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Study on behalf of the
European Portable Battery Association (EPBA)

The collection of waste portable batteries in Europe in view of the achievability of the collection targets set by Batteries Directive 2006/66/EC

August 2013

Update December 2015
Summary of Changes

Introduction

The collection of portable primary and rechargeable batteries in Europe is mandated by Directive 2006/66/EC which requires Member States to achieve a collection rate of 25% in 2012 and 45% in 2016.

The European portable power industry commissioned consultants Perchards/Sagis to carry out a study investigating and advising on the achievement of mandatory collection rates for portable primary and rechargeable batteries in EU Member States, plus Iceland Norway and Switzerland. In 2014 **and 2015**, EPBA commissioned an update of the study taking into account 2013 data.

The industry intends to use the study as a basis for dialogue with the European Commission, Member State Governments, their agencies and other stakeholders to highlight the limitations of the current regulations and practices as a basis for suggested improvements.

Methodology

The study's findings rely on primary research of publications of collection organisations (notably annual reports) and national authorities, supported by questionnaires and interviews with representatives from these organisations between May-12 to Aug-13. The consultants have attempted to explain the stated collection rates quantitatively by collecting hundreds of data points for each country and trying to identify correlations between them. This has proven challenging for several reasons: A) The sheer magnitude of variables with multiple interdependencies; B) Incomplete and incomparable historical data. (Prior to Batteries Directive 2006/66/EC there were no requirements at EU level to report on portable batteries, and if data were collected they were based on varying definitions); C) Diverging national terminology for key parameters of the schemes and organisations, such as collection sources; and D) Ongoing changes in national legislation and rapid development of scheme implementation as a result of the short time since the transposition of the Directive.

Data sources and accuracy

Accuracy of portable battery collection rates in this report: In the absence of the official collection rates that may be adjusted by statistically significant estimates[1], the collection rates used in this report are calculated using unadjusted POM and collection volume data released by member states and / or organisations. Where current data are not available, earlier data or estimates based on earlier years or partial data from organisations are used.

Per capita volume data: To allow for meaningful cross-country comparisons, it is necessary to use battery collection and POM data on a per capita basis. For consistency, this report only uses EUROSTAT population data to arrive at per capita volumes. Battery organisations and national authorities often use other data sources or data from a single base year. Thus per capita data in this report may vary slightly from those released nationally.

Sources for WEEE data: Eurostat EEE and WEEE data (2006 to 2010) are used for comparison purposes. (As regards batteries, Eurostat provides only one dataset for waste from all batteries 2004 to 2010 without breakdown into portables.)

Acknowledgements

The authors would like to thank the numerous individuals and organisations that have provided data and valuable input to this study. Any errors or omissions remain the responsibility of the authors.

[1] Batteries Directive 2006/66/EC requires member states to calculate the collection rate for the first time for the calendar year 2011 and report results of the four-year period 27 September 2008 to 26 September 2012 to the Commission by 26 June 2013. Commission Decision 2008/763/EC allows Member States to base their calculation of battery sales (POM, placed on the market) volumes on 'collected data or statistically significant estimates based on collected data'. For many countries these estimates may have a significant impact on the official collection rates, especially in those that did not have POM reporting procedures for batteries in EEE in place throughout the period 2009-2012 and those with high uncertainty about the reported collection volumes.

Terminology

'Scheme'	is used to refer to the overarching regime in view of the parties responsible for the management (consumer awareness, collection and treatment) of waste portable batteries.
'Scheme models'	can be distinguished by the parties held financially and/or organisationally responsible for waste battery management. For the purpose of this study, the following main scheme models are identified: 'State fund model', a 'Single organisation model' (also 'Environmental agreement model') and a 'Competing organisations model'.
'Organisation'	is used to refer to entities engaged in coordinating waste battery management and involved in assisting to fulfil producer responsibility obligations. Subject to the national context, 'organisations' may be referred to as 'compliance systems', 'producer compliance schemes', 'producer compliance organisations', 'collective schemes' or 'approved waste managers' which may be subject to licensing or approval requirements, restriction on their ownership, profit objective and business activities, etc.
'POM'	(Placed On the Market) refers to sales volumes of portable batteries that producers are obligated to report.
'Collection rate'	refers to the use of the calculation methodology of Directive 2006/66/EC which divides the collection volume in the current year by the average weight placed on market in current and two preceding years. If, due to unavailability of 3 years of POM data, only the current year POM is used, the text states 'collection rate on current year basis'.
'Batteries Directive'	refers to Batteries Directive 2006/66/EC.

Country short codes

Austria	AT	Greece	GR	Poland	PL
Belgium	BE	Hungary	HU	Portugal	PT
Bulgaria	BG	Iceland	IC	Romania	RO
Croatia	HR	Ireland	IE	Slovakia	SK
Cyprus	CY	Italy	IT	Slovenia	SI
Czech Republic	CZ	Latvia	LV	Spain	ES
Denmark	DK	Lithuania	LT	Sweden	SE
Estonia	EE	Luxembourg	LU	Switzerland	CH
Finland	FI	Malta	MT	UK	UK
France	FR	Netherlands	NL		
Germany	DE	Norway	NO		

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CROSS COUNTRY ANALYSIS

Collection rate achievement

Development of EEA wide reported POM and collection volumes

On the basis of the mostly unofficial data available for this study, **around 214,000 tonnes or an estimated 10.2 billion portable batteries were reported to have been placed on the market of the EEA plus Switzerland in 2014, while around 85,000 tonnes of waste portable batteries were reported as collected. This corresponds to a collection rate on a current year basis of 40%, up from 25% in 2010.**

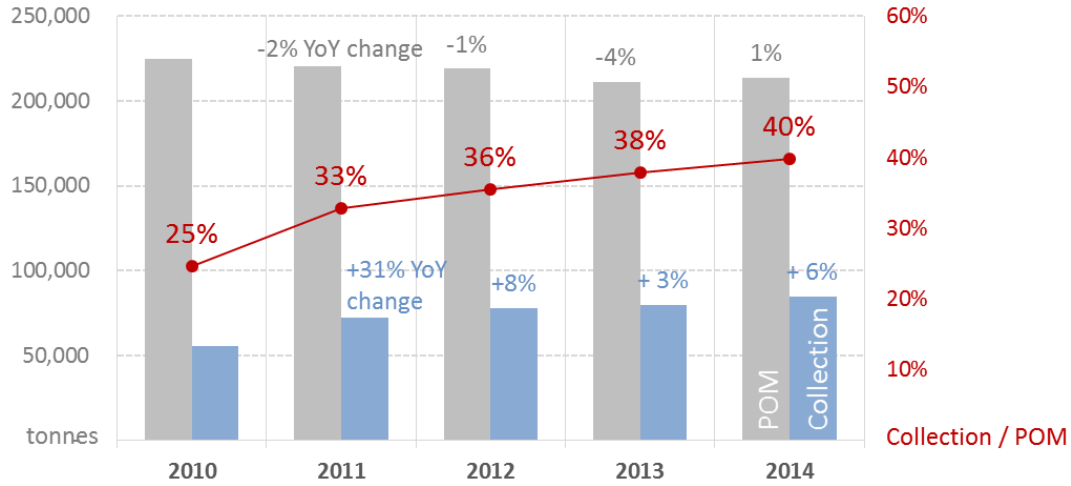


Figure 1: EEA + Switzerland, portable battery POM and collection tonnages 2010 – 2013

POM: Between 2010 and 2013 reported POM volumes declined by over 6% in terms of weight (from 430g per capita in 2010 to 402g in 2013). **In 2014, the downward trend reversed as POM increased by 1.1%.** In unit terms remained largely constant at around 19 units per capita [2].

Collection: Between 2010 and **2014,** reported collection of portable batteries increased by **54%** (from 107g per capita in 2010 to **161g in 2014**). The strong year-on-year growth in 2011 (+30%) declined to 3% in 2013 **but accelerated in 2014 (+6%)**. Few data are available about the number of units of waste portable batteries collected. Estimates from some countries suggest that in terms of units around 18% of batteries POM are collected.

Portable Batteries EEA + Switzerland	***Grams per capita*** [3]					***Units per capita***				
	2010	***2011***	***2012***	*2013*	***2014***	***2010***	***2011***	***2012***	*2013*	***2014***
POM	432	423	419	402	**405**	18.8	18.7	18.8	18.3	**19.3**
Collection	107	139	149	152	**161**	2.3	3.0	3.2	3.2	**3.4**
Collection / POM	*25%*	*33%*	*36%*	*38%*	***40%***	*12%*	*16%*	*17%*	*18%*	***18%***

Table 1: EEA + Switzerland, portable battery POM and collection, gram and units per capita 2010 – 2013

[2] 2002 - 2010 data suggests that POM increased by an annual average of 1-2% in unit terms (including declines after the 2008 financial crisis) and that the growth in numbers was driven by button cells (average weight of 2g) whose volumes have doubled since 2004. Currently button cells contribute about 25% of units and 2% by weight to POM.

[3] Population EEA + Switzerland 518, 520, 523, 525, 527 million in 2010, 2011, 2012, 2013, 2014 respectively.

