

# A ROADMAP TO INCREASING UK AEROSOL RECYCLING



THE UK  
AEROSOL  
RECYCLING  
INITIATIVE

**An estimated 650 million metal aerosols are used in the UK each year, with over 80% of these likely to be consumed in households. Household aerosols should be captured through kerbside collection systems for recycling, alongside all other metal packaging.**

The packaging waste landscape in the UK is changing. In the future non-beverage packaging, including aerosols, face ambitious mandatory recycling targets of 50% for aluminium and 85% for steel by 2030 under Extended Producer Responsibility (EPR). Alupro has made a commitment to supporting the aerosols value chain in achieving these targets.

Whilst aerosols made of both metals share some common challenges, it is worth noting that different processes apply for the sorting and treatment of each.

This report presents the details of research carried out by Resource Futures on behalf of the UK Aerosol Recycling Initiative that defines the roadmap for industry to meet this challenge.

**This research answered four key questions:**

- 1. Where are the greatest losses of aerosols from the recycling stream and why?***
- 2. What are the greatest obstacles to increasing aerosol recycling?***
- 3. What are the potential solutions that enable increased recycling?***
- 4. What are the likely costs and readiness levels of the industry?***

The findings in this report have been developed from the results of a nationwide survey of over 2000 UK residents, detailed waste composition analyses in 9 local authorities, an assessment of how 17 local authorities communicate with their residents about aerosol recycling and 19 interviews with experts across the value chain.

## WHERE ARE THE GREATEST LOSSES OF AEROSOLS AND WHY?

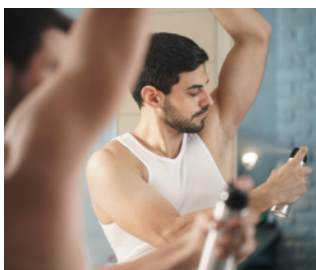
The research demonstrates how the greatest losses of aerosols are associated with post-consumer aerosol disposal practices and treatment. Aerosol losses during production (pre-consumer) are limited, as these aerosols are primarily collected and treated at dedicated aerosol recycling facilities. The research indicates that the losses of post-consumer aerosols start with householders at the collection phase where, consumer confusion and disposal practices, and the nature of collection infrastructure available are key factors.

The public survey indicated that there is confusion, lack of confidence and knowledge from the public on how to recycle used aerosols. This includes a lack of knowledge of the services available in their local area, particularly for non-empty aerosols.

There are indications that these post-consumer losses can be increased during sorting and treatment as systems are not optimised to ensure high quantities of aerosols, discarded via kerbside collections, are identified, sorted and treated to retain their highest post-consumer value. This is against a backdrop of technological solutions being available and proven systems of practice already operating in the UK and overseas. To increase aerosol recycling both improvements in public knowledge and awareness combined with changes to current collection, sorting and treatment processes are required.

The following key findings from the nationwide consumer survey, the waste composition analysis and local authority communications assessment are primary factors in understanding losses associated with collection.

## NATIONWIDE PUBLIC SURVEY



- The most common source of information used by respondents for aerosol recycling is their council website, which was identified by 45% of respondents, whilst 39% checked the packaging /container for information.

- The majority of respondents (64%) claimed to recycle empty aerosol cans, predominantly personal care products, through kerbside recycling. 15% stated they place empty aerosols in the general waste bin, and 14% took empty aerosols to their local recycling centre for disposal.

- There is some understanding that empty, part-full and full aerosols are to be disposed of differently. There is wide-spread confusion about how to dispose of non-empty aerosols, with 17% of people responding that they did not know how to dispose of them. Over 80% of people indicated that they place non-empty aerosols into the recycling collection.

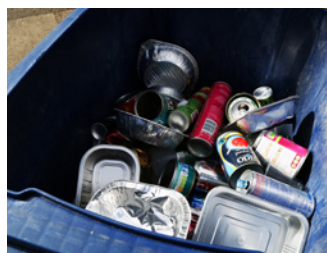
- Knowledge and confidence in aerosol purchasing and disposal was found to increase significantly with age. 45% of 16–24 year olds reported recycling empty aerosols in the kerbside service, compared to 75% of over 55s. However, older age groups claimed that they recycle non-empty aerosols more than younger age groups.

- 52% of people feel very (15%) or somewhat confident (37%) about the process of disposing of aerosols in their local area. At the same time, 58% of people believe that metal aerosols can be recycled through kerbside systems.

## WASTE COMPOSITION ANALYSIS

Detailed waste composition analyses were conducted in 9 local authorities looking at recycling and residual waste arising from households, in order to measure the 'capture rate' of aerosols (i.e. the % of aerosols found in the recycling stream as a proportion of the total). The analysis predominantly supported the public survey findings.

