‘Mobilising together on the Government’s plans for plastics’

Welcome!

Enjoy the conference

Speak to Ali, Paldeep or Paul if you need assistance
Welcome and purpose of this Conference

Objectives

1. Raise awareness of the upcoming HMRC consultation on ‘chemical recycling and mass balance’. Help increase numbers and quality of responses.

2. Mobilise the packaging value chain on the Government’s plans for plastics recycling.

3. Between us all, mobilise action, create enthusiasm, and help deliver national ambitions and outcomes for plastics.
Open consultation

Plastic Packaging Tax - chemical recycling and adoption of a mass balance approach

Published 18 July 2023

Contents
- Summary
- Foreword
- 1. Introduction
- 2. Plastics manufacture and recycling
- 3. Mass balance approach
- 4. Mass balance models
- 5. How certification would operate
- 6. Understanding commercial practices
- 7. Assessment of impacts
- 8. Summary of consultation questions
- 9. The consultation process
- Annex A: Relevant current government legislation

**Duration**

The consultation will run for 12 weeks from 18 July 2023 to 10 October 2023.

**Scope of this consultation**

HM Revenue and Customs (HMRC) is consulting on the impacts of chemical recycling for plastics and the potential use of a mass balance approach to account for chemically recycled content for PPT.

**Who should read this?**

Businesses (including those in the plastics value chain such as petrochemical businesses and mechanical recyclers), individuals, tax advisers, non-governmental organisations (NGOs), academia/research, certification, trade and professional bodies and other interested parties.

**Lead official**

The lead official is Mark Palmer of HM Revenue and Customs (HMRC).
‘Mobilising together on the Government’s plans for plastics’

Mark Palmer

His Majesty’s Revenue and Customs (HMRC)
Plastic Packaging Tax and a Mass Balance Approach
19 July 2023
Objectives of the tax

- Provide an economic incentive to use recycled plastic in packaging
- Increase demand for recycled plastic
- Stimulate recycling and collection of plastic waste
- Divert plastic from going to landfill or incineration
The Story So Far

- Visible that the tax is already having an impact
- Increase use of recycled plastic in packaging as well as substitution towards other materials
- Anecdotal evidence of greater investment in recycling technologies
- PPT raised over £260m in 2022-23
- Committed to evaluation of the tax

(statistics are provisional figures still subject to quality and validation checks by HMRC)
The next step – why MBA?

• Tax must keep pace with technology

• Important to encourage recycling of all plastics

• Ongoing close working relationship with the industry

• Essential to balance integrity of the tax and environmental objectives with encouraging innovation and investment
MBA consultation: Key areas covered

• The case for a MBA
• Integrity of the tax and public perception
• Controls and standards
  • Mass balance models
  • Allocation methods
  • Certification requirements
• Impact on business and beyond
Ongoing engagement with stakeholders
Thank you

• HM Revenue & Customs
• Mark Palmer
• Indirecttaxdesign.team@hmrc.gov.uk
‘Mobilising together on the Government’s plans for plastics’

Linda Crichton MBE

Department of Environment, Food and Rural Affairs (DEFRA)
Mobilising together on the Government's plans for plastics

INCPEN Conference

Linda Crichton
19 July 2023
Why is change necessary?

- Our use of resources, including plastic, is unsustainable.
- The arising waste can cause environmental damage if not managed properly.
- Almost 13m tons of plastic enter the ocean each year (set to triple by 2040 compared to 2016).
- Need to move from our traditional economic model to a more sustainable circular economy keeping materials in use for longer.
- Government has a role in developing policy measures, clearly communicating the reasons for these measures as well as what these policies mean.
- We all have a role in achieving the change we want to see happen.
1. Government's plans for plastic collections

• Resources & Waste Strategy 2018 provides the policy framework

• Environment Act 2021 introduces new requirements for all local authorities in England to arrange for a core set of materials to be collected for recycling from all households: paper and card; plastic; glass; metal; food waste and garden waste.

• Environment Act 2021 also introduces requirement for all businesses, schools and hospitals in England to make arrangements to recycle the same set of recyclable materials (with the exception of garden waste).

• 2021 consistency consultation set out proposals for materials to be collected in each recyclable waste stream. For plastics this included...
  • Plastic bottles; plastic pots, tubs, trays; food and drink cartons
  • Plastic films & flexible packaging
2. Clarity on collections timelines; in-scope plastics

• Government response to the 2021 consultation on EPR (March 2022), set out that plastic film packaging is to be collected for recycling by end March 2027 – from households and businesses.