Largely correlating to population size, six countries (DE, UK, FR, IT, PL, ES, NL) account for nearly 80% of POM and collection of portable batteries. Adding another six (SE, BE, AT, NO, CZ, CH) brings the total to over 90%:

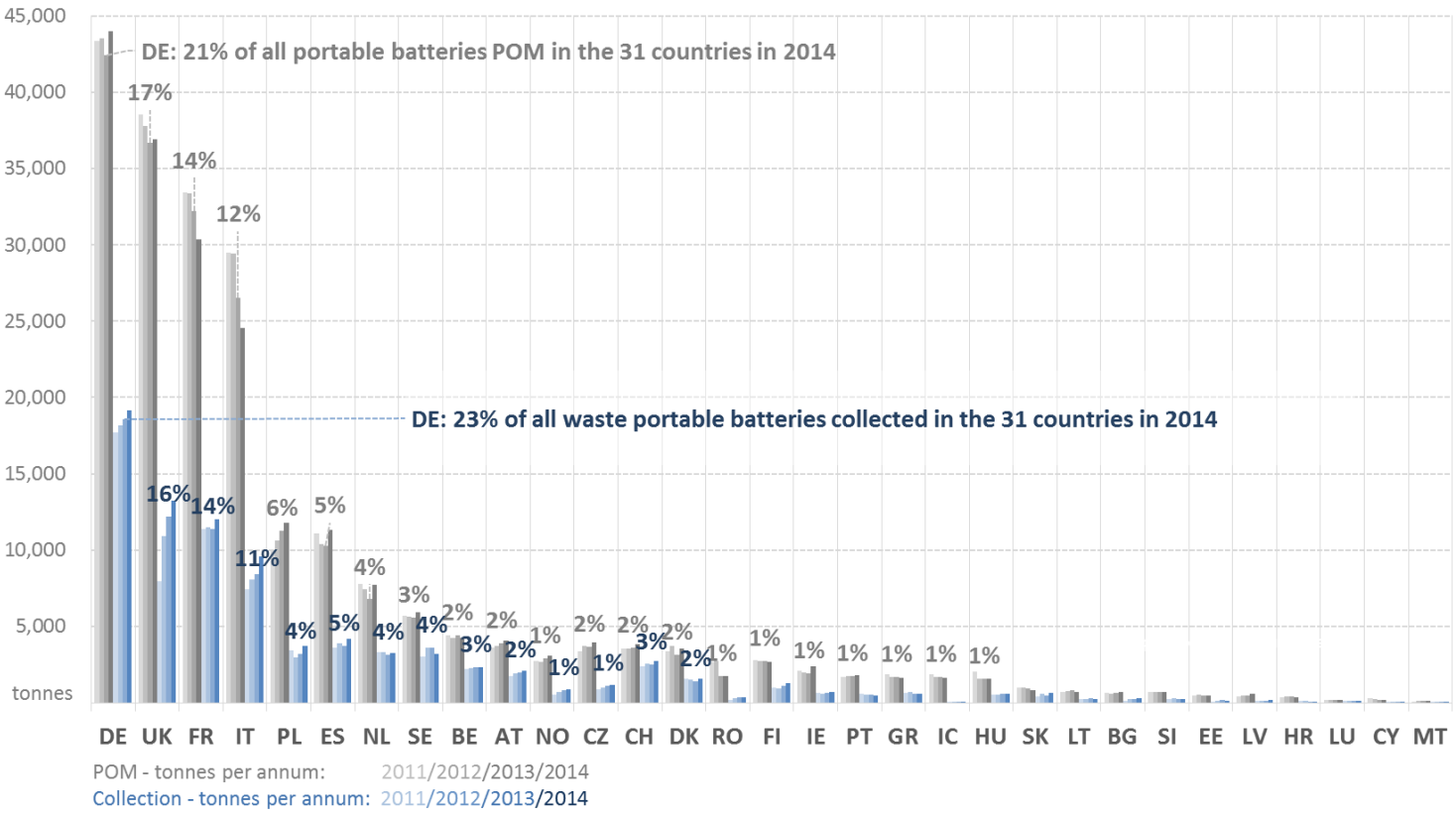


*Figure 2: EEA + Switzerland, portable battery POM and collection tonnages per country 2010 – **2014***

Current collection rates in EEA countries

Collection rates consistently above the 25% (2012) target in all except 3 - 4 countries

On the basis of the mostly unofficial data available for this study, the 25% minimum collection rate mandated by Batteries Directive 2006/66/EC in 30 EEA member countries[4] was achieved in all but 3 countries (CY, MT, RO) in 2012. In 2013, the rate was missed by CY and new member state Croatia (HR), probably missed by RO but far exceeded by MT. **In 2014, CY continued its upward trend but stayed below 25%, HR's rate did not change significantly while MT and EE fell back below 25%.**

7 EEA countries appear to have reached rates above 45% in 2014

These seven countries include 5 EEA countries that have consistently exceeded the 45% rate between 2011 and 2014 (AT, BE, SE, LU, SK) and two (FI and BG) which exceeded 45% for the first time in 2014.

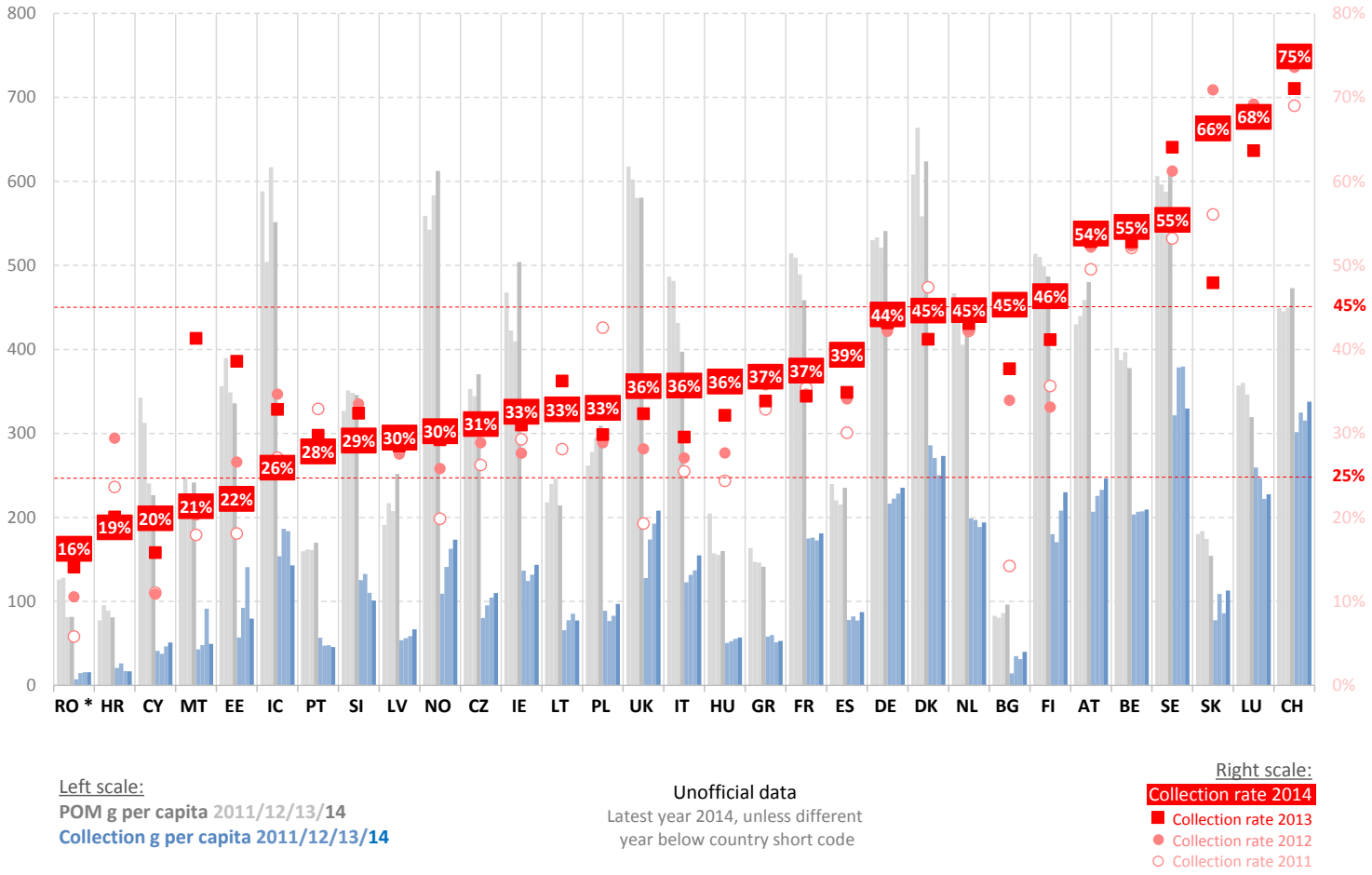


*Figure 3: EEA + Switzerland, portable battery POM and collection per capita and collection rates 2010 – **2014***

[4] 31 countries are signatories to the European Economic Area (EEA) agreement. However, EEA member **Liechtenstein** is part of the Swiss customs territory and as such subject to a large part of Swiss legislation, including waste legislation, and the Swiss producer responsibility organisations operate on its territory. **Switzerland** is not a member of either the EU or the EEA and thus under no obligation to follow EU policy. Switzerland has nevertheless adopted broadly similar rules on batteries as the EU and is included in this study for the sake of completeness.

About 2/3 of EEA countries unlikely to achieve a 45% collection rate in 2016

An extrapolation of the collection rates from 2012 to 2014 suggests around 20 of the 30 EEA area are unlikely to meet the 45% collection rate in 2016.

