences issued is an effective measure to reduce the risk of waste diversion to exports.
- The majority of respondents (67%) did not believe a permitting/licencing charge on RDF/SRF exports would be an effective mechanism to reduce the risk of waste diversion to exports.
- Some stakeholders suggested a Carbon Boarder Adjustment Mechanism (CBAM) approach to exports that recognises the difference between domestic carbon and international carbon prices.
- Some stakeholders suggested that government policy should focus on preventing undesirable materials being produced at the source.
- Some stakeholders proposed export taxes including a tiered tax differentiating between EU and non-EU countries; a per-tonne levy; and an incrementally increasing tax.

## The Authority Response

Landfill

The Authority recognises the concerns raised by consultation respondents regarding the risks of UK ETS expansion to waste causing diversion to landfill. Prior to the inclusion of the waste sector in the UK ETS, we will ensure appropriate mechanisms are in place to disincentivise diversion to landfill and reinforce the waste hierarchy. However, we do not believe UK ETS expansion to landfill would be a feasible option and would provide an effective decarbonisation incentive. We will set out more detail in due course.

Exports

The Authority recognises concerns raised by respondents about both the risk of incentivising export of waste, and that some level of waste export is necessary to manage capacity constraints. We are developing our policy position to ensure that waste export is not used to avoid ETS costs. We will set out more detail in due course.

# Decarbonisation pathways

## Summary of consultation

In the consultation, we outlined decarbonisation pathways for the waste sector. This included a proposed means through which UK ETS costs for some waste materials may be passed back to producers, the need to divert fossil waste away from incineration and the steps we will be taking to consider support for local authorities.

The UK Government, Scottish Government, Welsh Government and Northern Ireland's Department of Agriculture, Environment and Rural Affairs committed to plan collectively for the implementation of UK ETS in the waste sector, with a particular focus on fossil fuel derived wastes that do not currently have a decarbonisation pathway or a cost recovery mechanism. We noted that the UK Government was considering the process for supporting local authorities once waste incineration facilities are included in the UK ETS until they have decarbonisation pathways in place. We also proposed ensuring the UK ETS aligns with pEPR so that the carbon price is considered as part of the pEPR cost recovery process.

The Authority recognised the need to accelerate the deployment of cutting-edge technologies like Carbon Capture & Storage (CCS) across the wider waste sector in the UK.

**Questions**

48. Do you agree with the decarbonisation pathways for waste incineration facilities detailed above? 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.

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? If yes, please provide further details. 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? Please give further details to support your answer, including any information on the type, form and content of guidance needed.

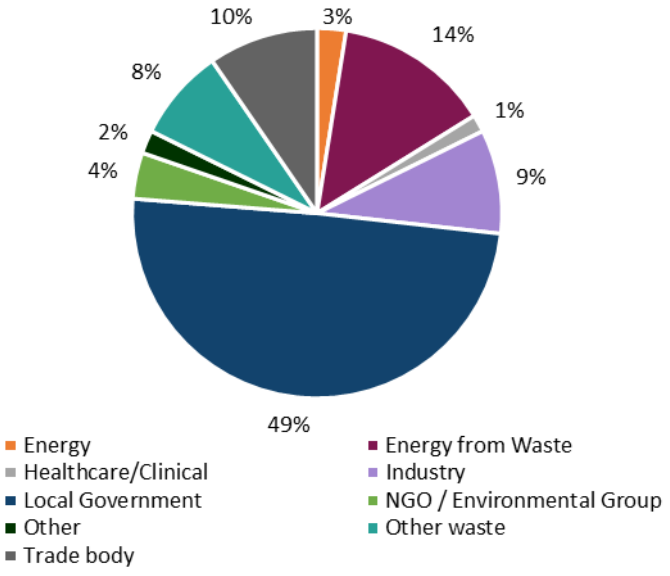
52. Beyond the mechanisms listed above, are there any other mechanism(s) you would recommend to support local authorities to decarbonise? Please give further details to support your answer, including any information on the type of support mechanism(s) recommended and details on the type of materials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

## Summary of responses

Questions on decarbonisation pathways were answered by 198 respondents in total, with some variation across questions.

