

# Packaging EPR fee in EU: What are the differences?



Overview and comparison of PRO fees between January and June/July 2024.

## Content

<b>1</b>	<b>Introduction</b>	<b>6</b>
<b>2</b>	<b>Methodology</b>	<b>7</b>
	I. Calculation Method	7
	II. Changes in the calculation compared to 2023	8
	<i>i. Outlook</i>	8
<b>3</b>	<b>Fee indicators for 2024</b>	<b>9</b>
<b>4</b>	<b>Comparison of the July 2023 and January 2024 values</b>	<b>11</b>
<b>5</b>	<b>Accessibility and transparency of the data</b>	<b>13</b>
	I. Accessibility	15
	II. Transparency	16
<b>6</b>	<b>Conclusion</b>	<b>17</b>
<b>Annex</b>	<b>18</b>	
	I. Austria	18
	<i>i. Transparent PET Bottle</i>	18
	<i>ii. Aluminum Can</i>	18
	<i>iii. Cardboard Box</i>	18
	<i>iv. Transparent Glass Water Bottle</i>	18
	<i>v. Canned Tomatoes</i>	18
	<i>vi. Wooden Box</i>	19
	II. Belgium	20
	<i>i. Transparent PET Bottle</i>	20
	<i>ii. Aluminum Can</i>	20
	<i>iii. Cardboard Box</i>	20
	<i>iv. Transparent Glass Water Bottle</i>	20
	<i>v. Canned Tomatoes</i>	21
	<i>vi. Wooden Box</i>	21
	III. Bulgaria	22
	<i>i. Transparent PET Bottle</i>	22
	<i>ii. Aluminum Can</i>	22
	<i>iii. Cardboard Box</i>	22
	<i>iv. Transparent Glass Water Bottle</i>	22
	<i>v. Canned Tomatoes</i>	23
	<i>vi. Wooden Box</i>	23
	IV. Cyprus	24
	<i>i. Transparent PET Bottle</i>	24
	<i>ii. Aluminum Can</i>	24
	<i>iii. Cardboard Box</i>	24
	<i>iv. Transparent Glass Water Bottle</i>	24
	<i>v. Canned Tomatoes</i>	24

vi.	<i>Wooden Box</i>	25
V.	Czech Republic	26
i.	<i>Transparent PET Bottle</i>	26
ii.	<i>Aluminum Can</i>	26
iii.	<i>Cardboard Box</i>	26
iv.	<i>Transparent Glass Water Bottle</i>	26
v.	<i>Canned Tomatoes</i>	27
vi.	<i>Wooden Box</i>	27
VI.	Estonia	28
i.	<i>Transparent PET Bottle</i>	28
ii.	<i>Aluminum Can</i>	28
iii.	<i>Cardboard Box</i>	28
iv.	<i>Transparent Glass Water Bottle</i>	28
v.	<i>Canned Tomatoes</i>	29
vi.	<i>Wooden Box</i>	29
VII.	Finland	30
i.	<i>Transparent PET Bottle</i>	30
ii.	<i>Aluminum Can</i>	30
	<i>Cardboard Box</i>	30
iii.	<i>Transparent Glass Water Bottle</i>	30
iv.	<i>Canned Tomatoes</i>	31
v.	<i>Wooden Box</i>	31
VIII.	France	32
i.	<i>Transparent PET Bottle</i>	32
ii.	<i>Aluminum Can</i>	32
iii.	<i>Cardboard Box</i>	32
iv.	<i>Transparent Glass Water Bottle</i>	33
v.	<i>Canned Tomatoes</i>	33
vi.	<i>Wooden Box</i>	33
IX.	Germany	35
i.	<i>Transparent PET Bottle</i>	35
ii.	<i>Aluminum Can</i>	35
iii.	<i>Cardboard Box</i>	35
iv.	<i>Transparent Glass Water Bottle</i>	36
v.	<i>Canned Tomatoes</i>	36
vi.	<i>Wooden Box</i>	36
X.	Italy	38
i.	<i>Transparent PET Bottle</i>	38
ii.	<i>Aluminum Can</i>	38
iii.	<i>Cardboard Box</i>	38
iv.	<i>Transparent Glass Water Bottle</i>	39
v.	<i>Canned Tomatoes</i>	39

vi.	Wooden Box	39
XI.	Luxembourg	40
i.	Transparent PET Bottle	40
ii.	Aluminum Can	40
iii.	Cardboard Box	40
iv.	Transparent Glass Water Bottle	40
v.	Canned Tomatoes	41
vi.	Wooden Box	41
XII.	Netherlands	42
i.	Transparent PET Bottle	42
ii.	Aluminum Can	42
iii.	Cardboard Box	42
iv.	Transparent Glass Water Bottle	42
v.	Canned Tomatoes	42
vi.	Wooden Box	43
XIII.	Portugal	44
i.	Transparent PET Bottle	44
ii.	Aluminum Can	44
iii.	Cardboard Box	44
iv.	Transparent Glass Water Bottle	44
v.	Canned Tomatoes	44
vi.	Wooden Box	45
XIV.	Romania	46
i.	Transparent PET Bottle	46
ii.	Aluminum Can	46
iii.	Cardboard Box	46
iv.	Transparent Glass Water Bottle	46
v.	Canned Tomatoes	47
vi.	Wooden Box	47
XV.	Slovenia	48
i.	Transparent PET Bottle	48
ii.	Aluminum Can	48
iii.	Cardboard Box	48
iv.	Transparent Glass Water Bottle	48
v.	Canned Tomatoes	49
vi.	Wooden Box	49
XVI.	Spain	50
i.	Transparent PET Bottle	50
ii.	Aluminum Can	50
iii.	Cardboard Box	50
iv.	Transparent Glass Water Bottle	50
v.	Canned Tomatoes	51

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vi.	<i>Wooden Box</i>	51
XVII.	Sweden	52
i.	<i>Transparent PET Bottle</i>	52
ii.	<i>Aluminum Can</i>	52
iii.	<i>Cardboard Box</i>	52
iv.	<i>Transparent Glass Water Bottle</i>	52
v.	<i>Canned Tomatoes</i>	53
vi.	<i>Wooden Box</i>	53
XVIII.	UK	54
i.	<i>Transparent PET Bottle</i>	54
ii.	<i>Aluminum Can</i>	54
iii.	<i>Cardboard Box</i>	54
iv.	<i>Transparent Glass Water Bottle</i>	55
v.	<i>Canned Tomatoes</i>	55
vi.	<i>Wooden Box</i>	55

## 1 Introduction

In the European Union, packaging waste has surged by over 20% in the past decade.<sup>1</sup> This rise in waste poses significant environmental issues. Improperly disposed packaging can contaminate soil, waterways, and oceans, threatening wildlife and ecosystems, and emitting greenhouse gases as it decomposes.<sup>2</sup> The environmental impact extends beyond disposal, as packaging consumes a substantial portion of virgin materials: 40% of plastics and 50% of paper in the EU are used for packaging. Without intervention, packaging waste is projected to increase by another 19% by 2030, obstructing progress toward a low-carbon circular economy.<sup>3</sup>

Efforts to address this challenge began in 1994 with the Packaging and Packaging Waste Directive (PPWD). This pioneering directive introduced the concept of 'shared responsibility,' later evolving into 'extended producer responsibility' (EPR). In 2018, the EPR principle became the primary mechanism for ensuring that producers bear the financial and operational burden from creation to disposal, as outlined in Directive 2018/851.

A key turning point was the revision of Directive 2018/852/CE on packaging and packaging waste, requiring EU Member States to establish dedicated EPR schemes for packaging by 2025. These schemes, typically managed by producer responsibility organizations (PROs) funded by packaging producers and users, represent a collective effort to promote responsibility throughout the packaging lifecycle. In November 2022, the European Commission proposed further revisions to the PPWD, including targets for waste reduction and reuse in economic operations. The proposed updates also emphasize the importance of recycling-friendly design and harmonized labeling of packaging and waste bins to facilitate proper disposal.

Various EPR models for packaging have emerged across Europe, tailored to each country's socio-cultural, macro-economic, and organizational circumstances. Central to these models is the imposition of environmental contributions or fees, designed to cover all necessary activities (collection, sorting, recycling). These charges are linked to environmental factors and vary depending on the material.

This report analyzes fees for six packaging solutions across 18 countries to compare trends and identify patterns.

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<sup>1</sup> [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_7155](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7155)

<sup>2</sup> <https://climate.mit.edu/ask-mit/would-stopping-plastic-pollution-help-climate-change-how-do-we-do-it>

<sup>3</sup> [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_7155](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7155)

## 2 Methodology

### I. Calculation Method

First, the Main PRO representing the functionality of the respective national EPR system for packaging was identified for each country. In addition, six packaging solutions were pre-defined for which the corresponding fee indicator was calculated in each country. The packaging solutions are shown in Figure 1:



**Figure 1: Overview of the six packaging solutions**

For the calculation, the fee indicators of the individual materials were identified on the respective PRO website. The fee indicators were given by weight, so that the respective indicator was multiplied by the respective weight of the product for the calculation. In some countries, other fees and discounts were also added/subtracted. The detailed calculation for the six packaging solutions in the 18 countries for the months January and June/July 2024 can be found in the Annex. Finally, the aggregate fee indicator was calculated for each Main PRO by summing up all six fee values. All fee values are expressed in euro cents.