The straightforward extrapolation suggest that - in addition to 7 EEA countries that exceeded 45% already in 2014 (AT, BE, BG, FI, LU, SE, SK[5]) - 3 countries will reach rates just above 45% (DE, DK, NL). Of the remaining 20 countries,

- **4 are projected to reach rates of 40%-45% (ES, FR, IT, HU),**
- **4 to reach rates of 35%-40% (NO[6], PL, GR, IE),**
- **3 rates between 30% and 35% (CZ, LT, LV) and**
- **7 to remain below 30% (HR, IC, RO, EE, SI, PT, CY).**

The forecast has several limitations: The impact of the economic cycle on POM and strong annual variations of reported collection volumes could lead to substantially different rates in 2016. Moreover, collection rates in a small number of countries may fall if measures were taken to ensure that only waste batteries are counted towards the portable batteries collection rate that had been declared as 'portable batteries' when POM (which the UK has recently done). Additionally, national collection rates would vary if a common interpretation of the term 'portable battery' was applied[7].

Despite these limitations, the forecast strongly suggests that EPBA's position paper during consultation on the Directive in 2005, which considered the 25% target 'ambitious but achievable' but raised concerns about the achievability of the 45% target, remains valid.

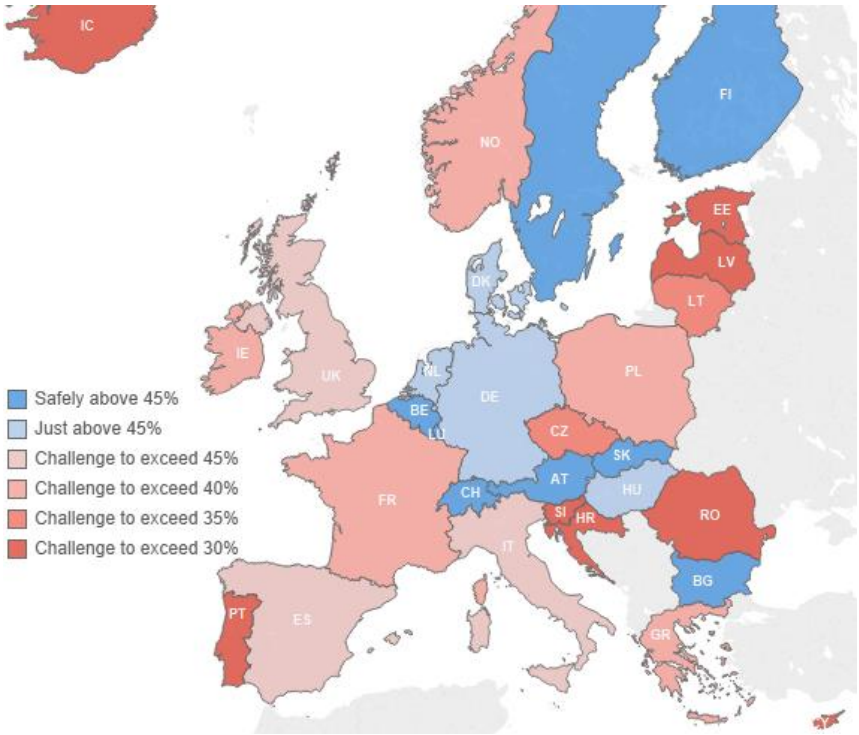


Figure 4: EEA + Switzerland, extrapolation of collection rates to 2016

5 **The SK collection rate is subject to uncertainties about embedded batteries' POM volumes.**

6 **The NO collection rate is subject to uncertainties about embedded batteries' POM and collection volumes.**

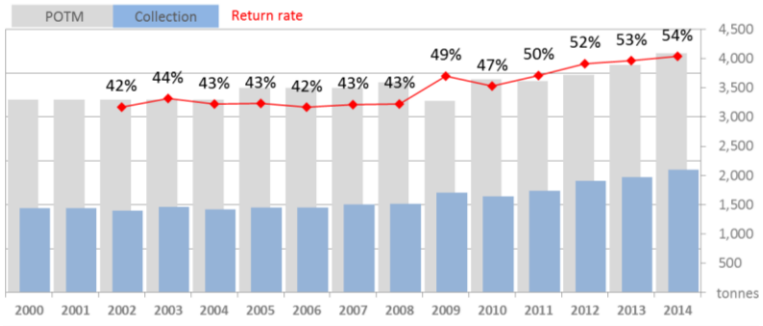
7 We estimate a harmonization of the weight thresholds for portable batteries currently applied in some countries would change national collection rates by up to +/- 3%.

COUNTRY ANALYSES

AUSTRIA

The Austrian battery collection organisation has been built up since the early nineties. In 2008 it moved from a single organisation model to competing organisations. Municipalities continue to play a key role in collection. The clearing house organises awareness creation measures effectively.

Since the mid-nineties, collection rates of 40-50% have been achieved. Since 2011, rates have increased from 50% to **54% in 2014**. **Since 2010 collection volumes have increased steadily by an average of over 6% per year. POM increased steadily by half the rate (+3% annually).**



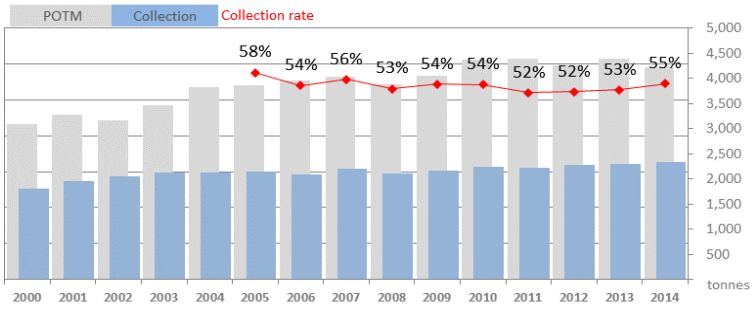
Source: EAK

BELGIUM

Backed up by an eco-tax from 1996 to end 2012, single organisation BEBAT has been in operation since 1996 and achieved a high consumer participation (87%). Municipalities and schools play a key role in collection.

Collection rates of 40% to 60% **(in 2014 55%)** have been achieved since the mid-nineties. BEBAT estimates that the 2011 waste battery collection volume represents 87% of all waste batteries available for collection[8].

As a new agreement between the regional Government and industry governing Bebat is being negotiated (the current one expires at the end of 2015). MinaRAAD, the strategic advisory council on environmental matters to the Flemish Government, noted in March 2015 i.a. that a revised basis for the collection rate ('available for collection rather than POM) seems appropriate in due course and that Bebat should co-finance i.a. a study on BAT on ways to limit metal losses during recycling.



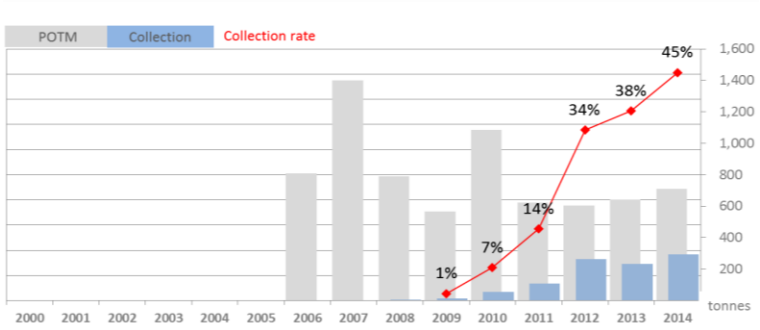
Source: BEBAT; Note: Pre-2010 BEBAT collection data are adjusted by us to account for portable batteries only: Based on confirmed data from 2010-12, the portable batteries share of all collected batteries by BEBAT is assumed to have been 86% in all years.

[8] This translates into ratio POM / 'available for collection' of 1 : 0.6, with 40% of batteries placed on the market not available for collection

BULGARIA

Although batteries have been subject to mandatory take-back legislation and product fee legislation since 2006, the first battery compliance organisations were only approved in January 2009. Producers that do not join a compliance organisation or that comply individually must pay the Product Fee. The fee increased from EUR 2,050 per tonne of portable batteries put on the market in 2008 to EUR 3,100 in 2012. An amendment, published in June 2013, requires the number of collection points of approved compliance organisations to be proportional to their market share.

Collection of waste portable batteries has increased rapidly, from 2g per capita in 2009 t**o 40 g in 2014, a collection rate of 45%. The country's national portable battery collection target as a percentage of POM *in the same year* has been exceeded since 2012, though only by 1% in 2014.**



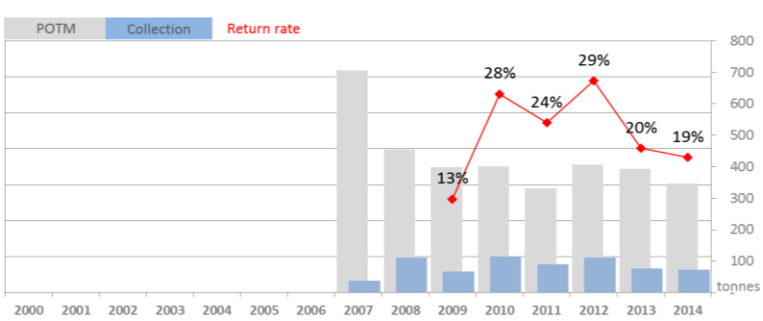
Source: 2013/2014 EEA report. Before EEA Register and Ministry of Environment and Water

CROATIA

Since late 2007, portable batteries (including those integrated into EEE) have been subject to fee payments to the Environmental Protection and Energy Efficiency Fund (EPEEF). In 2013, the option for producers to comply collectively or individually was implemented in framework legislation. **In October 2015, a new Waste Batteries Ordinance removed industrial and automotive batteries from the fund financing regime. The new legislation lowers fees for portable batteries but they are expected to remain subject to the fund regime until at least 2017.**

As of 2013, 8 waste management companies are authorised to collect waste portable batteries of which 3 are also authorised for battery treatment. Payments to collectors and processors totalled around EUR 1.5 million in 2013.

