



ACR+

www.acrplus.org

DEPOSIT-REFUND SYSTEMS FOR ONE-WAY BEVERAGE PACKAGING IN EUROPE



THE CASE OF ESTONIA

JANUARY 2019



DESCRIPTION OF THE SYSTEM

BACKGROUND FOR INTRODUCING THE SYSTEM

In Estonia, the DRS came into effect on 1 May 2005. Until then, and since 1997 the Package Excise Duty Act¹ was in force, imposing a duty on packaging of goods placed on the market in Estonia. In the beginning, the duty only applied to alcohol beverage containers, e.g. beer bottles, and was later expanded to also cover other type of packaging. The underlining principle was that the packaging recovery targets were set in the Packaging Excise Duty Act, which, if not reached, results in a certain amount of duty to be paid by the producers. However, as the legislation did not foresee an authority responsible for monitoring of the system and solely required packaging undertakings to report their collection rates, the system lacked transparency. In addition to this, because the legislation did not lay down clear regulations as to who is responsible for collecting packaging, the system was unstable and differed widely across the country. This meant that the network of collection points was not well established, nor made accessible to the consumers. The collection points were mainly concentrated in towns and not in rural areas. Lastly, since a uniform deposit had not been established by the Government, the price was determined by the market and thus fluctuated between 25% and 50% of the excise rates².

Several factors contributed to the decision to introduce the DRS in 2005. First of all, the fact that it was difficult to monitor the market-driven system that resulted from the Package Excise Duty Act playing a strong role. Additionally, there was a de facto DRS for refillable bottles that was operational in the country until the beginning of the 1990s and there was still strong and positive memory of this experience among the general population. Lastly, the rapidly changing consumer behaviour also played a part since it was becoming more consuming-oriented rather than environmentally-friendly. On the one hand, the decision to introduce the system did not come without hesitation, as the Ministry of Environment understood the legal and technical challenges of the system. Additionally, it faced opposition from many market forces. To the extent that it hesitated to introduce the system until after the European Court of Justice presented its decision on the German deposit-return case (Case C-309/02). On the other hand, the positive aspects of the DRS, such as the examples of recovery rate of up to 90% from other countries and the possibility to keep refillables on the market and thereby avoid packaging waste was also considered by the Ministry of Environment. Furthermore, the general feeling of the

1 Packaging Excise Duty Act 1996 [[website](#)]. Like all tax-related laws, the Act is governed by the Ministry of Finance who consults with the Ministry of Environment for issues concerning the recovery/ recycling targets.

2 Schlegelmilch K. (ed.) – Green Budget Reform in Europe. Springer-Verlag Berlin Heidelberg 1999. p. 221-222 [[website](#)]

society, that expected the old system to be restored in order to receive the monetary value of the packaging, was strong and evident³.

THE LEGAL BASIS, SCOPE, AND TARGETS. LINKS TO OTHER POLICIES OR INSTRUMENTS

The main requirements for packaging waste are established in two acts: the 2004 Packaging Act and the 1996 Packaging Excise Duty Act⁴. The Packaging Act sets up a DRS for beverage containers, implemented on 1 May 2005. A deposit is established for both reusable (glass and plastic) and non-reusable (plastic, metal, and glass) beverage containers containing soft drinks, no- and low-alcoholic beverages, beer, cider and perry, of a volume between 0.1 and 3 l:

- For the reusable packaging, the retailer is responsible for collecting the packaging and returning it to the packaging company.
- For the one-way packaging, the retailer is responsible for collecting the empty containers and handing them to recovery organisations which are responsible for organising the collection and recovery of the packaging waste. A recovery organisation is a legal entity whose founders, members or shareholders are packaging undertakings.

The legislation foresees that the deposit rate cannot be less than 0.03 EUR per package. The amount of the deposit is set by the Ministry of Environment, upon consultation with the relevant stakeholders and may be amended every 12 months⁵. The deposit rate for both refillable and non-refillable packaging is set at 0.10 EUR, regardless of the material and size, as of 1 February 2015⁶.