A range of stakeholders responded to decarbonisation questions, including 98 Local government bodies, 27 Energy from Waste operators, and 16 stakeholders from elsewhere in the waste sector (Figure 15).

**Figure 15: Breakdown of decarbonisation pathway respondents by stakeholder category**




Pie chart showing diversion to landfill and waste export respondents by stakeholder category. It's divided into 10 categories: Energy - 3%, Energy from Waste - 14%, Healthcare/ Clinical - 1%, Industry - 9%, Local Government - 49%, NGO/Environmental Group - 4%, Other - 2%, Other Waste - 8%, Trade body - 10%.

The majority of respondents (75%) did not agree with the decarbonisation pathways outlined in the consultation (CCS, heat networks, and pEPR). Concerns included:

- **Local authorities' limited control over residual waste composition:** 34% of respondents, including most local government bodies, stated the composition of residual waste depends on household disposal habits and voluntary participation in recycling schemes. These respondents believed that ETS costs won't encourage local authorities to decarbonise, as they have limited abilities to change the composition of residual waste.
- **CCS:** 40% of respondents argued that CCS is an emerging technology and its efficacy has not been proven. 27% of respondents noted that it may not be possible to retrofit CCS technology to all EfW plants due to regional isolation, a lack of access to transportation infrastructure, limited space or short remaining operational lifespan.
- **Heat networks:** 18% of respondents highlighted the challenges associated with connecting heat networks to EfW facilities, noting that the viability of heat networks depends on local demand. Some respondents pointed out that while heat offtake will reduce system wide emissions through the production of low carbon heat, it will not directly reduce the emissions of EfW facilities. Some respondents have suggested that heat offtake should be incentivised through free allowances.
- **Delays to Collection Packaging Reforms (CPR):** Some stakeholders (11%) were sceptical about the effectiveness of the CPR (including pEPR and similar recycling measures) due to ongoing delays in reforms and uncertainties regarding certain aspects of the scheme. Respondents emphasize that the CPR should be fully implemented before operators are required to surrender UK ETS allowances (UKA).
- **pEPR:** Some respondents (9%, primarily made up of Local Government bodies) were concerned the pEPR regime will not account for the ETS costs. Conversely some respondents (10%, primarily Industry stakeholders) have argued against including ETS costs in the pEPR, claiming that if the pEPR is extended to cover the costs of the ETS this could result in packaging that is already subject to modulated fees under the pEPR charged twice, and reduce incentives for local authorities to invest in better recycling practices.
- **Pre-incineration sorting:** Some stakeholders (19%) argued against pre-sorting waste as a viable decarbonisation option because of the high initial cost of the required infrastructure and the limited opportunities for recycling given the low quality of the extracted materials.
- **Limited decarbonisation options for some materials:** Some respondents (15%) noted that some materials (such as Persistent Organic Pollutants (POPs)) are either legally required to be incinerated or are difficult to recycle (e.g. mattresses and carpet), leaving no decarbonisation options available for their disposal.

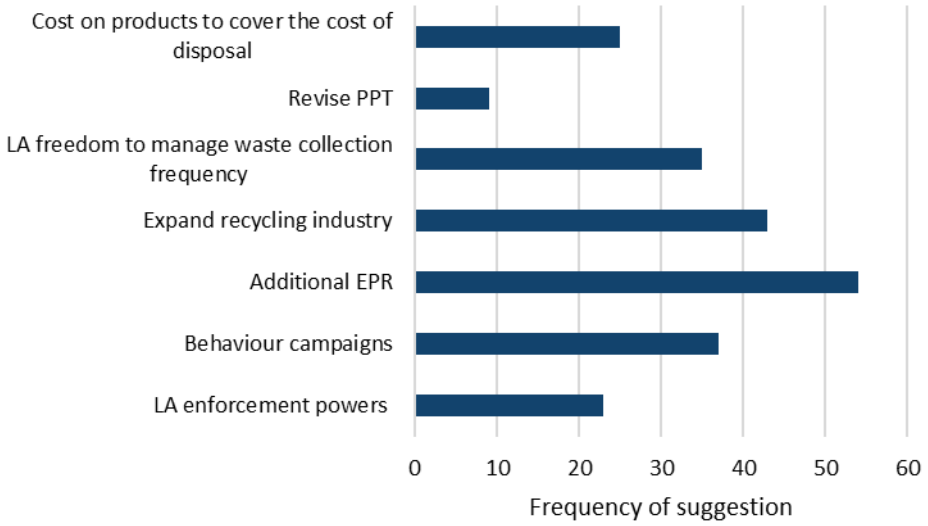
Respondents were divided over whether investment in decarbonisation technologies, such as CCS and heat networks, will provide EfW facilities and their customers with savings and potential profits. Some respondents argued these technologies are not currently viable, and 44% claimed any investment will result in increased costs being passed onto consumers. Other respondents listed a series of factors that may influence their profitability:

- **ETS carbon price:** 21% of respondents stated their viability will depend on the price of ETS allowances.
- **Regional factors:** 8% of respondents noted the viability of these investments may depend on a series of regional factors including local planning regulations, public opinion and availability of suitable land.
- **Government incentives:** 19% of respondents have stated that government support will be needed to make these technologies viable.

It is not clear from the responses whether, if savings are achieved, they will be passed onto the customers of EfW facilities, with some respondents (8%) stating that this will depend on individual contracts.

When asked to suggest other mechanisms that may be used to support local authorities to decarbonise, some respondents (21%) reiterated their suggestion that the government should focus on policy interventions that target producers. Notwithstanding, respondents suggested a series of alternative methods that may be used to decarbonise waste streams (Figure 16).

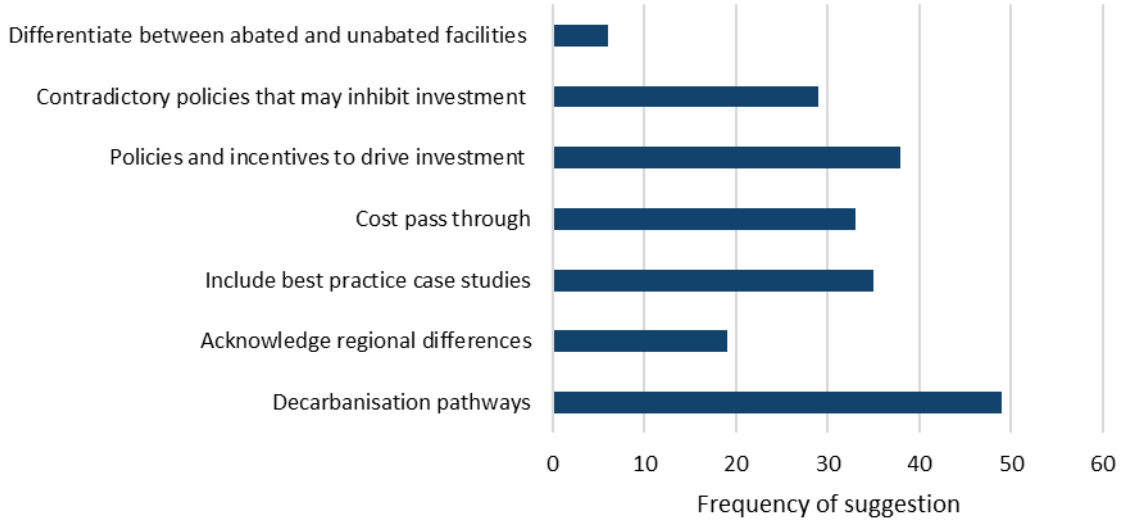
**Figure 16: Alternative decarbonisation methods**




Bar chart showing the frequency of suggested alternative decarbonisation methods. Cost of products to cover the cost of disposal – 25, revise Plastic Packaging Tax – 9, LA freedom to manage waste collection frequency – 35, expand recycling – 43, additional EPR – 54, behaviour campaigns – 37, and LA enforcement powers – 23.

Almost all (95%) of the respondents agreed on a need for guidance on decarbonisation, suggestions for the type and content of guidance are outlined in Figure 17.