A collection rate of 29% was achieved in 2012, falling to 20% in 2013 and **19% in 2014, as collection decreased by -5% and POM by -16%.**

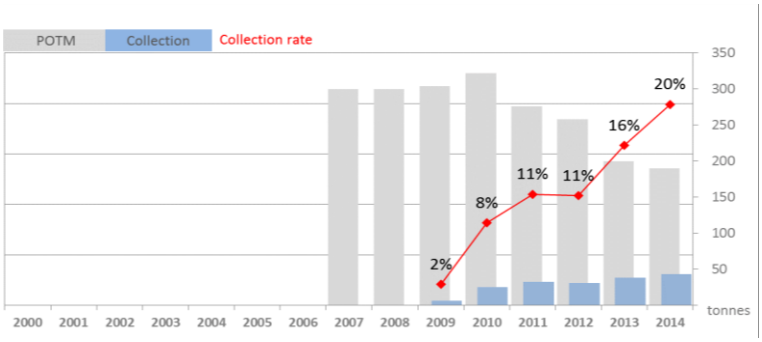


Source: Environment Agency

CYPRUS

The single organisation, AFIS, began collection in late 2009 and collection facilities at municipalities 'green points' have been delayed and are yet to become fully available.

The collection rate climbed from 11% in 2012 to 20% in 2014. Collection volumes increased by an average of 14% annually since 2010 to 51g per capita, while POM declined by an annual average of 12% to a low of 226 g per capita in 2014.

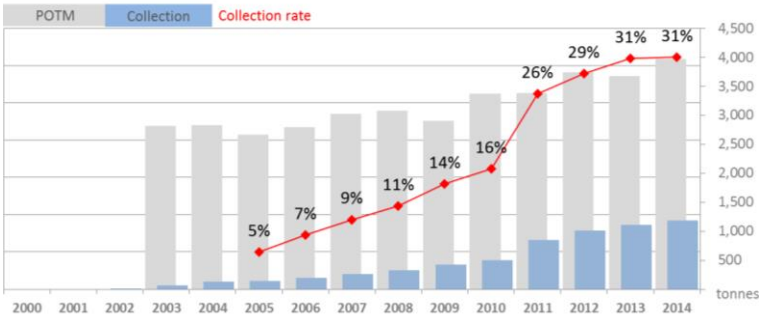


Source: AFIS

CZECH REPUBLIC

On the basis of a 2001 voluntary agreement between the Government and industry, Ecobat was the single battery organisation from 2003 to 2009. Under legislation transposing batteries Directive 2006/66/EC, REMA Battery – related to WEEE organisation REMA - was approved as a second battery collection organisation. **A July 2015 amendment to the Decree introduces comprehensive POM and collection reporting as well as detailed financial disclosure requirements for compliance organisation from 2016. A draft Act on End-of-life Products would, if adopted, introduce tighter authorization requirements for WEEE and batteries compliance organisations.**

Estimates based on partial data from compliance organisations suggest that collection volume has steadily increased and the collection rate reached 31% in 2013. **In 2014 the collection rate remained at 31% as POM increased by 8% and the collection volume by 6%.**



From late 2013 to early 2014, an 'inventory project' involving 7,000 households found 49 portable batteries in the average Czech household: 33 portable batteries were contained in 17 EEE appliances, and of the remaining 16 batteries half were new and the other half used. This is four times the amount that consumers estimated to have in their home (12.7 batteries) in a study for ECOBAT in 2012.

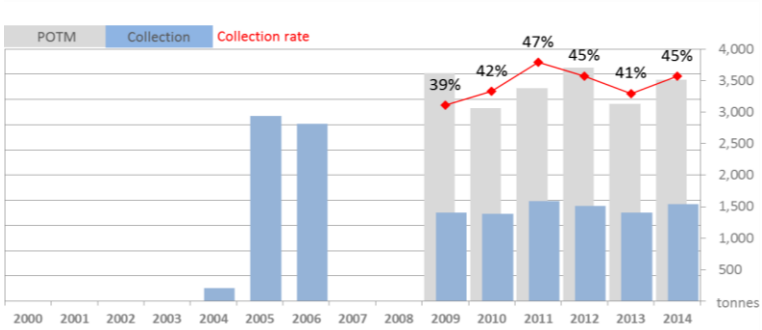
The 'inventory project' was organised by 'Recycling Games' (FB link)', an organisation promoting environmental education (in over 3,000 schools) that was co-founded in 2008 by compliance organisations Asekol, Ecobat, Ecolamp and Elektrowin,

and operating under the auspices of the Ministry of Education. For the project, primary and secondary school students were given the task of counting the batteries in their homes.

DENMARK

From the mid-nineties, a municipal collection organisation for NiCd batteries was financed by producers. Since September 2009, municipalities have been responsible for collection of all portable batteries (financed by a tax on producers of DKK 2,750 (EUR 370) per tonne put on the market) while two battery compliance organisations take back waste batteries from municipalities and from voluntarily-collecting retailers and other organisations. Organisations also finance and organise public awareness creation measures.

From 1997 – 2001, the municipal collection organisation for NiCd batteries had achieved collection rates of 48%-79% for these batteries. **The collection rate for all portable batteries declined from a high of 47% in 2011 to 41% in 2013 and increased to 45% in 2014. Annual fluctuations of around +/- 15% for POM and +/- 8% for collection volumes have been common.** Over 90% of waste batteries derive from municipal collection points. Retailers are not obligated to take back waste batteries.



*Source: Data after 2009: **DPA-System***

A January 2014 **DPA guidance document on the batteries scope** provides clarifications of i.a. the terms 'portable', electric vehicle, battery packs and industrial battery to correctly report batteries:

An academic paper, 'WEEE and portable batteries in residual household waste', released in May 2013, is based on the analysis of 26 tonnes of residual waste from 3,129 households (of which 2,272 single person households) in 12 Danish municipalities in 2011. The study found that the average household[9] disposed of incorrectly (with residual household waste) per annum[10]:

- **1.5 kg or 7 units of WEEE - mostly small WEEE - electric tooth brushes, watches, clocks, headphones, flashlights, bicycle lights, and cables.**
- **208 g or 9 units of batteries - of which 20% in WEEE and mostly primary alkaline, carbon zinc, alkaline button cells. The amount corresponds to 39% of WEEE corrected in proper channels.**

In view of the impact of collection approaches used by municipalities, the study had identified a 'full service system' (including bag or box for each household) and 'public collection points'. However, despite large variations between the two, their impact on the data could not be proven. This justified treating both collection approaches as one sample.

9 **Based on Danish household size distribution, we estimate the sample of the study to cover 9,800 residents. On a per capita per annum basis, the findings thus translate into 486 g of incorrectly disposed WEEE and 67 g of incorrectly disposed batteries in 2011.**

10 **The study provides weight per week and units per year (WEEE 29 g/week, 7 units/year; Batteries 4 g / week, 9 units / year, Toner 1 g / week, cables 7 g /week)**

In June 2014, the MoE released the study **'Best practice for waste battery collection in municipalities'** which investigates the costs of effectiveness of 5 collection approaches based on details provided by authorities in 11 municipalities. **Key finding included:**

- **As regards the effectiveness of five types of collection approaches used by municipalities (all municipalities used several approaches), the closeness of the approach to the resident is found to be key: 'Environmental boxes' distributed to each household to collect hazardous waste including batteries which are returned to hazardous waste collection points and 'Battery bags' distributed to households which residents can dispose of by placing them on top of residual waste bins appear to be the most effective options.**

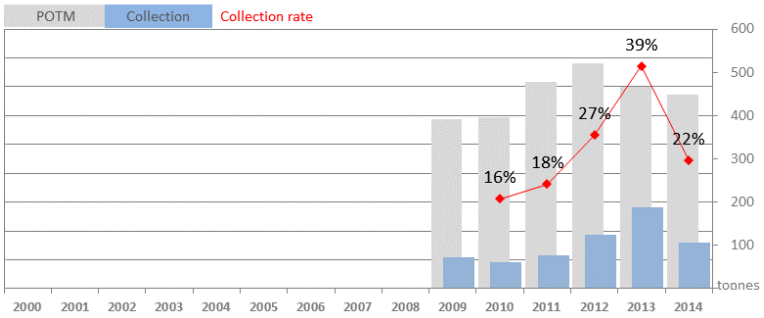
- **Information measures are key to collection costs: Municipalities with low collection costs had either a separate battery collection plan in place, unchanged for a long time and with little need for new information or have made little effort to collect batteries.**

- **The Batteries Directive (Art. 8) and WEEE Directive (Art.5) place 'almost identical' requirements on the collection network (end-users must be able to dispose of the waste products in easily accessible collection points, having regard to population density. A different implementation of the two therefore 'does not seem appropriate'.**

ESTONIA

A separate collection organisation for portable batteries has been in place since the end of the 1990s. Batteries could be returned free of charge to around 100 hazardous waste collection points managed by the municipalities. Since May 2004, producers have been legally responsible for WBAs. However, there were no compliance organisations available until 2009, when two WEEE management organisations - EES-Ringlus and Elektroonikaromu - were approved as waste battery organisations.

The collection rate more than doubled between 2011 and 2013 (from 18% to 39%) **but dropped to 22% in 2014**. POM of portable batteries declined from 520 g per capita in 2012 to 466 g in 2013, but remains about double that of neighbouring LT, LV and PL.



