



Brussels, **XXX**  
[...] (2025) **XXX** draft

## COMMISSION DELEGATED DECISION

of **XXX**

**supplementing Directive 2008/98/EC of the European Parliament and of the Council with regard to rules for the calculation and verification of the weight of materials or substances which are removed after a sorting operation and which are not subsequently recycled, based on average loss rates for sorted waste**

*This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.*

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## **EXPLANATORY MEMORANDUM**

### **1. CONTEXT OF THE DELEGATED ACT**

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste<sup>1</sup>, hereafter “the Waste Framework Directive”), as amended by Directive 2018/851/EU<sup>2</sup>, establishes targets for the preparation for re-use and recycling of municipal waste to be achieved by 2025, 2030 and 2035, respectively.

This Directive requires that only the input to the recycling operation shall be taken into account for the purposes of calculating the recycling targets for municipal waste and that, as a rule, the actual measurement of the amount of the waste has to be done at the point of the input to the recycling operation.

By way of derogation, in accordance with Article 11a(3) of the Waste Framework Directive, Member States can also calculate the recycling targets by measuring the output of sorting operations. If Member States use this derogation, they have to ensure that certain safeguards are met, namely that further losses due to preliminary treatment before the specific waste material enters the recycling operation are deducted. Average loss rates for sorted waste is one of the options Member States may use to calculate further losses in order to establish the amount of waste reported as recycled.

This Commission Delegated Decision supplements Directive 2008/98/EC by establishing uniform rules for the calculation, verification and reporting of the weight of materials or substances which are removed after a sorting operation and which are not subsequently recycled based on average loss rates for sorted waste as required under Article 11a(10) of the Waste Framework Directive.

Regulation (EU) 2025/40 of the European Parliament and of the Council of 19 December 2024 on packaging and packaging waste<sup>3</sup>, applies the same rules for the calculation of the rates of the recycling targets for packaging waste with Directive 2018/852/EU<sup>4</sup>, and, in particular, Article 6a paragraph 3 makes reference to this Delegated Decision.

This Decision represents a derogation from the established rules and it is meant to be used only when data on losses from the recycling operators close to the calculation point are not reliable. In situations when reliable data cannot be obtained from the recycling operators in whose facilities the waste reached the calculation point, data on losses per waste stream shall be obtained from a representative sample of sorting facilities producing sorted waste between the calculation point and the measurement point, as defined in Annex I to the Implementing Decision (EU) 2019/1004<sup>5</sup>. When Member States make use of this Decision, they have to sample sorting facilities and compile data on losses obtained directly by the sorting operators. The losses obtained from the sample will be valid for five years.

Costs to competent authorities can be related to the update of the reporting procedures and systems; in particular, one-off costs at the outset will be related to verifying losses from the waste management operators, and to adjusting the existing reporting systems as appropriate. Further costs are related to the annual reporting obligation. However, such costs are part of

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<sup>1</sup> OJ L 312, 22.11.2008, p. 3.

<sup>2</sup> OJ L 150, 14.6.2018, p. 100–140.

<sup>3</sup> OJ L 365 31.12.1994, p. 10.

<sup>4</sup> OJ L 150 14.6.2018, p.141-154.

<sup>5</sup> (EU) 2019/1004, [https://eur-lex.europa.eu/eli/dec\\_impl/2019/1004/oj/eng](https://eur-lex.europa.eu/eli/dec_impl/2019/1004/oj/eng)

the typical annual reporting obligations of each Member State to the Commission, and thus are expected to be marginal.

The costs for the businesses, i.e. waste management operators, will be related to estimating the losses per waste stream through sampling bales of sorted waste. Assuming that in the EU there are currently at least 1,000 operating sorting facilities of municipal solid waste, and that the costs for sampling and compiling losses could be approximately at least EUR 3 000 per plant (depending on the size of the plant, the number of the waste streams are processed, etc.), the total costs to businesses would oscillate around EUR 3 000 000.

In the 2022 reporting period, ten Member States made use of the derogation laid down in Article 11a(3) of the Waste Framework Directive, and thus based the calculation of their recycling rates on average loss rates. In this context, and assuming the same number of sorting plants in each Member State, the costs to businesses (waste management operators) would be eventually reduced to appx. EUR 1 110 000. These costs are one-off, and every five years the waste management operators should perform random checks of the bales of sorted waste to verify that the compiled losses remain accurate and representative.

## **2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT**

The Commission carried out targeted stakeholder consultations with the packaging and recycling sector as part of a dedicated study<sup>6</sup> during the development stage of this act as well as in the preparatory phase for the first draft of the Decision conducted in 2019.

The Commission discussed the draft Delegated Decision with the Member States in meetings of the expert group on waste in 2018, 2019, 2020 and 2024.