**Figure 17: Suggested guidance content**




Bar chart showing the frequency of guidance suggestions: Differentiate between abated and unabated facilities – 6, contradictory policies – 29, policies and incentives to drive investment – 38, cost pass through – 33, case studies – 35, regional differences – 19%, and decarbonisation pathways – 49.

## The Authority Response

**We recognise the challenges the expansion of the scheme places on local authorities who have limited control over the composition of the waste they are required to collect and manage. As such local authorities will not be expected to cover full ETS costs. The Authority will confirm proposals to help local authorities to manage the impacts of the scheme before facilities are exposed to the carbon price in a subsequent Authority Response**.

We also recognise that the expansion of the scheme will impact commercial and industrial customers (C&I) as they will also be subject to ETS costs. However, C&I customers benefit from additional flexibility in responding to fluctuations in costs in comparison to local authorities and often have shorter contracts with their EfW operators. This will allow them to move their commerce to facilities with lower ETS cost exposure, such as those with CCS, incentivising the take up of this technology. They are also able to make changes in their supply chains to lower the fossil content of their waste and are able to pass costs through to their customers, unlike local authorities.

Although C&I customers of EfW are better able to decarbonise, we recognise that a comprehensive suite of policies including funding, regulation and carbon pricing is needed to deliver decarbonisation across the EfW sector. The Authority also understands that there are additional policies needed to tackle hard to decarbonise waste streams.

In November 2024 the UK Government established the Circular Economy Taskforce to bring together industry, academic and policy experts with central, devolved and local government to develop an evidence-driven and actionable Circular Economy Strategy for England.

The circular economy work will form part of a larger Missions-oriented strategy across the UK Government, underpinned by the forthcoming Industrial Strategy, refreshed Carbon Budget Delivery Plan, and heavily complemented by an Industrial Decarbonisation Strategy.

The UK Government has now confirmed the first six priority sectors that the taskforce will focus on to deliver the greatest impact – textiles, transport, construction, agri-food, waste electrical and electronic equipment (WEEE) and chemicals & plastics. The Taskforce will now work with these sectors to create a series of specific roadmaps to improve and reform the approach to using materials, underpinned by a Circular Economy Strategy for England which will be published in Autumn 2025. Both the roadmaps and Strategy will give businesses certainty to plan and the confidence to build and invest in new infrastructure.

The Welsh Government's 2021 circular economy strategy, Beyond Recycling, commits Wales to zero (residual) waste by 2050. As well as implementing its own 'made-for-Wales' policies such as the new Workplace Recycling Regulations that came into force in April 2024, the Welsh Government has identified in its Net Zero Wales Carbon Budget 2 plan the need to work jointly with the UK Government to look at where there may be policies that could be implemented on a pan-UK basis.

In Scotland, Ministers have worked hard to drive forward sustainable resource use and the circular economy. Most recently, the Circular Economy (Scotland) Act 2024 established the legislative framework to support Scotland's transition to a zero waste and circular economy, significantly increase reuse and recycling rates, and modernise and improve waste and recycling services. The Scottish Government has also published Scotland's Circular Economy and Waste Route Map to 2030. This sets out the clear actions we intend to take to deliver more sustainable use of our resources and progress a circular economy in Scotland by 2030. The Route Map includes specific actions related to reducing waste and associated emissions, maximising reuse and recycling, and decarbonising disposal of any remaining residual waste. Looking ahead, the Scottish Government intends to publish a statutory circular economy strategy in 2026 and to set new circular economy targets by 2027. The strategy will identify priority sectors and systems, and will take a strategic longer term view up to 2045. A consultation on the strategy and an associated monitoring and indicator framework is planned for later in 2025.

Rethinking Our Resources is a collection of workstreams that will set out the necessary reforms needed in Northern Ireland (NI) to drive better resource and waste management to contribute to NI's Net Zero ambition, improve the environment and build a better, more circular economy. The Waste Management Strategy (WMS) is the cornerstone of this work with the recent recycling consultation, Rethinking Our Resources: Measures for Climate Action and a Circular Economy in NI being a further outworking of an element of the strategy. Other workstreams are driven by the numerous legislative and policy drivers that have been developed and implemented since the previous WMS, published in 2013.

The Authority will continue to work collectively to ensure these proposals across all four nations support the decarbonisation of waste that will be in scope of the UK ETS, reducing emissions from this sector.