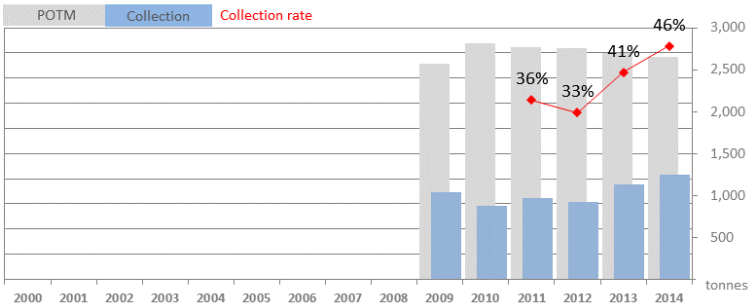
Source: MoE, EES-Ringlus

FINLAND

Though producer responsibility for batteries containing mercury, cadmium and lead has existed since 2004, take-back organisations were set up only under legislation transposing Batteries Directive 2006/66/EC. A new Decree on Batteries was adopted in July 2014 to bring waste batteries legislation in line with the recent Waste Act and a new WEEE Decree.

Since 2009, two producer controlled organisations, Recser and ERP, have been approved as battery organisations. Recser alone manages waste battery collection and awareness campaigns whose costs are shared between the organisations according to market share.

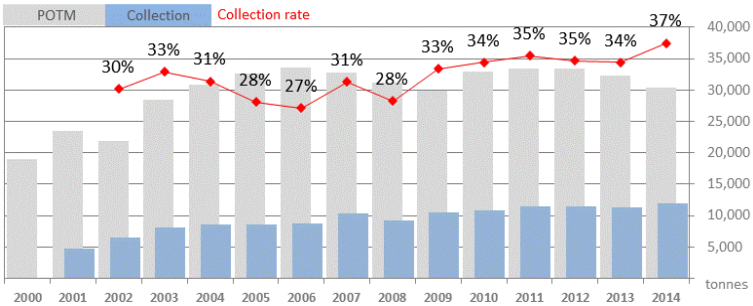
The collection volume increased by 18% in 2013 and 10% in 2014, while POM decreased by -2% in both years. The collection rate moved from 33% in 2012 up to 46% in 2014. Before producer responsibility legislation the collection rate had been approximately 15%.



FRANCE

Since January 2001 producers have had to take back waste batteries collected by distributors, municipalities and other final holders. While large retailers initially ran individual organisations, by 2012, only two producer-controlled battery organisations remained.

Since 2010, collection volumes have increased by an average of 3% annually, while POM declined by an annual average of -2%. The collection rate of 37% in 2014, helped by a 6% decrease of POM. In 2014 Corepile's collection rate of 39.3% and Screlec's of 33.7% remained below the target of 41% set for 2014 in the Government's approval of the organisations.



Source: ADEME reports.

In July 2015, Directive 2013/56/EU was transposed by three legal texts. In September 2015, a Decree was published that lays down new operating requirements for battery compliance organisations applicable from 2016. Notably, it requires compliance organisation to:

- **charge fees based on eco-design criteria[11],**
- **use 'proximity' as a mandatory tender criteria and performance indicator,**
- **boost collection and conduct a study on 'batteries available for collection'.**

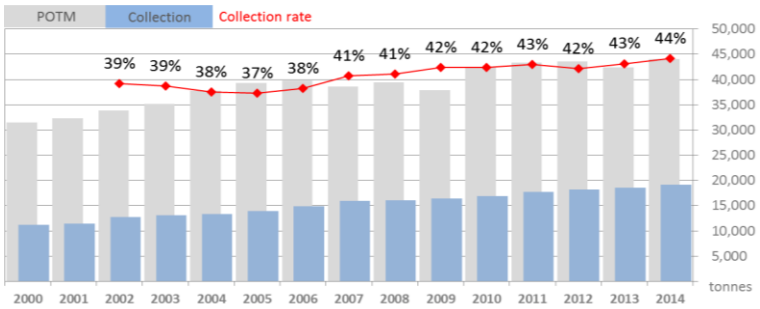
The Government is enabled to set a collection target above the minimum 45% for non-complying organisations.

GERMANY

From 1988 industry operated a voluntary organisation collecting only 'environmentally hazardous' batteries. In response to the 1998 Batteries Ordinance, producer organisation GRS was established, and its special role as the 'joint' organisation was confirmed under the 2009 Batteries Act. In addition, three other portable battery compliance organisations are operating.

Since 2010, the collection volume increased by an annual average of 3%, POM of 1%. The collection rate increased gradually from 37% in 2005 to **44% in 2014.**

There is no mechanism to adjust for over- and under-collection, or to define what actions would be taken if an organisation does not achieve the binding interim collection targets. **The binding interim collection rate target of 40% in 2014 was met by GRS (45%), CCR Rebat (40%) and ERP (41%).**



Source: Organisations' reports

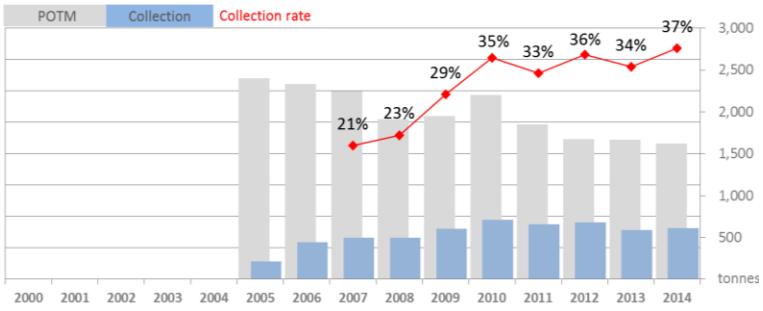
Following pilots in June 2014, GRS introduced its new safety concept in May 2015 in line with new dangerous goods requirements: Batteries are differentiated according to three safety classes: 1) Conventional batteries (green containers, left tray for large batteries), 2) high-energy batteries (yellow boxes and barrels) and 3) Damaged high-energy batteries (red).

[11] **Saline battery (term used for zinc carbon, zinc manganese chemistries): + 50% on top of fee applied to alkalines if use life shorter than that of alkaline batteries.**
Non-lithium button cell: + 50% on top of fee applied to lithium cells if containing mercury and silver oxide.
NiCd: 2.5 × fee applied to NiMH
Lead battery: + 35% on top of fee applied to NiMH, as lead is a heavy metal.
Rechargeable lithium: + 20% on top of fee applied to NiMH due to danger of lithium.

GREECE

A Presidential Decree of 2004 required producers to set up battery organisations and achieve a collection rate of 30% by 2006. In response, AFIS, the only collective organisation for batteries, was established by battery importers as a non-profit company. A new Decree transposed Batteries Directive 2006/66/EC in 2010 and allowed producers of batteries in EEE to comply through the WEEE organisation, and no longer report batteries POM from 2011.

The collection rate increased strongly from 2005 to 2010 and has since stayed around 35%. **In 2014, a rate of 37% was reached.** From 2010 – 2013, POM volumes fell by 30% due to the economic crisis.

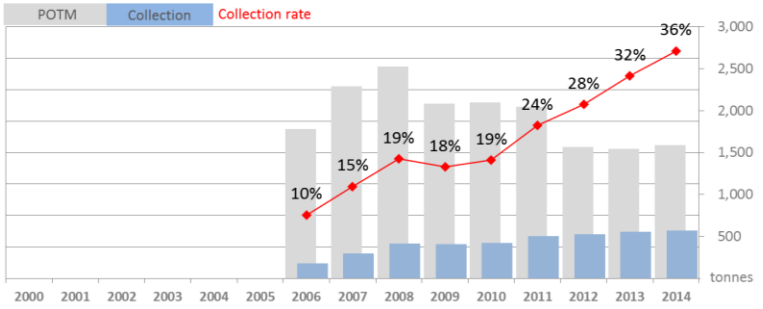


Source: AFIS

HUNGARY

Since 2000, the Product Fee Act has applied to accumulators (but not single charge batteries). From 2005 collective compliance became a feasible compliance option and three producers organisations, RE'LEM, Re-bat and CCR Rebat have been operational since. These have worked well, leading the Government to maintain this approach when it replaced producer compliance organisations for most other waste streams with state controlled coordination from 2012. A new Batteries Decree required the organisations to ensure at least one collection point in each village with over 100 inhabitants from 2013, which lead to a five-fold increase in the number of municipal collection points.

The collection rate increased from 28% in 2012 **to an estimated 36% in 2014. While collection volumes increased steadily 4%-5% since 2012**, the increase in the collection rate was assisted by a 30% decline in POM in 2012, probably due to delayed effects of the 2008/9 economic crisis.

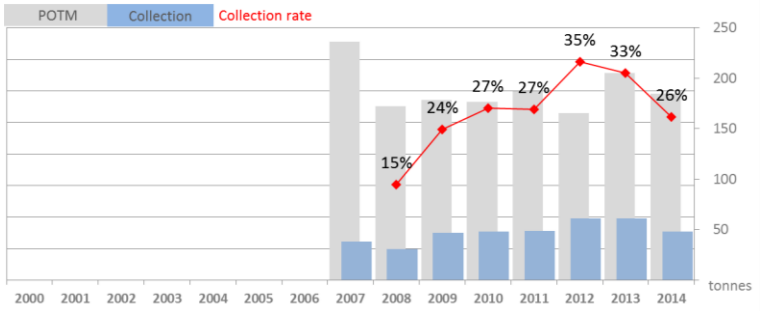


Source: Post 2010, RE'LEM

ICELAND

Iceland's **1999 Regulation on Batteries** imposed eco-fees on batteries, to be charged by customs on import of batteries. This was to fund the separate collection of hazardous wastes, including waste batteries, by the government's Icelandic Recycling Fund. Legislation transposing Batteries Directive 2066/66/EC extended the scope of batteries covered and maintained the existing financing and collection mechanisms. The Fund must ensure that battery collection targets are met. An amendment to the Act on Waste, adopted in May 2014, i.a elaborates the Fund's monitoring and data collection obligations.