• Further details on consistent collections, including specific materials in scope of each recyclable stream, will be set out in the Government response to the 2021 recycling consistency consultation, (published soon).

• Introducing new single use plastic bans from October 2023.
3. Government policy support for mechanical and chemical recycling

- Where mechanical recycling is impractical or uneconomic, chemical recycling offers a potential complementary route for plastic recycling.
- May enable more complex plastics (films, multilaminate, contaminated) to be recycled and could enable recycled content to be used in food grade applications.
- We continue to consider how chemical recycling could play a role in ensuring more of our plastic waste is recycled domestically to meet our ambition of a 65% recycling rate by 2035.
- We must be satisfied that chemical recycling will not divert materials that could otherwise be mechanically recycled.
- WRAP recently published an updated plastic waste hierarchy that references chemical recycling and its potential for offering a complementary recycling route to mechanical recycling for certain plastics.
- Defra supports the proposals for HMRC to consult on the application of the mass balance approach.
4. Where does DEFRA want plastics recycling to be by March 2027?

• All businesses and households to have a recycling collection of all recyclable plastic packaging – with household services funded through packaging EPR fees.

• Implementation of DRS - increase in PET drinks bottle recycling and less littering.

• Binary labelling adopted on all primary and shipment packaging - Recycle or Do Not Recycle

• Plastics recycling contributing to higher Municipal Solid Waste (MSW) recycling rates and higher plastic packaging recycling rates.

• Our ‘Waste Infrastructure Roadmap’ (published soon), will set out anticipated waste arisings to 2035, reflecting the Collection and Packaging Reforms, and will be a tool to support investment in UK reprocessing.
Thank you
‘Mobilising together on the Government’s plans for plastics’

Panel Q&A

HMRC and DEFRA

‘Mobilising together on the Government’s plans for plastics’

Sebastian Munden, Chair
Waste & Resources Action Programme (WRAP)
‘Mobilising together on the Government’s plans for plastics’

Stuart Foster
RECOUP
Reliable data & performance reporting on plastics

July 2023

Stuart Foster, Chief Executive Officer
Commitments

RECOUP is the UK’s leading independent authority and trusted voice on plastics resource efficiency and recycling. As a registered charity, our work is supported by members who share our commitments including:

- More sustainable use of plastics
- Increased plastics recycling
- Improved environmental performance
- Meeting legislative requirements

Leading, Advising, Challenging, Educating
# 2022 UK Plastic Packaging Recycling Rates

## Recycling Rates
- **51%**: UK Plastic Packaging Recycling Rate
- **1,154kt**: Plastic Recycled
- **2,264kt**: Plastic Placed on the Market

### Sources
- Valpak Packflow Covid-19 Phase 2 report (Figure 103), RECOUP
- UK Household Plastic Packaging Survey 2022 and Environment Agency

<table>
<thead>
<tr>
<th>Year</th>
<th>Recycled (kt)</th>
<th>Placed on the Market (kt)</th>
<th>Recycling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>640</td>
<td>2550</td>
<td>25.1%</td>
</tr>
<tr>
<td>2013</td>
<td>710</td>
<td>2260</td>
<td>31.4%</td>
</tr>
<tr>
<td>2014</td>
<td>842</td>
<td>2220</td>
<td>37.9%</td>
</tr>
<tr>
<td>2015</td>
<td>891</td>
<td>2260</td>
<td>39.4%</td>
</tr>
<tr>
<td>2016</td>
<td>1015</td>
<td>2260</td>
<td>44.9%</td>
</tr>
<tr>
<td>2017</td>
<td>1044</td>
<td>2260</td>
<td>46.2%</td>
</tr>
<tr>
<td>2018</td>
<td>1034</td>
<td>2260</td>
<td>45.8%</td>
</tr>
<tr>
<td>2019</td>
<td>1141</td>
<td>2290</td>
<td>49.8%</td>
</tr>
<tr>
<td>2020</td>
<td>1175</td>
<td>2092</td>
<td>56.2%</td>
</tr>
<tr>
<td>2021</td>
<td>1112</td>
<td>2174</td>
<td>51.1%</td>
</tr>
<tr>
<td>2022</td>
<td>1154</td>
<td>2264</td>
<td>51.0%</td>
</tr>
</tbody>
</table>