- Aerosols have a capture rate of 56% for non-ferrous aerosols and 63% for ferrous aerosols, compared with non-ferrous beverage cans (81%) and ferrous cans (86%).



- Deodorants and air fresheners were the most prominent type of aerosols by weight, reflecting the national survey data results on the public's understanding of an aerosol and disposal practices.

- 85% of all discarded aerosols were classed as empty overall, with 89% of aerosols in the mixed dry recycling being empty and 80% of those in the residual waste. A higher proportion of non-ferrous aerosols were assessed as empty than ferrous aerosols overall.

## LOCAL AUTHORITY COMMUNICATIONS ASSESSMENT

There was no clear correlation between capture rate and the availability of information on aerosol recycling within the local authority. The lack of correlation indicates that simply hosting information of recyclability on a website is not sufficient to drive capture rates and active communication is worth exploring. It is not clear why but the nature and focus of collection services available and, as identified in the waste composition analysis, socio-demographics are likely to impact on local performance. For example, as an interviewee from a local authority said, aerosols are not a priority and the multicultural aspects of their area makes it difficult to communicate effectively.

## WHAT ARE THE GREATEST OBSTACLES?

The 19 stakeholder interviews indicated that there is a diversity of views on what the problems and solutions are, the role and responsibilities of different stakeholder groups and the need to change the current system. The variety of views are likely to be influenced by vested interests of different parties within the value chain, noting that the views expressed are opinions rather than statements of fact.

Whilst there were different opinions on priorities for action, common themes emerged regarding obstacles. When aligned with understandings of where the greatest losses occur, the key obstacles for aerosol recycling that arose from stakeholder interviews were:

- A lack of data on post-consumer aerosol recycling rates and losses throughout the value chain.
- Lack of public knowledge and understanding about aerosols and responsible recycling practices.
- Lack of consistency in collection infrastructure and services.
- Unoptimized sorting processes that potentially raise various H&S risks in safely sorting and separating aerosols if volumes and concentrations increased.
- Treatment processes failing to retain or maximise the value of post-consumer aerosols.
- Design of aerosols increasing metal contamination.



## OUR PRIORITY ACTIONS

Based on the evidence detailed in this report, numerous solutions were identified. To meet the challenge, the UK Aerosol Recycling Initiative has prioritised these five solutions for immediate action:

### 1. MEASURE RECYCLING PERFORMANCE

to inform innovation and investment.

### 2. CONSISTENT PUBLIC MESSAGING

to dispel confusion.

### 3. TARGETED CONSUMER EDUCATION

to encourage recycling.

### 4. STANDARDISED RECYCLING LABEL

to empower consumers.

### 5. MODEL POLICY IMPACTS

to prepare for the future.



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# OUR LONG-TERM PLAN: A ROADMAP TO INCREASING AEROSOL RECYCLING

Our work has shown what could be done to achieve higher aerosol recycling rates in the UK. Our vision is a world where consumers recycle all of their empty aerosols responsibly in their kerbside system, with confidence that this will result in their packaging waste being collected, sorted, recycled and transformed into something new. It will take long term, sustained, collaboration to achieve this vision.

Join our initiative and come with us on our journey.



### CHALLENGE

To obtain regular high-quality data on aerosol collection and recycling.

### SOLUTION

Requirement for more vigorous sampling of aerosols within materials recovery facilities (MRFs).  
Determine the extent of losses at each stage of the value chain for aluminium and steel aerosols to inform targeting of monitoring and interventions.

### CHALLENGE

To address increased sorting and processing technical challenges at different stages of end-of-life aerosol treatment as aerosol capture rates increase.

### SOLUTION

Invest in circular economy pathways and business cases for treating non-empty aerosols.

### CHALLENGE

To prepare for the impact of EPR and DRS (Deposit Return Scheme).

### SOLUTION

Provide clarity to the industry on the impacts of EPR and DRS.

### CHALLENGE

To address regulatory challenges for the waste value chain in increasing aerosol recycling.

### SOLUTION

Review regulatory potential for aerosol-specific collection systems.

### CHALLENGE

To improve the design of aerosols to optimise the value of recycled materials.

### SOLUTION

Explore Design-for-Recyclability (DfR) opportunities for aerosols.

### CHALLENGE

To improve public knowledge, messaging, understanding and practices relating to aerosol recycling.

### SOLUTION

Ensure public messaging consistency.  
Develop long-term targeted consumer education that increases knowledge and confidence in all socio-demographic groups in the UK.  
Establish standardised aerosol-specific labelling that informs UK householders of good recycling practice.

### CHALLENGE

To increase quantities of empty aerosols in kerbside recycling and reduce disposal of non-empty aerosols in kerbside collections.

### SOLUTION

Establish mandatory empty and non-empty aerosol collection consistency.