The main objectives of the implementation of the DRS are threefold. First of all, it aims at improving the packaging collection rate, recycling and increase reuse of packaging materials. Second, it intends to increase the amounts of recyclable waste materials subjected to the regulation: plastic, glass, and metal. Third, it aims to minimise the impact of packaged goods on cities and the natural environment in form of litter and marine litter⁷.

The Packaging Act foresees that a waste recovery rate shall be calculated as a ratio of packaging waste recovered in a calendar year and the mass of packaging of goods put on the market in the same period of time, expressed in percentage by weight. Failure to meet these targets may cause the materials to become subject to a packaging excise. Initial targets set in 2004 were amended and increased in 2008. As of 1 January 2009, at least 60% of the total mass of packaging waste in a calendar year shall be recovered and 55-80% should be recycled. For separate materials the targets are the following⁸:

Table 1: Targets for packaging waste

Material	Glass	Metal	Plastic
Targets	70% recycling	60% recycling	55% recovery, 45% recycling, 22.5% reprocessing into plastic

3 Eek P – Deposit on drink packages in Estonia [[website](#)]

4 OECD Publishing – OECD Environmental Performance Reviews: Estonia 2017. p. 138 [[website](#)]

5 Act 2014 – The Packaging Act [[website](#)]

6 Eesti Pandipakend – How does the deposit system work? [[website](#)]

7 Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging. p. 5 [[report](#)], and Eesti Pandipakend – Deposit System Estonia: an environmental measure. 2017 [[website](#)]

8 Act 2014 – The Packaging Act [[website](#)]

Higher targets (85%) apply for PET and glass packages which are part of the DRS since such a system is more efficient in terms of collection. Regarding metal packaging, 40% target was set historically, as of 2010 it is 50%. The target for cans is set at a lower level than that for PET and glass bottles, due to the large share of metal cans being exported to Finland for personal use. In general, higher targets for the packaging subject to deposit are meant to incentivise the DRS operator to be effective and to avoid a situation where it would be in favour of increasing the share of unredeemed deposits which are an effective income. In case the recovery targets are not met, the DRS operator pays excise duty on behalf of the packaging producers.

The central piece of legislation governing waste management is Estonia's Waste Act of 2004. The Act specifies obligations for the main actors involved in waste management, establishes procedures for waste permits and includes provisions for fines and other penalties. It also establishes EPR for specific waste streams and provides a legal framework for the establishment of PROs.

In Estonia, waste management is the responsibility of the local governments that organise municipal waste collection and set up separation facilities. In general, the main targets of waste management policies are to increase separate collection of glass, metal, plastic and paper waste as well as facilitate separate collection of bio-waste and reduce landfilling of biodegradable waste. The collection systems vary in different geographical locations depending on the population and the population density, but the most common way of collecting different types of waste includes bring points near residential areas, while door-to-door collection is preferred for private housing estates/neighbourhoods⁹.

Packaging waste falls under EPR and there are four producer responsibility organisations (PROs) licensed by the Ministry of environment: one deals with deposit and recycling of one-way packaging (Eesti Pandipakend) and the other three focus on general packaging (OÜ TVO, Eesti Taaskasutusorganisatsioon and Eesti Pakendiringlus). Companies that do not join one of these PROs must pay a charge for their packaging, as do PRO members when packaging targets are not met¹⁰.

SYSTEM FUNCTIONING, ROLES AND RESPONSIBILITIES OF MAIN STAKEHOLDERS

Deposit operator



**EESTI
PANDIPAKEND**

Eesti Pandipakend (EPP) was established in 2005 in order to organise the activities related to the DRS and the recycling of one-way beverage packaging subject to deposit in Estonia. As the DRS operator, it takes up the following obligations on behalf of packaging companies:

- Collection of packaging in the Republic of Estonia and (organisation of) recovery of the collected packaging in line with the requirements of applicable legislation;
- Acceptance of returned packaging from retailers (EPP collects the packaging from the retailer themselves upon the retailers ordering this service);
- Performance of the Packaging Company's obligations under the Packaging Excise Duty Act, including payment on behalf of the Packaging Company of excise duty on the packaging and pursuant to the procedure provided by applicable law¹¹.

