

Packaging EPR fee in EU: What are the differences?

Overview and comparison of PRO fees between July 2023 and January 2024.

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1 Introduction

In the European Union, the volume of packaging waste has increased by over 20 % within the past decade.¹ This increase in packaging waste raises significant environmental concerns, for example, improperly disposed packaging waste can contaminate soil, waterways and oceans, posing a serious threat to wildlife and ecosystems, and it creates greenhouse gas emissions as it decomposes.² However, the environmental footprint extends beyond disposal, as packaging represents a substantial consumer of virgin materials, with 40% of plastics and 50% of paper utilized in the EU dedicated to packaging production. Without intervention, projections indicate a further 19 % increase in packaging waste by 2030, hindering the progression toward a low-carbon circular economy.³

The beginnings of tackling this challenge date back to 1994, when the Packaging and Packaging Waste Directive (PPWD) was introduced. This ground-breaking directive introduced the pioneering concept of 'shared responsibility', which was later developed into the paradigm of 'extended producer responsibility' (EPR). In 2018, the EPR principle emerged as the primary mechanism for Member States to ensure that producers of packaging bear the financial and operational burden from creation to disposal, as set out in Directive 2018/851.

The subsequent revision of Directive 2018/852/CE on packaging and packaging waste was a key turning point, as EU Member States were required to set up dedicated EPR schemes for packaging by 2025. These schemes are typically managed by producer responsibility organisations (PROs) funded by packaging producers and users and represent a concerted effort to promote responsibility throughout the packaging lifecycle. In November 2022, the European commission proposed a revision of the PPWD, which included targets for waste reduction at Member State Level as well as reuse targets for economic operations. Furthermore, the proposed updates to the PPWD emphasise the importance of design for recycling and the harmonized labelling of packaging and waste bins to facilitate correct disposal.

Various EPR models for packaging have emerged across Europe, tailored to the socio-cultural, macro-economic and organisational circumstances of each country. At the centre of these models is the charging of environmental contributions or fees that are carefully designed to cover all costs of the necessary activities (collection, sorting, recycling). These charges are closely linked to environmental factors and vary depending on the material.

In this report, fees for six packaging solutions from 18 countries are analyzed to compare countries and identify trends.

¹ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7155

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

³ 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 July 2023 and January 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. However, it did not contain information for the sixth packaging solution (wooden box).

- 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 8th January 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. Moreover, the PROs of three countries do not provide specific indicators for wood (Belgium, Germany, Luxembourg). Therefore, the aggregate fee indicators of those countries must also be viewed with caution.

II. Changes in the calculation compared to 2023

During the preparation of this report, we noticed some changes within a few PRO systems. The changes are explained below.

- Finland: In Finland exist two PROs (Finnish Packaging Recycling Ltd. and Sumi Oy). In the last reports, only the fee values of Finnish Packaging Recycling Ltd. were used, because it manages approx. 90 % of packaging in Finland.⁴ Moreover, Finnish Packaging Recycling Ltd. has contracts with more companies than Sumi Oy (4,700 vs. 3,000).⁵ However, for completion reasons, Sumi Oy is now also considered, starting from this report.
- Spain: Ecoembes introduced an ecomodulation model, starting from January 2024 and following the guidelines set out in [Royal Decree 1055/2022 on Packaging and Packaging Waste](#). It includes discounts as well as penalties for HDPE, PET Tray, Non-PET-Tray, Flexible Plastic, Other Rigid Plastics as well as paper and cardboard.⁶
- Sweden: According to the new regulation, [SFS 2022:1274](#), the municipalities must take over the collection responsibility for sorted packaging from 1st January 2024.⁷ The newly formed company Näringslivets Producentansvar (NPA) is an approved PRO and takes over all producer responsibility related questions as of 1st January 2024. For this reason, the former collection companies FTI and glasatervinning are discontinued during 2024. However, Glasatervinning will continue its operations in recycling.

⁴ <https://rinkiin.fi/en/producer-responsibility/join-a-producer-organisation/finnish-packaging-producers-ltd/#:~:text=Finnish%20Packaging%20Producers%20Ltd%20is,type%20of%20packaging%20in%20Finland>.

⁵ <https://suomenpakkaustuottajat.fi/en/> and <https://rinkiin.fi/en/producer-responsibility/join-a-producer-organisation/sumi-ltd/>

⁶ <https://www.ecoembes.com/en/companies/packaging-declaration/green-dot-fees>

⁷ <https://glasatervinning.se/for-producenter-och-importorer/nytt-avtal-2022/>

i. Outlook

- UK: In October 2025, additional EPR fees will come into force for large producers.⁸ The current PRN fees are associated with recycling and go directly to repro-cessors 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 man-aging household packaging waste and will be fixed across a compliance year.

⁸ <https://www.valpak.co.uk/epr-drs/epr-for-packaging/>

3 Fee indicators for 2024

The following table shows all calculated fee indicators for January 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.

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)
Italy*	CONAI	0,15	0,01	0,78	0,72	0,02	0,56	2,24
Luxembourg	VALORLUX	0,79	0,03	1,00	0,97	0,08	0,00	2,87
Cyprus	GREEN DOT CYPRUS	0,42	0,03	0,99	1,33	0,40	0,94	4,12
Slovenia	SLOPAK	0,98	0,37	0,16	0,30	1,23	2,80	5,84
Belgium	FOST PLUS	0,46	0,04	2,68	3,30	0,26	0,00	6,74
UK*	VALPAK	0,81	0,01	0,13	6,74	0,04	0,44	8,17
Finland	RINKI	1,11	0,13	2,15	4,54	0,36	0,19	8,50
Spain*	ECOEMBES	2,50	0,10	3,00	1,97	0,81	0,56	8,94
Romania	ECO-ROM	0,65	0,25	1,84	5,00	0,37	5,28	13,39
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
Germany*	GRUNE PUNKT	3,57	1,36	4,08	3,05	3,70	0,00	15,76
Austria	ARA	3,65	0,54	4,22	4,92	1,32	1,60	16,25
France*	CITEO	1,73	0,34	4,59	0,87	0,36	16,26	24,14
Sweden	NPA	2,84	0,85	7,71	8,58	4,46	0,36	24,80
Czech Republic	EKO-COM	2,65	0,50	4,63	3,72	0,36	17,75	29,60

*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.