In 2014, the collection rate fell to 26% (from 33% in 2013) as collection decreased by -27% and POM by -11%. Due the small total volumes, POM and collection are subject to strong annual fluctuations.

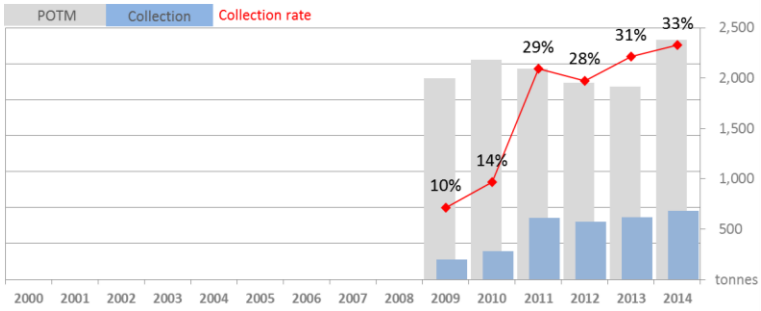


Source: Icelandic Recycling Fund

IRELAND

Though producer responsibility for portable batteries has existed since 2004, no compliance organisation was set up until September 2008, when the two Irish WEEE organisations were also approved as the only two battery organisations (three years after their approval as WEEE organisations). New Batteries Regulations published in June 2014 notably aligning enforcement related provisions with those of the 2014 WEEE Regulations.

The collection rate increased quickly to 29% in the first 3 years after the legislation came into force. **In 2014, a rate of 33% was reached. In 2014, POM increased by 23% over 2013 to a peak of 504 g per capita (after having declined in each year since 2010) while collection increased by 10%.**



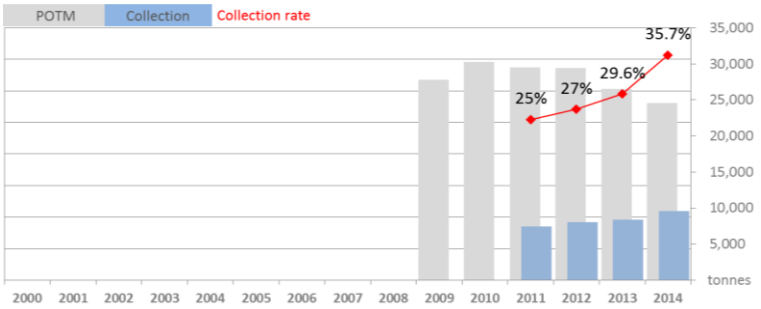
Source: Environ.ie

A Producer Responsibility Initiative (PRI) Review of the WEEE & Batteries regimes, released by the Government in 2014, recommended that battery public awareness campaigns should be conducted under a single brand. The assessment also provided detailed recommendations for meeting the EU 45% collection target in 2016.

ITALY

Decree 188/2008 transposing Batteries Directive 2006/66/EC entered into force in December 2008. Battery producers currently comply through 13 organisations for portable batteries of which all except COBAT originate from WEEE organisations. The coordination centre CDCNPA, which acts as interface between all organisations and collectors including municipalities, became operational in late 2012.

Coordination Centre data show that a collection rate of 25% was reached in 2011, the second year after the take-back obligation came into force. **A collection rate of 36% was reached in 2014, helped by consistently falling POM (2014 POM was 17% lower than in 2011) and steadily increasing collection (+28 over 2011).** It should be noted that Coordination Centre's data, in particular POM, do not fully reflect the entire market[12].

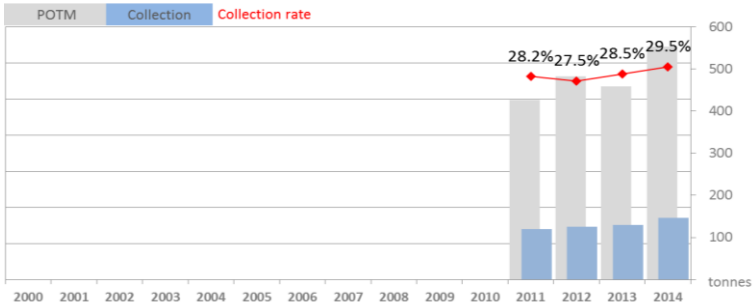


Source: CDCNPA; Data do not fully reflect those declared to national authorities

LATVIA

A Natural Resources Tax (NRT) has applied to separately sold batteries since July 2006, and since January 2011 also to batteries in EEE. Producers could be exempted from the tax by achieving collection targets. In 2006 five WEEE organisations were approved as battery organisations. Legislation transposing Batteries Directive 2006/66/EC came into force in May 2011, **while the NRT – significantly increased from 2014 – continues to be maintained as enforcement instrument.** The Government currently lists 15 waste management companies and producer controlled organisations as battery organisations.

A collection rate of over 28% was achieved in 2013, **moving up to 29.5% in 2014 despite a strong increase of POM (+21%). Since 2011, collection has increased on average 6% per annum, POM 8%.**



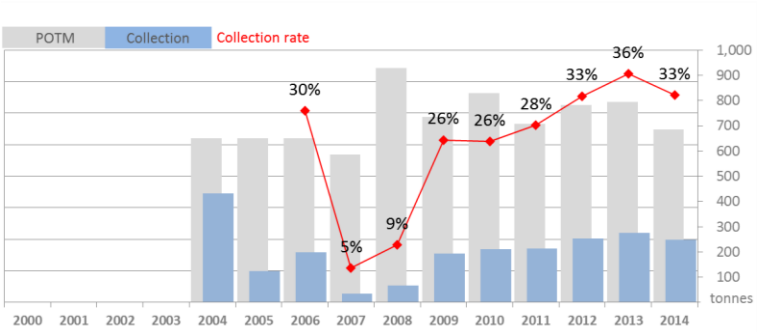
Source: Unofficial data from organisation

[12] Reasons: a) The reporting of POM to the Centre is not mandatory for compliance organisations. b) the Centre's data do not include those of individually complying producers (e.g. producers of B2B EEE with integrated batteries) as they are not required to join the Coordination Centre. c) There are no penalties for compliance organisations that do not join the Centre and reportedly a few of these exist.

LITHUANIA

Since 2003, producers have had to pay a natural resource tax (NRT) on batteries. From 2008, producers could avoid the tax if they achieved collection targets by buying recycling notes from recyclers or through collective organisations. The collection target was lowered from 80% in 2011 to 25% in 2012, but the tax effectively increased by a factor of 6, which boosted the membership of the two producer controlled compliance organisations.

The collection rate increased from 26% in 2010 to a peak of 36% in 2013 **and fell to 33% in 2014, as collection declined by -11% and POM by -16%.**

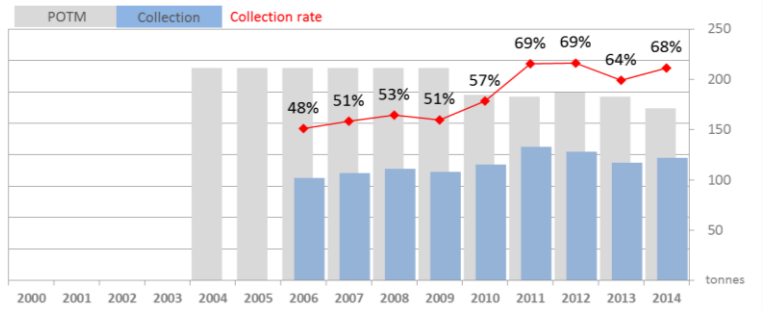


Source: Post 2011: Various Government sources; Before 2009: MoE[13] and various sources

LUXEMBOURG

The 1994 Waste Management and Prevention Law introduced a household waste category for 'problematic refuse' needing special treatment, which included batteries and accumulators. The 2008 Law on Batteries and Waste Batteries, transposing Batteries Directive 2006/66/EC, required the existing public collection of batteries through the SuperDrecksKëscht programme to be preserved while now requiring producers to fund the system. Producer controlled battery system Ecobatterien, established in 2009, thus replaced municipalities as the contracting party to the agreements with the private waste collection companies that operate the SuperDrecksKëscht programme.

Ecobatterien data show a collection rate of **64% in 2013 and 68% in 2014. Since 2012, POM has decreased from 360g to 320 g per capita. The comparatively low POM level is likely due to a significant amount of batteries being purchased by Luxembourg residents in neighbouring countries.**



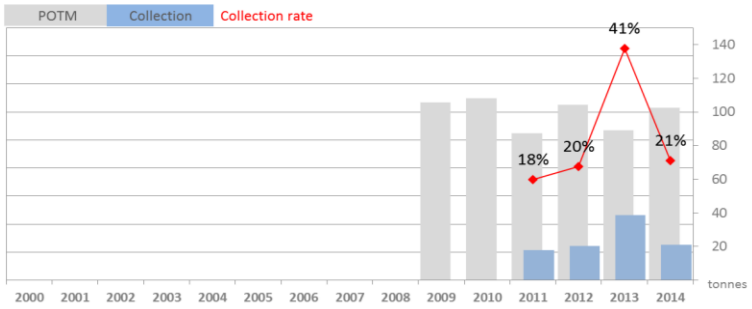
In September 2014, Ecobatterien simplified and clarified battery classifications: Notably, a weight threshold of 3 kg for portable batteries was introduced from 1 January 2015. More specifically, all batteries with a weight of 3 kg or below must be reported as portable batteries, including batteries of e-bikes. Previously a 2 kg threshold was applied.

