



# Calculating Recycling Obligations

The Producer Responsibility Obligations (Packaging and Packaging Waste) Regulations 2024

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## Introduction

This document sets out the application of the methodology required to calculate and collate the recycling obligations for producers under the Producer Responsibility Obligations (Packaging and Packaging Waste) Regulations 2024 (the 2024 regulations).

The recycling obligations methodology is set out in Schedule 5 ([Appendix 1](#)) and Schedule 15 ([Appendix 2](#)) of the 2024 regulations. To calculate recycling obligations, there are four key elements that must be considered, these being:

- The material specific recycling obligation calculation (Schedule 5, para 2(1))
- The glass re-melt recycling obligation calculation (Schedule 5, para 2(2))
- The scaling up of packaging data (Schedule 15, para 5)
- The adjustments for transitional packaging (Schedule 15, para 6)

This document will explain the Environment Agency's interpretation of how recycling obligations must be calculated in the 2025 relevant year, for the following scenarios:

- Direct registrant (Not part of a group registration and no transitional packaging)
- Direct registrant (Not part of a group registration with transitional packaging)
- Direct registrant (Part of a group registration and no transitional packaging)
- Direct registrant (Part of a group registration with transitional packaging)

For the purposes of this paper, we have explained how to calculate recycling obligations for each large producer. For group registrations (of large producers), each entity within the group is a large producer and the obligations must be calculated separately and added together to form the holding company's obligation.

It is important to note that throughout this document, references to 'scaling up data' will be calculated by Report Packaging Data (RPD). Direct registrants must not scale up data outside of the digital service, as this will lead to duplication. We have provided the calculation for information only, to enable producers to replicate the calculation.

## Direct registrant (Not part of a group registration and no transitional packaging)

To calculate the recycling obligations:

- 1) If the large producer submitted, you must scale up (extrapolate) the data. This is required for all large producers that reported H1 2024 data under the following submission period codes:

- 2024-P2 ((individual packaging weight /91) x 182)
- 2024-P3 ((individual packaging weight/61) x 182)

The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded to the nearest kilogram using the standard rules of rounding.

- 2) Combine the packaging (POM) datasets for the large producer covering the H1 and H2 2024 periods.

Please note that a 'dataset' includes any data – for example a producer may only have submitted a dataset with SMOW in it but that should still be counted.

- 3) Filter out all 'Packaging types' except for the following:

1. HH - household packaging
2. NH – Non-household packaging
3. PB – Commonly ends up in public bins
4. HDC – Households drinks containers
5. NHC – Non-household drinks containers

- 4) The total weight of packaging per material must be added together to provide a weight in kilograms for each specific material. This weight must be rounded up or down to the nearest tonne in accordance with Schedule 5, paragraph 2(3). This will provide the value 'X' for the formula in Schedule 5, paragraph 2(1).

- 5) The formula for calculating a recycling obligation is  $X \times Y = Z$ . For each material type multiply the value in tonnes ('X') by the relevant recycling target for that material ('Y'). Doing this will provide you with 'Z'.

- 6) The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if Z equals 11.2 tonnes, it must be rounded to 12 tonnes.
- 7) Once you have the recycling obligation for each material type, you must determine the glass re-melt recycling obligation (only applies to producers that supplied glass packaging). The formula for calculating the glass re-melt obligation can be found in Schedule 5, paragraph 2(2) ( $T(L \times Y) = G$ ).

The value for L represents the amount of glass packaging supplied by the producer, as determined in step 4 (above). Both Y and T can be found in Schedule 5, paragraphs 3 and 4, respectively.

When performing the calculation, it is likely that the output will result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if G equals 5.2 tonnes, it must be rounded to 6 tonnes.

- 8) You must then determine the 'glass other' recycling obligation. To calculate this, you must subtract the value of 'G' (glass remelt recycling obligation) from the value of 'Z'.