## **3. LEGAL ELEMENTS OF THE DELEGATED ACT**

In accordance with Article 11a(10) of the Directive 2008/98/EC on waste, the Commission is empowered to establish rules for the calculation, verification and reporting of the weight of materials or substances which are removed after a sorting operation and which are not subsequently recycled based on average loss rates for sorted waste.

Articles 1 refers to the definitions of Implementing Decision 2019/1004 that are applicable to the act. Article 2 specifies the rules for the calculation and application of average loss rates. Article 3 specifies the requirements on data collection for the purpose of calculating and verifying average loss rates, and Article 4 refers to contact points. Article 5 identifies Member States as addressees of the Decision.

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<sup>6</sup> <https://op.europa.eu/en/publication-detail/-/publication/3d72ef00-bcac-11e9-9d01-01aa75ed71a1>

## COMMISSION DELEGATED DECISION

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives<sup>7</sup>, and in particular Article 11a(10) thereof,

Whereas:

- (1) Article 11a(3) of Directive 2008/98/EC requires Member States to establish an effective system of quality control and traceability of municipal waste to ensure that the conditions for the calculation and measurement of the municipal waste recycled are met. The weight of the municipal waste recycled is, as a general rule, to be measured when the waste enters the recycling operation. However, the weight of municipal waste recycled may instead be measured at the output of any sorting operation, provided that the output waste is subsequently recycled and that the weight of materials and substances which are removed after a sorting operation by other preliminary treatment and which are not subsequently recycled is not included in the weight of waste reported as recycled. Member States may use average loss rates ('ALRs') for sorted waste within the system of quality control and traceability of municipal waste as a method to determine the amount of those materials and substances.
- (2) This situation can occur where sorted waste undergoes a series of further sorting or other preliminary treatment operations in several waste treatment facilities whereby fractions of the sorted waste are separated or mixed with other types of waste, with waste from other sources, or with waste from other countries before reaching the calculation point. When Member States use ALRs, they should verify national-based average loss rates from a sample of sorting facilities in situations when reliable data cannot be obtained from the waste operators in whose facilities the waste reached the calculation point.
- (3) ALRs for sorted waste should account for targeted and non-targeted materials and substances that are removed from sorted waste and are not effectively recycled at the calculation point. Losses should include all losses of targeted and non-targeted materials by the recycling facility between the measurement point and up to the

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<sup>7</sup> OJ L 312 22.11.2008, p. 3, ELI: <http://data.europa.eu/eli/dir/2008/98/oj>.

calculation point, including losses relating to preliminary operations which take place in the recycling facility upstream of the calculation point.

- (4) Losses represent materials in sorted waste that cannot be effectively recycled in recycling processes and are neither sent to recycling operations nor prepared for reuse. ALRs are to be used only where reliable data on the amount of waste recycled cannot be obtained otherwise.
- (5) For the purposes of calculating the ALRs, data on losses per waste stream should be obtained from a representative sample of sorting facilities producing sorted waste between the calculation point and the measurement point. Data should be retrieved through sampled sorting facilities, either estimated from a compositional analysis or calculated by using mass balances. Mass balances should be used to deduce the amounts of recycled materials from the difference between the total amount of material entering the sorting facility and the amounts of non-targeted material removed before the calculation point.
- (6) In order to ensure the reliability and accuracy of the data and other information necessary for the proper calculation of ALRs, it is necessary to lay down requirements on the collection of data and their regular update for the purpose of verification. In order to reflect changes in waste composition and waste management practices, it is appropriate to set out the criteria for adjusting the established ALRs. In particular, it is essential to establish such uniform calculation and verification rules for plastic packaging, as the amount of non recycled plastic packaging has financial implications for the Union in that it is considered an own resource in the Union budget.
- (7) In order to promote high quality sorting and recycling and to enable the waste management operators and Member States that ship sorted waste for recycling to determine the applicable ALRs for their waste, it is necessary to lay down rules on the accessibility of such rates. It should be possible to calculate ALRs by surveying and compiling data from a representative sample of sorting plants,

HAS ADOPTED THIS DECISION:

#### *Article 1*

#### *Definitions*

For the purposes of this Decision, the definitions in Implementing Decision (EU) 2019/1004 shall apply.