⁹ European Commission – National Factsheet on separate collection: Estonia. 2014 [[website](#)]

¹⁰ Act 2014 – The Packaging Act [[website](#)] and OECD Publishing – OECD Environmental Performance Reviews: Estonia 2017. p. 150 [[website](#)]

¹¹ Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging. p. 5 [[report](#)]

EPP is a state-accredited organisation, founded by and comprised of packaging companies that pay a deposit for every item of packaging put on the market. EPP is a non-for-profit organisation which finances its activities by unredeemed deposit, sold materials and an industry fee. The latter is charged from the producers if the first two means of financing are not enough to cover the company's costs. Additionally, it organises the registration of information about packages used by packaging companies via an online tool. To facilitate the collection of the deposit-subjected packaging, it has established a barcode system which must be used by the packaging producers. In case the recovery targets set by the Ministry of Environment are not met, the DRS operator pays the excise duty on behalf of the packaging producers. To compensate the incurred costs, it would then increase the fee for producers who put on the market packaging from the material of which recovery rates were not high enough. The total revenue in 2017 reached 33.75 million EUR.

Table 2: Eesti Pandipakend income in 2017¹²

Income type	2017 (in EUR)
Deposit Money	29,254,533
Revenue from sold material	3,192,201
Collected operating fees	1,257,579
Other	54,347
Total income	33,758,660

Producers

Producers are obliged to collect and recover packaging of packaged goods placed on the market and the packaging waste that results from it in such a way that the recovery targets set by the Ministry of Environment are reached. The packaging undertakings may transfer these obligations set in the Packaging Act to a recovery organisation on the basis of a written agreement¹³. To fulfil the obligations related to the packaging subject to deposit, these may be transferred to the licensed DRS operator Eesti Pandipakend. Companies that do not join EPP must pay a charge for their packaging, as do PRO members when packaging targets are not met¹⁴. Packaging producers are also obliged to equip the packaging subject to deposit with a deposit marking and with a barcode.

Additionally, upon joining EPP, producers pay a one-time membership fee (100 EUR + VAT) and a one-time registration fee for each packaging placed on the market (52 EUR + VAT). In case a second test of the packaging is necessary the packaging registration fee is increased (104 EUR + VAT). Based on the monthly sales report, the producer pays 0.10 EUR for each packaging unit released on the market as well as a handling fee based on the material and type of the packaging.

Regarding refillable containers, packaging producers themselves are responsible for collecting such packaging from the collection points.

¹² Eesti Pandipakend – Yearly report 2017 [[website](#)]

¹³ Act 2014 - The Packaging Act [[website](#)]

¹⁴ Act 2014 - The Packaging Act [[website](#)] and OECD Publishing – OECD Environmental Performance Reviews: Estonia 2017. p. 150 [[website](#)]

Retailers

Retailers sell packaged goods to the consumers and are obliged to collect the returned deposit-subjected packaging and refund the deposit to the consumers. Thus retailers are responsible for developing the network of packaging collection infrastructure, either at the place of sale or at its close proximity, and for its initial financing. Some of the costs incurred by retailers are reimbursed over time through retailer handling fees paid by the DRS organisation per each collected package. The handling fees depend on the manner of collection, manual or via RVMs, as well as the type of packaging: plastic, metal, or glass.

The reception of deposit-subjected packaging and the refunding of deposits must be organised in a manner that is convenient and accessible for the consumers¹⁵. The collected one-way packaging (representing 86% share of total volume) is handed over to EPP. The refillable packaging (representing 14% share) is directly collected from the packaging companies dealing with refillables (basically 3 major producers).

As of 2017, there were a total of 850 collection points, of which 670 RVMs¹⁶.

Consumers

Consumers can return deposit-subject packaging, marked with EPP label, everywhere where those are sold or to a collection point situated nearby. Packaging without the EPP marking are not accepted for return and are not refunded with a deposit. As a rule, the collection stations and RVM in stores do not give out money but issue a receipt instead. Consumers can use the receipt to redeem their money at the cashier desk, or use the amount as a discount on their bill.