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2022 UK Plastic Packaging Recycling Data

Plastic Packaging Recycling in the UK Over Time

Source: Environment Agency
### Average Plastic PRN Prices 2006 - 2022

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>£30m</td>
<td>£21m</td>
<td>£47m</td>
<td>£59m</td>
<td>£254m</td>
<td>£149m</td>
<td>£65m</td>
<td>£228m</td>
</tr>
</tbody>
</table>

**Average PRN Price (per tonne)**

- 2015: £36
- 2016: £31
- 2017: £48
- 2018: £68
- 2019: £264
- 2020: £150
- 2021: £84
- 2022: £228

**Pie Chart**

- Infrastructure and capacity: 30%
- Reduction in price and developing new markets: 27%
- Costs of complying with the regulations: 7%
- Retained for future investment: 2%
- Developing communication strategies: 1%

**Source:** LetsRecycle and Environment Agency
Placed on the market data - household

1,439,000 tonnes of household plastic packaging placed on the market in the UK

641,000 tonnes Plastic Bottles

457,000 tonnes Plastic Pots, Tubs & Trays

341,000 tonnes Plastic Films & Flexibles

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Plastic Collection Services

2021 UK Local Authority Provision for Kerbside Plastic Recycling

- **Bottles**: 100% (Since 2020)
  - +1% vs 2020

- **Pots, Tubs & Trays**: 88%
  - down less than 1% vs 2020

- **Film**: 13%

- **Collect recyclables**
  - 70% fortnightly
  - 20% weekly
  - 9% 3-or-4 weekly

54% of Local Authorities collect recycling with at least one material type or format

47% Source Separated

75% of Local Authorities collect dry mixed recycling

65% said ‘reducing contamination’ was the main focus of the campaign

65% of Local Authorities are planning a communication campaign this year

Wheel Bin Colours

- 33% Blue
- 25% Mixed
- 20% Green
- 8% Brown
- 7% Grey
- Other

The UK’s collection rate for natural HDPE drinks bottles, primarily used as milk bottles, is estimated to be around 78%

PET drinks bottles, which are more commonly used for both ‘On-the-Go’ and large drinks bottles, are slightly lower, but still is estimated to be around 75%

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### Sorting & Reprocessing Infrastructure

#### Material Recovery Facilities (MRF)
- **123 Facilities**
- **900kt - 1.1mt Annual Throughput**
- **1.7mt - 2.1mt Annual Capacity**

#### UK Plastic Reprocessors
- **Household**
  - 16 Facilities
  - 455kt Annual Capacity
  - 288kt Annual Throughput

- **Commercial & Industrial**
  - 78 Facilities
  - 515kt Annual Capacity
  - 347kt Annual Throughput

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PET - Recycled prices pressured by virgin and imports
2030 Roadmap

Plastic recycling tonnage
from 2006 to 2020 and predicted tonnage for 2030

Landfill tonnage
from 2006 to 2020 and predicted tonnage for 2030

Non-mechanical recycling tonnage
from 2006 to 2020

Energy recovery tonnage
from 2006 to 2020 and predicted tonnage for 2030

Source: 2006 - 2030 - PlasticEurope/Convertio; 2021 - 2030 - BPF
Chemical Recycling

- Chemical recycling has the potential to make a **significant contribution** to the UK’s recycling infrastructure.
- Chemical recycling should not be seen as a ‘silver bullet’
- Developed as part of **closed-loop** recycling models.
- **Mass Balance** should be considered appropriate methods of certification.
- UK policy, including the Plastic Packaging Tax and Food Contact regulations needs to accommodate chemical recycling as part of future infrastructure planning.

