

PackUK: Packaging Extended Producer Responsibility (pEPR) Producer Disposal Fees Modulation Statement

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In setting up the Extended Producer Responsibility for packaging (pEPR) scheme (referred in this document as “the scheme”), the Producer Responsibility Obligations (Packaging and Packaging Waste) Regulations 2024 (referred in this document as “the Regulations”) require the Scheme Administrator PackUK to publish a statement of policy on household packaging waste disposal fee modulation as soon as is practicable after its establishment.

This modulation policy statement sets out the approach PackUK will take to varying pEPR household packaging waste disposal fees to reflect the extent to which household packaging supplied by a producer in a packaging category is environmentally sustainable and to incentivise producers to use packaging that is more environmentally sustainable.

Under this policy statement, recyclability - according to the [Recyclability Assessment Methodology \(RAM\) v1.1](#) will be the measure of environmental sustainability, in line with regulation 64(7)(c) of the Regulations. The most recent version of the RAM will be used at the point when each year’s invoices are generated.

Modulation will commence from year 2 of the scheme with the first modulated fees applying to disposal fee calculations for the 2026 to 2027 financial year (calculated using data relating to packaging supplied in 2025).

A revised policy statement will be published to cover years after 2028 to 2029 following a review of the modulation policy in line with paragraph 8(7)(b) of Schedule 7 to the Regulations. In the meanwhile, we will continue to monitor the impacts of the modulation policy, engage with industry to consider available evidence and clarify any emerging issues.

The modulation of household packaging waste disposal fees will not increase the total of all household packaging waste disposal fees paid. Instead, it will affect how these costs are allocated by material.

Modulation strategy

PackUK will follow 2 initial principles for modulation to underpin this modulation policy which will be monitored to determine the impacts of modulation.

- drive a shift to more environmentally sustainable packaging design, with recyclability as the indicator
- reduce the risk of switching to less environmentally sustainable materials

Recyclability is only the first modulation factor. PackUK will consider further indicators of environmental sustainability, as described in regulation 64(7) of the Regulations for subsequent modulation policy statements from 2029 to 2030.

Modulation

The modulation policy contained within this statement should be read together with the base fees which PackUK will publish as they become available. Base fees for 2025 are published on GOV.UK and in future years will be published with modulated fees following the submission of packaging data by obligated producers.

Modulation applies to the household packaging waste disposal fee which is a significant component of base fees. Only once the household packaging waste disposal fee has been calculated can the modulated fees be calculated.

Under the RAM, all in-scope packaging materials are assigned a rating of Red, Amber, or Green, with Red being the least recyclable and Green being the most recyclable. The environmental regulators will ensure that these self-reported ratings are accurate.

From 2026, the base fee provided for each material will be calculated using a household packaging waste tonnage fee and be reflective of an Amber rating. The price per tonne will be higher than this for packaging assigned the Red rating and lower for packaging assigned the Green rating.

How modulation is performed

When calculating disposal fees, modulation will be implemented by multiplying the household packaging waste disposal fee element by the modulation factor. This statement sets out the modulation factor for each of the 3 years that the statement covers and it is anticipated that subsequent statements will have similar approach.

Multiplication of the household packaging waste disposal fee by the modulation factor for RAM Red-rated packaging material will result in an increase in that fee.

The additional funds raised by the application of the modulation factor to the household packaging waste disposal fee for each tonne of RAM Red-rated packaging material will form a pot of money for redistribution. This redistribution pot will be used to apply a lower household packaging waste disposal fee for RAM Green-rated packaging material. Each tonne of Green material (across all material categories) will receive an equal percentage discount on its household packaging waste disposal fee. This approach has been chosen to reduce the risk of switching to less environmentally sustainable materials

Amber-rated material will see no change in its household packaging waste disposal fee as a result of modulation.

The modulation factor

For each assessment year covered by this statement, the modulation factor for Red RAM packaging materials will be as described in Table 1.

Table 1: Modulation factors per year

Assessment Year	Factor
2026 to 2027	1.2
2027 to 2028	1.6
2028 to 2029	2.0

The modulation factor has been designed to increase incrementally over the initial period, giving an immediate reward to packaging which is already RAM Green, while also offering a fair and reasonable transition for producers of RAM Red packaging who struggle to move to more environmentally sustainable packaging immediately.

These modulation factors have been chosen following careful consideration of the policy objective, and discussions with the value chain.

The objective of modulation is to drive improvements in the design and composition of packaging, aligning with PackUK's duty under paragraph 2(c) of schedule 7 to the Regulations¹. PackUK will continue to adjust the modulation factor if doing so serves that objective, whilst taking into consideration the relevant implications of doing so. A decision on future modulation factors will be taken as part of the first review point of the fee modulation policy which will take place no later than 2028.

The modulation factors specified in this statement will be applied when calculating household packaging waste disposal fees each year. Household packaging waste disposal fees can be calculated only once all data has been reported by obligated producers. Once household packaging waste disposal fees have been calculated, PackUK will publish a table of final modulated fees, and this will coincide with the issuing of invoices to obligated large producers. Medical packaging

¹ Under paragraph 2(c) of Schedule 7, PackUK, in exercising its functions, must act in accordance with the principle of the need to (1) incentivise the use of environmentally sustainable packaging; (2) the prevention of packaging becoming waste, (3) an increase in reuse of packaging and in the quantity and quality of packaging materials recycled, and (iv) a reduction in the disposal of packaging waste.