The following definitions shall also apply:

- (1). 'sorted waste' means waste that has undergone any treatment before submission to the recycling facility resulting in the materials contained in that waste being classified into different waste fractions;
- (2). 'average loss rates for sorted waste' means 100 percent minus an estimation of the ratio, expressed as percentage, between the amount of material recycled at the calculation point as referred to in Annex I to Implementing Decision (EU) 2019/1004, and the amount of sorted waste shipped to or entering waste treatment facilities;

- (3). 'mass balance' means a method to estimate amounts of materials based on the fact that, under a steady material flow, the sum of material input to a waste treatment facility equals the sum of material output, accounting for material losses, moisture losses and changes in storages;
- (4). 'sorting facilities' means sorting operations that produce sorted waste before that waste is submitted to recycling facilities, including those carried out at the recycling facilities;
- (5). 'waste operator' means an entity that operates sorting facilities.

## *Article 2*

### *Calculation and application of average loss rates*

1. ALRs shall be calculated for sorted waste per material compatible at least with the list of materials set out in Annex I.
2. The amount of the losses for each waste material shall be calculated as the amount of targeted and non-targeted materials and substances that are removed from the waste collected and are not effectively recycled at the calculation point.
3. When Member make use of ALRs to calculate their recycling rates they shall follow the sequence of steps set out in paragraphs 4 to 9.
4. For sorted waste to which ALRs are to be applied, information about qualitative and quantitative waste composition in terms of targeted materials and non-targeted materials and substances shall be retrieved by Member States. Member States shall ensure that information on ALRs per waste material is collected by surveying a representative sample of sorting facilities operating on their territories. Member States may complement the retrieved ALRs through surveys addressed to plant operators and surveys conducted by means of electronic registers and databases and through compositional analyses on the bales of sorted waste.
5. For plastic packaging waste, Member States shall ensure that the losses are linked to the preliminary operations which take place into the recycling facility upstream of the calculation point.
6. When different sorting processes apply to different fractions of the sorted waste, losses shall be calculated as a weighted average, using the share that each fraction represents in the sorted output that undergoes those processes. If reliable data on those shares is not available, mass balance estimates may be used.
7. Where average loss rates are calculated for a group of sorting facilities, the amount of the losses shall be calculated as a weighted average based on the proportions of the total amount of waste treated by each facility.
8. The calculated ALRs shall be updated at least as follows:
  - (a) for year 2030 and every five years thereafter;
  - (b) for other years, whenever there are reasons to expect significant changes in the amount of materials that are removed, in particular due to changes to the common practices in preliminary treatment or changes in the qualitative and quantitative composition of the waste to which average loss rates are applied.

Where necessary, the ALRs shall be adjusted based on the data collected in accordance with Article 3(2).

9. ALRs shall be calculated only by those Member States that opt to make use of the derogation set out in Article 11a(3) of Directive 2008/98/EC.

ALRs shall be retrieved and compiled from a representative sample of sorting plants for each waste stream operating on the territories of the Member States using average loss rates. The sorting plants to be included in the sample shall:

- (a) comply with technical specifications that determine the type and the composition of the sorted waste, in particular the maximum values for the amounts of non-targeted materials and other substances present in the sorted waste;
  - (b) have operated continuously for a period of at least two years at full scale;
  - (c) ensure a sample with representative coverage of the sorting activities taking place within the Member State, while ensuring that the sample is large enough to have a statistical error not higher than 5 %;
  - (d) receive for treatment waste streams falling within the scope of Directive 2008/98/EC.
10. Specific plants that demonstrate lower losses than the sampled ones for a specific waste stream may apply their own losses.

### *Article 3*

#### *Data collection for the purpose of calculating and verifying average loss rates*

1. For the purpose of the calculation of ALRs, data on the amount of losses shall be collected from the sampled plants.
2. The data referred to in paragraph 1 shall be gathered based on mass balances of the sampled sorting facilities, complemented by compositional analyses in bales of sorted waste. Available data from extended producer responsibility schemes defined in 2008/98/EC or other databases may also be used to compile the average loss rates.
3. Plant operators shall take appropriate measures to ensure that the data referred to in paragraph 1 are collected applying a representative sampling of individual batches of sorted waste per material with regard to targeted materials and non-targeted materials. When compiling the average loss rates, Member States shall consider the diversity of sorting qualities, recycling technologies, output grade and seasonal variations.
4. A sample of sorted waste at the output of sorting plants shall include, among others, batches shipped within the Union and, where relevant, exported to third countries and confirmed as recycled pursuant to Regulation (EU) 2024/1157.

### *Article 4*

*Contact points*

1. Member States who make use of the derogation set out in Article 11a(3) of Directive 2008/98/EC to calculate their recycling rates shall designate a contact point which shall be used for notifying ALRs to the Commission.
2. Member States shall inform the Commission of the contact point designated in accordance with paragraph 1 by 31 December 2027, and about any change thereof without delay.

*Article 5*

*Addressees*

This Decision is addressed to the Member States.

Done at Brussels,

*For the Commission  
The President  
Ursula von der Leyen*