- Scenario developments
- Refining definitions and preferred approaches
Evidence & Data

- 2023 UK Household Plastic Packaging Collection Survey
- 2023 Ocean and Rivers Plastics Collection Programs Guide
- 2023 UK Plastics Collection at Household Waste Recycling Centres (HWRC)
- Sorting & Reprocessing Infrastructure
- Recycled Content Verification Systems
- Quality Standard for Recycled Plastics
- Pledge2recycle – best practice for consumer communications
- Design for Recycling and Re-usability by Design

- Open 3P phase 2 - Improve the quality and availability of plastic and all packaging data for everyone in the packaging value chain
- FPF Flexcollect - understand how to incorporate flexibles into existing collection services
- Plastic Litter Composition and Pathways – at scale assessment and method development for plastic litter pathways data.
RECOUP Conference 2023 – Save the Date
Thursday 28 September 2023
Thank you

www.recoup.org
‘Mobilising together on the Government’s plans for plastics’

Helen Jordan
British Plastics Federation

‘Be Prepared’

‘Guides are ready to deal with anything that might come their way.’
Ethylene to polyethylene

https://www.bbc.co.uk/bitesize/topics/zgvbkqt/articles/zt6t6rd
About the British Plastic Federation

- **30+** Dedicated staff
- **500+ members**
- **100** Around member meetings every year
- **18** Membership groups
- **90 years** The leading voice of the UK plastics industry
- **#1** The world's first plastics association
- **80%** Representation of UK plastics industry by turnover
- **6** Central expert committees
Chemical Recycling Information Hub

Chemical recycling (also known as advanced recycling) is a process that breaks down plastic waste and converts it into its chemical components, thereby enabling it to be used to make new plastic products. This is in contrast to traditional mechanical recycling, which involves physically turning plastic products into smaller pieces, shredding them, and then melting the plastic.
Chemical Recycling Information Hub

‘Chemical Recycling’ (also known as ‘advanced recycling’) is a process that breaks down plastic waste and converts it into its chemical components, therefore enabling it to be used to make new plastic products. This is in contrast to traditional ‘mechanical recycling’ which involves physically turning plastics products into smaller pieces, shredding them and then melting the plastics.

Gain a full explanation of chemical recycling in our briefing document. Click here to download for free.
Chemical recycling is complementary to mechanical recycling

Chemical
The polymer chain is intentionally broken down

Mechanical
The polymer is made ready for filtration and the chains are chemically unchanged

Dissolution
Hybrid process between Mechanical and Solvolysis

Solvent based
e.g. Purecycle, Creasolv, Vinyloop

Solvolysis
Targeting condensation polymers (PET, PC, PA – Solvent splits polymer chain often into starting monomers

Hydrolysis

Glycolysis

Methanolysis

Pyrolysis

Gasification

HydroThermal Treatment

Thermal
Targeting addition polymers (PE, PP, PS)
Chemical Recycling Information Hub

'Chemical Recycling' (also known as 'advanced recycling') is a process that breaks down plastic waste and converts it into its chemical components therefore enabling it to be used to make new plastic products. This is in contrast to traditional 'mechanical recycling' which involves physically turning plastics products into smaller pieces, shredding them and then melting the plastics.

[Diagram of various recycling processes]
Chemical Recycling / Non-mechanical capacity

There are a number of companies who are currently developing chemical recycling or other non-mechanical recycling processes within the UK. These are at different stages of being developed - laboratory scale, pilot plant or commercial plant.

UK chemical / non-mechanical capacity

The 2021 BPF Recycling Roadmap mapped out the facilities which were planned or in development in the UK.

Contact ICIS for more details on the Recycling Supply Trackers:
www.bpf.co.uk/hub
Chemical Recycling Information Hub

‘Chemical Recycling’ (also known as ‘advanced recycling’) is a process that breaks down plastic waste and converts it into its chemical components therefore enabling it to be used to make new plastic products. This is in contrast to traditional ‘mechanical recycling’ which involved physically turning plastics products into smaller pieces, shredding them and then melting the plastics.
Life Cycle Analysis & Third Party Reports on Chemical Recycling

Chemical recycling: reduced GHG emissions and fossil resource depletion

Authors: None

Chemical recycling provides a reduction in GHG emissions of at least 50% (2023) and 60% (2030). The study also demonstrates that fossil resource depletion, i.e. fossil resource use, is reduced by at least 75% and 140% respectively when waste plastic is chemically recycled instead of incinerated.