PackUK recognises that medical packaging occupies a special place in the packaging landscape and is subject to a different approach to regulation to other types of packaging.

Consistent with Regulation 64(10) of the Regulations, PackUK has taken account of the legislation which applies to medical packaging, and which affects the ability of producers to use more environmentally sustainable packaging. Additionally, PackUK recognises that some medical packaging is recyclable and for that reason medical packaging is not exempt from fee modulation.

Medical packaging will however be treated differently to other packaging. Medical packaging must be assessed under the RAM, and medical packaging which is assessed to be Green or Amber will be subject to those fees in the same way as other types of packaging. Where medical packaging is assessed to be Red and the producer determines that the packaging is Red by virtue of regulatory requirement, then it can be reported as Amber. Where medical packaging is assessed to be Red, but this is not a result of a regulatory requirement, it will be subject to modulation in the same way as other Red-rated packaging materials. Further details on how to report medical packaging data are set out in the reporting guidance.

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Next steps

PackUK will continue to gather evidence to support the modulation of the household packaging disposal fee and identify new measures which could form the basis of future iterations of fee modulation. A review of the impact and success of this modulation policy will be undertaken before the next policy statement is published.

We are also commissioning a research project to develop a more comprehensive assessment of environmental sustainability. This is needed to extend pEPR fee modulation to include a wider range of environmental sustainability criteria in the most objective and evidence-based manner. This project will help pEPR incentivise better packaging and reduce harms to the wider environment in the UK from packaging waste.

The calculation for the modulation of RAM Green-rated household packaging waste disposal fees starts by calculating the size of additional revenue generated by the modulation factor applied to RAM Red-rated packaging materials. This additional revenue is then divided by the amount of Green tonnage multiplied by its respective disposal fee.

This calculates the available fee discount which can be applied to all RAM Green-rated household packaging waste disposal fees, while maintaining the total value of disposal fees paid across all packaging equal to that before modulation.

This calculated discount is then applied to a RAM Green-rated household packaging waste disposal fee for a certain material category by multiplying its respective disposal by 1 minus the calculated discount:

$$Green_Disposal_Fee_i = Disposal_Fee_i \left[1 - \frac{Total\ Premium\ Charged\ to\ Red\ Across\ All\ Materials}{Sum\ of\ (Green\ tonnage\ on\ market \cdot disposal\ fee\ for\ each\ respective\ material)} \right]$$

Formally, this equation can be written as follows:

$$Green_Disposal_Fee_i = Disposal_Fee_i \left[1 - \frac{\sum_{i=1}^n (Disposal_Fee_i \cdot Red_PS_i \cdot (RedMod - 1))}{\sum_{i=1}^n (Green_PS_i \cdot Disposal_Fee_i)} \right]$$

Where 'i' is the series of the 8 material categories :

- Red_PS is the quantity, in tonnes, of RAM Red-rated materials supplied in the market
- Green_PS is the quantity, in tonnes, of RAM Green-rated materials supplied in the market
- RedMod is the modulation factor applied to RAM Red-rated packaging material fees (1.2, 1.6, 2 times disposal fee, increasing over the 3 years)
- Disposal_Fee is the disposal fee for each material category
- Green_Disposal_Fee is the RAM Green-rated disposal fee category charged per tonne, with a different fee charged for each material category

Illustrative Simplified Example

To simplify, there are only 3 material categories on the market. 1,000 tonnes of rigid plastics on the market, 2,000 tonnes of paper and 3,000 tonnes of glass.

The RAM breakdown of these categories is the following:

- Rigid Plastic: 60% Green, 30% Amber, 10% Red (600 tonnes of Green, 300 tonnes of Amber, 100 tonnes of Red)
- Paper: 50% Green, 30% Amber, 20% Red (1000 tonnes of Green, 600 tonnes of Amber, 400 tonnes of Red)
- Glass: 70% Green, 20% Amber, 10% Red (2100 tonnes of Green, 600 tonnes of Amber, 300 tonnes of Red)

The disposal fees for these categories are the following:

- Rigid Plastic: £423
- Paper: £196
- Glass: £192

The Red Modulation Factor is 2 times the disposal fee.

The rigid plastic green disposal fee would be calculated as follows:

$$\begin{aligned} Green_Disposal_Fee_{rigid_plastic} &= 423 \left[1 - \frac{(423100 \text{ tonnes} \cdot (2 - 1)) + (196 \cdot 400 \text{ tonnes} \cdot (2 - 1)) + (192 \cdot 300 \text{ tonnes} \cdot (2 - 1))}{423 \cdot 600 \text{ tonnes} + 196 \cdot 1000 \text{ tonnes} + 192 \cdot 2100 \text{ tonnes}} \right] \\ &= 423 \left[1 - \frac{178,300}{853,000} \right] = 423 \cdot [0.7909730] = £334.58 \end{aligned}$$

The discount for green RAM-rated packaging for **all material categories** is
 $1 \text{ minus } 0.7909730 = 20.903\%$

This would be applied to **all green RAM-rated packaging, across all material categories**.

Because the value of the redistribution pot is dependent on the quantity of RAM Red-rated packaging material supplied, and the share of it is dependent on the quantity of RAM Green-rated packaging material supplied, the final modulated fees can only be published once all data has been submitted for a given reporting year.

The approach to modulation being taken by PackUK operates across all material categories, providing consistent incentives for producers to switch to more recyclable packaging.