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

Overall, the aggregate fee indicator is lowest in Italy (2,24 ct), Cyprus (4,12 ct) and Slovenia (5,84 ct). For Italy and Slovenia, 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. Cyprus does not have the lowest indicator for any material; however, the indicators for plastic, aluminum, cardboard and glass are quite low, compared to other countries. According to the table, Luxembourg (2,87 ct) would be the second lowest value, but no indicator for wood was available there, so the values are not fully comparable with those of the other countries. However, since Luxembourg has pretty low indicators for all other materials, it can be assumed that even if a wood indicator was added, Luxembourg would remain one of the lowest aggregate fee indicators.

On the other hand, the highest aggregate fee indicators were found in Czech Republic (29,60 ct), Sweden (24,80 ct) and France (24,14 ct). In the Czech Republic and France, the high aggregate fee indicator is due to high fee rates for wooden packages. 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 aluminum and fourth highest for plastic.

4 Comparison of the July 2023 and January 2024 values

In order to identify the economic trends related to the fee, the study assessed a comparison between the two aggregate indicators from July 2023 and January 2024.⁹ The list below is sorted according to the Trend January 2024, from highest reduction to highest increase.

Table 2: Comparison between the fees of July 2023 and January 2024

Country	Main PRO	Aggregate Fee Indicator Jan. 2024	Aggregate Fee Indicator July 23	Trend January 2024
France*	CITEO	24,14 cents	36,83 cents	-34,5 %
UK*	VALPAK	8,17 cents	12,37 cents	-34,0 %
Czech Republic	EKO-COM	29,60 cents	42,26 cents	-30,0 %
Slovenia	SLOPAK	5,84 cents	5,97 cents	-2 %
Finland	RINKI	8,50 cents	8,62 cents	-1,5 %
Estonia	ETO	14,65 cents	14,65 cents	0,0 %
Cyprus	GREEN DOT CYP-RUS	4,12 cents	4,12 cents	0,0 %
Bulgaria	ECOPACK	13,41 cents	13,30 cents	1 %
Romania	ECO-ROM	13,39 cents	12,53 cents	6,8 %
Italy*	CONAI	2,24 cents	2,04 cents	9,9 %
Germany*	GRUNE PUNKT	15,76 cents	14,16 cents	11,3 %
Belgium	FOST PLUS	6,74 cents	6,02 cents	12,0 %
Austria	ARA	16,25 cents	13,54 cents	20,0 %
Luxembourg	VALORLUX	2,87 cents	2,37 cents	20,9 %
Spain*	ECOEMBES	8,94 cents	6,84 cents	30,7 %
Portugal	SPV	14,71 cents	9,30 cents	58 %
Netherlands	AFVALFONDS (SAV)	13,69 cents	8,63 cents	58,6 %
Sweden	NPA	24,80 cents	12,14 cents	104,2 %

*Countries with a population of more than 20 million.

Fees were reduced in five out of 18 countries (28 %) between July 2023 and January 2024, with the largest reduction in France. In **France**, this decline is only due to the fall in the indicator for wood (-46 %), while all other indicators have increased. A reason for this decline wasn't stated by CITEO, however, in their annual report they presented new recycling and sorting technologies, which may explain the increase in the other indicators.¹⁰ In the **UK**, the overall decrease is the result of a further decrease in PRN values between July 2023 and January 2024, especially for aluminum (-98 %), cardboard (-80 %) and wood (-80 %). Since the PRN market is based on supply and

⁹ The Trend January 2024 represents the delta of the absolute values; inflation rates were not taken into account.

¹⁰ https://bo.citeo.com/sites/default/files/2023-02/20220921_RA%20CITEO_GB.pdf

demand, this decrease may be the result of a surplus of evidence notes. However, it should be noted that the PRN values were derived from a different website, as the previous website was no longer publicly accessible. On the new website, the PRN values are given per week, whereas on the old website they were given per month. In the **Czech Republic**, the overall decrease is mainly a result of the decrease in the indicator for wood (-42 %). Some other indicators even rose (plastic +10 %, aluminum +25%). EKO-KOM illustrates on their website¹¹, when legal adjustments have an impact on the fee indicators, but for the 2024 values no explanation was available yet. It should also be noted that the value of the CZK has decreased, resulting in a lower fee indicator for glass in €, while the fee indicator in CZK has actually increased compared to 2023. In **Slovenia**, the small decrease is due to lower fee indicators for cardboard (-13 %) and glass (-39 %), while the fee indicators for paper and aluminum slightly increased (both +6 %). The changes to the fee indicators are not explained on the SLOPAK website. The indicators for steel and wood remained unchanged compared to 2023. In **Finland**, there is only a slight decrease observable for the aggregate fee indicator, which is surprising since Rinkis service fees are now (starting 2024) included in the PRO fees already. However, at Finnish Packaging Producers Ltd. only the fee indicator for cardboard (+31 %) increased compared to 2023, whereas all other indicators got cheaper. When taking Sumi Oys fee indicators into account, the increase in cardboard fees gets lowered down to only +13 %. Finnish Packaging Producers Ltd. explains the increase of cardboard fees by the following statement: “From July 2023 the producers are responsible for the costs of residential waste collection organised by municipalities for residences of at least five households and this approximately doubles the collection costs of consumer packaging waste.”¹² The price list of Sumi Oy doesn't state explanations for changes in fee indicators.