Published: April 2023

Read Highlights Online

How much can chemical recycling contribute to plastic waste recycling in Europe? An assessment using material flow analysis modeling

Authors: Jordano Sastre Llorente, Mervi Jokinen, Dario Curo, Diana Curo, Tanja K. Albrecht, Jorge Cristobal, Steven De Meester, Marinus Kremer, Kim Rigby, Kevin M. van Geem, Jo Dewispelaere

- Results of this study show that the implementation of chemical and solvent-based recycling technologies bring positive impacts towards the end-of-life recycling rate in plastic-to-plastic and plastic-to-chemicals recycling from chemical recycling will increase the rate up to 80% (with mechanical recycling alone the rate would be 40% in 2030)
- Chemical recycling becomes complementary (and not competitive) to improved mechanical recycling. In this scenario, plastic-to-plastic rate
- For policy makers, the approach (i.e., mass balance model) and findings of this paper can also be used to support proposals of realistically achievable recycled content targets and support which recycling technologies can play which roles in achieving the targets.

Published: 26 February 2023 (Ressources, Consoutration & Recycling, Elsevier, ScienceDirect.com)

Download

Hydothermal Treatment of Waste Plastics: An Environmental Impact Study

Authors: Kiankak Manufacturing Group (Matthew C. Doremena, Stuart R. Coles)

- The results show HTT with a Global Warming Potential (GWP) of 479 kg CO2 eq. per tonne can generate up to 80% reduction in climate change impacts when compared with comparable end-of-life treatment technologies whilst conserving material with the system.
- The GWP could be reduced by up to 57% by changing how electricity is generated for on-site consumption.

Published: 25th Feb 2023 (Journal of Polymers and the Environment)

Download
Chemical Recycling Information Hub

'Chemical Recycling' (also known as 'advanced recycling') is a process that breaks down plastic waste and converts it into its chemical components, therefore enabling it to be used to make new plastic products. This is in contrast to traditional 'mechanical recycling' which involved physically turning plastics products into smaller pieces, shredding them and then melting the plastics.
Mass Balance

Mass balance is a specific Chain of Custody model.

What is Chain of Custody?
Chain of custody is the process by which inputs and outputs and associated information are transferred, monitored and controlled as they move through each step in the relevant supply chain (CST 279/2020/Chaine of Custody - General terminology and models accessed 08/09/2020).

What is Mass balance?
Mass balance is a Chain of Custody model where material or products with a set of specific characteristics (in this case extruded from a chemically recycled source) are mixed according to defined criteria with material or products without that set of characteristics in a continuous operating production. The recycled feedstock is then attributed to a selected product using mass balance.

With a mass balance model, the incoming raw material must balance the outgoing material within the mass balance period.

The diagram below explains this further.

Application of Mass Balance to Chemical Recycling

Why is mass balance so important?
Chemical recycling processes break down plastic into oils and gases which can be fed into a petrochemical plant as recycled content; there are different types of chemical / non-chemical recycling which take the material back to different stages in the process (as illustrated). Petrochemical plants are large industrial operations dealing with thousands of tonnes of material. They are complex operations and, therefore, it is not possible to physically trace the exact product the chemically recycled material has gone into. It is instead a continuous operating production process. Assessing an overall split across all products produced would mean the amounts per product would be too minimal there would not be an incentive to invest in technology to utilise the feedstock and benefit the product. Allowing the recycled content to be allocated to a product or a group of products provides that incentive as companies can meet their sustainability targets or requirements, for example, under the plastic packaging tax. Companies therefore want to invest further in chemical recycling so there is more material available to be allocated.

Lack of acceptance of mass balance in the UK is preventing companies from investing in facilities here as the incentive to invest is not there.

Where else is mass balance used?
- Petrol
- Diesel
- Timber (ESC)
- Wood
- Polyamide
- Rainforest Alliance

Types of mass balance allocation
There are different mass balance approaches available:
- Pool allocation
- Fuel exempt
- Polymer only

F(payload) allocation allows the chemically recycled input material to be allocated except any losses in the system.

Fuel exempt means you can only allocate the percentage of the input material which does not go towards fuel and losses in the system also have to be removed.

Polymer only will only allow you to allocate the percentage of the input material which goes for polymer production.
Briefing papers

Chemical Recycling

This Briefing Paper Will Cover:
- What is chemical recycling?
- What benefits does chemical recycling deliver?
- How will chemical recycling reduce carbon emissions?
- What is the current capacity in the UK?
- What is the current barrier to the growth of chemical recycling in the UK?

Find out more on chemical recycling, www.bpf.co.uk/hub/home

“Industry believes chemical recycling is the missing link necessary to achieve a truly circular economy”

Chemical Recycling

Summary

This Briefing Paper Will Cover:
- What is chemical recycling?
- What benefits does chemical recycling deliver?
- How will chemical recycling reduce carbon emissions?
- What is the current capacity in the UK?
- What is the current barrier to the growth of chemical recycling in the UK?