## Direct registrant (Not part of a group registration with transitional packaging)

To calculate the recycling obligations:

- 1) If the large producer submitted partial data, you must scale up (extrapolate) the data. This is required for all large producers that reported H1 2024 data under the following submission period codes:
  - 2024-P2 ((individual packaging weight /91) x 182)
  - 2024-P3 ((individual packaging weight/61) x 182)

The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded to the nearest kilogram using the standard rules of rounding.

Note: transitional packaging represents a full year and must not be subject to any scaling.

- 2) Combine the packaging (PoM) datasets for the large producer covering the H1 and H2 2024 periods
- 3) Filter out all 'Packaging types' except for the following:
  1. HH - household packaging
  2. NH – Non-household packaging
  3. PB – Commonly ends up in public bins
  4. HDC – Households drinks containers
  5. NHC – Non-household drinks containers
- 4) The total weight of packaging per material (except 'other') must be added together to provide a weight in kilograms for each specific material.
- 5) In accordance with Schedule 15, paragraph 6(6) you must subtract the value of 'transitional packaging' from the value obtained from step 4 for each of the relevant packaging materials.

- 6) Round the weight per material up or down to the nearest tonne in accordance with Schedule 5, paragraph 2(3). This will provide the value 'X' for the formula in Schedule 5, paragraph 2(1).
- 7) The formula for calculating a recycling obligation is  $X \times Y = Z$ . For each material type multiply the value in tonnes ('X') by the relevant recycling target for that material ('Y'). Doing this will provide you with 'Z'.
- 8) The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if Z equals 11.2 tonnes, it must be rounded to 12 tonnes.
- 9) Once you have the recycling obligation for each material type, you must determine the glass re-melt recycling obligation (only applies to producers that supplied glass packaging). The formula for calculating the glass re-melt obligation can be found in Schedule 5, paragraph 2(2) ( $T(L \times Y) = G$ ).

The value for L represents the amount of glass packaging supplied by the producer, as determined in step 6 (above). This value will therefore factor in any transitional glass packaging. Both Y and T can be found in Schedule 5, paragraphs 3 and 4, respectively.

When performing the calculation, it is likely that the output will result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if G equals 5.2 tonnes, it must be rounded to 6 tonnes.

- 10) You must then determine the 'glass other' recycling obligation. To calculate this, you must subtract the value of 'G' (glass remelt recycling obligation) from the value of 'Z'.

## Direct registrant (Part of a group registration and no transitional packaging)

To calculate the recycling obligations:

- 1) If the large producer submitted partial data, you must scale up (extrapolate) the data. This is required for all large producers that reported H1 2024 data under the following submission period codes:
  - 2024-P2 ((individual packaging weight /91) x 182)
  - 2024-P3 ((individual packaging weight/61) x 182)

The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded to the nearest kilogram using the standard rules of rounding.

- 2) Combine the packaging (POM) datasets for the large producer covering the H1 and H2 2024 periods.
- 3) Filter out all 'Packaging types' except for the following:
  1. HH - household packaging
  2. NH – Non-household packaging
  3. PB – Commonly ends up in public bins
  4. HDC – Households drinks containers
  5. NHC – Non-household drinks containers
- 4) The total weight of packaging per material (except 'other') must be added together to provide a weight in kilograms for each specific material. This weight must be rounded up or down to the nearest tonne in accordance with Schedule 5, paragraph 2(3). This will provide the value 'X' for the formula in Schedule 5, paragraph 2(1).
- 5) The formula for calculating a recycling obligation is  $X \times Y = Z$ . For each material type multiply the value in tonnes ('X') by the relevant recycling target for that material ('Y'). Doing this will provide you with 'Z'.
- 6) The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if Z equals 11.2 tonnes, it must be rounded to 12 tonnes.



- 7) Once you have the recycling obligation for each material type, you must determine the glass re-melt recycling obligation (only applies to producers that supplied glass packaging). The formula for calculating the glass re-melt obligation can be found in Schedule 5, paragraph 2(2) ( $T(L \times Y) = G$ ).

