



Joint Position Paper

A deposit refund scheme is not an effective instrument for increasing the collection of portable batteries

Executive summary

In the framework of the discussions on the Commission's proposal on batteries and waste batteries, EPBA, EPTA, ERP, EUCOBAT and RECHARGE highlight a great concern with the introduction of deposit refund schemes. These schemes give a monetary reward which is suitable for consumer products with a high turnover and short timeframe between placing on the market and the actual consumption such as beverage bottles. Portable batteries and accumulators have, however, a much longer lifespan than e.g. beverage bottles. Combined with the rather modest number of battery units a consumer might be able to bring back for collection on an annual basis, we question how this economic reward can be motivating enough to encourage action.

There are various factors that significantly impact the collection results for waste batteries which should be addressed first, among which, the effectiveness of the collection infrastructure, consumer awareness and the calculation methodology for setting the targets.

The greatest concern is that the introduction of deposits schemes will lead to an enormous decrease in the number of collection points since common collection streams, such as schools, offices, municipalities, will not be able to fulfill the refund part. The collection then will have to mainly rely on the retail sector which would be counterproductive to the final aim of making the return as convenient as possible for consumers and to increase collection.

A deposit scheme for portable batteries will also encounter a lot of practical and logistical complexities such as the risk of deposit tourism, fraud and counterfeit. Retailers will have to set up an additional service which will require training of staff who will have to be able to distinguish between the different categories and chemical composition of batteries. The long lifespan of portable batteries and accumulators (compared to packaging material) will result in enormous funds that must be built up and which must remain available for a very long period, so that the deposit paid can still be refunded.

The decrease of the collection points in the network, outlined administrative effort, safety risks, significant potential for fraud, a long start-up phase and an economically irresponsible accumulation of capital are important constraints to a deposit-refund scheme for batteries. These schemes might be effective with other product categories with short lifespans like beverage bottles, but this will not be workable for portable batteries.

To increase collection rates, the most efficient ways are improved and wide-spread education for environmentally responsible behaviour, combined with an efficient and extensive collection infrastructure in all Member States.

Deposit schemes will not result in increased collection of portable batteries

EPBA, EPTA, ERP, EUCOBAT and RECHARGE are committed to the principles of producer responsibility and therefore support workable and efficient battery collection instruments that result in higher amounts of waste batteries being available and collected for recycling in Europe. We are of the opinion that the introduction of deposits schemes will lead to an enormous decrease in the number of collection points in addition to introducing significant logistical and practical complexities. These points are set out in more detail below.

There are a number of decisive factors that have a significant impact on the collection results for waste batteries. Those are key to be addressed first and across the EU before considering to change the overall approach: The effectiveness of the collection infrastructure differs among Member States, insufficient consumer awareness on proper waste disposal, an unsuitable calculation methodology, export of batteries integrated in (W)EEE outside of the EU, batteries not removed from waste electronic devices prior to treatment (although it is a requirement of the WEEE legislation), as well as the fact that consumers hoard batteries at home for several years which especially affects growing battery markets. On the hoarding as well as on the proper waste disposal issue, we feel that there is still a lot that can be done in terms of educating consumers about the need to bring their waste batteries to a collection point. Notwithstanding this aspect, there is no indication in scientific literature that a deposit-refund scheme will improve this situation¹. This has already been a well-addressed topic during the revision of WEEE legislation. The result was that a deposit refund system is not appropriate for increasing collection rates.

Data by different EPR schemes show the importance of a dense collection network in order to make it as easy as possible for the consumer to bring back waste portable batteries. For many of these collection points implementing a refund system will not be possible. Maximum 1/3 of the waste batteries are collected through the retail channel which would be the only channel equipped for handling refunds. The other collection points, such as schools, offices, municipalities, will not be able to collect batteries anymore, as they are not able to fulfill the refund part. As a consequence, they will need to stop their engagement, which as a consequence will lower the density of collection points.

The collection then will have to mainly rely on the retail sector which would be counterproductive to the final aim of making the return as convenient as possible for consumers and to increase the collection (e.g. in Belgium where the total collection is high [59,3% in 2020] but where the retail accounts for less than 20% of collected batteries²). The introduction of a deposit refund scheme will therefore result in a significant reduction of the collection network, with all the negative consequences for the collection results and correct return behavior. In particular, it is worth underlining that the retail network is completely unusable and unsuitable for the collection of larger portable batteries and accumulators.