13 The Ministry of Environment attributes the wide fluctuation of collection data to changes in the reporting organisation.

MALTA

Since September 2004 the Eco-Contribution Act has applied an eco-contribution to batteries, but not to batteries integrated into EEE. Regulations of 2008 provide for exemptions from the tax for members of an approved battery organisation but have not yet come into force. Regulations transposing Batteries Directive 2006/66/EC came into force in May 2010. However, no battery organisations have been approved yet. Since 2003, Government controlled and financed **WasteServ** has organised the separate collection of portable batteries. **Legislation published in August 2015 removed the eco-contribution from EEE but it is retained on batteries.**

According to MEPA data, a portable battery collection rate of 20% was achieved in 2012, increasing to 41% in 2013 **but falling to 21% as collection decreased by -84% while POM increased by 19% over 2013.**

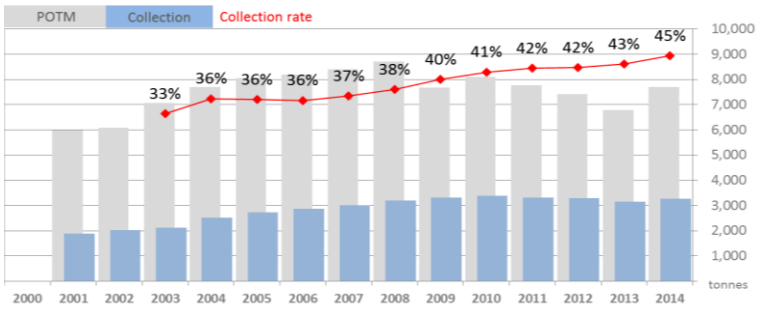


Source: MEPA

NETHERLANDS

A Government Decision of 1995 held producers of batteries weighing 1kg or less responsible for collecting 90% of waste batteries by 1999 through approved waste plan(s). In mid-1995 the Battery Foundation (Stichting Batterijen, or Stibat) set up a collective organisation to take back waste batteries. In 2008, a Batteries Regulation transposed Directive 2006/66/EC and obliged retailers to take back batteries, and producers to reach the 25% collection target in 2012.

From 2010 to 2013, the collection rate increased from 41 to 43% as collection and POM declined steadily. **In 2014, both downward trends reversed, with POM increasing by 12% and collection by 3%. The collection rate reached close to 44.6%,** despite extensive communication over many years, which illustrates the challenge of reaching the 45% collection target.



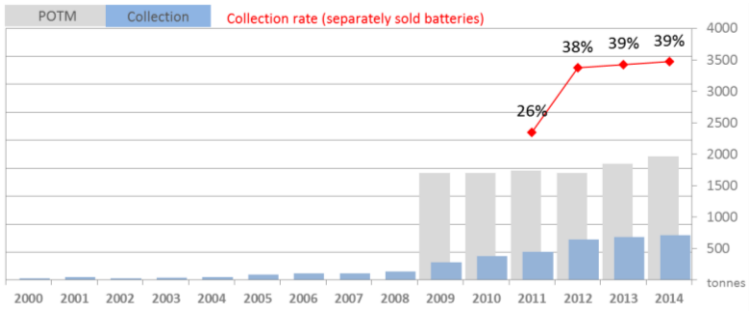
Source: Stibat

While the number of Stibat retail collection points increased almost 40% from 2012 to 2014, the volume of waste batteries returned from retailers increased only slightly (+3% in 2014), suggesting diminishing marginal returns from additional collection points.

NORWAY

Since July 2000, Regulations on Waste Recycling have imposed take-back and reporting obligations on producers of lead-acid, industrial nickel cadmium and rechargeable batteries only. An amendment of October 2012 transposed the producer responsibility provisions of Directive 2006/66/EC. The transposition notably distinguishes between compliance requirements for separately sold batteries and batteries integrated into EEE. A further amendment in November 2013 tightened the reporting requirements for recycling companies. Since 1999, Rebatt AS – which operates under the name Batteriretur - has been the only collective organisation for separately sold portable batteries. Producers of batteries integrated into EEE comply through one of five competing WEEE organisations.

As regards POM and collection of **separately sold batteries**, Batteriretur's data show a collection rate of 26% in 2011, 38% in 2012 **and 39% in 2013 and 2014, as POM increased at about the same rate as collection volumes.** The overall portable battery collection rate is subject to uncertainties about **POM and collection volumes of batteries embedded in EEE**. We estimate for the **overall portable battery collection rate** was 26% in 2012**, increasing to 30% in 2014. However, this number may not include a substantial amount of batteries removed from WEEE during treatment.**

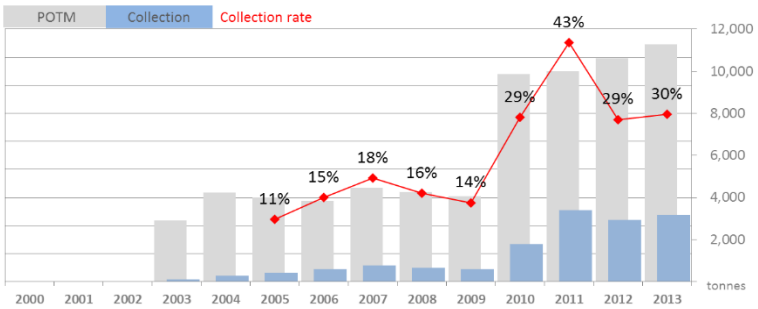


Source: Rebatt (Batteriretur)

POLAND

Since 2002, the Act on Entrepreneurs' Obligations has required producers to individually achieve collection targets and pay a product fee if the targets are not met. The Batteries and Accumulators Act of 2009 left the collection target / product fee mechanism in place but did not define or regulate compliance organisations. A comprehensive amendment to the Batteries Act introduces *inter alia* a formal role for compliance organisations from 2015. Around 50 organisations **(2014: 56)** provide compliance services, including battery organisation REBA and entities set up by WEEE organisations, such as ERP Poland.

The collection rate increased steeply to 43% in 2011 while showing implausible amounts of lead batteries. This issue was cleared in 2012, when the collection rate fell to 29%. **In 2013 and 2014, collection increased (in 2014 alone by 15%) and the collection rate moved up to 30% in 2013 and 33% in 2014. About 25% of producers missed the national collection target of 30% in 2013 and 35% in 2014 and the 40% in 2015 remains challenge.**



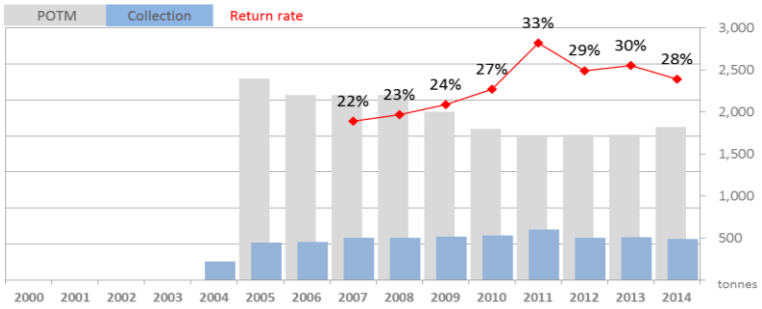
Source: Post 2010 GIOS reports; Pre 2010: REBA collection only

Environment Agency GIOS suggests to increase collection by significantly increasing the product fee and engaging municipalities effectively in waste battery collection through amendments to the Public Cleanliness Act.

PORTUGAL

In response to the 2001 Decree on Batteries, which required producers to take back waste batteries through a licensed recovery organisation, not-for-profit battery organisation Ecopilhas was set up in 2002. Under the 2009 Batteries Decree Law transposing Batteries Directive 2006/66/EC, the two WEEE organisations AMB3e and ERP Portugal were licenced as battery organisations in addition to Ecopilhas in March 2010. Organisations are tightly regulated. Each must achieve collection targets, increasing annually from 25% in 2010 to 45% in 2015. Municipalities remain responsible for collecting waste batteries and must be compensated by the organisations for their services.

After a peak of 33% in 2011, the estimated collection rate is 28% in 2014. Collection peaked in 2011 and since 2012 has remained largely constant at pre-2011 levels. POM has remained low (160 g per capita) since the 2008 economic crises but increased in 2014 (+5%). Due to the two licensed producer registers (Ecopilhas as well as ANREE - used by ERP and AMB3E), POM data are uncertain: Our estimate is based on collection data released by producer register **ANREE** and data from Ecopilhas[14].



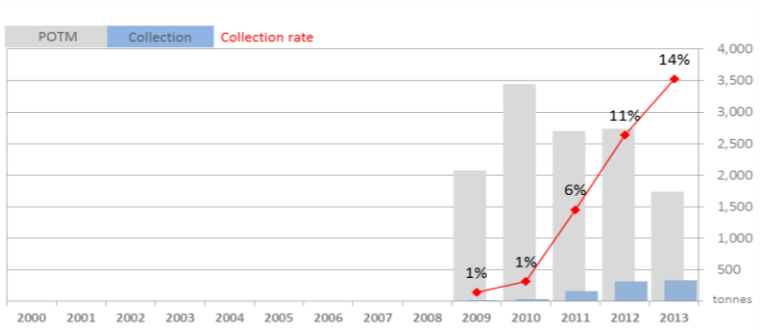
Source: Estimates from organisations, notably Ecopilhas

[14] Ecopilhas prefers to announce its collection results in units of batteries collected. This number increased from 8 million in 2004 to 16 million in 2005 and 20 million in 2009, and appears to have remained at that level.