For the following countries, the calculation approach was slightly different:

- **Finland:** The company Rinki is only an intermediary between producers and PROs. In Finland exist two PROs for Packaging: Finnish Packaging Producers and Sumi Oy. Both PROs charge different fees. For this reason, the overall fee indicator for Finland/Rinki is calculated by using the average of the two PRO fees.
- **France:** The main PRO of France uses an articulated mechanism to calculate fees per material with detailed formulas. In this case, assumptions have been made about the inclusion of Bonus and Malus.
- **Germany:** a license calculator from the PRO website was used, as it allows to calculate the fee value according to each material's quantity put on the market.

- UK: an average estimated cost value per material was used, as the national system is dynamic and prices vary continuously in relation to the market's performance of raw materials and the recycling cost (the fee for material is replaced by Certificates attesting the recycling quantities -Packaging Recycling Notes, PRN - at the expense of each obliged entity). The most recent published values (week of 7<sup>th</sup> June 2024) were used.

For some countries (in particular those East-European), the fee's value declared in local currency has been converted into euro currency of the period considered at the exchange. For countries where a Deposit Recycling System for Recycling (DRS) is active, for the Main PRO the value of the fee was calculated with reference to packaging of equivalent in weight and materials.

## II. Changes in the calculation compared to January 2024

During the preparation of this report, no major changes in the calculation compared to January 2024 occurred. However, compared to the last report, this report finally includes values for wood for all countries, i. e. now includes values for wood also in Belgium, Germany and Luxembourg, which were missing in the previous reports.

### i. Outlook

- UK: In October 2025, additional EPR fees will come into force for large producers.<sup>4</sup> The current PRN fees are associated with recycling and go directly to reproducers or exporters accredited to issue PRNs. PRNs are determined by market forces. EPR fees will cover the net costs to local authorities of collecting and managing household packaging waste and will be fixed across a compliance year.

## III. Sources for the recycling rates

The recycling rates in chapter 5 are mainly based on the publication "Inspiring packaging recycling" by Expra.<sup>5</sup> However, the national recycling rates for 2021 were derived from the Eurostat database.<sup>6</sup> For some countries, the calculation or the source was slightly different

- Bulgaria: The recycling rate was determined by averaging all recycling rates for each material. This method may be inaccurate, as the proportion of each material in overall recycling may vary.
- Luxembourg + Slovenia: The recycling rate was calculated by dividing the amount of recycled material by the total amount put on the market.
- UK: The source for the recycling indicator was the Reconomy Sustainability Report 2023 by Valpak.<sup>7</sup>

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<sup>4</sup> <https://www.valpak.co.uk/epr-drs/epr-for-packaging/>

<sup>5</sup> [https://expira.eu/wp-content/uploads/2023/11/EXTERNAL\\_EXPRA-2023-Brochure-INTERNAL-copia.pdf](https://expira.eu/wp-content/uploads/2023/11/EXTERNAL_EXPRA-2023-Brochure-INTERNAL-copia.pdf)

<sup>6</sup> [https://ec.europa.eu/eurostat/databrowser/view/env\\_waspacr/default/table?lang=en&category=env.env\\_was.env\\_wasst](https://ec.europa.eu/eurostat/databrowser/view/env_waspacr/default/table?lang=en&category=env.env_was.env_wasst)

<sup>7</sup> <https://www.valpak.co.uk/wp-content/uploads/2024/06/Reconomy-Sustainability-Report-2023.pdf>



### 3 Fee indicators for June / July 2024

The following table shows all calculated fee indicators for June / July 2024. The indicators are all stated in euro cents and are presented in ascending order. They were determined according to the calculations in chapter 2. For countries where a Deposit Recycling System is active, the value of the fee was calculated with reference to packaging of equivalent in weight and materials.

Table 1: Overview of the fee indicators for 2024

Countries	Main PRO	PET bottle	Aluminum Can	Cardboard Box	Glass Bottle	Steel Can	Wooden Box	Aggregate Fee Indicator (cent)
Slovenia	SLOPAK	0,07	0,03	0,001	0,003	0,09	0,20	0,38
Italy	CONAI	0,18	0,02	1,44	0,72	0,02	0,56	2,95
Luxembourg	VALORLUX	0,79	0,03	1,00	0,97	0,08	1,16	4,03
Cyprus	GREEN DOT CYPRUS	0,42	0,03	0,99	1,33	0,40	0,94	4,12
Finland	RINKI	1,11	0,13	2,15	4,54	0,36	0,19	8,50
UK	VALPAK	0,71	0,32	0,11	7,19	0,17	0,43	8,93
Belgium	FOST PLUS	0,46	0,04	2,68	3,30	0,26	1,36 <sup>8</sup>	8,10
Spain	ECOEMBES	2,50	0,10	3,00	1,97	0,81	0,56	8,94
Romania	ECO-ROM	0,62	0,24	1,90	4,55	0,38	5,28	12,97
Bulgaria	ECOPACK	0,48	0,22	2,31	5,76	0,24	4,41	13,41
Netherlands	AFVALFONDS (SAV)	5,52	0,32	0,38	4,81	1,45	1,20	13,69
Estonia	ETO	1,82	0,43	2,49	5,20	1,19	3,52	14,65
Portugal	SPV	1,24	0,11	3,28	1,24	0,87	7,97	14,71
Austria	ARA	3,65	0,54	4,22	4,92	1,32	1,60	16,25
Germany	GRUNE PUNKT	3,84	1,54	4,37	3,14	3,92	4,64	21,45
France	CITEO	1,73	0,34	4,59	0,87	0,36	16,26	24,14
Czech Republic	EKO-COM	2,65	0,50	4,63	3,72	0,36	17,75	29,60
Sweden	NPA	4,41	1,52	11,26	8,22	7,99	0,36	33,76

In the table above the lowest and the highest fee values per packaging are highlighted in green and yellow respectively. Therefore, the results indicate that the fee values are:

- Lower in Slovenia (plastic, cardboard, glass), Italy (aluminum, steel) and Finland (wood).
- Higher in the Netherlands (plastic), Germany (aluminum), Sweden (cardboard, glass, steel) and Czech Republic (wood).

<sup>8</sup> Value of wooden box taken from Valipac (<https://www.valipac.be/en/>)

Overall, the aggregate fee indicator is lowest in Slovenia (5,84 ct), Italy (2,95 ct) and Luxembourg (4,03 ct). For Slovenia and Italy, this is due to the fact that both countries have the lowest fee indicator for at least one material and have comparably low indicators for other materials as well. Luxembourg does not have the lowest indicator for any material; however, the indicators for aluminum, cardboard, glass and steel are quite low, compared to other countries.

On the other hand, the highest aggregate fee indicators were found in Sweden (33,76 ct), Czech Republic (29,60 ct) and France (24,14 ct). In Sweden, the high aggregate fee indicator is a result of having high or even highest fee indicators for almost all materials: highest fee indicator for cardboard, glass and steel, second highest fee indicator for plastic and aluminum. In the Czech Republic and France, the high total fee indicator is due to high fee rates for wood packages, which account for a large proportion of the total fee indicator.

## 4 Comparison of the January and June / July 2024 values

In order to identify the economic trends related to the fee, the study assessed a comparison between the two aggregate indicators from January 2024 and June / July 2024.<sup>9</sup> The list below is sorted according to the Trend July 2024, from highest reduction to highest increase.

Table 2: Comparison between the fees of January and June / July 2024

Country	Main PRO	Aggregate Fee Indicator July 2024	Aggregate Fee Indicator January 2024	Trend July 2024
<b>Slovenia</b>	SLOPAK	0,38	5,84	-93,5%
<b>Romania</b>	ECO-ROM	12,97	13,39	-3,2%
<b>Cyprus</b>	GREEN DOT CYPRUS	4,12	4,12	0,0%
<b>Finland</b>	RINKI	8,50	8,50	0,0%
<b>Spain*</b>	ECOEMBES	8,94	8,94	0,0%
<b>Bulgaria</b>	ECOPACK	13,41	13,41	0,0%
<b>Netherlands</b>	AFVALFONDS (SAV)	13,69	13,69	0,0%
<b>Estonia</b>	ETO	14,65	14,65	0,0%
<b>Portugal</b>	SPV	14,71	14,71	0,0%
<b>Austria</b>	ARA	16,25	16,25	0,0%
<b>France*</b>	CITEO	24,14	24,14	0,0%
<b>Czech Republic</b>	EKO-COM	29,60	29,60	0,0%
<b>Luxembourg</b>	VALORLUX	4,03	4,03	0,0%
<b>Belgium</b>	FOST PLUS	8,10	8,10	0,0%
<b>UK*</b>	VALPAK	8,93	8,17	9,4%
<b>Italy*</b>	CONAI	2,95	2,24	31,6%
<b>Germany*</b>	GRUNE PUNKT	21,45	15,76	36,10%
<b>Sweden</b>	NPA	33,76	24,80	36,14 %

\*Countries with a population of more than 20 million.

In 12 out of 18 countries (67 %), no changes occurred during this timeframe. Namely, these countries are **Cyprus, Finland, Spain, Bulgaria, Netherlands, Estonia, Portugal, Austria, France, Czech Republic, Luxembourg and Belgium**. For these countries it seems usual that fees are adjusted on an annual basis, thus changes will be expected again in the next report (January 2025). It has to be noted that the fees for January 2024 for Luxembourg and Belgium have been adjusted subsequently as an indicator for wood was now included.