Also, a deposit for built-in portable batteries and accumulators creates a very undesirable incentive for users to remove the batteries from products themselves, which may lead to undesirable actions by the user when trying to remove built-in batteries unprofessionally. This creates unnecessary safety risks where these batteries must be safely dismantled by the professional organizations.

¹ [See also comparable study that was undertaken to analyse benefits of a deposit fund for waste electrical and electronic equipment \(WEEE\), where the collection rates in the examined countries did not increase as consequence of the introduction of the deposit and was therefore disbanded: Möbius/RECUPEL "Study of a deposit-refund system for WEEE" by Prof. Dr. Bram Desmet and Guillaume Hanquet published in May 2013.](#)

² Bebat Annual report 2020: <https://2020.bebat.be/en>

Deposit-return schemes give a monetary reward which is suitable for consumer products with a high turnover and short timeframe between placing on the market and the actual consumption such as beverage bottles. Given the rather modest number of battery units a consumer might be able to bring back for collection on an annual basis³, we question how this economic reward can be motivating enough to encourage action. This should be seen in combination with the time portable batteries stay in consumer homes which easily exceeds 5 years for primary batteries and can go beyond 10 years for rechargeable batteries. This raises the question on the level of compensation which is needed to stimulate behavioral change in consumers and motivate them to bring back more waste batteries for collection. In fact, contrary to the (plastic) bottles market, the quantity of such batteries used by consumers is much more limited, and their use may last months or years, reducing the user's sensitivity to the monetary incentive. In reality, this may lead to a situation whereby consumers will have paid extra for the deposit upon purchase of the battery, but, given the constraints above, will not be able to recover the deposit at the end-of-life of the battery.

On the contrary, the collection rates may be increased based on the development of the end users' perception of their environmental responsibility, and not on a discharge by a payment. Looking at the recent recommendations from the [Möbius study](#), which was conducted for the Dutch ministry of infrastructure, the key to improve the collection of waste consumer batteries is awareness raising and establishing proper collection systems⁴.

Furthermore, a deposit refund system will require a sophisticated monitoring and clearing process to ensure a correct use and pay out of the collected deposit fees. This would be especially crucial given that products are available cross-border in the internal market⁵. An additional problem is the export outside the EU of batteries and products with built-in batteries which will be very complex to factor it in a deposit refund system.

Practical and logistical complexities of applying a deposit scheme for portable batteries

A deposit scheme for portable batteries will also encounter a lot of practical and logistical complexities.

- There is a clear risk of deposit tourism which will require a clearing mechanism among Member States especially if the level of the deposit is different.
- For retailers, the introduction of deposits refund scheme would mean that an extra service must be set up at the return desk where the different categories of batteries will have to be sorted by type of battery category and chemistry and the users will have to be paid correctly. This requires instruction from the personnel who will have to be able to distinguish between the different categories and chemical composition of batteries. After all, it involves expensive retail space, a time-consuming procedure and the necessary training of staff.
- Portable batteries and accumulators have a much longer lifespan than the products and packaging materials for which deposit systems have now been set up. The lithium-ion packs can be used for 8 to 10 years before being discarded by the user. If reuse/repurposing is further applied (and this is foreseen in particular for lithium-ion batteries), the lifespan will be doubled. Batteries are therefore less suitable for a deposit due to this slow rotational speed.

³ On average, 22 portable batteries are purchased per capita based on data representing the EEA + Switzerland

⁴ Möbius "Verkenndend Onderzoek Inzameling Lithium-Ion Batterijen in Nederland" for Ministerie van Infrastructuur en Waterstaat published on 17.11.2020.

⁵ This issue has already been addressed by the German government when asked about the viability of a deposit system for WEEE and was seen as a disproportionate measure: Drucksache 19/4801

<https://dserver.bundestag.de/btd/19/048/1904801.pdf>

The result would be that enormous funds will be built up that must remain available for a very long period of time, so that the deposit paid can still be refunded (even after 15 or even 20 years for discarded Lithium-Ion batteries which were subject to reuse/repurposing).