Find out more on chemical recycling, www.bpf.co.uk/hub/home
Dear Minister

Letter from Plastics Industry Stakeholders to Ministers, Shadow Ministers and Select Committee Chairs

We refer to the recent announcement of an upcoming consultation on mass balance tax and are calling for the consultation on this to be released immediately, and for mass balance accounting to be included as an allowable allocation method within the Plastic Packaging Tax as soon as possible. Permitting this will support the growth of the chemical recycling industry in the UK as it will drive investment into recycling infrastructure and further enable a circular economy for plastics. The benefit this will offer is the opportunity to process plastic waste (both food and non-food derived) that is difficult to recycle into high-quality, high-value recycle. In addition, it will provide permanent jobs within the recycling industry, as well as additional jobs during the infrastructure development and construction phases, and for the UK recycling and food recycling supply chain.

The UK has the opportunity to be a leader in chemical recycling with research and innovation taking place here. However, to realise the benefits of this we encourage immediate investment, the right framework needs to be in place. Unfortunately, many companies are developing commercial plants elsewhere in Europe despite research taking place in the UK.

It should be noted that chemical recycling is a complementary technology to mechanical recycling. It is designed to help increase the range of plastics that are currently recyclable and drive-up recycling rates, rather than diverting material away from mechanical recycling facilities. Moreover, the Tax’s environmental impact assessment states a clear rationale to divert unrecyclable plastics away from landfill or incineration, with significant potential carbon emissions savings that contributes towards UK’s Net Zero targets. Chemical recycling is key to enabling the low carbon transition, decarbonising waste, energy and chemicals sectors. Significant recycling opportunities exist to make low-carbon, single-use plastics recyclable back for future plastic packaging.

The whole plastic supply chain is keen to see a significant increase in the amount of plastic that is recycled and the extent to which recycled plastic is used, as this will reduce the UK’s reliance on exporting materials for recycling. To achieve this investment is needed in both mechanical and chemical recycling facilities. Currently, the failure to accept mass balance methodology is harming investment in chemical recycling technologies and facilities and is hampering the UK achieving its potential as a principal recycling nation, which the UK industry is keen to see.

Chemical recycling allows the use of plastic waste, especially food waste, not suitable for mechanical recycling, to be made into the feedstock for petrochemical plants and in turn monomers that can be used to produce new virgin quality plastics. It can deliver additional high-quality material for a large number of applications, such as certain types of contaminant-sensitive packaging, e.g., for pharmaceuticals, food and cosmetics, medical devices, or certain automotive components and construction products that require high-quality recycled plastics for safety, regulatory and performance reasons.

Yours sincerely,

Philip K. Law
Director-General
British Plastics Federation
plaw@bpf.co.uk
07768 125290

14th June
7 MPs attended
Speeches from Unilever, Dow and BPF

Outputs:
- PQs tabled
- Industry Minister Response – ‘I would be pleased to meet representatives of the chemical recycling industry in the future’.
- Exchequer Secretary to the Treasury responded - ‘To signal support for the developing chemical recycling sector’.
- In short list for a Westminster Hall Debate
Chemical Recycling and Non-Mechanical Technologies Working Group

- WG from the BPF Recycling Group
- Scope: To monitor, advice and advocate on chemical and non-mechanical recycling technologies within the UK.

Mass balance taskforce

- Across BPF group to run for the duration of the consultation
- Initial discussion on mass balance allocation models, certification and credit transfer
19th October 2023

CHEMICAL RECYCLING 2023

SECURE YOUR TICKET

Online half-day event. Previous editions have had delegates from over 20 countries!

www.chemicalrecycling2023.com
Chemical Recycling Information Hub

www.bpf.co.uk/hub

hjordan@bpf.co.uk
Mobilising together on the Government’s plans for plastics

Helen Bird

WRAP

Facilitating & Enabling Change

Helen Bird
Head of Material Systems, WRAP

WRAP
2021 DATA

**TARGET 1**
84% reduction in problematic and unnecessary plastic packaging since 2018

**TARGET 2**
70% of plastic packaging is recyclable - up from 66% in 2018

**TARGET 3**
50% of plastic packaging is recycled - up from 44% in 2018

**TARGET 4**
22% average recycled content, up from 8.5% in 2018
Meet Hazel...

Age: 11
Likes: animals, spaghetti
Dislikes: plastic that hurts animals, olives

What needs to be done?...
69% would buy loose if available
77% believe supermarkets should be doing more

*Everyday Plastics*
Will the crisp bags of today still be washing ashore in 60 years' time?
Plastic bags/wrapping collections are coming!