Fees were reduced in two out of 18 countries (11 %) between January and July 2024, with the largest reduction in Slovenia. In **Slovenia**, this decline is due to a sharp decrease in all fee indicators (-93 % for plastic, aluminum, steel and wood; -99 % for

<sup>9</sup> The Trend July 2024 represents the delta of the absolute values; inflation rates were not taken into account.

cardboard and glass). The changes to the fee indicators are not explained on the SLOPAK website. However, it also has to be noted that the fees slightly differ between the [English](#) and the [Slovenian](#) price list: In the Slovenian version, for example, the indicator for glass is 0,04 EUR/t, whereas in the English version, it's 0,042 EUR/t. For this report, the indicators from the English version were used. An explanation for the sharp decrease could not be found on the website of SLOPAK. In **Romania**, the overall (small) decrease is the result of a slight decrease in plastic (-4 %), aluminum (-6 %) and glass (-9 %). On the other hand, there even has been a small increase in the values for cardboard (+3 %) and steel (+2 %). An explanation could not be found on the website of Eco-Rom.

On the other hand, in four countries (22 %) an increase of the aggregate fee indicator was recorded: the country who registered the most significant increase is **Sweden** (+36,14 %). The increase is the result of high increases in the values for plastic (+55 %), aluminum (+78 %), cardboard (+46 %) and steel (+79 %). On the other hand, the values for glass even decreased slightly (-4 %). The overall increase in indicators is explained by the NPA with the new regulation on producer responsibility, which extends their (financial) responsibility.<sup>10</sup> Moreover, they explain “The Swedish Environmental Protection Agency announces quarterly changes that affect the costs and thus the fee. Above all, it refers to the expansion of municipal collection, as well as changes to the compensation level for the municipal collection system (recycling stations, collection near properties, etc.). The costs are therefore variable and our ambition is to adjust the fees annually.”<sup>11</sup> In **Germany**, the high increase (+36,1 %) is due to the fact that all indicators have increased: Plastic (+8 %), aluminum (+13 %), cardboard (+7 %), glass (+3 %), steel (+6 %). Unfortunately, the indicator for wood cannot be compared to the January 2024 values since it wasn't derived during the last report. However, the completely new inclusion of this indicator also has a big impact on the overall fee aggregator: Without wood, the aggregate indicator would only have risen by 7 %. The changes for the fee indicators are not explained by “Grüner Punkt”. In **Italy**, the fees for plastic (+23 %), aluminum (+71 %) and cardboard (+86 %) significantly increased. The other values remained the same. CONAI explains their general calculation with the Legislative Decree 152/06 and that the contribution level is linked to the environmental impact at the end-of-life-stadium.<sup>12</sup> Moreover, they published a press release, explaining that the economic situation leads to an increase in EPR fees in aluminum, paper and plastic.<sup>13</sup> And in **UK** the PRN prices for aluminum (+3373 %) and steel (+281 %) sharply increased, causing a higher aggregate fee indicator. The changes for PRN values for the other materials were not that significant. The prices in aluminum rose constantly since January 2024 (January: £4, February: £36, March: £48, April: £100; May: £151, June: £168), resulting in a big difference between January and June. Since the PRN market is based on supply and demand, the increase may be the result of a shortage of evidence notes.

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<sup>10</sup> <https://npa.se/en/about-us>

<sup>11</sup> <https://npa.se/en/producer-responsibility/packaging-fees>

<sup>12</sup> <https://www.conai.org/imprese/contributo-ambientale/>

<sup>13</sup> [https://www.conai.org/wp-content/uploads/2024/01/Conai\\_press\\_release\\_EPR\\_-fee\\_changes\\_2024.pdf](https://www.conai.org/wp-content/uploads/2024/01/Conai_press_release_EPR_-fee_changes_2024.pdf)

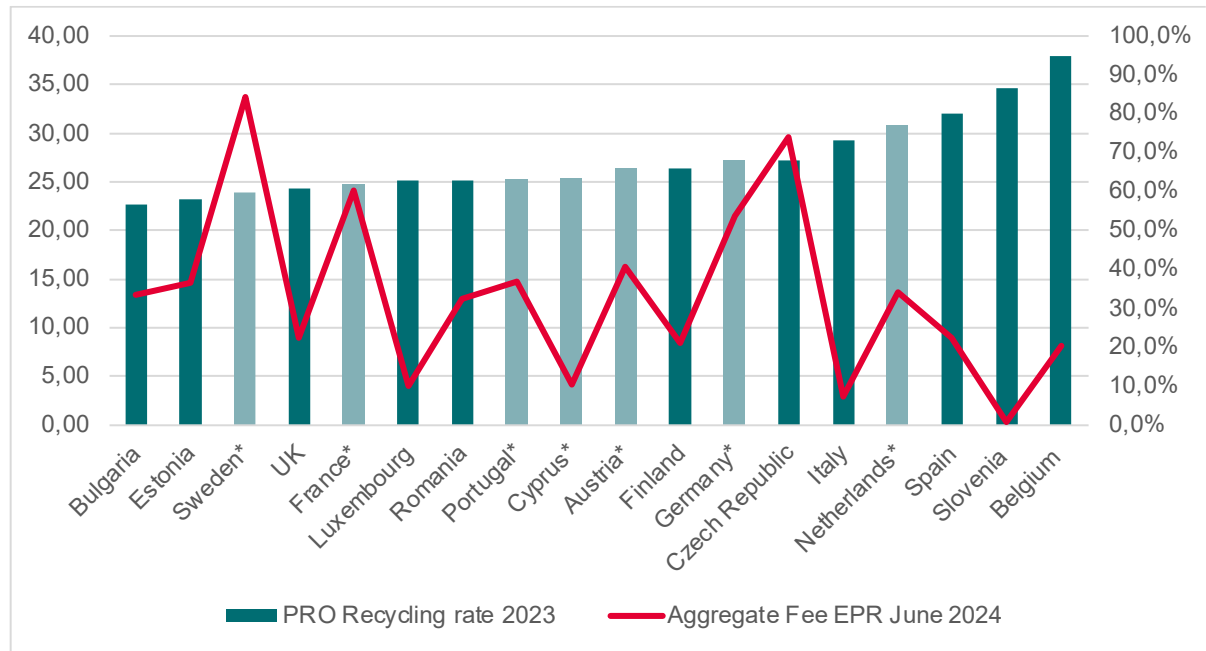
## 5 Comparison of aggregate fee indicators and recycling rates

The aggregate fee indicators for each country were also compared to the recycling rates of the PROs. As illustrated in the following table, Fost Plus has the highest recycling rate at 95%, while Bulgaria has the lowest at 56.7%. In seven countries, the recycling rate for 2023 was not available.

**Table 3: Comparison between the aggregate fee indicator and the PRO recycling rates**

Country	Main PRO	Aggregate Fee Indicator July 2024	PRO Recycling Rate 2023	PRO Recycling Rate 2022	Country recycling rate 2021
Sweden	NPA	33,76	n/a	65,0%	59,6%
France	CITEO	24,14	n/a	65,5%	61,8%
Portugal	SPV	14,71	n/a	n/a	63,1%
Cyprus	GREEN DOT CYPRUS	4,12	n/a	89,0%	63,5%
Austria	ARA	16,25	n/a	78,0%	65,8%
Germany	GRUNE PUNKT	21,45	n/a	n/a	67,9%
Netherlands	AFVAL-FONDS (SAV)	13,69	n/a	88,0%	76,8%
Bulgaria	ECOPACK	13,41	56,7%	n/a	n/a
Estonia	ETO	14,65	57,9%	57,8%	70,4%
UK	VALPAK	8,93	60,9%	n/a	n/a
Luxembourg	VALORLUX	4,03	63,0%	n/a	73,7%
Romania	ECO-ROM	12,97	63,0%	63,0%	n/a
Finland	RINKI	8,50	66,0%	66,0%	72,5%
Czech Republic	EKO-COM	29,60	68,0%	68,0%	69,1%
Italy	CONAI	2,95	75,3%	71,5%	72,9%
Spain	ECOEMBES	8,94	80,2%	80,2%	70,1%
Slovenia	SLOPAK	0,38	86,5%	n/a	55,1%
Belgium	FOST PLUS	8,10	95,0%	95,0%	80,4%

The relationship between those two values is shown in the figure below. Please note that for countries, where no recycling rate for 2023 was available, the country recycling rate of 2021 was used. This is also illustrated by the lighter green bars and the asterisk at each country.



\* The values for the recycling rates are taken from the countries' recycling rates for 2021.

**Figure 2: Comparison between the aggregate fee indicator and recycling rates**

The figure indicates that Belgium (95%), Slovenia (86.5%), and Spain (80.2%) achieve the highest recycling rates. Conversely, the aggregate fee indicators for these countries are among the lowest: Belgium ranks 5<sup>th</sup> lowest at 8.10 cents, Slovenia has the lowest at 0.38 cents, and Spain is 8<sup>th</sup> lowest at 8.94 cents. These figures suggest that these three countries have highly efficient recycling processes, managing to maintain high recycling rates despite low fees.

The lowest recycling rates are observed in Bulgaria (56.7%), Estonia (57.9%), and Sweden (60.9%). However, for Bulgaria, it's important to note that the actual recycling rate might be higher (or lower) since this value is merely the average of all materials. For instance, materials like paper and tinfoil have higher recycling rates (99% and 95.8%, respectively), whereas plastics and aluminum have lower rates (52.1% and 24.1%). Therefore, adjusting the proportion to the actual amounts could alter this indicator. Additionally, for Sweden, it should be noted that this figure is from 2021 and represents the entire country. As NPA has just started their operations, future reports will hopefully provide more accurate numbers. Regarding the aggregate fee indicators, Bulgaria ranks 9<sup>th</sup> highest (13.41 cents), Estonia 7<sup>th</sup> highest (14.65 cents), and Sweden the highest (33.76 cents). This suggests there is still room for improvement in efficiency.