Alignment with the Packaging Extended Producer Responsibility Scheme

**The UK ETS will align with pEPR so that the additional carbon costs incurred by local authorities for disposing of packaging materials through incineration are considered as part of the calculation of the pEPR payments for the efficient management of household packaging.**

This means that the payments to local authorities for the efficient and effective management of household packaging under pEPR would include costs associated with the UK ETS, where waste packaging has been appropriately disposed of via incineration. pEPR is designed to improve efficiency by placing responsibility on businesses for the environmental impact of their packaging. This will incentivise the appropriate use of packaging, the use of recyclable and reusable packaging, encourage more domestic reprocessing and overall system improvements.

We have undertaken further work since the previous consultation to understand what proportion of emissions will be in scope of pEPR and the UK ETS. We currently estimate that between 20-30% *by weight* of the fossil waste handled by local authorities and that is incinerated is within scope of pEPR. This means that the carbon price associated with disposing of this waste via incineration would be covered by pEPR payments. Compositional analysis of waste samples suggests that the incineration of this in-scope material *currently* contributes 60% of the emissions generated from the incineration of household waste, because much of the material within scope of pEPR currently contains plastics. However, mandatory collection of flexible plastics from households for recycling from 31 March 2027 will reduce the percentage of fossil wastes entering the residual waste stream and waste incineration facilities. Government is exploring how best to increase demand for this recycled material. We therefore expect that figure to decrease, so that less than 60% of the emissions generated from the incineration of household waste will stem from materials within scope of pEPR by 2028. The proportion of emissions associated with the incineration of household waste, and therefore the carbon price for these emissions, is currently difficult to predict and will depend on the impact the pEPR scheme has throughout the preceding years.

It will be crucial to ensure that ETS costs are accurately reflected in the pEPR scheme, so that packaging producers only pay the carbon price for the incineration of fossil-containing packaging materials. There are several waste streams that are not within scope of pEPR and as such will not be covered by this cost pass through mechanism. The pEPR scheme design factors in an adjustment from 2028 to account for the ETS costs associated with household packaging material. The Department for the Environment, Food & Rural Affairs (DEFRA) intends to consult later this year to ensure the right data is available to effectively account for ETS costs while delivering the pEPR policy intent, to increase recycling quantity and quality and the recovery of recyclable material from residual waste streams.

# Accurate apportioning of cost pass through

## Summary of the consultation

In the consultation, the Authority recognised the importance of accurately apportioning ETS costs between different customers to reflect emission reductions and recycling efforts. We recognised the difficulties in doing so given some facilities accept waste from multiple sources. Doing so is necessary to preserve the decarbonisation incentives that arises from applying ETS costs to fossil emissions from waste incineration. We consulted on options for cost pass through and noted that the Authority will support this by providing guidance, as we understand that any provisions will be dependent on specific operator and customer contexts. The consultation options were sampling, default calculation factor approach and a combined, phased approach.

**Questions**

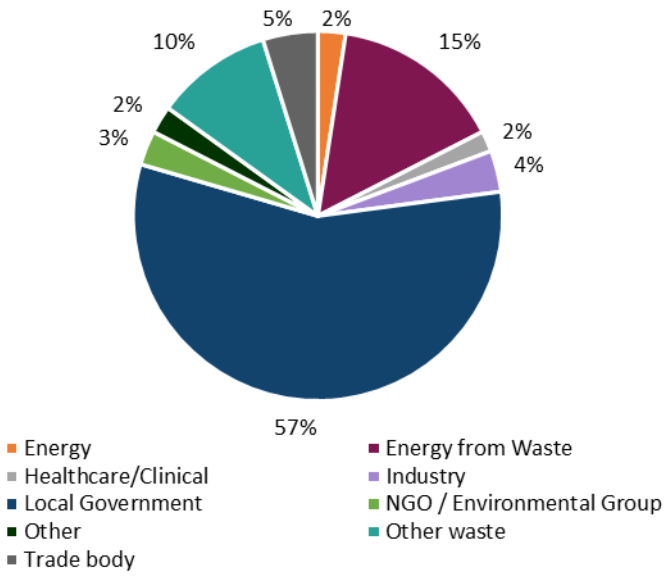
53. Do you think that sampling (e.g. MRF requirements) would be an effective approach for supporting accurate cost pass through from EfW operators to customers?
54. Do you think that the outlined sample analysis techniques (e.g. manual sorting, selective dissolution, and Carbon-14) would effectively 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?