The value for L represents the amount of glass packaging supplied by the producer, as determined in step 4 (above). Both Y and T can be found in Schedule 5, paragraphs 3 and 4, respectively.

When performing the calculation, it is likely that the output will result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if G equals 5.2 tonnes, it must be rounded to 6 tonnes.

- 8) You must then determine the 'glass other' recycling obligation. To calculate this, you must subtract the value of 'G' (glass remelt recycling obligation) from the value of 'Z'.
- 9) To determine the recycling obligation of the holding company, you must combine the material specific recycling obligations of each of the subsidiaries with that of the holding company. This includes 'glass other' and 'glass remelt'.

## Direct registrant (Part of a group registration with transitional packaging)

To calculate the recycling obligations:

- 1) If the large producer submitted partial data, you must scale up (extrapolate) the data. This is required for all large producers that reported H1 2024 data under the following submission period codes:
  - 2024-P2 ((individual packaging weight /91) x 182)
  - 2024-P3 ((individual packaging weight/61) x 182)

The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded to the nearest kilogram using the standard rules of rounding.

Note: transitional packaging represents a full year and must not be subject to any scaling.

- 2) Combine the packaging (PoM) datasets for the large producer covering the H1 and H2 2024 periods.
- 3) Filter out all 'Packaging types' except for the following:
  1. HH - household packaging
  2. NH – Non-household packaging
  3. PB – Commonly ends up in public bins
  4. HDC – Households drinks containers
  5. NHC – Non-household drinks containers
- 4) The total weight of packaging per material (except 'other') must be added together to provide a weight in kilograms for each specific material.
- 5) In accordance with Schedule 15, paragraph 6(6) you must subtract the value of 'transitional packaging' from the value obtained from step 4 for each of the relevant packaging materials.
- 6) Round the weight per material up or down to the nearest tonne in accordance with Schedule 5, paragraph 2(3). This will provide the value 'X' for the formula in Schedule 5, paragraph 2(1).

- 7) The formula for calculating a recycling obligation is  $X \times Y = Z$ . For each material type multiply the value in tonnes ('X') by the relevant recycling target for that material ('Y'). Doing this will provide you with 'Z'.
- 8) The above calculation will sometimes result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if Z equals 11.2 tonnes, it must be rounded to 12 tonnes.
- 9) Once you have the recycling obligation for each material type, you must determine the glass re-melt recycling obligation (only applies to producers that supplied glass packaging). The formula for calculating the glass re-melt obligation can be found in Schedule 5, paragraph 2(2) ( $T(L \times Y) = G$ ).

The value for L represents the amount of glass packaging supplied by the producer, as determined in step 6 (above). This value will therefore factor in any transitional glass packaging. Both Y and T can be found in Schedule 5, paragraphs 3 and 4, respectively.

When performing the calculation, it is likely that the output will result in a decimal value. Where this occurs, the value must be rounded up to the next whole tonne. For instance, if G equals 5.2 tonnes, it must be rounded to 6 tonnes.

- 10) You must then determine the 'glass other' recycling obligation. To calculate this, you must subtract the value of 'G' (glass remelt recycling obligation) from the value of 'Z'.
- 11) To determine the recycling obligation of the holding company, you must combine the material specific recycling obligations of each of the subsidiaries with that of the holding company. This includes 'glass other' and 'glass remelt'.

# Appendix 1 – Schedule 5

## SCHEDULE 1

Regulation 40

### Recycling obligations

1.—(1) A producer's obligations to recycle packaging waste in a relevant year are—

- (a) for each packaging category the producer supplies, to recycle an amount of packaging waste in the corresponding packaging waste category ("the required amount"), as provided in paragraph 2(1); and
- (b) in relation to glass, to satisfy part of the required amount by recycling an amount of glass packaging waste by re-melt, as provided in paragraph 2(2),

and are calculated by aggregating the producer's obligations in relation to each specified packaging category supplied by the producer in that year.