On the other hand, in eleven countries (61 %) an increase of the aggregate fee indicator was recorded: the country who registered the most significant increase is **Sweden** (+104,2 %), where the aggregate fee indicator more than doubled. The fee indicators for all materials increased, but glass and steel increased sharply by +148 % and +181 % respectively. The overall increase in indicators is explained by the NPA with the new regulation on producer responsibility, which extends their (financial) responsibility.¹³ But, in addition to the increased indicators, an indicator for wood was available in 2024, which is missing in the calculation for 2023. In the **Netherlands**, all indicators rose, with the highest increase in glass (+67 %), plastic (+66 %) and wood (+50 %). Afvalfonds verpakkingen explains this increase by i. a. additional statutory duties they have to fulfill.¹⁴ A similar development can be observed in **Portugal**, where all indicators rose as well, with the highest increase in plastic (+83 %), wood (+77 %) and aluminum (+62 %). An explanation for these changes cannot be found on the SPV website. An increase in all fee indicators can also be observed in **Spain**, with the highest increase in cardboard (+53 %) and plastic (+41 %). All changes starting from 2024

¹¹ <https://www.ekokom.cz/en/clients/how-the-system-works/>

¹² <https://rinkiin.fi/app/uploads/2023/10/Price-List-2024-SPT-ENG.pdf>

¹³ <https://npa.se/en/about-us>

¹⁴ <https://www.afvalfondsverpakkingen.nl/en/node/450>

are explained by Ecoembes in an infographic, e. g. that the payment for packaging recovered from general waste, road cleaning, green areas, recreational areas and beaches goes from being voluntary to mandatory.¹⁵ In **Luxembourg**, not all indicators rose; the indicator for aluminum fell by 36 %. The highest increases in the fee indicators were for steel (+68 %) and plastic (+52 %). Valorlux has not published a specific explanation for the changes. However, Valorlux has published all its statistics on waste collection and recycling and explains that the fees are calculated on the basis of the collection and disposal costs and the revenue from the sale of the collected packaging materials¹⁶; therefore, the statistics can serve as an indicator of the changes. In **Austria**, some fee indicators remained the same. Only the fees for cardboard (+90 %), plastic (+12 %) and glass (+7 %) increased. ARA does not give specific explanations for the changes, but they note that the rates reflect the expenses of the various packaging materials cause in the collection and recovery cycle.¹⁷ In **Belgium**, a sharp increase in the indicator for steel can be observed (+322 %). Cardboard (+55 %) and glass (+18 %) also increased, whereas indicators for plastic (-64 %) and aluminum (-4 %) decreased. Fostplus published a blog post on the new 2024 fees and explained some changes.¹⁸ However, they do not exactly explain the large increase in steel. In **Germany**, all indicators increased, with the highest increase in glass (+30 %), and steel (+11 %). Grüner Punkt does not explain the changes on their website. The biggest change in a fee indicator can be observed in **Italy**, where the indicator for cardboard sharply increased by 600 % compared to 2023. Compared to other countries, however, the fee indicator for cardboard is still one of the lowest in Italy. Other indicators rose as well (glass +35 %, wood +13 %), whereas other indicators remained the same (plastic, aluminum, steel). 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.¹⁹ Moreover, they published a press release which gives detailed information about changes in the fee indicators.²⁰ For pulp and paper, the high increase is explained by a sharp decrease in the market values of pulp and paper as well as an increase in the quantities of managed packaging waste, among other things. In **Romania**, all indicators slightly increased, with the indicator for wood with the biggest increase (+9 %). An explanation could not be found on the website of Eco-Rom. The lowest increase of the aggregate fee indicator can be observed in **Bulgaria**, where the fee indicator increased by +1 %. Only the indicators for plastic (+8 %) and aluminum (+51 %) increased while all other indicators remained unchanged. Changes are not explained. **Cyprus** and **Estonia** are the only countries where all fees remained unchanged compared to 2023. For Cyprus, the fee values were constant for the years 2017-2024.²¹ In Estonia it is not evident for which exact year(s) the listed fees are.

¹⁵ <https://www.ecoembes.com/sites/default/files/inline-files/recursos/infografia-tarifas-punto-verde-2024-en.pdf>

¹⁶ https://www.valorlux.lu/media/651e72248cfa9_factsheet-de_2022.pdf

¹⁷ <https://www.ara.at/en/licensing-service-for-packaging>

¹⁸ <https://www.fostplus.be/en/blog/green-dot-fees-2024>

¹⁹ <https://www.conai.org/imprese/contributo-ambientale/>

²⁰ <https://t1p.de/37fn7>

²¹ <https://greendot.com.cy/en/packaging-definition-and-fees/packaging-fees/>

5 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 3: Overview of offered languages on the websites of PROs

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

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 4: 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"/>

6 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 Italy, the UK, Slovenia and Finland, whereas higher fee values characterize countries like the Netherlands, Germany, Sweden, and the Czech Republic. As of January 2024, the aggregate fee indicator was lowest in Italy (2,24 ct) and highest in Czech Republic (29,60 ct). Overall, a decline in the aggregate fee indicator was only observed in five countries between July 2023 and January 2024, while an increase was observed in eleven countries. 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 Italy, where the indicator for cardboard has risen by 600 %, but the aggregate fee indicator has only risen by around 10 %. Changes in fee indicators were only explicitly explained by eight PROs.

