

# ETS and Energy from Waste

Research and support for local authorities

# How EfW fits into a dynamic policy landscape

Energy from Waste (EfW) is a key component of modern waste management, diverting non-recyclable materials from landfill and generating energy in the form of electricity and heat.

As of 2024, the UK's 63 operational EfW facilities had a combined annual capacity of 19.3 million tonnes; an additional 4.9m tonnes of capacity is in development.

Defra forecasts an 18% decrease in residual waste arisings by 2035 due to three key policies: Extended Producer Responsibility (EPR), Simpler Recycling, and the Deposit Return Scheme (DRS). These policies aim to increase recycling rates and divert recyclable materials from waste, considerably reducing the volumes sent to EfW.

The inclusion of EfW in the UK Emissions Trading Scheme (ETS) further aims to reduce residual waste and associated fossil carbon emissions. It requires facility operators to report activity and emission data, with a voluntary Monitoring, Reporting and Verification (MRV) period starting from 2026 and mandatory inclusion from 2028.



This will oblige operators to purchase carbon allowances, providing incentives to divert fossil carbon waste (mainly plastics) from residual waste through reduction, reuse and recycling.

A limit on total emissions incentivises investment in efficiency design to make use of both heat and power generated, and in technologies that reduce emissions such as carbon capture and storage (CCS).

However, ETS inclusion for Energy from Waste will likely lead to increased residual waste management costs for local authorities, with additional ETS costs estimated to be ~£48/tonne (a 50% increase in gate fees), leading to £800m per year in costs.

Where does EfW fit within your waste management strategy? How resilient is it to policy and market changes?

- Are you prepared for the impacts of EPR, Simpler Recycling and DRS on your residual waste activities?
- Do you understand how inclusion of EfW into ETS may impact gate fees and contracts?
- What are your current and future EfW needs as residual waste tonnages decline?
- What role will EfW play within your waste hierarchy and net zero commitments?
- Can modelling help to understand future costs and the impacts of future waste management and treatment scenarios?



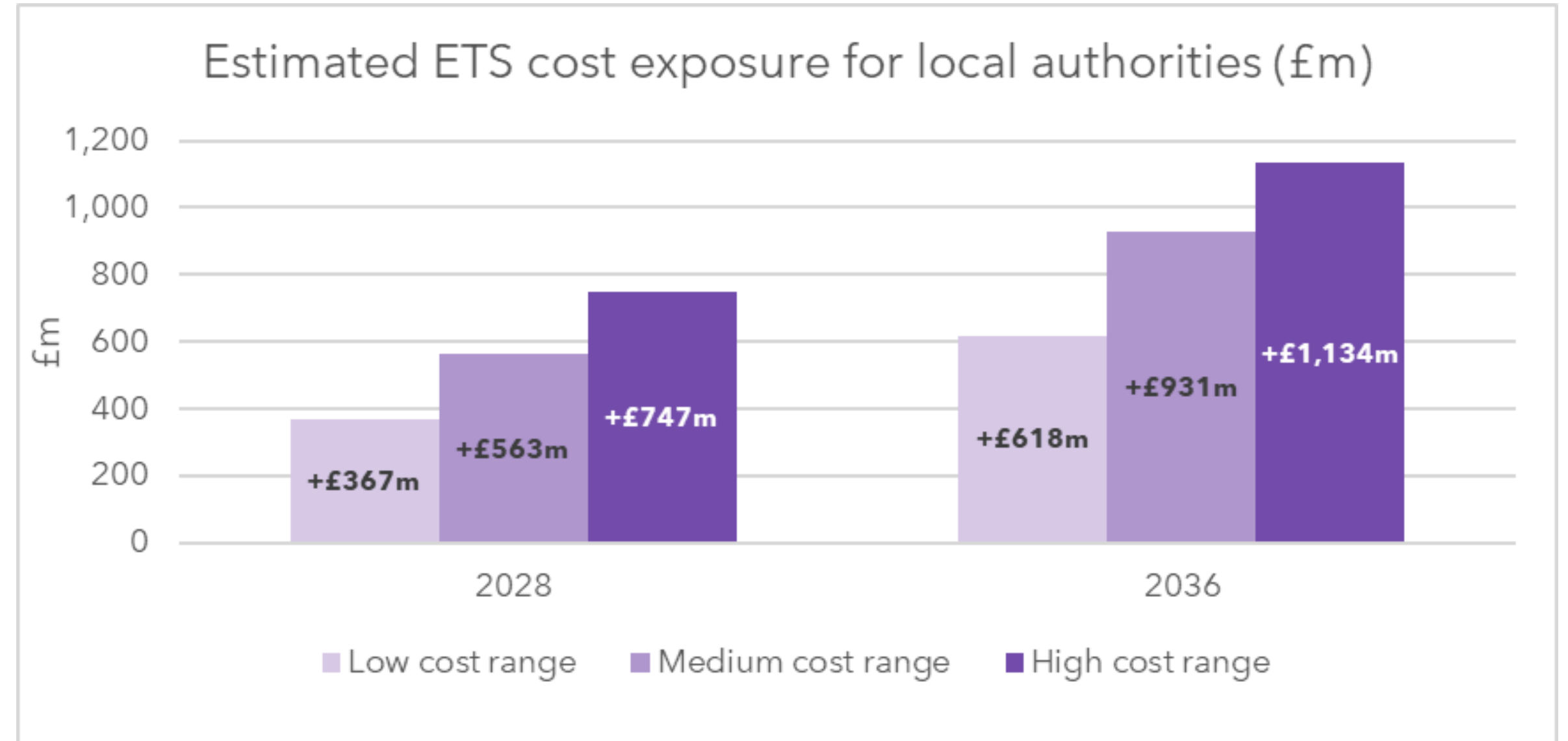
# Cost scenarios of LA exposure to ETS costs