However, since there is no significant observable correlation between the aggregate fee indicator and recycling rates, and because countries with higher recycling rates do not necessarily have the highest EPR fees, it suggests that other factors may influence the effectiveness of recycling programs.

## 6 Accessibility and transparency of the data

### I. Accessibility

The fee indicators utilized in calculating the fees for the six packaging options are sourced from the respective PRO websites, with the exception of the UK values, which are obtained from an external website. This deviation is a result of the UK employing a system where Packaging Waste Recovery Notes (PRNs) are procured instead of relying on PRO fees.

Nevertheless, there are variations in the accessibility of these values across PRO websites. Some PROs provide their websites in multiple languages, offering the advantage of facilitating foreign companies in finding PRO fees and completing their declarations more conveniently. The table below provides an overview of PROs that offer their websites in at least one language other than their primary one. PROs marked with an asterisk (\*) have their fee indicators available in English.

**Table 4: Overview of offered languages on the websites of PROs**

Available in more languages	Only available in own language
<ul style="list-style-type: none"> <li>■ <b>ARA*</b> (Austria): German, English</li> <li>■ <b>Fostplus*</b> (Belgium): Dutch, French, English</li> <li>■ <b>Ecopack*</b> (Bulgaria): Bulgarian, English</li> <li>■ <b>Greendot*</b> (Cyprus): Greek, English</li> <li>■ <b>Eko-kom*</b> (Czech Republic): Czech, English</li> <li>■ <b>ETO*</b> (Estonia): Russian, Estonian, English</li> <li>■ <b>Rinki*</b> (Finland): Finnish, Swedish, English</li> <li>■ <b>Grüne Punkt*</b> (Germany): German, English, Chinese</li> <li>■ <b>CONAI*</b> (Italy): Italian, English</li> <li>■ <b>Valorlux*</b> (Luxembourg): German, English, French</li> <li>■ <b>Afvalfonds*</b> (Netherlands): Dutch, English</li> <li>■ <b>SPV*</b> (Portugal): Portuguese, English</li> <li>■ <b>Ecoembes*</b> (Spain): Spanish, English</li> <li>■ <b>NPA*</b> (Schweden): Swedish, English</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>CITEO*</b> (France)</li> <li>■ <b>Eco-Rom</b> (Romania)</li> <li>■ <b>SLOPAK</b> (Slovenia)</li> <li>■ <b>VALPAK*</b> (UK)</li> </ul>

Enhanced accessibility is facilitated by the presence of a search bar or a direct link to fees on the main page of the respective PRO website. Fostplus, ETO, Rinki, Afvalfonds, Ecoembes, and NPA exemplify this convenience by providing a direct link to fees prominently on their main pages or easily accessible through navigation. Furthermore, these fees can be found using the search bar on these websites.

In contrast, on some other websites like ARA, Ecopack, CONAI, and Valorlux, the fees are located on sub-pages such as "News," "Members/Business," or "Services." Notably, accessing fee information on CITEO's website poses additional challenges, as the main website is exclusively available in French. Moreover, companies are required to register (at no cost) to download the fees, adding an extra layer of complexity to the process.

## II. Transparency

On every PRO website, it is generally explained that fees are allocated for the collection, recycling, and recovery of packaging waste. Some provide a more detailed breakdown, outlining how the fees are calculated or specifying their designated purposes. Some PROs also explain changes in the fee indicators (see chapter 4). Moreover, the majority of PROs release an annual report detailing the tons collected and, in some cases, recycled. A handful also make available a public list of their members. The table below provides an overview of the information offered by different PROs.

Table 5: Overview of offered information on the websites of PROs

PRO	Info about use of fees	Explanation fee changes	Annual report	Member list
ARA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fostplus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ecopack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Green-Dot	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Eko-Kom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ETO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rinki	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CITEO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Grüner Punkt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CONAI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Valorlux	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Afvalfonds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SPV	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Eco-Rom	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SLOPAK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ecoembes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NPA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VALPAK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



## 7 Conclusion

In summary, the analysis of fee values across various countries reveals clear trends and differences in the management of packaging waste. Lower fee values are prevalent in Slovenia, Italy and Finland, whereas higher fee values characterize countries like the Netherlands, Germany, Sweden, and the Czech Republic. As of June 2024, the aggregate fee indicator was lowest in Slovenia (0,38 ct) and highest in Sweden (33,38 ct). Overall, a decline in the aggregate fee indicator was only observed in two countries between January 2024 and June/July 2024, while an increase was observed in four countries. But for the majority (12 out of 18 countries), no changes in fee indicators occurred. It became clear that a change in the indicator for wood has a significant impact on the aggregate fee indicator, as the packaging itself accounts for around 50 % of the total weight of all six packaging solutions (800 g of 1604,6 g). High increases in the fee indicators for other packaging, which only account for a small proportion of the total weight, therefore only have a minor impact on the aggregate fee indicator. This can be seen in the UK, where the indicator for aluminum has risen by over 3000 %, but the aggregate fee indicator has only risen by around 9 %. Changes to the fee indicators were only explicitly declared by three PROs (out of six for which the values changed).

It was also found that there is no significant observable correlation between the aggregate fee indicator and recycling rates, thus suggesting that other factors may influence the effectiveness of recycling programs.

Moreover, the accessibility and transparency of fee information vary across different PRO websites, with some offering multilingual interfaces and easy access to fee structures, while others present challenges in navigation and require registration for accessing information. 13 PROs offer a detailed calculation and an annual report and eight PROs publish a list of their members. Nonetheless, the general transparency among PROs regarding fee allocation and reporting on waste collection and recycling activities underscores efforts towards accountability and sustainability in the management of packaging waste.

## Annex

### I. Austria

Main PRO: ARA

Source: <https://www.ara.at/uploads/Dokumente/Tarifbl%C3%A4tter/ARA-Tarifblatt-2024.pdf>

#### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	1.04.1 "Kunststoffe Haushalt": 0,870 €/kg
Calculation	42 g * 0,087 cent/g = 3,654 cent



**TRANSPARENT PET BOTTLE**  
1,5 liters  
40 g  
plastic cap 2 g

#### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	1.03.2 „Aluminium Haushalt“: 0,34 €/kg
Calculation	16 g * 0,034 cent/g = 0,544 cent



**ALUMINIUM CAN**  
33 cl  
16 g

#### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	1.01.0 „Papier Haushalt“: 0,190 €/kg
Calculation	222 g * 0,019 cent/g = 4,218 cent



**CARDBOARD BOX**  
13,3 x 25,5 x 9 cm  
222 g

#### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	1.02.0 „Glas Haushalt“: 0,102 €/kg 1.03.2 „Aluminium Haushalt“: 0,34 €/kg
Calculation	480 g * 0,0102 cent/g = 4,896 cent 0,6 g * 0,034 cent/g = 0,0204 cent Total: 4,916 cent



**TRANSPARENT GLASS WATER BOTTLE**  
75 cl  
480 gr  
aluminium cap 0,60 g

#### v. Canned Tomatoes

January + June/July 2024:



**CANNED TOMATOES (STEEL)**  
44 g

Fee indicator:	1.03.1 "Eisenmetall Haushalt": 0,3 €/kg
Calculation	$44 \text{ g} * 0,03 \text{ cent/g} = 1,32 \text{ cent}$

**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	1.04.5 "Holz Haushalt": 0,02 €/kg
Calculation	$800 \text{ g} * 0,002 \text{ cent/g} = 1,6 \text{ cent}$

**WOODEN BOX**30 x 50 cm  
800 g

## II. Belgium

Main PRO: FOST PLUS

Source: <https://www.fostplus.be/en/members/green-dot-rates> and <https://www.valipac.be/en/existing-clients/#Yourdeclaration%20> for wood

### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	PET bottles and flasks - transparent colourless: 0,0646 €/kg  PET rigid packaging other than bottles and flasks transparent: 1,031 €/kg
Calculation	40 g * 0,03125 ct/g = 0,2584 cent  2 g * 0,1031 ct/g = 0,2062 cent  Total: 0,465 cent



### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum: 0,0224 €/kg
Calculation	16 g * 0,00224 ct/g = 0,036 cent



### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Paper-Cardboard: 0,1209 €/kg
Calculation	222 g * 0,01209 ct/g = 2,684 cent



### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Glass: 0,0687 €/kg  Aluminum: 0,0224 €/kg
Calculation	480 g * 0,00687 ct/g = 3,2976 cent  0,6 g * 0,00224 ct/g = 0,001344 cent  Total: 3,299 cent



**v. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	Steel: 0,0591 €/kg
Calculation	44 g * 0,00591 cent/g = 0,26 cent



**CANNED TOMATOES (STEEL)**

44 g

**vi. Wooden Box**

January + June/July 2024:

Note: The fee indicator from Valipac was used, since the wooden box is considered as B2B packaging waste.

Fee indicator:	Recyclable packaging excl. plastic: 17 €/t
Calculation	800 g * 0,0017 cent/g = 322,64 cent



**WOODEN BOX**

30 x 50 cm  
800 g

### III. Bulgaria

Main PRO: Ecopack

Source: <https://www.ecopack.bg/en/members/pricing-and-business-policy>

Currency exchange (January + June/July 2024): 1 BGN = 0,51 €.