Supervision

The Ministry of Environment controls the national Packaging registry, regulates the work of the PROs and grants licences for their operation. Furthermore, upon consultation with producers (represented by the DRS operator) and other stakeholders, it sets the amount of the deposit for the packages subject to DRS. Additionally, it sets the requirements for deposit markings, such as size, as well as approves the deposit marking that is developed by the DRS operator and is thus its intellectual property through a Ministry decree.

The Packaging Act also creates the Packaging Committee – an advisory body intended to keep the system running smoothly and on target with its goals¹⁷. The Packaging Committee shall be formed by the minister responsible for the area and comprise representatives of relevant ministries, local governments, the Environmental Inspectorate, the Consumer Protection Board, the Veterinary and Food Board, the Competition Authority, the Tax and Customs Board, packaging undertakings, environmental organisations and professional associations of waste handlers, and experts in the area. The function of the Packaging Committee is to coordinate the achievement of the goals arising from the Packaging Act and to act as an advisory body to the minister responsible for the area in developing the packaging and packaging waste policy and accreditation and repeal of accreditation of recovery organisations. In order to fulfil its functions, the Packaging Committee requests, where necessary, information from a recovery organisation, reviews a recovery organisation's written report on the activities in the previous calendar year, and submits its opinion to the minister responsible for the area on the compliance of the activities of a recovery organisation with the conditions of accreditation¹⁸. After 2006-2007, the Packaging Committee deals mainly with the evaluations of yearly reports of all PROs foreseen under the Packaging

¹⁵ Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging. p. 5 [[report](#)]

¹⁶ Eesti Pandipakend – Deposit System Estonia: an environmental measure, 2017 [[website](#)]

¹⁷ The section is based on the information provided in the Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging. p. 7 [[report](#)] and Bottle Bill Resource Guide: Estonia [[website](#)]

¹⁸ Act 2014 - The Packaging Act [[website](#)]

Act. All PROs have to present their activity report, describing in detail their activities, changes on customers and economic activities, service providers, agreements with the Municipalities for container collections systems and collection network, spending on public relations, and actual work done. As an advisory body to the Minister, the Committee should deal also with the cases, where there is evidence that a PRO does not fulfil the requirements set by PackAct. If the case is serious and lasting, then the Committee can make a proposal to revoke activity license.

RESULTS

Over 10 years of operation, the DRS results in continuously reaching and overpassing the set targets. The percentage of deposited packaging sent for recovery in 2017 was: 87.8% of plastic bottles, 88.7% of glass bottles, and 73.5% of cans by total weight put on the market. All collected cans (mainly aluminium) are sold to recyclers in other EU countries (England and France), where they are melted and sold back to the beverage industry meaning a closed loop for cans. The European aluminium can market prices fluctuate between 1,000 – 1,400 EUR per tonne. Collected plastic bottles (mainly PET) are auctioned for recyclers in Estonia or abroad at a price ranging between 175 – 450 EUR per tonne. Part of recycled PET bottles is used in food industry for new food packaging, and part is turned into fibre and goes to the textile industry. Clear glass bottles are recycled in Estonia and turned into new bottles and jars. Coloured glass is sold to recyclers abroad, as there is no coloured glass melting factory in Estonia.

Table 3: Packaging collection rates

One-way package	Actual		Requirement by law	
	2016	2017	2015	2016
Sales, million units	311.25	291.26		
Return, million units	244.96	231.33		
PET return rate	87.4%	87.8%	85%	85%
CAN return rate	74.0%	73.5%	50%	50%
OWG (one-way glass) return rate	86.8%	88.7%	85%	85%