- Front of store is a start
- Facilitate demand for UK infrastructure
- Kerbside essential
- By end of 2027

But collections does not = recycling

- Infrastructure – sorting & reprocessing
- End market challenge
- Non-mechanical (chemical) recycling essential
- Plastics Tax reform – Non-mechanical & ensure PCR is competitive
Thank you
‘Mobilising together on the Government’s plans for plastics’

Panel Q&A
RECOUP, BPF and WRAP

‘Mobilising together on the Government’s plans for plastics’

Lunch in the Marble Hall

Back in seats please by 1.30pm
‘Mobilising together on the Government’s plans for plastics’

Chair, Geoff Mackey

Plastics Europe
‘Mobilising together on the Government’s plans for plastics’

Nick Cliffe
Smart & Sustainable Plastics Packaging (SSPP)
UK Research and Innovation (UKRI)

Innovating through the UK *Smart Sustainable Plastics Packaging Programme*

Nick Cliffe  
Deputy Challenge Director
Smart Sustainable Plastics Packaging Challenge Fund

Aim:
To establish the UK as a leading innovator in smart and sustainable plastic packaging for consumer products, delivering cleaner growth across the supply chain, with a dramatic reduction in plastic waste entering the environment by 2025

Objectives:
• To deliver R&I in support of the UK Plastic Pact targets
• To unlock significant overall increase in R&I spend (Govt and Industry)
• To increase UK Plastics packaging supply chain collaboration
£60M investment
£149M co-investment target
> £200M current co-investment
Key Themes

▪ Chemical recycling
▪ Non-bottle PET recycling
▪ Refill (incl. prefill and reuse)
▪ Solutions for film & flexibles
▪ Food-grade polyolephins

First-of-a-kind Demonstrators
Chemical Recycling

Renew ELP: 20ktpa Chemical Recycling Plant
Chemical Recycling

- Full spectrum of projects, from new approaches through enabling technology to full-scale Demonstration
  - “a challenging environment for new plant development”
- Securing feedstocks
- Recognition for the Plastic Packaging Tax
- Addressing stakeholder concerns
Film & Flexibles

impact recycling

UK Research and Innovation
Film & Flexibles

- Wide range of projects and innovation in this format:
  - Improving the recyclability of multi-material
  - Improving the performance of mono-material
  - Alternate materials

- Collection and consumer engagement

- On-going work (with CEFLEX) on recyclability

- Food-grade recycling

- Mechanical or Chemical – competition?
Looking forward

Chemical Recycling
▪ Mass Balance
▪ (more) LCA
▪ “Investability” and scaling
▪ International (India & beyond)
▪ Other feedstocks (PET?)

Film & Flexibles
▪ Demonstration plant
▪ Collection trial outcomes …
▪ Household engagement
▪ Alternate materials

SSPP ends in March 2025
Find out more

Nick Cliffe
nick.cliffe@iuk.ukri.org

www.ukcpn.co.uk
‘Mobilising together on the Government’s plans for plastics’

John Case

Dow
Creating confidence in chemical recycling.
Creating certainty in market demands for recycled plastics

John Case – President, Dow UK & Ireland
Our sustainability plan

PROTECT THE CLIMATE
By 2030, Dow will PROTECT THE CLIMATE by reducing its net annual carbon emissions by 5 million metric tons compared to its 2020 baseline (15% reduction). By 2050, Dow intends to be carbon neutral (scopes 1 + 2 + 3 plus product benefits).

TRANSFORM THE WASTE
By 2030, plastic waste and other forms of alternative feedstock to commercialize 3 million metric tons of circular and renewable solutions annually.

*Dow expects the waste required to produce this target to surpass and replace its original 1 million metric ton Stop the Waste goal.