#### i. Transparent PET Bottle

January 2024:

Fee indicator:	Plastic, Base fee rate for recover: 0,225 BGN/kg → 0,11475 €/kg
Calculation	42 g * 0,011475 cent/g = 0,482 cent



#### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum, base fee rate: 0,265 BGN/kg → 0,13515 €/kg
Calculation	16 g * 0,013515 ct/g = 0,216 cent



#### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Paper and cardboard, base rate: 0,204 BGN/kg → 0,10404 €/kg
Calculation	222 g * 0,010404 ct/g = 2,31 cent



#### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Glass, base fee rate: 0,235 BGN/kg Aluminum: 0,175 BGN/kg → Glass: 0,11985 €/kg → Aluminum: 0,08925 €/kg
Calculation	480 g * 0,011985 ct/g = 5,753 cent 0,6 g * 0,008925 ct/g = 0,005 cent Total: 5,758 cent



**v. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	Steel Base Amount: 0,105 BGN/kg → 0,05355 €/kg
Calculation	44 g * 0,005355 cent/g = 0,236 cent



**CANNED TOMATOES (STEEL)**

44 g

**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Wood Base Amount: 0,108 BGN/kg → 0,05508 €/kg
Calculation	800 g * 0,005508 cent/g = 4,406 cent



**WOODEN BOX**

30 x 50 cm  
800 g

## IV. Cyprus

Main PRO: Green Dot Cyprus

Source: <https://greendot.com.cy/en/packaging-definition-and-fees/packaging-fees/>

### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	PET: 100,6 €/t
Calculation	$42 \text{ g} * 0,01006 \text{ ct/g} = 0,42 \text{ cent}$



**TRANSPARENT PET BOTTLE**  
1,5 liters  
40 g  
plastic cap 2 g

### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum: 20,31 €/t
Calculation	$16 \text{ g} * 0,002031 \text{ ct/g} = 0,03 \text{ cent}$



**ALUMINIUM CAN**  
33 cl  
16 g

### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Carton: 44,78 €/t
Calculation	$222 \text{ g} * 0,004478 \text{ ct/g} = 0,99 \text{ cent}$



**CARDBOARD BOX**  
13,3 x 25,5 x 9 cm  
222 g

### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Glass: 27,61 €/t Aluminum: 20,31 €/t
Calculation	$480 \text{ g} * 0,002761 \text{ ct/g} = 1,325 \text{ cent}$ $0,6 \text{ g} * 0,002031 \text{ ct/g} = 0,0012 \text{ cent}$ Total: 1,33 cent



**TRANSPARENT GLASS WATER BOTTLE**  
75 cl  
480 gr  
aluminium cap 0,60 g

### v. Canned Tomatoes

January + June/July 2024:

Fee indicator:	Metal: 90,62 €/t
Calculation	$44 \text{ g} * 0,009062 \text{ ct/g} = 0,4 \text{ cent}$



**CANNED TOMATOES (STEEL)**  
44 g



**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Wood: 11,80 €/t
Calculation	$800 \text{ g} * 0,00118 \text{ ct/g} = 0,94 \text{ cent}$

**WOODEN BOX**30 x 50 cm  
800 g

## V. Czech Republic

Main PRO: Ekokom

Source: [https://www.ekokom.cz/wp-content/uploads/2023/11/Fees\\_valid\\_from\\_1\\_1\\_2024.pdf](https://www.ekokom.cz/wp-content/uploads/2023/11/Fees_valid_from_1_1_2024.pdf)

Currency exchange:

- January 2024: 1 CZK = 0,041 €

Note: All fees are from the category “Sales one-way packaging”.

### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	PET clear transparent, beverage, soft flexible: 15.478 CZK/t → 634,598 €/t  PET colored opaque, beverage, virgin up to 3L: 13.117 CZK/t → 537,797 €/t
Calculation	40 g * 0,0634598 ct/g = 2,538 cent  2 g * 0,0537797 ct/g = 0,108 cent  Total: 2,646 cent



**TRANSPARENT  
PET BOTTLE**  
1,5 liters  
40 g  
plastic cap 2 g

### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum, beverage, soft: 7.601 CZK/t  → 311,641 €/t
alculation	16 g * 0,0311641 ct/g = 0,499 cent



**ALUMINIUM  
CAN**  
33 cl  
16 g

### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Paperboard, non-beverage: 5.090 CZK/t  → 208,69 €/t
Calculation	222 g * 0,020869 ct/g = 4,633 cent



**CARDBOARD  
BOX**  
13,3 x 25,5 x 9 cm  
222 g

### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Glass, clear transparent, beverage: 1.884 CZK/t  → 77,244 €/t
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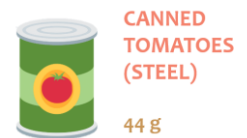
	Aluminum, beverage, rigid, virgin, up to 3L: 3.269 CZK/t → 134,029 €/t
Calculation	$480 \text{ g} * 0,0077244 \text{ ct/g} = 3,708 \text{ cent}$ $0,6 \text{ g} * 0,0134029 \text{ ct/g} = 0,008 \text{ cent}$ Total: 3,716 cent



**v. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	Metals Fe, non-beverage, rigid, up to 3L: 1.992 CZK/t → 81,672 €/t
Calculation	$44 \text{ g} * 0,0081672 \text{ ct/g} = 0,359 \text{ cent}$



**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Wood and chipboard, non-beverage: 5.412 CZK/t → 221,892 €/t
Calculation	$800 \text{ g} * 0,0221892 \text{ ct/g} = 17,751 \text{ cent}$



## VI. Estonia

Main PRO: ETO

Source: <https://www.eto.ee/en/producerimporter/service-fees/>

Note: All values represent the “calculated rate of service fee EUR/t”. The values remain unchanged; however, there is no information on the website for which year(s) the presented fees are applicable.

### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	Plastic (monomaterial): 433 €/t
Calculation	$42 \text{ g} * 0,0433 \text{ ct/g} = 1,819 \text{ cent}$



### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum: 270 €/t
Calculation	$16 \text{ g} * 0,027 \text{ ct/g} = 0,432 \text{ cent}$



### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Paper and carton: 112 €/t
Calculation	$222 \text{ g} * 0,0112 \text{ ct/g} = 2,486 \text{ cent}$



### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Glass and ceramics: 108 €/t Aluminum: 270 €/t
Calculation	$480 \text{ g} * 0,0108 \text{ ct/g} = 5,184 \text{ cent}$ $0,6 \text{ g} * 0,027 \text{ ct/g} = 0,016 \text{ cent}$ Total: 5,2 cent



**v. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	Ferrous metal: 270 €/t
Calculation	$44 \text{ g} * 0,027 \text{ ct/g} = 1,188 \text{ cent}$



**CANNED TOMATOES (STEEL)**

44 g

**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Wood: 44 €/t
Calculation	$800 \text{ g} * 0,0044 \text{ ct/g} = 3,52 \text{ cent}$



**WOODEN BOX**

30 x 50 cm  
800 g

## VII. Finland

Main PRO: Rinki

Source: <https://rinkiin.fi/en/producer-responsibility/price-lists/>

Note: The values represent the average of the two PROs that exist in Finland, Finnish Packaging Producers Ltd. and Sumi Oy.

### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	Finnish Packaging Producers, Plastic, B2c, Class B: 259 €/t Sumi Oy, Plastic, B2C, Class B: 270 €/t
Calculation	$42 \text{ g} * ((0,0259+0,027)/2) \text{ ct/g} = 1,111 \text{ cent}$



### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Finnish Packaging Producers, Metals, Aluminum packaging, B2c: 79 €/t Sumi Oy, Metals, Aluminum packaging, B2c, Class A: 86 €/t
Calculation	$16 \text{ g} * ((0,0079+0,0086)/2) \text{ ct/g} = 0,132 \text{ cent}$



### Cardboard Box

January + June/July 2024:

Fee indicator:	Finnish Packaging Producers, Paper fibre, carton and paper packaging, B2C, Class A: 81 €/t Sumi Oy, Paper fibre, carton and paper packaging, B2C, Class A: 113 €/t
Calculation	$222 \text{ g} * ((0,0081+0,0113)/2) \text{ ct/g} = 2,153 \text{ cent}$



### iii. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Finnish Packaging Producers, Glass packaging Class A: 101 €/t Sumi Oy, Glass, Class A: 88 €/t
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	FPP, Aluminum, Class C: 114 €/t Sumi Oy, Aluminum, Class C: 154 €/t
Calculation	480 g * 0,00945 ct/g = 4,536 cent 0,6 g * 0,0134 ct/g = 0,008 cent Total: 4,544 cent

**iv. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	Finnish Packaging Producers, Steel Packaging consumer, Class A: 79 €/t Sumi Oy, Steel, Class A: 86 €/t
Calculation	44 g * 0,00825 cent/g = 0,363 cent



**CANNED TOMATOES (STEEL)**

44 g

**v. Wooden Box**

January + June/July 2024:

Fee indicator:	Finnish Packaging Producers, Other wooden pallets and other wooden packaging, Class B: 2,20 €/t Sumi Oy, Wood packaging, Class B: 2,60 €/t
Calculation	800 g * 0,00024 cent/g = 0,192 cent



**WOODEN BOX**

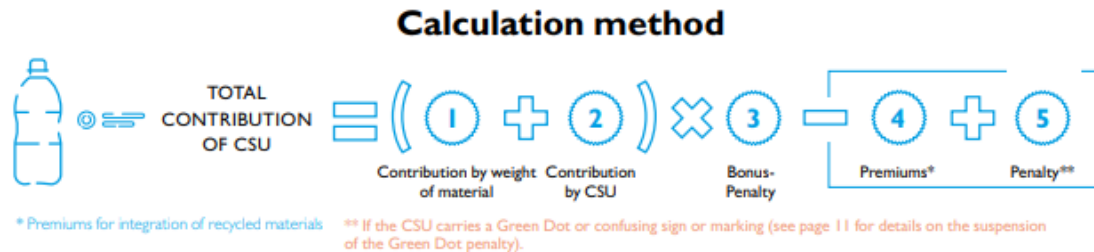
30 x 50 cm  
800 g

### VIII. France

Main PRO: CITEO

Source: <https://www.citeo.com/tarifs-citeo-emballages-et-papiers>

Note: The fees remain unchanged.



#### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	clear PET bottles: 38,16 ct/kg Rigid PET packaging: 50,74 ct/kg
Units per CSU:	2 → 0,1773 ct
Bonus/ Premium / Penalty:	4 % / 0 / 0
Calculation	$(40 \text{ g} * 0,03816 \text{ ct/g} + 2 \text{ g} * 0,05074 \text{ ct/g} + 0,1773 \text{ cent}) * 0,96 = 1,733 \text{ cent}$



#### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum: 15,43 ct/kg
Units per CSU:	1 → 0,1043 cent
Bonus/ Premium / Penalty:	4 % / 0 / 0
Calculation	$(16 \text{ g} * 0,01543 \text{ ct/g} + 0,1043 \text{ cent}) * 0,96 = 0,3358 \text{ cent}$



#### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Paper/cardboard: 20,19 ct/kg
Units per CSU:	1 → 0,1043 cent





Bonus/ Premium / Penalty:	0 % / 0 / 0
Calculation	$(222 \text{ g} * 0,02019 \text{ ct/g} + 0,1043 \text{ cent}) * 1 = 4,5865 \text{ cent}$

**iv. Transparent Glass Water Bottle**

January + June/July 2024:

Fee indicator:	Glass: 1,5 ct/kg Aluminum: 15,34 ct/kg
Units per CSU:	2 → 0,1773 cent
Bonus/ Premium / Penalty:	4 % / 0 / 0
Calculation	$(480 \text{ g} * 0,0015 \text{ ct/g} + 0,6 \text{ g} * 0,01534 \text{ ct/g} + 0,1773 \text{ cent}) * 0,96 = 0,8702 \text{ cent}$



**v. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	Acier: 5,72 ct/kg
Units per CSU:	1 → 0,1043 cent
Bonus/ Premium / Penalty:	0 % / 0 / 0
Calculation	$(44 \text{ g} * 0,00572 \text{ ct/g} + 0,1043 \text{ ct}) * 1 = 0,3560 \text{ cent}$



**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Unprocessed materials from renewable, sustainably managed resources for which a recycling stream or organic recovery is under development (wood, cork): 20,19 ct/kg
Units per CSU:	1 → 0,1043 cent
Bonus/ Premium / Penalty:	0 % / 0 / 0



Calculation	$(800 \text{ g} * 0,02019 \text{ ct/g} + 0,1043 \text{ ct}) * 1 =$ 16,2563 cent
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## IX. Germany

Main PRO: Grüner Punkt

Source: <https://www.verpackgo.com/de/license-calculator/>

Notes:

- To calculate the fees, 1 ton of each material was entered into the calculator. The respective values for the materials were then used for the product specific indicator.
- Fees include the use of the label
- An indicator for wood in January 2024 is not available.

### i. Transparent PET Bottle

January 2024:

Fee indicator:	Plastic: 850 €/t
Calculation	$42 \text{ g} * 0,085 \text{ ct/g} = 3,57 \text{ cent}$



**TRANSPARENT  
PET BOTTLE**  
1,5 liters  
40 g  
plastic cap 2 g

June 2024:

Fee indicator:	Plastic: 915 €/t
Calculation	$42 \text{ g} * 0,0915 \text{ ct/g} = 3,843 \text{ cent}$

### ii. Aluminum Can

January 2024:

Fee indicator:	Aluminum: 850 €/t
Calculation	$16 \text{ g} * 0,085 \text{ ct/g} = 1,36 \text{ cent}$



**ALUMINIUM  
CAN**  
33 cl  
16 g

June 2024:

Fee indicator:	Aluminum: 960 €/t
Calculation	$16 \text{ g} * 0,096 \text{ ct/g} = 1,536 \text{ cent}$

### iii. Cardboard Box

January 2024:

Fee indicator:	Carton: 184 €/t
Calculation	$222 \text{ g} * 0,0184 \text{ ct/g} = 4,085 \text{ cent}$



**CARDBOARD  
BOX**  
13,3 x 25,5 x 9 cm  
222 g

June 2024:

Fee indicator:	Carton: 197 €/t
Calculation	$222 \text{ g} * 0,0197 \text{ ct/g} = 4,373 \text{ cent}$

**iv. Transparent Glass Water Bottle**

January 2024:

Fee indicator:	Glass: 62,5 €/t Aluminum: 850 €/t
Calculation	$480 \text{ g} * 0,00625 \text{ ct/g} = 3 \text{ cent}$ $0,6 \text{ g} * 0,085 \text{ ct/g} = 0,051 \text{ cent}$ Total: 3,051 cent



June 2024:

Fee indicator:	Glass: 64,3 €/t Aluminum: 960 €/t
Calculation	$480 \text{ g} * 0,00643 \text{ ct/g} = 3,08 \text{ cent}$ $0,6 \text{ g} * 0,096 \text{ ct/g} = 0,0576 \text{ cent}$ Total: 3,144 cent

**v. Canned Tomatoes**

January 2024:

Fee indicator:	Ferrous metals: 840 €/t
Calculation	$44 \text{ g} * 0,084 \text{ cent/g} = 3,696 \text{ cent}$



June 2024:

Fee indicator:	Ferrous metals: 890 €/t
Calculation	$44 \text{ g} * 0,089 \text{ cent/g} = 3,916 \text{ cent}$

**vi. Wooden Box**

January 2024:

Fee indicator:	<i>Not available</i>
Calculation	<i>Not available</i>

**WOODEN BOX**30 x 50 cm  
800 g

June 2024:

Fee indicator:	Other material (incl. wood): 58 €/t
Calculation	$800 \text{ g} * 0,0058 \text{ cent/g} = 4,64 \text{ cent}$

## X. Italy

Main PRO: CONAI

Source: <https://www.conai.org/en/businesses/environmental-contribution/> and <https://www.conai.org/imprese/contributo-ambientale/>

### i. Transparent PET Bottle

January 2024:

Fee indicator:	Plastic B1.2: 20 €/t Plastic B2.1: 350 €/t
Calculation	40 g * 0,002 ct/g = 0,08 cent 2 g * 0,035 ct/g = 0,07 cent Total: 0,15 cent



June 2024:

Fee indicator:	Plastic B1.2: 24 €/t Plastic B2.1: 441 €/t
Calculation	40 g * 0,0024 ct/g = 0,096 cent 2 g * 0,0441 ct/g = 0,07882cent Total: 0,184 cent

### ii. Aluminum Can

January 2024:

Fee indicator:	Aluminum: 7 €/t
Calculation	16 g * 0,0007 ct/g = 0,0112 cent



June 2024:

Fee indicator:	Aluminum: 12 €/t
Calculation	16 g * 0,0012 ct/g = 0,019 cent

### iii. Cardboard Box

January 2024:

Fee indicator:	Paper level 1: 35 €/t
Calculation	222 g * 0,0035 ct/g = 0,777 cent



June 2024:

Fee indicator:	Paper level 1: 65 €/t
Calculation	$222 \text{ g} * 0,0065 \text{ ct/g} = 1,443 \text{ cent}$

**iv. Transparent Glass Water Bottle**

January 2024:

Fee indicator:	Glass: 15 €/t Aluminum: 7€/t
Calculation	$480 \text{ g} * 0,0015 \text{ ct/g} = 0,72 \text{ cent}$ $0,6 * 0,0007 \text{ ct/g} = 0,00042 \text{ cent}$ Total: 0,720 cent



June 2024:

Fee indicator:	Glass: 15 €/t Aluminum: 12€/t
Calculation	$480 \text{ g} * 0,0015 \text{ ct/g} = 0,72 \text{ cent}$ $0,6 * 0,0012 \text{ ct/g} = 0,00072 \text{ cent}$ Total: 0,721 cent

**v. Canned Tomatoes**

January + June 2024:

Fee indicator:	Steel: 5 €/t
Calculation	$44 \text{ g} * 0,0005 \text{ cent/g} = 0,022 \text{ cent}$



**vi. Wooden Box**

January + June 2024:

Fee indicator:	Wood: 7 €/t
Calculation	$800 \text{ g} * 0,0007 \text{ ct/g} = 0,56 \text{ cent}$



## XI. Luxembourg

Main PRO: Valorlux

Source: [https://www.valorlux.lu/media/652fe3b3e00e5\\_gruener-punkt-tarife-2024-detailliert-.pdf](https://www.valorlux.lu/media/652fe3b3e00e5_gruener-punkt-tarife-2024-detailliert-.pdf)

### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	PV06: 0,1865 €/kg PV10: 0,179 €/kg
Calculation	40 g * 0,01865 ct/g = 0,758 cent 2 g * 0,0179 ct/g = 0,0358 cent Total: 0,794 cent



### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	PV05: 0,0184 €/kg
Calculation	16 g * 0,00184 ct/g = 0,029 cent



### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	PV02: 0,0451 €/kg
Calculation	222 g * 0,00451 ct/g = 1,001 cent



### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	PV01: 0,0201 €/kg PV05: 0,0184 €/kg
Calculation	480 g * 0,00201 ct/g = 0,9648 cent 0,6 g * 0,00184 ct/g = 0,0011 cent Total: 0,966 cent





**v. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	PV04: 0,0180 €/kg
Calculation	44 g * 0,0018 cent/g = 0,079 cent



**CANNED TOMATOES (STEEL)**

44 g

**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	PV18: 0,0145 €/kg
Calculation:	800 g * 0,00145 ct/g = 1,16 cent



**WOODEN BOX**

30 x 50 cm  
800 g

## XII. Netherlands

Main PRO: Afvalfonds Verpakkingen (SAV)

Source: <https://www.afvalfondsverpakkingen.nl/en/node/450>

### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	Plastic flexible: 1,32 €/kg Plastic rigid: 1,22 €/kg
Calculation	40 g * 0,132 ct/g = 5,28 cent 2 g * 0,122 ct/g = 0,244 cent Total: 5,524 cent



### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum: 0,2 €/kg
Calculation	16 g * 0,02 ct/g = 0,32 cent



### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Paper and cardboard: 0,017 €/kg
Calculation	222 g * 0,0017 ct/g = 0,377 cent



### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Glass: 0,1 €/kg Aluminum: 0,2 €/kg
Calculation	480 g * 0,01 ct/g = 4,8 cent 0,6 * 0,02 ct/g = 0,0012 cent Total: 4,812 cent



### v. Canned Tomatoes

January + June/July 2024:

Fee indicator:	Other metals: 0,33 €/kg
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Calculation	$44 \text{ g} * 0,033 \text{ cent/g} = 1,452 \text{ cent}$
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**CANNED TOMATOES (STEEL)**  
44 g

**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Wood: 0,015 €/kg
Calculation	$800 \text{ g} * 0,0015 \text{ cent/g} = 1,2 \text{ cent}$



**WOODEN BOX**  
30 x 50 cm  
800 g

### XIII. Portugal

Main PRO: SPV

Source: [https://www.pontoverde.pt/aderentes\\_uk/2\\_1\\_valor\\_a\\_pagar.php](https://www.pontoverde.pt/aderentes_uk/2_1_valor_a_pagar.php)

#### i. Transparent PET Bottle

January + June/July 2024:

Fee indicator:	Plastic: 0,2960 €/kg
Calculation	$42 \text{ g} * 0,0296 \text{ ct/g} = 1,243 \text{ cent}$



**TRANSPARENT PET BOTTLE**  
1,5 liters  
40 g  
plastic cap 2 g

#### ii. Aluminum Can

January + June/July 2024:

Fee indicator:	Aluminum: 0,0658 €/kg
Calculation	$16 \text{ g} * 0,00658 \text{ ct/g} = 0,105 \text{ cent}$



**ALUMINIUM CAN**  
33 cl  
16 g

#### iii. Cardboard Box

January + June/July 2024:

Fee indicator:	Paper and Cardboard: 0,1477 €/kg
Calculation	$222 \text{ g} * 0,01477 = 3,279 \text{ cent}$



**CARDBOARD BOX**  
13,3 x 25,5 x 9 cm  
222 g

#### iv. Transparent Glass Water Bottle

January + June/July 2024:

Fee indicator:	Glass: 0,0258 €/kg Aluminum: 0,0658 €/kg
Calculation	$480 \text{ g} * 0,00258 \text{ ct/g} = 1,2384 \text{ cent}$ $0,6 * 0,00658 \text{ ct/g} = 0,0039 \text{ cent}$ Total: 1,242 cent



**TRANSPARENT GLASS WATER BOTTLE**  
75 cl  
480 gr  
aluminium cap 0,60 g

#### v. Canned Tomatoes

January + June/July 2024:

Fee indicator:	Steel: 0,1985 €/kg
Calculation	$44 \text{ g} * 0,01985 \text{ cent/g} = 0,873 \text{ cent}$



**CANNED TOMATOES (STEEL)**  
44 g

**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Wood: 0,0996 €/kg
Calculation	800 g * 0,00996 cent/g = 7,968 cent



**WOODEN BOX**

30 x 50 cm  
800 g

## XIV. Romania

Main PRO: ECO-ROM

Source: <https://ecoromambalaje.ro/informatii-publice/tarife/>

Currency exchange:

- January + June 2024: 1 Lei → 0,2 €

### i. Transparent PET Bottle

January 2024:

Fee indicator:	PET: 770 lei/t → 154 €/t
Calculation	$42 \text{ g} * 0,0154 \text{ ct/g} = 0,647 \text{ cent}$



**TRANSPARENT  
PET BOTTLE**

1,5 liters  
40 g  
plastic cap 2 g

June 2024:

Fee indicator:	PET: 737 lei/t → 147,4 €/t
Calculation	$42 \text{ g} * 0,01474 \text{ ct/g} = 0,619 \text{ cent}$

### ii. Aluminum Can

January 2024:

Fee indicator:	Aluminum: 785 lei/t → 157 €/t
Calculation	$16 \text{ g} * 0,0157 \text{ ct/g} = 0,251 \text{ cent}$



**ALUMINIUM  
CAN**

33 cl  
16 g

June 2024:

Fee indicator:	Aluminum: 737 lei/t → 147,4 €/t
Calculation	$16 \text{ g} * 0,01474 \text{ ct/g} = 0,236 \text{ cent}$

### iii. Cardboard Box

January 2024:

Fee indicator:	Carton: 415 lei/t → 83 €/t
Calculation	$222 \text{ g} * 0,0083 \text{ ct/g} = 1,843 \text{ cent}$



**CARDBOARD  
BOX**

13,3 x 25,5 x 9 cm  
222 g

June 2024:

Fee indicator:	Carton: 429 lei/t → 85,8 €/t
Calculation	$222 \text{ g} * 0,00858 \text{ ct/g} = 1,905 \text{ cent}$

**iv. Transparent Glass Water Bottle**

January 2024:

Fee indicator:	Glass: 520 lei/t → 104 €/t Aluminum: 785 lei/t → 157 €/t
Calculation	480 g * 0,0104 ct/g = 4,992 cent 0,6 g * 0,0157 ct/g = 0,00942 cent Total: 5,001 cent



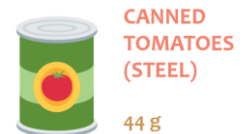
June 2024:

Fee indicator:	Glass: 473 lei/t → 94,6 €/t Aluminum: 737 lei/t → 147,4 €/t
Calculation	480 g * 0,00946 ct/g = 4,5408 cent 0,6 g * 0,01474 ct/g = 0,008844 cent Total: 4,55 cent

**v. Canned Tomatoes**

January 2024:

Fee indicator:	Otel: 420 lei/t → 84 €/t
Calculation	44 g * 0,0084 cent/g = 0,37 cent



June 2024:

Fee indicator:	Otel: 429 lei/t → 85,8 €/t
Calculation	44 g * 0,00858 cent/g = 0,378 cent

**vi. Wooden Box**

January + June 2024:

Fee indicator:	Lemn: 330 lei/t → 66 €/t
Calculation	800 g * 0,0066 cent/g = 5,280 cent



## XV. Slovenia

Main PRO: Slopak

Source: Internal information from EXPRA (for January 2024 values) and <https://www.slopak.si/cache/documents/63562b2f4386f6e11afa5424/green-dot-fees-2024.pdf>

### i. Transparent PET Bottle

January 2024:

Fee indicator:	Plastika PET: 234 €/t
Calculation	$42 \text{ g} * 0,0234 \text{ ct/g} = 0,983 \text{ cent}$



June 2024:

Fee indicator:	Plastika PET: 16,38 €/t
Calculation	$42 \text{ g} * 0,001638 \text{ ct/g} = 0,069 \text{ cent}$

### ii. Aluminum Can

January 2024:

Fee indicator:	Metal Aluminum: 234 €/t
Calculation	$16 \text{ g} * 0,0234 \text{ ct/g} = 0,374 \text{ cent}$



June 2024:

Fee indicator:	Metal Aluminum: 16,38 €/t
Calculation	$16 \text{ g} * 0,001638 \text{ ct/g} = 0,026 \text{ cent}$

### iii. Cardboard Box

January 2024:

Fee indicator:	Papir: 7 €/t
Calculation	$222 \text{ g} * 0,0007 \text{ ct/g} = 0,155 \text{ cent}$



June 2024:

Fee indicator:	Papir: 0,049 €/t
Calculation	$222 \text{ g} * 0,0000049 \text{ ct/g} = 0,001 \text{ cent}$



**iv. Transparent Glass Water Bottle**

January 2024:

Fee indicator:	Glass: 6 €/t Metal Aluminum: 34 €/t
Calculation	$480 \text{ g} * 0,006 \text{ ct/g} = 0,288 \text{ cent}$ $0,6 \text{ g} * 0,0234 \text{ ct/g} = 0,01404 \text{ cent}$ Total: 0,302 cent



June 2024:

Fee indicator:	Glass: 0,042 €/t Metal Aluminum: 16,38 €/t
Calculation	$480 \text{ g} * 0,0000042 \text{ ct/g} = 0,002016 \text{ cent}$ $0,6 \text{ g} * 0,001638 \text{ ct/g} = 0,0009828 \text{ cent}$ Total: 0,003 cent

**v. Canned Tomatoes**

January 2024:

Fee indicator:	Kovine jeklo: 279 €/t
Calculation	$44 \text{ g} * 0,0279 \text{ cent/g} = 1,228 \text{ cent}$



June 2024:

Fee indicator:	Kovine jeklo: 19,53 €/t
Calculation	$44 \text{ g} * 0,001953 \text{ cent/g} = 0,086 \text{ cent}$

**vi. Wooden Box**

January 2024:

Fee indicator:	Les: 35 €/t
Calculation	$800 \text{ g} * 0,0035 \text{ cent/g} = 2,8 \text{ cent}$



June 2024:

Fee indicator:	Les: 2,45 €/t
Calculation	$800 \text{ g} * 0,000245 \text{ cent/g} = 0,196 \text{ cent}$

**XVI. Spain**

Main PRO: Ecoembes

Source: <https://www.ecoembes.com/en/companies/packaging-declaration/green-dot-fees>

**i. Transparent PET Bottle**

January + June/July 2024:

Fee indicator:	PET Packaging: 0,6€/kg PET rigid: 0,576 €/kg Ecomodulation/Discounted Fee (1 attribute, colour): -0,57 %
Calculation	$(40 \text{ g} * 0,06 \text{ ct/g} + 2 \text{ g} * 0,0576 \text{ ct/g}) * (1 - 0,0057)$ = 2,501 cent



**ii. Aluminum Can**

January + June/July 2024:

Fee indicator:	Beverage cans: 0,062 €/kg
Calculation	$16 \text{ g} * 0,0062 \text{ ct/g} = 0,099 \text{ cent}$



**iii. Cardboard Box**

January + June/July 2024:

Fee indicator:	Paper and cardboard: 0,135 €/kg
Calculation	$222 \text{ g} * 0,0135 \text{ ct/g} = 2,997 \text{ cent}$



**iv. Transparent Glass Water Bottle**

January + June/July 2024:

Fee indicator:	Glass (weight): 0,03167 €/kg Glass (unit): 0,00449 € / unit Other aluminum: 0,048 €/kg
Calculation	$480 \text{ g} * 0,003167 \text{ ct/g} + 0,449 \text{ ct} = 1,9692 \text{ cent}$ $0,6 \text{ g} * 0,0048 \text{ ct/g} = 0,00288 \text{ cent}$ Total: 1,972 cent



**v. Canned Tomatoes**

January + June/July 2024:

Fee indicator:	Other steel packaging: 0,185 €/kg
Calculation	44 g * 0,0185 cent/g = 0,814 cent



**CANNED TOMATOES (STEEL)**

44 g

**vi. Wooden Box**

January + June/July 2024:

Fee indicator:	Wood and cork: 0,007 €/kg
Calculation	800 g * 0,0007 cent/g = 0,56 cent



**WOODEN BOX**

30 x 50 cm  
800 g

## XVII. Sweden

Main PRO: NPA

Source: <https://npa.se/en/producer-responsibility/packaging-fees>

Currency exchange: January + June 2024: 1 SEK → 0,089 €

### i. Transparent PET Bottle

January 2024:

Fee indicator:	Plastic (compatible with material recycling): 7,6 SEK/kg → 0,6764 €/kg
Calculation	42 g * 0,06764 ct/g = 2,841 cent



June 2024:

Fee indicator:	Plastic (compatible with material recycling): 11,8 SEK/kg → 1,05 €/kg
Calculation	42 g * 0,10502 ct/g = 4,411 cent

### ii. Aluminum Can

January 2024:

Fee indicator:	Aluminum: 6 SEK/kg → 0,534 €/kg
Calculation	16 g * 0,0534 ct/g = 0,854 cent



June 2024:

Fee indicator:	Aluminum: 10,7 SEK/kg → 0,9523 €/kg
Calculation	16 g * 0,09523 ct/g = 1,524 cent

### iii. Cardboard Box

January 2024:

Fee indicator:	Paper (compatible with material recycling): 3,9 SEK/kg → 0,3471 €/kg
Calculation	222 g * 0,03471 ct/g = 7,706 cent



June 2024:

Fee indicator:	Paper (compatible with material recycling): 5,7 SEK/kg → 0,5073 €/kg
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Calculation	$222 \text{ g} * 0,05073 \text{ ct/g} = 11,262 \text{ cent}$
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**iv. Transparent Glass Water Bottle**

January 2024:

Fee indicator:	Glass: 2 SEK/kg → 0,178 €/kg Aluminum: 6 SEK/kg → 0,534 €/kg
Calculation	$480 \text{ g} * 0,0178 \text{ ct/g} = 8,544 \text{ cent}$ $0,6 \text{ g} * 0,0534 \text{ ct/g} = 0,032 \text{ cent}$ Total: 8,576 cent



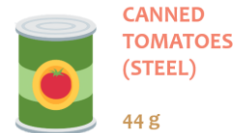
June 2024:

Fee indicator:	Glass: 1,91 SEK/kg → 0,169 €/kg Aluminum: 10,7 SEK/kg → 0,9523 €/kg
Calculation	$480 \text{ g} * 0,0169 \text{ ct/g} = 8,15952 \text{ cent}$ $0,6 \text{ g} * 0,09523 \text{ ct/g} = 0,057138 \text{ cent}$ Total: 8,217 cent

**v. Canned Tomatoes**

January 2024:

Fee indicator:	Steel plate: 11,4 SEK/kg → 1,0146 €/kg
Calculation	$44 \text{ g} * 0,10146 \text{ cent/g} = 4,464 \text{ cent}$



June 2024:

Fee indicator:	Steel plate: 20,4 SEK/kg → 1,8156 €/kg
Calculation	$44 \text{ g} * 0,18156 \text{ cent/g} = 7,989 \text{ cent}$

**vi. Wooden Box**

January +June 2024:

Fee indicator:	Wood packaging – in systems for reuse: 0,05 SEK/kg → 0,00445 €/kg
Calculation	$800 \text{ g} * 0,000445 \text{ ct/g} = 0,356 \text{ cent}$



**XVIII. UK**

Main PRO: VALPAK

Source: <https://www.packagingnews.co.uk/news/environment/prn-pricewatch/prn-pricewatch-week-ending-12-january-2024-15-01-2024> and <https://www.packagingnews.co.uk/news/environment/prn-pricewatch/prn-pricewatch-week-ending-7-june-2024-10-06-2024>

Currency exchange:

- January 2024: 1 Pound → 1,17 €
- June 2024: 1 Pound → 1,19 €

**i. Transparent PET Bottle**

January 2024:

Fee indicator:	Plastic: 164,53 £/t → 192,5 €/t
Calculation	$42 \text{ g} * 0,0192,5 \text{ ct/g} = 0,8085 \text{ cent}$



June 2024:

Fee indicator:	Plastic: 143,01 £/t → 170,18 €/t
Calculation	$42 \text{ g} * 0,017018 \text{ ct/g} = 0,7148 \text{ cent}$

**ii. Aluminum Can**

January 2024:

Fee indicator:	Aluminum: 4,92 £/t → 5,76 €/t
Calculation	$16 \text{ g} * 0,000576 \text{ ct/g} = 0,0092 \text{ cent}$



June 2024:

Fee indicator:	Aluminum: 168,01 £/t → 199,93 €/t
Calculation	$16 \text{ g} * 0,019993 \text{ ct/g} = 0,3199 \text{ cent}$

**iii. Cardboard Box**

January 2024:

Fee indicator:	Paper: 4,98 £/t → 5,83 €/t
Calculation	$222 \text{ g} * 0,000583 \text{ ct/g} = 0,1294 \text{ cent}$



June 2024:

Fee indicator:	Paper: 4,32 £/t → 5,14 €/t
Calculation	222 g * 0,000514 ct/g = 0,1141 cent

**iv. Transparent Glass Water Bottle**

January 2024:

Fee indicator:	Glass (remelt): 119,94£/t → 140,33 €/t Aluminum: 4,92 £/t → 5,76 €/t
Calculation	480 g * 0,014033 ct/g + 0,6 g * 0,000576 ct/g = 6,7362 cent



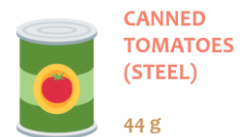
June 2024:

Fee indicator:	Glass (remelt): 125,63 £/t → 149,50 €/t Aluminum: 168,01 £/t → 199,93 €/t
Calculation	480 g * 0,014950 ct/g + 0,6 g * 0,019993 ct/g = 7,1880 cent

**v. Canned Tomatoes**

January 2024:

Fee indicator:	Steel: 8,5 £/t → 9,95 €/t
Calculation	44 g * 0,000995 cent/g = 0,0438 cent



June 2024:

Fee indicator:	Steel: 31,82 £/t → 37,87 €/t
Calculation	44 g * 0,003787 cent/g = 0,1666 cent

**vi. Wooden Box**

January 2024:

Fee indicator:	Wood: 4,68 £/t → 5,48 €/t
Calculation	800 g * 0,000548 cent/g = 0,4380 cent



June 2024:

Fee indicator:	Wood: 4,5 £/t → 5,36 €/t
Calculation	$800 \text{ g} * 0,000536 \text{ cent/g} = 0,4284 \text{ cent}$