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>

Note: Some fees remain unchanged.

i. Transparent PET Bottle

July 2023:

Fee indicator:	1.04.1 "Kunststoffe Haushalt": 0,780 €/kg
Calculation	42 g * 0,078 cent/g = 3,276 cent



January 2024:

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

ii. Aluminum Can

July 2023 + January 2024:

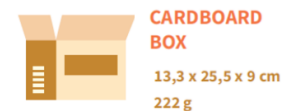
Fee indicator:	1.03.2 „Aluminium Haushalt“: 0,34 €/kg
Calculation	16 g * 0,034 cent/g = 0,544 cent



iii. Cardboard Box

July 2023:

Fee indicator:	1.01.0 „Papier Haushalt“: 0,100 €/kg
Calculation	222 g * 0,01 cent/g = 2,22 cent



January 2024:

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

iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	1.02.0 „Glas Haushalt“: 0,095 €/kg
----------------	------------------------------------

	1.03.2 „Aluminium Haushalt“: 0,34 €/kg
Calculation	480 g * 0,0095 cent/g = 4,56 cent 0,6 g * 0,034 cent/g = 0,0204 cent Total: 4,58 cent



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

January 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

v. Canned Tomatoes

July 2023 + January 2024:

Fee indicator:	1.03.1 “Eisenmetall Haushalt”: 0,3 €/kg
Calculation	44 g * 0,03 cent/g = 1,32 cent



**CANNED
TOMATOES
(STEEL)**
44 g

vi. Wooden Box

July 2023 + January 2024:

Fee indicator:	1.04.5 “Holz Haushalt”: 0,02 €/kg
Calculation	800 g * 0,002 cent/g = 1,6 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>

Note: There was no fee indicator for wooden packages.

i. Transparent PET Bottle

July 2023:

Fee indicator:	PET bottles and flasks - transparent colourless: 0,3125 €/kg PET rigid packaging other than bottles and flasks transparent: 0,7431 €/kg
Calculation	40 g * 0,03125 ct/g = 1,25 cent 2 g * 0,07431 ct/g = 0,14862 cent Total: 1,399 cent



January 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

July 2023:

Fee indicator:	Aluminum: 0,0234 €/kg
Calculation	16 g * 0,00234 ct/g = 0,03744 cent



January 2024:

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

iii. Cardboard Box

July 2023:



Fee indicator:	Paper-Cardboard: 0,0781 €/kg
Calculation	222 g * 0,00781 ct/g = 1,73382 cent

January 2024:

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

iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	Glass: 0,0581 €/kg Aluminum: 0,0234 €/kg
Calculation	480 g * 0,00581 ct/g = 2,7888 cent 0,6 g * 0,00234 ct/g = 0,001404 cent Total: 2,79 cent



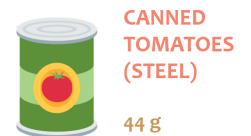
January 2024:

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

July 2023:

Fee indicator:	Steel: 0,014 €/kg
Calculation	44 g * 0,0014 cent/g = 0,0616 cent



January 2024:

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

vi. Wooden Box

July 2023 + January 2024:



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

III. Bulgaria

Main PRO: Ecopack

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

Currency exchange (July 2023 + January 2024): 1 BGN = 0,51 €.

Note: Some fees remained unchanged.

i. Transparent PET Bottle

July 2023:

Fee indicator:	Plastic, Base fee rate for recover: 0,209 BGN/kg → 0,10659 €/kg
Calculation	42 g * 0,010659 cent/g = 0,448 cent



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

July 2023:

Fee indicator:	Aluminum, base fee rate: 0,175 BGN/kg → 0,08925 €/kg
Calculation	16 g * 0,008925 ct/g = 0,143 cent



January 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

July 2023 + January 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

July 2023 + January 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



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

v. Canned Tomatoes

July 2023 + January 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

July 2023 + January 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/>

Note: Values for 2023 and 2024 remained unchanged.

i. Transparent PET Bottle

July 2023 + January 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

July 2023 + January 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

July 2023 + January 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

July 2023 + January 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

July 2023 + January 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

July 2023 + January 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: Ekocom

Source: https://www.ekocom.cz/wp-content/uploads/2023/11/Fees_valid_from_1_1_2024.pdf and https://www.ekocom.cz/wp-content/uploads/2023/05/EKOKOM_fees_valid_from_1_7_2023.pdf

Currency exchange:

- July 2023: 1 CZK = 0,042 €
- January 2024: 1 CZK = 0,041 €

Note: All fees are from the category “Sales one-way packaging”. The result for the glass bottle, which is cheaper in 2024, only results in different currency exchange.

i. Transparent PET Bottle

July 2023:

Fee indicator:	PET clear transparent, beverage, soft flexible: 13.617 CZK/t → 571,914 €/t PET colored opaque, beverage, virgin up to 3L: 13.224 CZK/t → 555,408 €/t
Calculation	40 g * 0,0571914 ct/g = 2,288 cent 2 g * 0,0555408 ct/g = 0,111 cent Total: 2,399 cent



January 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

ii. Aluminum Can

July 2023:

Fee indicator:	Aluminum, beverage, soft: 5.930 CZK/t → 249,06 €/t
alculation	16 g * 0,024906 ct/g = 0,398 cent



January 2024:

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

iii. **Cardboard Box**

July 2023:

Fee indicator:	Paperboard, non-beverage: 5.208 CZK/t → 218,736 €/t
Calculation	222 g * 0,0218736 ct/ = 4,856 cent



January 2024:

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

iv. **Transparent Glass Water Bottle**

July 2023:

Fee indicator:	Glass, clear transparent, beverage: 1.843 CZK/t → 77,40 €/t Aluminum, beverage, rigid, virgin, up to 3L: 3.099 CZK/t → 130,16 €/t
Calculation	480 g * 0,0077406 ct/g = 3,715 cent 0,6 g * 0,0130158 ct/g = 0,008 cent Total: 3,723 cent



January 2024:

Fee indicator:	Glass, clear transparent, beverage: 1.884 CZK/t → 77,244 €/t Aluminum, beverage, rigid, virgin, up to 3L: 3.269 CZK/t → 134,029 €/t
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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
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v. Canned Tomatoes

July 2023:

Fee indicator:	Metals Fe, non-beverage, rigid, up to 3L: 2.060 CZK/t → 86,52 €/t
Calculation	$44 \text{ g} * 0,008652 \text{ ct/g} = 0,381 \text{ cent}$