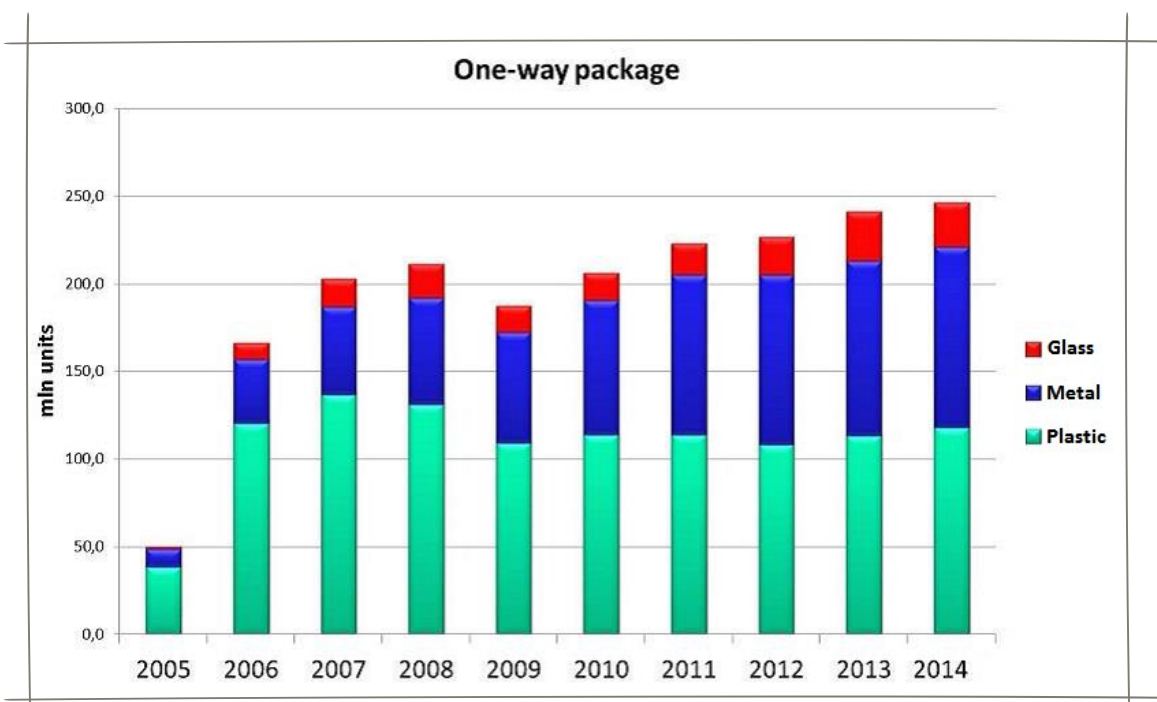


Figure 1: Collected packaging between 2005 and 2014¹⁹

¹⁹ Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging. p. 10 [report]

Despite the fact that the Ministry of Environment did not conduct a quantitative study on littering before and after the DRS was introduced, reduced litter has been observed in the city surroundings and nature areas in link with the high return rates²⁰.

In Estonia, both DRS and container-based collections systems were rolled out at the same time in 2005. This was different to many other countries where the container collection system with one or several organisations of the “green dot” type have been in operation before the DRS was introduced, and as a consequence, they became big opponents of the DRS. As the two systems were introduced at the same time, this was not the case in Estonia. However, the effects of one system on the other have not been measured, yet.

Regarding the perception of the population, 95% of consumers are aware of the deposit system, 81% think that it is important to return containers and 65% regularly returns packaging to a collection point/retailer. This indicates that the system gives a clear message and motivation for the consumers to participate²¹.

In the latest survey of producers and retailers conducted by the DRS operator EPP, both retailers and producers, noted that the DRS system is needed in order to protect the environment. Producers' average was 4.2 points and retailers 4.5 points (on a scale from 1 to 5, in which 5 is the most positive).

A modification to the system was announced by the DRS operator on 1 January 2017. EPP noted that it will only accept bottles and cans marked with special barcodes and deposit stamps proving that the containers and their contents were not sold outside of Estonia. This special regulation because of Latvian boarder trade applies only to alcoholic PET bottles and cans, i.e. if a producer is putting alcoholic beverages in PET bottles or cans on the Estonian market, they have to be marked with an Estonian-based EAN code and cannot be sold in Latvia and other neighbouring countries. The head of waste disposal at the Ministry of Environment explained that the move was prompted by a "sharp rise" in drink imports from Latvia, where customers pay far less in alcohol duties. The Estonian system had hitherto been very open: if a customer bought something in Latvia and returned the packaging in Estonia, since the stamp was the same, he would receive the deposit²².