## Summary of response

Questions on the how to accurately apportion ETS costs were answered by 166 respondents in total, with some variation across questions.

A range of stakeholders responded to these questions, including 94 Local government bodies, 25 Energy from Waste operators, and 17 stakeholders from elsewhere in the waste sector (Figure 18).

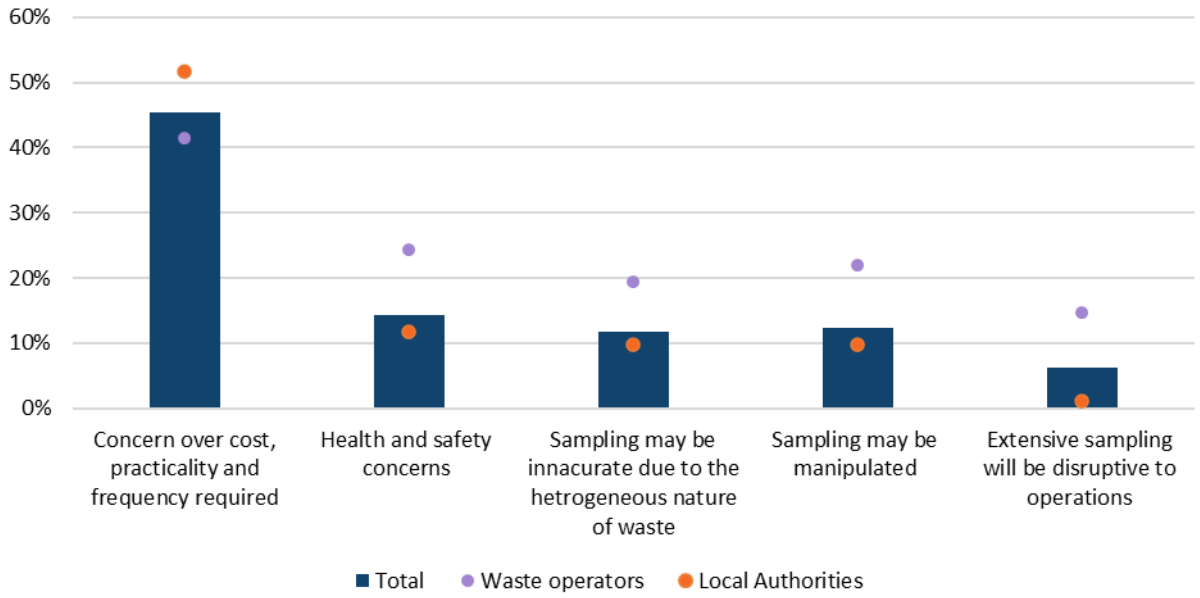
**Figure 18: Breakdown cost pass through respondents by stakeholder category**




Pie chart showing diversion to landfill and waste export respondents by stakeholder category. It's divided into 10 categories: Energy - 2%, Energy from Waste - 15%, Healthcare/ Clinical - 2%, Industry - 4%, Local Government - 57%, NGO/Environmental Group - 3%, Other - 2%, Other Waste - 10%, Trade body - 5%.

There was disagreement about whether sampling would be an effective approach to support accurate cost pass through, with 52% of respondents supporting the approach. Respondents raised a series of concerns with sampling that can be seen in Figure 19.