CANNED TOMATOES (STEEL)
44 g

January 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

July 2023:

Fee indicator:	Wood and chipboard, non-beverage: 9.079 CZK/t → 381,818 €/t
Calculation	$800 \text{ g} * 0,0381318 \text{ ct/g} = 30,505 \text{ cent}$



WOODEN BOX
30 x 50 cm
800 g

January 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

July 2023 + January 2024:

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



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

ii. Aluminum Can

July 2023 + January 2024:

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



ALUMINIUM CAN
33 cl
16 g

iii. Cardboard Box

July 2023 + January 2024:

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



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

iv. Transparent Glass Water Bottle

July 2023 + January 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



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

v. Canned Tomatoes

July 2023 + January 2024:

Fee indicator:	Ferrous metal: 270 €/t
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CANNED TOMATOES (STEEL)
44 g

Calculation	$44 \text{ g} * 0,027 \text{ ct/g} = 1,188 \text{ cent}$
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vi. Wooden Box

July 2023 + January 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. For the last report and for the July 2023 values, only fees from Finnish Packaging Producers were used. The values cannot be adjusted since the values for Sumi Oy for 2023 are not available anymore. Therefore, the comparison needs to be seen with caution.

i. Transparent PET Bottle

July 2023:

Fee indicator:	Finnish Packaging Producers, Plastic, B2c, Class B: 290 €/t
Calculation	$42 \text{ g} * 0,029 \text{ ct/g} = 1,218 \text{ cent}$



January 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

July 2023:

Fee indicator:	Finnish Packaging Producers, Metals, Aluminum packaging, B2c, Class A: 96 €/t
Calculation	$16 \text{ g} * 0,0096 \text{ ct/g} = 0,1536 \text{ cent}$



January 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

July 2023:

Fee indicator:	Finnish Packaging Producers, Paper fibre, carton and paper packaging, B2C: 86 €/t
Calculation	$222 \text{ g} * 0,0086 \text{ ct/g} = 1,9092 \text{ cent}$



January 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

July 2023:

Fee indicator:	Finnish Packaging Producers, Glass packaging Class A: 98 €/t Aluminum: 96 €/t
Calculation	$480 \text{ g} * 0,0098 \text{ ct/g} = 4,704 \text{ cent}$ $0,6 \text{ g} * 0,0096 \text{ ct/g} = 0,00576 \text{ cent}$ Total: 4,709 cent



January:

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

iv. Canned Tomatoes

July 2023:

Fee indicator:	Finnish Packaging Producers, Steel Packaging consumer, Class A: 96 €/t
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Calculation	$44 \text{ g} * 0,0096 \text{ cent/g} = 0,4224 \text{ cent}$
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January 2024:

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

v. **Wooden Box**

July 2023:

Fee indicator:	Finnish Packaging Producers, Other wooden pallets and other wooden packaging, Class B: 2,60 €/t
Calculation	$800 \text{ g} * 0,00026 \text{ cent/g} = 0,208 \text{ cent}$



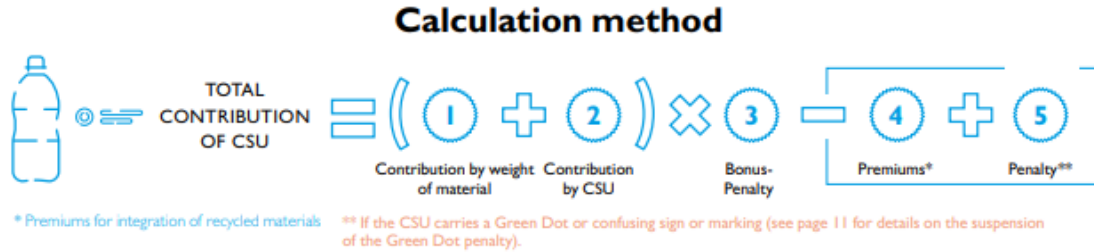
January 2024:

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	$800 \text{ g} * 0,00024 \text{ cent/g} = 0,192 \text{ cent}$

VIII. France

Main PRO: CITEO

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



i. Transparent PET Bottle

July 2023:

Fee indicator:	clear PET bottles: 33,04 ct/kg Rigid PET packaging: 38,91 ct/kg
Units per CSU:	2 → 0,146 ct
Bonus/ Premium / Penalty:	4 % / 0 / 0
Calculation	$(40 \text{ g} * 0,03304 \text{ ct/g} + 2 \text{ g} * 0,03891 \text{ ct/g} + 0,146 \text{ cent}) * 0,96 = 1,4836 \text{ cent}$



January 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

July 2023:

Fee indicator:	Aluminum: 13,03 ct/kg
Units per CSU:	1 → 0,0859 cent



Bonus/ Premium / Penalty:	4 % / 0 / 0
Calculation	$(16 \text{ g} * 0,01303 \text{ ct/g} + 0,0859 \text{ cent}) * 0,96 = 0,2826 \text{ cent}$

January 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

July 2023:

Fee indicator:	Paper/cardboard: 17,07 ct/kg
Units per CSU:	1 → 0,0859 cent
Bonus/ Premium / Penalty:	0 % / 0 / 0
Calculation	$(222 \text{ g} * 0,01707 \text{ ct/g} + 0,0859 \text{ cent}) * 1 = 3,8754 \text{ cent}$



January 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

July 2023:

Fee indicator:	Glass: 1,27 ct/kg
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	Aluminum: 13,03 ct/kg
Units per CSU:	2 → 0,146 cent
Bonus/ Premium / Penalty:	4 % / 0 / 0
Calculation	$(480 \text{ g} * 0,00127 \text{ ct/g} + 0,6 \text{ g} * 0,01303 \text{ ct/g} + 0,146 \text{ cent}) * 0,96 = 0,7329 \text{ cent}$



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

January 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

July 2023:

Fee indicator:	Acier: 4,88 ct/kg
Units per CSU:	1 → 0,0859 cent
Bonus/ Premium / Penalty:	0 % / 0 / 0
Calculation	$(44 \text{ g} * 0,00488 \text{ ct/g} + 0,0859 \text{ ct}) * 1 = 0,3006 \text{ cent}$



CANNED TOMATOES (STEEL)
44 g

January:

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

July 2023:

Fee indicator:	Unprocessed materials from renewable, sustainably managed resources for which a recycling stream or organic recovery is under development (wood, cork): 37,58 ct/kg
Units per CSU:	1 → 0,0859 cent
Bonus/ Premium / Penalty:	0 % / 0 / 0
Calculation	$(800 \text{ g} * 0,03758 \text{ ct/g} + 0,0859 \text{ ct}) * 1 = 30,1499 \text{ cent}$



January 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	$(800 \text{ g} * 0,02019 \text{ ct/g} + 0,1043 \text{ ct}) * 1 = 16,2563 \text{ cent}$

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
- No fee indicator for wood was available

i. Transparent PET Bottle

July 2023:

Fee indicator:	Plastic: 799 €/t
Calculation	$42 \text{ g} * 0,0799 \text{ ct/g} = 3,3558 \text{ cent}$



January 2024:

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

ii. Aluminum Can

July 2023:

Fee indicator:	Aluminum: 820 €/t
Calculation	$16 \text{ g} * 0,082 \text{ ct/g} = 1,312 \text{ cent}$



January 2024:

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

iii. Cardboard Box

July 2023:

Fee indicator:	Carton: 171 €/t
Calculation	$222 \text{ g} * 0,0171 \text{ ct/g} = 3,7962 \text{ cent}$



January 2024:

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

July 2023:

Fee indicator:	Glass: 48 €/t Aluminum: 820 €/t
Calculation	$480 \text{ g} * 0,0048 \text{ ct/g} = 2,304 \text{ cent}$ $0,6 \text{ g} * 0,082 \text{ ct/g} = 0,0492 \text{ cent}$ Total: 2,3532 cent



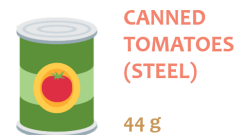
January 2024:

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

v. Canned Tomatoes

July 2023:

Fee indicator:	Ferrous metals: 760 €/t
Calculation	$44 \text{ g} * 0,076 \text{ cent/g} = 3,344 \text{ cent}$



January 2024:

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

vi. Wooden Box

July 2023 + January 2024:

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



X. Italy

Main PRO: CONAI

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

Note: Some fees remained unchanged.

i. Transparent PET Bottle

July 2023 + 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



ii. Aluminum Can

July 2023 + January 2024:

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



iii. Cardboard Box

July 2023:

Fee indicator:	Paper level 1: 5 €/t
Calculation	222 g * 0,0005 ct/g = 0,111 cent



January 2024:

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

iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	Glass: 23 €/t Aluminum: 7€/t
Calculation	480 g * 0,0023 ct/g = 1,104 cent



	$0,6 * 0,0007 \text{ ct/g} = 0,00042 \text{ cent}$ Total: 1,10442 cent
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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

v. Canned Tomatoes

July 2023 + January 2024:

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



CANNED TOMATOES (STEEL)
44 g

vi. Wooden Box

July 2023:

Fee indicator:	Wood: 8 €/t
Calculation	$800 \text{ g} * 0,0008 \text{ ct/g} = 0,64 \text{ cent}$



WOODEN BOX
30 x 50 cm
800 g

January 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/634doafc6db92_gruener-punkt-tarife-2023-detailliert-.pdf and https://www.valorlux.lu/media/652fe3b3e00e5_gruener-punkt-tarife-2024-detailliert-.pdf

Note: No specific indicator for wooden packaging was given (only for B2B).

i. Transparent PET Bottle

July 2023:

Fee indicator:	PV06: 0,1226 €/kg PV10: 0,1538 €/kg
Calculation	40 g * 0,01226 ct/g = 0,4904 cent 2 g * 0,01538 ct/g = 0,03076 cent Total: 0,52116 cent



January 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

July 2023:

Fee indicator:	PV05: 0,0286 €/kg
Calculation	16 g * 0,00286 ct/g = 0,04576 cent



January 2024:

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

iii. Cardboard Box

July 2023:

Fee indicator:	PV02: 0,0444 €/kg
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Calculation	$222 \text{ g} * 0,00444 \text{ ct/g} = 0,98568 \text{ cent}$
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January 2024:

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



iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	PV01: 0,0161 €/kg PV05: 0,0286 €/kg
Calculation	$480 \text{ g} * 0,00161 \text{ ct/g} = 0,7728 \text{ cent}$ $0,6 \text{ g} * 0,00286 \text{ ct/g} = 0,001716 \text{ cent}$ Total: 0,7745 cent



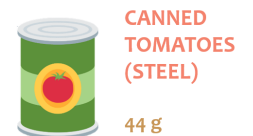
January 2024:

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

v. Canned Tomatoes

July 2023:

Fee indicator:	PV04: 0,0107 €/kg
Calculation	$44 \text{ g} * 0,00107 \text{ cent/g} = 0,04708 \text{ cent}$



January 2024:

Fee indicator:	PV04: 0,0180 €/kg
Calculation	$44 \text{ g} * 0,0018 \text{ cent/g} = 0,079 \text{ cent}$

vi. Wooden Box

July 2023:

Fee indicator:	<i>Not available</i>
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XII. Netherlands

Main PRO: Afvalfonds Verpakkingen (SAV)

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

Please note: Some fee indicators changed in their description (plastic).

i. Transparent PET Bottle

July 2023:

Fee indicator:	Plastic (lower rate): 0,79 €/kg
Calculation	42 g * 0,079 ct/g = 3,318 cent



January 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

July 2023:

Fee indicator:	Aluminum: 0,16 €/kg
Calculation	16 g * 0,016 ct/g = 0,256 cent



January 2024:

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

iii. Cardboard Box

July 2023:

Fee indicator:	Paper and cardboard: 0,012 €/kg
Calculation	222 g * 0,0012 ct/g = 0,2664 cent



January 2024:

Fee indicator:	Paper and cardboard: 0,017 €/kg
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Calculation	$222 \text{ g} * 0,0017 \text{ ct/g} = 0,377 \text{ cent}$
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iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	Glass: 0,06 €/kg Aluminum: 0,16 €/kg
Calculation	$480 \text{ g} * 0,006 \text{ ct/g} + 0,6 * 0,016 \text{ ct/g} = 2,8896 \text{ cent}$



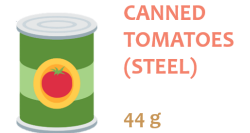
January 2024:

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

v. Canned Tomatoes

July 2023:

Fee indicator:	Other metals: 0,25 €/kg
Calculation	$44 \text{ g} * 0,025 \text{ cent/g} = 1,1 \text{ cent}$



January 2024:

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

vi. Wooden Box

July 2023:

Fee indicator:	Wood: 0,010 €/kg
Calculation	$800 \text{ g} * 0,0010 \text{ cent/g} = 0,8 \text{ cent}$



January 2024:

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

XIII. Portugal

Main PRO: SPV

Source: https://www.pontoverde.pt/aderentes_uk/Green%20Dot%20Fees%202023.pdf

i. Transparent PET Bottle

July 2023:

Fee indicator:	Plastic: 0,1616 €/kg
Calculation	$42 \text{ g} * 0,01616 \text{ ct/g} = 0,67872 \text{ cent}$



January 2024:

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

ii. Aluminum Can

July 2023:

Fee indicator:	Aluminum: 0,0405 €/kg
Calculation	$16 \text{ g} * 0,00405 \text{ ct/g} = 0,0648 \text{ cent}$



January 2024:

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

iii. Cardboard Box

July 2023:

Fee indicator:	Paper and Cardboard: 0,1067 €/kg
Calculation	$222 \text{ g} * 0,01067 = 2,36874 \text{ cent}$



January 2024:

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

iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	Glass: 0,0204 €/kg Aluminum: 0,0405 €/kg
Calculation	480 g * 0,00204 ct/g = 0,9792 cent 0,6 * 0,00405 ct/g = 0,00243 cent Total: 0,98163 cent



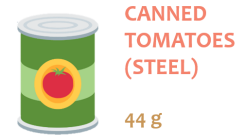
January 2024:

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

v. Canned Tomatoes

July 2023:

Fee indicator:	Steel: 0,1581 €/kg
Calculation	44 g * 0,01581 cent/g = 0,69564 cent



January 2024:

Fee indicator:	Steel: 0,1985 €/kg
Calculation	44 g * 0,01985 cent/g = 0,873 cent

vi. Wooden Box

July 2023:

Fee indicator:	Wood: 0,0564 €/kg
Calculation	800 g * 0,00564 cent/g = 4,512 cent



July 2023:

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

XIV. Romania

Main PRO: ECO-ROM

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

Currency exchange:

- July 2023: 1 Lei → 0,201 €
- January 2024: 1 Lei → 0,2 €

i. Transparent PET Bottle

July 2023:

Fee indicator:	PET: 740 lei/t → 148,74 €/t
Calculation	42 g * 0,014874 ct/g = 0,625 cent



January 2024:

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

ii. Aluminum Can

July 2023:

Fee indicator:	Aluminum: 725 lei/t → 145,725 €/t
Calculation	16 g * 0,0145725 ct/g = 0,233 cent



January 2024:

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

iii. Cardboard Box

July 2023:

Fee indicator:	Carton: 395 lei/t → 79,395 €/t
Calculation	222 g * 0,0079395 ct/g = 1,763 cent



January 2024:

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

iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	Glass: 490 lei/t → 98,49 €/t Aluminum: 725 lei/t → 145,725 €/t
Calculation	480 g * 0,009849 ct/g = 4,728 cent 0,6 g * 0,0145725 ct/g = 0,008 cent Total: 4,736 cent



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

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



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

v. Canned Tomatoes

July 2023:

Fee indicator:	Otel: 400 lei/t → 80,4 €/t
Calculation	44 g * 0,00804 cent/g = 0,354 cent



**CANNED
TOMATOES
(STEEL)**
44 g

January 2024:

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

vi. Wooden Box

July 2023:

Fee indicator:	Lemn: 300 lei/t → 60,3 €/t
Calculation	800 g * 0,00603 cent/g = 4,824 cent



WOODEN BOX
30 x 50 cm
800 g

January 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: https://www.slopak.si/cache/documents/63562b2f4386f6e11afa5424/Slopak_embalaznina_cenik2023.pdf and internal information from EXPRA.

Note: Some values remained unchanged.

i. Transparent PET Bottle

July 2023:

Fee indicator:	Plastika PET: 220 €/t
Calculation	42 g * 0,022 ct/g = 0,924 cent



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

January 2024:

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

ii. Aluminum Can

July 2023:

Fee indicator:	Metal Aluminum: 220 €/t
Calculation	16 g * 0,022 ct/g = 0,352 cent



ALUMINIUM CAN
33 cl
16 g

January 2024:

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

iii. Cardboard Box

July 2023:

Fee indicator:	Papir: 8 €/t
Calculation	222 g * 0,0008 ct/g = 0,178 cent



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

January 2024:

Fee indicator:	Papir: 7 €/t
Calculation	222 g * 0,0007 ct/g = 0,155 cent

iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	Glass: 10 €/t Metal Aluminum: 220 €/t
Calculation	480 g * 0,001 ct/g = 0,48 cent 0,6 g * 0,022 ct/g = 0,0132 cent Total: 0,493 cent