Analysis carried out by [the Local Government Association \(LGA\)](#) estimates that additional costs to local authorities from ETS may range from £367m to £747m per annum in 2028, to £618m to £1,134m per annum in 2036.

While some costs for managing fossil-based packaging waste may be covered by EPR, it is still expected that the remaining costs to local government could reach a cumulative cost of £5.4bn by 2036.

This presents several challenges to local authorities including:

- Uncertainty around ETS exposure specific to each local authority.
- Higher EfW gate fees and market uncertainty.
- Future EfW capacity need and long-term commitments.
- Regional disparities in available EfW capacity.
- Uncertainty in carbon capture and storage (CCS) technology readiness limiting treatment choices.
- Complex and expensive procurement processes for residual waste treatment.

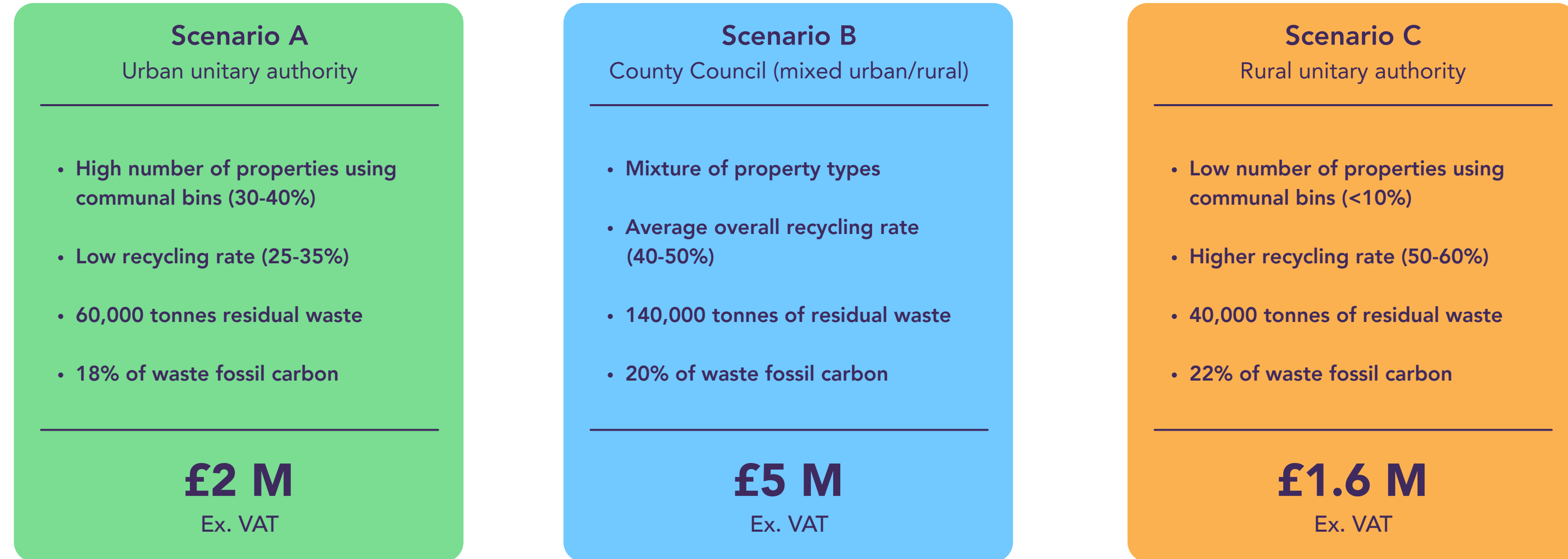


Source: [LGA \(2024\)](#)