**Figure 19: Stakeholder concerns with using sampling for cost pass through**



Bar chart showing stakeholder concerns with sampling as a cost pass through option: concerns over cost/practicality, 45% total, around 50% of LAs and 40% of waste operators, health and safety (around 15% of total, 10% of LAs, 25% of waste operators), inaccuracy/unrepresentativeness (around 10% of total, 10% of LAs, 20% of waste operators), risk of manipulation ( around 10% of total, 10% of LAs, 20% of waste operators), and disruption to operations (around 5% of total, 15% of waste operators)

Stakeholders raised significant concerns with the use of the sampling techniques outlined in the consultation for cost pass through. The concerns for each techniques included:

- **Carbon-14:** Some respondents (24%) noted that post-incineration Carbon-14 analysis is unable to determine the fossil content of individual customers waste (prior to incineration) and therefore cannot accurately apportion costs. Furthermore, some respondents (20%) were concerned that there is limited lab capacity to undertake the Carbon-14 analysis for the waste sector.
- **Manual sorting:** Some respondents (9%) noted that while manual sorting may be effective for cost pass through because it is able to determine the fossil content of waste for individual customers, it may be impractical due to human error, cost, and potential for manipulation.
- **Selective dissolution:** Some respondents (9%) stated that selective dissolution is too inaccurate and unreliable to be suitable.

88% of respondents felt that alternatives to sampling should be explored. 32% of respondents stated that default calculation factors are the most appropriate approach for cost pass through. However, 13% of respondents were concerned that a calculated emissions factor approach provides a reduced incentive to decarbonise.

Responses from waste sector trade bodies stated that it is essential that the approach for cost pass through is aligned with the approach for MRV. They proposed a calibrated emissions factors approach based on local authority recycling practices for cost pass through.

79% of respondents have expressed support for a phased approach to the development of a cost pass through mechanism. Arguments in support of a phased approach included:

- **Develop a new approach:** Allowing for a simpler approach such as emissions factors to be implemented initially giving stakeholders time to collaborate and develop a more refined approach (19%).
- **Build stakeholder capacity:** The initial phase could provide stakeholders with the opportunity to prepare and build capacity for more sophisticated systems while providing them with meaningful data (15%).
- **Allow other policies to come into effect:** Some stakeholders emphasised the need for decarbonisation pathways to be fully developed before the inclusion of the waste sector in the UK ETS, with a phased approach potentially providing additional time for these policies to be implemented (15%).

The main justifications against a phased approach were that customers and operators should start working together as soon as possible to prepare for the inclusion of the waste sector in the UK ETS (7%) and that there is a need for consistent guidance and legislation on cost pass through arrangements (11%).

## The Authority Response

**The Authority will engage with the sector, across all stages of the waste supply chain, to consider viable cost pass through approaches that maintain the decarbonisation incentive. Our intention is to use the voluntary MRV-only period to test MRV approaches that allow an explicit link between tonnages of waste and ETS costs, via a nationally managed system of emissions factors.**

There are complexities surrounding passing ETS costs back through waste supply chains, given multiple parties at various stages in the produce lifecycle have opportunities to decarbonise waste streams before they reach the point of incineration. EfW operators, as the party responsible for surrendering allowances, will also be responsible for passing on ETS costs to their customers, either through direct attribution or after applying Qualifying Change in Law clauses in contracts. Therefore, the Authority recognises the importance of accurately apportioning ETS costs between different customers according to the fossil content of their waste. Doing so is necessary to incentivise decarbonisation by rewarding emission reductions and recycling efforts with reduced ETS costs.

The Authority acknowledges the proposals from stakeholders on cost pass through approaches, and appreciates the detailed feedback received for the methodologies that were proposed in the consultation. We recognise the concerns about laboratory analysis of samples and the use of proprietary mass balance software as cost pass through approaches.

The Authority regards CEMS (for $CO_2$ monitoring) and Carbon-14 analysis (for the biogenic fraction of the $CO_2$) as the most consistent and accurate means of determining *facility-level* emissions. However, CEMS and Carbon-14 are not suitable for determining the content of individual customers' waste.

As stated in the previous sections of the Authority Response covering MRV and the MRV-only period, the Authority is committed to testing MRV approaches during the voluntary MRV-only period to facilitate accurate cost pass through via the use of calibrated emissions factors. We will provide further details on the proposed MRV approaches in guidance later in the year and will engage across the waste sector to ensure the final ETS approach secures the correct incentives for all participants in the waste supply chain.

We recognise the need for customers and operators to work together to prepare for the inclusion of the waste sector in the UK ETS, and the importance of managing cost pass through for local authorities in particular.

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