20 Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging. p. 10 [[report](#)]

21 Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging. p. 10 [[report](#)]

22 BBC News - Estonia clamps down on cheap drink imports. 2017 [[website](#)]

REFERENCES

- Act 2014 – The Packaging Act (2014) [https://www.riigiteataja.ee/en/compare_original/524102014004] Accessed in December 2018
- Eesti Pandipakend – Deposit System Estonia: an environmental measure, 2017 [https://eu.eventscloud.com/file_uploads/6ef776df81a333707936fcbe54f0a685_RaunoRaalGeneralManager-EstonianDepositOrganization.pdf]
- BBC News – Estonia clamps down on cheap drink imports. 2017 [<http://www.bbc.com/news/blogs-news-from-elsewhere-38489485>] Accessed in December 2018
- Botte Bill Resource Guide – Estonia [<http://www.bottlebill.org/legislation/world/estonia.htm#note6>] Accessed in December 2018
- Eek P. – Deposit on drinkpackages in Estonia [<https://issuu.com/pazaliuok/docs/p-eek-deposit-est-pres-riga-8-12>] Accessed in December 2018
- Eesti Pandipakend – Deposit System Estonia: an environmental measure. 2017 [https://eu.eventscloud.com/file_uploads/6ef776df81a333707936fcbe54f0a685_RaunoRaalGeneralManager-EstonianDepositOrganization.pdf]
- Eesti Pandipakend – How does the deposit system work? [<http://eestipandipakend.ee/en/how-does-the-deposit-system-work/>] Accessed in December 2018
- Eesti Pandipakend – Yearly report 2017 [<https://eestipandipakend.ee/wp-content/uploads/2018/07/EPP-aastaruanne-2017.pdf>]
- European Commission – National Factsheet on separate collection: Estonia. 2014 [<https://www.municipalwasteeurope.eu/sites/default/files/EE%20National%20factsheet.pdf>]
- Majandusaasta Aruanne [<http://www.eestipandipakend.ee/wp-content/uploads/2012/01/EPP-aastaruanne-2015.pdf>] Accessed in September 2018
- Nordic Council of Ministers – The Use of Economic Instruments in Nordic and Baltic Environmental Policy 2001-2005, p.97-98 [<https://books.google.be/>] Accessed in December 2018
- OECD Publishing – OECD Environmental Performance Reviews: Estonia 2017 [https://www.keepeek.com//Digital-Asset-Management/oecd/environment/oecd-environmental-performance-reviews-estonia-2017/waste-and-materials-management_9789264268241-11-en#.WqD8dmscTmh] Accessed in December 2018
- Packaging Excise Duty Act 1996 [<https://www.riigiteataja.ee/en/eli/527052014002/consolide>] Accessed in December 2018
- Regions for Recycling (R4R) Project – Good Practices Factsheet 1: System of deposit packaging [http://www.regions4recycling.eu/upload/public/Good-Practices/GP_Tallinn_deposit-packaging.pdf] Accessed in December 2018

Schlegelmilch K. (ed.) – Green Budget Reform in Europe. Springer-Verlag Berlin Heidelberg 1999. p. 221-222

[https://books.google.be/books?id=Ix70CAAAQBAJ&pg=PA222&lpg=PA222&dq=glass+containers+deposit+return+Estonia+1990&source=bl&ots=COwrJbMvVa&sig=BbvitXurM3zTBgJo0VK5EvAu4IU&hl=lt&sa=X&ved=0ahUKEwj7r52_ydrZAhUCKcAKHYSZARUQ6AEISTAE#v=onepage&q=glass%20containers%20deposit%20return%20Estonia%201990&f=false] Accessed in December 2018

Disclaimer

This country report is based on publicly available information gathered by ACR+ team and validated by Eesti Pandipakend.

Deposit-refund systems for one-way beverage packaging in Europe

This country report is part of a wider study of ten deposit-refund systems in Europe covering the following countries: Croatia; Denmark; Estonia; Finland; Germany; Iceland; Lithuania; the Netherlands; Norway and Sweden.

The full report is available for ACR+ members on www.acrplus.org.