# Indicative costs

Below are indicative costs based on typical authority scenarios with the cost of fossil CO<sub>2</sub> at £49 per tonne\*. This is subject to change based on your specific requirements. **Headline:** Authorities with higher recycling rates typically have higher proportions of fossil carbon waste in the residual waste stream. This is mainly due to higher capture of (non-fossil) food waste through separate food waste collections. However the overall ETS burden is lower because less residual waste goes to EfW.



\*The [UK ETS Authority](#) has determined that the carbon price per tonne of carbon dioxide equivalent for the scheme year beginning on 1st January 2026 is £49.41. This is likely to increase significantly over the next few years.

Fossil carbon waste estimates are based on our extensive knowledge of waste compositions.

All scenarios assume a fully compliant [Simpler Recycling](#) service and [DRS removing 90% of target materials](#) (namely PET plastics and cans).



# Taking action on EfW

That is where we come in.

- Our expert teams through sophisticated waste composition modelling can help local authorities to understand and validate their ETS exposure.
- Through our options appraisal modelling we can also identify operational efficiencies and potential cost savings in front line services helping to offset ETS exposure costs, reduce waste, and increase recycling performance.

## How we help

Our **Circular Economy** and **Policy** experts can support you across several areas, spanning market research and engagement, policy forecasting, and assessing financial impacts on future EfW requirements.

Our **Waste Strategy** service area supports authorities with contract procurement, infrastructure planning and service reviews through detailed waste composition, cost, carbon modelling and options appraisal.



### CASE STUDY

## Energy from Waste capacity research and forecasting

To inform its residual waste treatment needs, a local authority commissioned Resource Futures to undertake market research to further understand both the current and future EfW capacity surrounding the client's area and to understand how policy changes will likely affect future available capacity and gate fees.

As well as reviewing industry and governmental sources to understand the current (and planned) availability and capacity of EfW facilities, our proprietary Resource Data tool mapped the client's forecasted residual waste arisings to geographical data of EfW facilities and material flows from a range of governmental datasets.



Our final report outlined the current landscape and offers key considerations for future decisions, providing expert guidance to inform future waste management treatment routes.



# Next steps

## Reshaping your waste strategy

If you are reviewing your EfW strategy, evaluating future treatment options, or need support responding to policy and regulatory change, the team at Resource Futures is available to discuss your needs.

- Waste flow composition modelling, cost modelling and options appraisal
- Carbon modelling and impact assessments of EfW and alternative technologies
- Residual waste contract procurement support
- Policy and regulatory analysis, including ETS cost exposure modelling and advice
- EfW market and capacity assessments (both current and future)
- EfW training and capability-building workshops tailored for LA officers and decision makers



### CASE STUDY

## Designing sector-specific EfW training for IChemE members

Drawing on our significant expertise of EfW technologies, waste and recycling policy and business case considerations, we design and deliver introductory training courses across several circular topics - including Energy from Waste - to members of the Institution of Chemical Engineers (IChemE).

Delivered either in person or online, the EfW course provides an overview of the different technologies used and their specifications, policy considerations, advantages and disadvantages across environmental, economic and societal aspects, alongside shedding light on real-world examples and experiences of EfW facilities and



the key points and tools to analyse and determine if they are an effective choice.

While developed as an introductory course for engineers, we can tailor any elements of these course materials as needed for local authorities.



# About us

Resource Futures has led the way on sustainability and circularity for the past two decades. We work across the public and private sectors to deliver services and strategic support around the circular economy and net zero, policy, waste and resources.

We are the UK's leading experts in turning data into actionable intelligence and a sought-after partner for waste composition analysis and resource data intelligence. Alongside this we develop and lead ground breaking community-led social impact projects that propel reuse, repair and other sustainable activities into the mainstream.

Get in touch



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