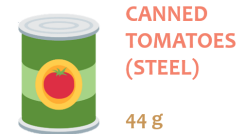
January 2024:

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

v. Canned Tomatoes

July 2023 + January 2024:

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



vi. Wooden Box

July 2023 + January 2024:

Fee indicator:	Les: 35 €/t
Calculation	800 g * 0,0035 cent/g = 2,8 cent



XVI. Spain

Main PRO: Ecoembes

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

Note: Spain introduced ecomodulation for some materials.

i. Transparent PET Bottle

July 2023:

Fee indicator:	PET Packaging: 0,423 €/kg PET rigid: 0,396 €/kg
Calculation	40 g * 0,0423 ct/g = 1,692 cent 2 g * 0,0396 ct/g = 0,0792 cent Total: 1,7712 cent



January 2024:

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

ii. Aluminum Can

July 2023:

Fee indicator:	Beverage cans: 0,048 €/kg
Calculation	16 g * 0,0048 ct/g = 0,0768 cent



January 2024:

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

iii. Cardboard Box

July 2023:

Fee indicator:	Paper and cardboard: 0,088 €/kg
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Calculation	$222 \text{ g} * 0,0088 \text{ ct/g} = 1,9536 \text{ cent}$
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January 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

July 2023:

Fee indicator:	Glass (weight): 0,03045 €/kg Glass (unit): 0,00432 € / unit Other aluminum: 0,034 €/kg
Calculation	$480 \text{ g} * 0,003045 \text{ ct/g} + 0,432 \text{ ct} = 1,8936 \text{ cent}$ $0,6 \text{ g} * 0,0034 \text{ ct/g} = 0,00204 \text{ cent}$ Total: 1,89564 cent



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

January 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

July 2023:

Fee indicator:	Other steel packaging: 0,133 €/kg
Calculation	$44 \text{ g} * 0,0133 \text{ cent/g} = 0,5852 \text{ cent}$



**CANNED
TOMATOES
(STEEL)**
44 g

January 2024:

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

vi. Wooden Box

July 2023 + January 2024:

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

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

XVII. Sweden

Main PRO: 2024: NPA, 2023: FTI

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

Currency exchange:

- July 2023: 1 SEK → 0,086 €
- January 2024: 1 SEK → 0,089 €

Note: A new PRO (NPA) has taken over the responsibilities of FTI. Therefore, fee indicators may change significantly.

i. Transparent PET Bottle

July 2023:

Fee indicator:	Plastic (low): 5,52 SEK/kg → 0,47472 €/kg
Calculation	42 g * 0,047472 ct/g = 1,994 cent



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

ii. Aluminum Can

July 2023:

Fee indicator:	Aluminum: 6 SEK/kg → 0,516 €/kg
Calculation	16 g * 0,0516 ct/g = 0,826 cent



July 2023:

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

iii. Cardboard Box

July 2023:

Fee indicator:	Paper (low): 2,24 SEK/kg → 0,19264 €/kg
Calculation	222 g * 0,019264 ct/g = 4,277 cent



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

iv. Transparent Glass Water Bottle

July 2023:

Fee indicator:	Glass: 0,83 SEK/kg → 0,07138 €/kg Aluminum: 6 SEK/kg → 0,516 €/kg
Calculation	480 g * 0,007138 ct/g = 3,42624 cent 0,6 g * 0,0516 ct/g = 0,0396 cent Total: 3,457 cent



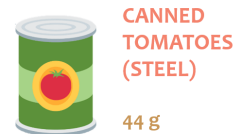
January 2024:

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

v. Canned Tomatoes

July 2023:

Fee indicator:	Steel plate: 4,20 SEK/kg → 0,3612 €/kg
Calculation	44 g * 0,03612 cent/g = 1,589 cent



January 2024:

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

vi. Wooden Box

July 2023:

Fee indicator:	Not available
Calculation	Not available



January 2024:

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

XVIII. UK

Main PRO: VALPAK

Source: <https://www.letsrecycle.com/prices/prns/prn-prices-2023/> and <https://www.packagingnews.co.uk/news/environment/prn-pricewatch/prn-price-watch-week-ending-12-january-2024-15-01-2024>

Currency exchange:

- July 2023: 1 Pound → 1,16 €
- January 2024: 1 Pound → 1,17 €
- Note: PRN prices are derived from a different website, starting 2024.

i. Transparent PET Bottle

July 2023:

Fee indicator:	Plastic: 315 £/t → 365,40 €/t
Calculation	42 g * 0,036540 ct/g = 1,5347 cent

January 2024:

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



ii. Aluminum Can

July 2023:

Fee indicator:	Aluminum: 290 £/t → 336,40 €/t
Calculation	16 g * 0,03364 ct/g = 0,5382 cent

January 2024:

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



iii. Cardboard Box

July 2023:

Fee indicator:	Paper: 25 £/t → 29 €/t
Calculation	222 g * 0,0029 ct/g = 0,6438 cent

January 2024:

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

July 2023:

Fee indicator:	Glass (remelt): 130 £/t → 150,8 €/t Aluminum: 290 £/t → 336,40 €/t
Calculation	$480 \text{ g} * 0,01508 \text{ ct/g} + 0,6 \text{ g} * 0,03364 \text{ ct/g} = 7,2586 \text{ cent}$



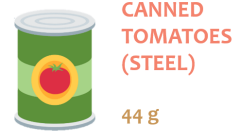
January 2024:

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

v. Canned Tomatoes

July 2023:

Fee indicator:	Steel: 41,5 £/t → 48,14€/t
Calculation	$44 \text{ g} * 0,004814 \text{ cent/g} = 0,2118 \text{ cent}$



January 2024:

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

vi. Wooden Box

July 2023:

Fee indicator:	Wood: 23,5 £/t → 27,26 €/t
Calculation	$800 \text{ g} * 0,002726 \text{ cent/g} = 2,1808 \text{ cent}$



January 2024:

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