CLOSE THE LOOP
By 2035, Dow will CLOSE THE LOOP by enabling 100% of Dow products sold into packaging applications to be reusable or recyclable.
How we’re going about it – collaborating with others

Plastic sustainability

Design for recyclability
A commercial reality

Mechanical recycling
Transforming the value chain

Advanced recycling
Picking up the pace

Bio-based
Diversifying and expanding

Carbon
The key driver

Design for Reducing / Reusing
Confidence in chemical recycling

Photo courtesy and proprietary of Mura Technology taken June 28th in Teesside, Wilton.
Confidence in the supply chain – let's work together

Extensive and unique capabilities enable Dow to solve unmet needs across the entire packaging ecosystem.
Government policy change can make a positive difference

Circularity
Climate protection
We ALL have a role to play

Creating More Sustainable Solutions Together

Technology and Innovation

Partnerships and Collaboration

Governance and Policy Engagement
THANK YOU
‘Mobilising together on the Government’s plans for plastics’

Robbie Staniforth
Ecosurety

The Flexible Plastic Fund FlexCollect Project

Robbie Staniforth, Innovation & Policy Director, Ecosurety

19th July 2023
Agenda

• Introducing the Flexible Plastic Fund
• Overview of the FPF FlexCollect Project
• Where are we now?
• Experience & learnings to date
• What’s next?
Flexible Plastic Fund & FPF FlexCollect Project
An innovative and collaborative fund giving value to flexible plastics so they are properly recycled

Established in 2021 and supported by:
Flexible Plastic Fund activities

Household collections
~£3M FPF FlexCollect kerbside collection & recycling pilots

Retail collections
£1M+ fund incentivising retail collections & recycling
More challenging polymer types attract a bigger incentive

£1M fund incentivising retail collections & recycling

Payments made ONLY when material is tracked and output certified

Participating retailers collect material

Washing Cleaning Sorting

Reprocessing

Recycled product

£1M fund incentivising retail collections & recycling
FPF FlexCollect aim:

To understand how to recycle post-consumer flexible plastic at scale from householders

How?

Via kerbside collection pilots with local authorities between 2022-25

Why?

To show it can be done and share insights with stakeholders

To inform Defra policy on the implementation of packaging EPR and consistent collections reform
FlexCollect project partnership

Funded by:

Funding managed by:

With in-kind support from:

Project delivery managed by: in partnership with local authorities and

Other engagement with:
Wider stakeholder involvement
Data and research gathering

Includes:

✓ Operational data to understand performance
✓ Waste compositional data to understand collected material
✓ Doorstep research to understand consumer attitudes and behaviours
✓ End market research with recyclers
✓ Trials of new processes and technology
FPF FlexCollect – Where are we now?
FPF FlexCollect local authority pilots

- 2022: Oct 2022
- 2023:
  - Jan 2023
  - May & June 2023
- 2024:
  - +4 in 2023/24
- 2025:
  - March 2025

In development...
FPF FlexCollect – Experience & learnings
Performance, Participation and Satisfaction

Residents like the service – pleased to have it!
Participation is generally high and contamination low
Good communications, printed bags and effective distribution are key to high performance
Early learnings

Coloured, printed bags are a useful tool

• Easily identifiable, good quality bags engage residents and aid collections, processing and data collection

Integration into existing infrastructure is more cost effective

• High volume/low weight necessitates compaction alongside other materials

• Romaquips have capacity for material with other plastics and cans
End market research & trials

Research undertaken into potential end markets

Trials being arranged:

• Assessments of chemical & mechanical recycling potential
• Mechanical recycling trials
• Sortation trials
• Chemical recycling trials (likely 2024)
What’s next?

Four more pilots expected to start in 2023
Pioneer pilots starting to plan expansions
Operational data gathering ongoing
Pace of end market research & trials accelerates
Interim report planned for November 2023

This valuable research will help shape the plastics collections programme, and provide confidence that can be deliverable nationwide.
Thank you

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Short comfort break
Back in seats please by 2.45pm

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Panel Chair, Margaret Bates, OPRL

Timothee Duret, Veolia
Jon Hastings, East London Waste Authority
Sokhna Gueye, Nestlé

Geoff Brighty, Mura Technology
Libby Peake, Green Alliance

Summary and ‘thank you’
‘Mobilising together on the Government’s plans for plastics’

Refreshments available until 4pm
Remember all your belongings including in Cloak Room

Ali, Paldeep and Paul wish you all smooth journeys home!