- The impact on the system of a large supply of (cheaper) batteries placed on the EU market without a deposit via e-commerce channels.
- A rise in fraud, theft and counterfeit batteries can be anticipated increasing with the amount of deposit depending on the battery value/size.
- In order to avoid counterfeits and fraud i.e. obtaining a deposit for devices that are not subject to a deposit, a forgery-proof marking would have to be introduced that would last for the entire service life of the device/battery. Alternatively, it must be possible to provide forgery-proof traceability of the deposit payment upon purchase.
- The system would need to account for deposit-free batteries, which are already in the market and batteries, which are deposit-free because they were provided in exchange or as a spare or service battery on the one hand, and batteries with deposit, which only entered the market later, on the other hand. This increases the complexity and administrative burden on retailers and collection points even more. Furthermore, it will be difficult to manage consumer expectations for historical batteries for which no deposits were paid but that nonetheless will need to be collected – often times together with newer batteries.
- Many electronic goods are gifted or resold on second-hand platforms. In those cases the deposit is never reclaimed because the system cannot verify the original purchase anymore and therefore does neither incentivize the end-user to bring back old batteries and increase collection rates nor free up the reserved money.
- It is not possible to manage this via a reversed vending machine due to the many shapes and sizes of portable batteries.

Conclusions and recommendations

In conclusion, we see a number of important constraints to a deposit-refund scheme for batteries. These schemes might be effective with other product categories with short lifespans like beverage bottles, but we believe they are not workable for portable batteries. Furthermore, even if a deposit-refund scheme were applied to batteries that are sold after a corresponding regulation comes into force, the deposit will only take effect once these batteries are being disposed of, many years from the entry into force. However, other, more effective measures can already be undertaken today: An enhanced enforcement by national authorities combined with continuous and suitable communication towards consumers will be more effective to increase the overall collection results. This should be complemented by an effective legal framework for increasing voluntary collection points such as schools or publicly managed places to enhance the overall collection point density.

In addition, the discussion on introducing deposits to increase collection results is based on the assumption that the current calculation methods are appropriate and the current collection targets are therefore underachieved. This omits the importance of having a proper and correct calculation methodology for defining the collection targets. The current methodology, based on what is placed on the market (i.e. 3 years average sales) does not reflect the realities of the battery market since it cannot capture the use and end-of-life phase of portable batteries *i.e.* it ignores all batteries which are in use, stored and exported (both new and waste batteries). All these batteries have been put on the market and are accounted for in calculating the collection target, but they are simply not physically available for collection since they are either stuck in households or are no longer on the EU market due to export of (W)EEE in which batteries are included. A deposit scheme will not change this fact.

Finally, the decrease of the collection point network, outlined administrative effort, safety risks, significant potential for fraud, a long start-up phase and an economically irresponsible accumulation of capital are in no reasonable relation to the deficiencies to be corrected within the system and the non-proven effect of deposit systems on collection rates of waste products with longer lifespans.

To increase collection rates, the most efficient ways are improved and wide-spread education for environmentally responsible behaviour, combined with an efficient and extensive collection infrastructure in all Member States.

EPBA The European Portable Battery Association (EPBA) advocates the portable power solutions of its members working with regulators, NGOs and other stakeholders to create an environment of harmonized and fair legislation so costumers may enjoy efficient and safe batteries to be conveniently used and recycled.

www.epbaeurope.net

EPTA The European Power Tool Association represents the interest of European power tool manufacturers. Our 25 member companies represent approximately 70.000 employees in Europe (170 000 worldwide) and 90% of all corded and cordless power tools sold. Power tools are used by professionals, skilled trades men and DIY consumers. The industry's annual turnover is about €7 billion in Europe. EPTA members are committed to the highest possible standards of quality and safety of their tools. Innovation and advanced technologies as well as customer-friendly applications are key to our companies' economic growth, competitiveness and the creation of jobs.

www.epta.eu

EUCOBAT Eucobat is the European association of national collection schemes for batteries. They ensure that all waste batteries are collected and recycled in an ecologically sound way, and by doing so contribute to a better environment.

www.eucobat.eu

ERP European Recycling Platform (ERP) operates compliance schemes for customers throughout Europe. In 2014, ERP joined LANDBELL GROUP, a global platform for extended producer responsibility. ERP and Landbell Group have collected more than 6 million tonnes of packaging, more than 4 million tonnes of e-waste, and over 90,000 tonnes of portable batteries

www.erp-recycling.org

RECHARGE RECHARGE is the European industry association for advanced rechargeable and lithium batteries. Founded in 1998, it is our mission to promote advanced rechargeable batteries as a key technology that will contribute to a more empowered, sustainable and circular economy by enabling decarbonised electricity and mobility, and cutting-edge consumer products. RECHARGE's unique membership covers all aspects of the advanced rechargeable battery value chain: from suppliers of primary and secondary raw materials, to battery and original equipment manufacturers (OEMs), to logistic partners and battery recyclers.

www.rechargebatteries.org