(2) For the purposes of this Schedule—

- (a) "packaging waste category" means a category of packaging waste specified in the first column of Table 1 in paragraph 3; and
- (b) "specified packaging category" means a packaging category or group of packaging categories corresponding to a packaging waste category.

2.—(1) The amount of packaging waste to be recycled by a producer ("PR") in a packaging waste category corresponding to a packaging category which PR supplies is calculated as follows—

$$X \times Y = Z$$

where—

"X" is the amount in tonnes of packaging in that packaging category supplied by PR in the preceding year;

"Y" is the percentage prescribed in paragraph 3 as the recycling target for that packaging waste category for the relevant year; and

"Z" is the amount in tonnes of packaging waste in that packaging waste category which is to be recycled in the relevant year.

(2) Where in the preceding year PR has supplied any glass packaging, PR must recycle by re-melt an amount of glass packaging waste calculated as follows—

$$T(L \times Y) = G$$

where—

"T" is the percentage target prescribed in paragraph 4 for the relevant year;

"L" is the amount in tonnes of glass packaging supplied by PR in the preceding year;

"Y" is the percentage prescribed in paragraph 3 as the recycling target for glass for the relevant year; and

"G" is the amount in tonnes of glass packaging waste which is to be recycled by re-melt in the relevant year.

(3) For the purposes of calculating X in sub-paragraph (1) and L in sub-paragraph (2), the amount of packaging in a packaging category, or glass packaging, supplied by PR is the amount supplied by PR in the United Kingdom in respect of which PR is a producer under any of regulations 16 to 21, calculated to the nearest tonne, excluding packaging which is exempt packaging either at the time of its supply or in the relevant year.

3. The following percentages are prescribed as the recycling target “Y” in respect of the category of packaging waste specified in the first column in relation to the years 2025 to 2030 as indicated—

**Table 1**

<i>Category of packaging waste</i>	<i>2025</i>	<i>2026</i>	<i>2027</i>	<i>2028</i>	<i>2029</i>	<i>2030</i>
Plastic	55%	57%	59%	61%	63%	65%
Wood	45%	46%	47%	48%	49%	50%
Aluminium	61%	62%	63%	64%	65%	67%
Steel	80%	81%	82%	83%	84%	85%
Paper, board or fibre-based composite material	75%	77%	79%	81%	83%	85%
Glass	74%	76%	78%	80%	82%	85%

4. The following percentage targets are prescribed as the recycling targets “T” for glass packaging waste to be achieved by re-melt for the years 2025 to 2030 as indicated.

**Table 2**

<i>2025</i>	<i>2026</i>	<i>2027</i>	<i>2028</i>	<i>2029</i>	<i>2030</i>
75%	76%	77%	78%	79%	80%

5. Where the appropriate agency is satisfied that a producer has instituted a system of using reusable packaging which has a life of at least four years, the producer’s obligations under this Schedule in relation to that packaging may be discharged by equal instalments over four years commencing with the year in which that packaging is first used.

6. For the purposes of this Schedule, recycling “by re-melt” means the recycling of waste glass packaging using a method that melts the glass before it is re-formed into a product.

## Appendix 2 – Schedule 15

### SCHEDULE 2

Regulation 137

#### Transitional, transitory and saving provisions

##### **Producers: scaling up of data reported for part of a reporting period**

5.—(1) This paragraph applies—

- (a) in relation to a reporting period commencing on 1st January 2024, where a producer has reported relevant data to the appropriate agency for only part of that reporting period—
  - (i) under the 2023 Data Regulations or under paragraph 2(1) of this Schedule, by virtue of—
    - (aa) regulation 2(2) of the Packaging Waste (Data Reporting) (England) (Amendment) Regulations 2024 or the Packaging Waste (Data Reporting) (No. 2) (Amendment) Regulations (Northern Ireland) 2024;
    - (bb) regulation 3(2) of the Packaging Waste (Data Collection and Reporting) (Wales) (Amendment) Regulations 2024; or
    - (cc) regulation 18(2) of the Packaging Waste (Data Reporting) (Scotland) (Amendment) Regulations 2024; or
  - (ii) under paragraph 2(4) or (5) of this Schedule, by virtue of paragraph 2(6) and (7); and
- (b) in relation to a reporting period commencing on 1st January 2025, where a producer has reported relevant data to the appropriate agency for only part of that reporting period, by virtue of paragraph 3 of this Schedule.

(2) Where this paragraph applies, the appropriate agency must, in relation to each description of relevant data reported by the producer, calculate an adjusted amount (“the scaled-up amount”) in accordance with the formula—

$$A \times \frac{C}{B}$$

where—

“A” means the amount in tonnes or kilograms, as applicable, reported by the producer;

“B” means the number of days in the reporting period for which the producer has reported that amount;

“C” means the number of days in the whole reporting period.

(3) The scaled-up amounts calculated under sub-paragraph (2) are to be used—

- (a) if the producer has recycling obligations, for the purpose of calculating those obligations under Schedule 5;
- (b) if the producer is a liable producer under Part 5, for the purpose of calculating the disposal fee and administration fee payable by the producer under that Part.

(4) In this paragraph, “relevant data” means an amount of packaging, household packaging or packaging waste, or of a description of packaging, household packaging or packaging waste, which a producer was or is required to report to the appropriate agency—

(a) in relation to a reporting period in 2024, under—

- (i) regulation 17 of, and Schedule 1 to, the Packaging Waste (Data Reporting) (England) Regulations 2023, the Packaging Waste (Data Collection and Reporting) (Wales) Regulations 2023 or the Packaging Waste (Data Reporting) (Scotland) Regulations 2023;

- (ii) regulation 18 of, and Schedule 1 to, the Packaging Waste (Data Reporting) (No. 2) Regulations (Northern Ireland) 2023; or
- (iii) paragraph 2 of this Schedule;
- (b) in relation to a reporting period in 2025, under regulation 35 or 36 of, and Schedule 4 to, these Regulations.

### **Producers: transitional packaging**

6.—(1) Where a report submitted by a large producer (“PR”) under regulation 35 in relation to a period ending on 31st December 2024 (a “regulation 35 report”) includes information about transitional packaging, PR may choose to submit a report to the appropriate agency containing the information in sub-paragraph (2).

(2) The information in this sub-paragraph is the proportion of transitional packaging in each packaging category which a producer has been required to recycle under the 2007 Regulations or the 2007 (NI) Regulations (“P”), calculated as follows—

$$P = AP \times SP$$

where—

“AP” is the amount in kilograms of transitional packaging which has previously been taken into account to calculate the recycling obligations of a producer under the 2007 Regulations or the 2007 (NI) Regulations;

“SP” is the sum of the percentages of that packaging which any class of producer has been required to recycle under the 2007 Regulations or the 2007 (NI) Regulations, as set out in paragraph 4 of Schedule 2 to those Regulations.

(3) In sub-paragraphs (1) and (2), “transitional packaging” means packaging about which PR has reported information in a regulation 35 report, which has already been the subject of recycling obligations under regulation 4(4)(b) of, and Schedule 2 to, the 2007 Regulations or the 2007 (NI) Regulations.

(4) If PR submits a report under sub-paragraph (1), it must be submitted—

- (a) in accordance with regulation 39(2); and
- (b) on the date on which PR submits a regulation 35 report for the period referred to in sub-paragraph (1).

(5) Where PR has submitted a report under sub-paragraph (1) in relation to transitional packaging in a packaging category, paragraph 2(1) of Schedule 5 applies with the modification in sub-paragraph (6) for the purposes of calculating PR’s recycling obligation in relation to that packaging category.

(6) The modification is that, in calculating the value of X for the packaging category for the purposes of the formula in paragraph 2(1) of Schedule 5, there shall be excluded from the amount of the transitional packaging in that packaging category which PR supplied in the reporting period a proportion of that amount equal to the value of P for that packaging category as calculated in accordance with sub-paragraph (2).