ROMANIA

Although Batteries Directive 2006/66/EC was transposed by a Decree in 2008 and producers had to be registered from July 2009, subsidiary legislation required for implementation was delayed until November 2011 and the first battery organisation was only approved in April 2012. **Romania is one of a the few 'new' member states that transposed the Batteries Directive without a state fund mechanism. Draft legislation of October 2015 proposes a similar mechanism to fine producers and compliance organisations for missing collection targets.** Currently four battery compliance organisations are operating.

The progress of awareness creation and battery collection activities has been impressive. Collection volumes doubled between 2011 and 2012, and increased by 7% in 2013, while nominal POM decreased by -58% in 2013. The 2013 collection rate is estimated at 14%. **Data for 2014 are not available.**

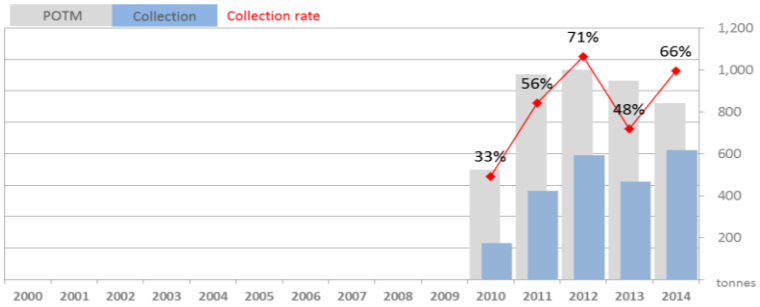


Source: Ministry of Environment (MoE); 2013 MoE estimates

SLOVAKIA

Since 2001, the Product Fee Act has subjected separately sold batteries to fees of the Recycling Fund on 100% of batteries placed on the market less the amount of batteries collected by producers themselves or collected on their behalf. Though the producer responsibility provisions of Batteries Directive 2006/66/EC had not yet been transposed, some of the 16 approved WEEE organisations provide battery collection services to producers to reduce the product fee payments for their members. **A new Waste Act, in force from 2016, introduces full EPR (competing organisation with clearing house), requires compliance organisations to be controlled by producers and abolishes the Recycling Fund. Implementing regulations were approved in late November 2015.**

Preliminary Government data indicate a collection rate of 33% in 2010, 71% in 2012, 48% in 2013 **and 66% in 2014**. The exceptionally high rates are supported by **very low POM (148 g per capita), presumably resulting from insufficient reporting of batteries in EEE. Collection volumes on a per capita basis are comparable to those in neighbouring countries.**

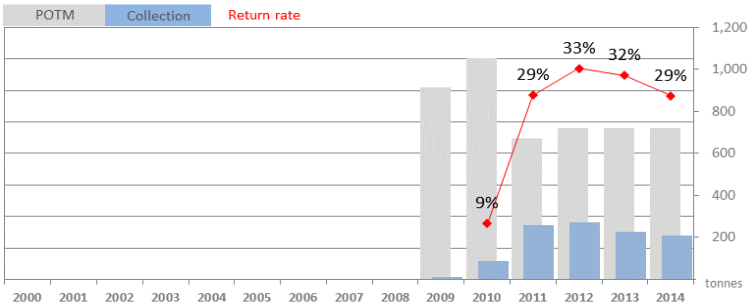


Source: Preliminary data from Ministry of Environment

SLOVENIA

Since 2003, municipalities have been obliged to separately collect hazardous wastes including batteries. They remain responsible for financing their collection infrastructure. In 2008 and 2010, Decrees transposing Batteries Directive 2006/66/EC required individual producers of separately sold batteries to achieve collection targets by taking back waste batteries from retailers, municipalities and their own collection points through approved waste management plans. Three WEEE organisations, ZEOS, Interseroh and Slopak offer 'joint' battery management plans that were approved in November 2009. **Requirements on compliance organisations ('holders of producers' joint plans') stipulated by the 2015 WEEE Regulation (not-for-profit objective, compensation of municipalities' cost) may affect batteries producers as batteries and WEEE plans are held by the same organisations.**

Collection increased quickly from 5 g per capita in 2009 to 125 g in 2011. In 2011, POM decreased -57%, resulting in a peak of the collection rate peak of 33% in 2012. **In 2013 and 2014, the collection volume decreased (-20%, -9%,) while POM remained nearly constant, causing the collection rate to move down to 29% in 2014.**



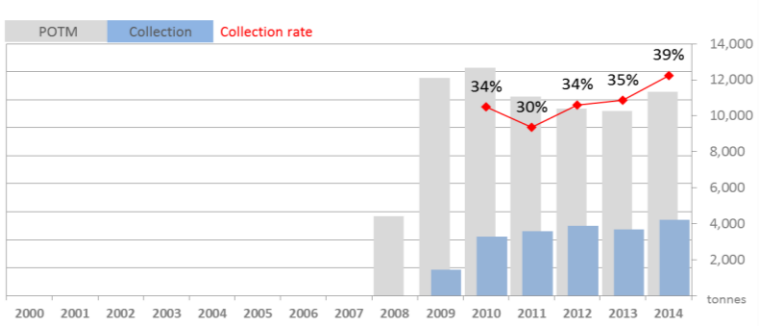
Source: MoE, ZEOS; 2013: estimate

SPAIN

Royal Decree 45/1996 held the Autonomous Communities responsible for separately collecting waste batteries. Royal Decree 106/2008 transposing Batteries Directive 2006/66/EC made producers responsible for taking back waste batteries and left each Autonomous Community responsible for authorising organisations operating on their territory. Decentralisation of authority slowed the implementation of producer compliance organisations and complicates waste flow monitoring. Though the legal framework for simplified requirements has been in place since 2012, these have yet to be fully implemented through an amendment to the Batteries Decree. **In 2015 a new WEEE Decree extended EEE reporting and take back obligation to 'batteries that the end-user cannot manually remove from WEEE'. The (unknown) POM weight of these batteries is reflected in the WEEE collection target calculation.**

Producers comply through battery compliance organisations Ecopilas, set up in 2000 by electronics association Asimelec. WEEE organisations, notably ERP, have also offered compliance services since 2009.

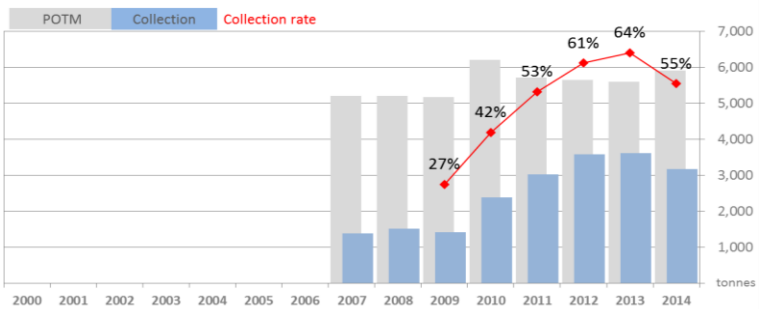
Unofficial data suggest that the collection rate increased from 34% in 2012 **to 39% in 2014.** After a strong decline of POM between 2010 and 2012, POM **increased by 9% in 2014 to 235 g per capita. The collection volume has increased by an annual average of about 6% since 2010 to 87 g per capita in 2014.**



SWEDEN

Following the 1997 Batteries Order, all of Sweden's 290 municipalities had to set up their own battery collection while producers of certain hazardous batteries provided financing through fees paid into a recycling fund managed by environment agency SNV. Batteries Ordinance 2008:834 transposed Batteries Directive 2006/66/EC, and shifted the collection responsibility to producers from 2009. These fulfil their obligation through WEEE organisation El-Kretsen, which receives about 70% of waste batteries from municipalities. Retailers are not obliged to take back waste batteries.

Data released by SNV's battery register in September 2014 show that the collection rate increased every year from about 27% in 2009 to 64% in 2013. **El Kretsen's battery collection rate was 56% (2013: 60%, as POM increased by 8%).**

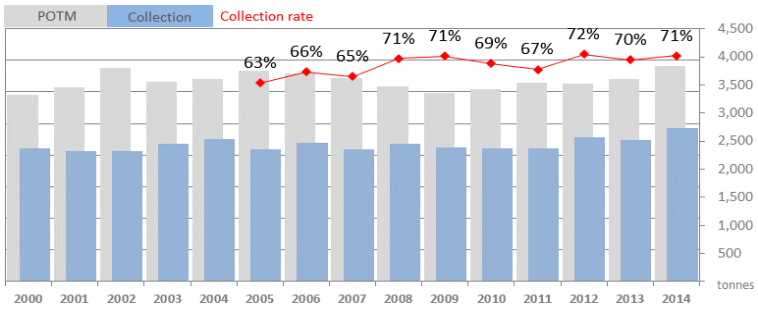


*Source: **2014 El Kresten data**; Before: SNV September 2014;*

SWITZERLAND

Legal requirements for the take-back of batteries have been in force since 1986, and voluntary financing by producers began in 1991. A 2001 Ordinance made the financing obligation mandatory through an Advance Recycling Fee (ARF) and a 2010 revision aligned the Ordinance with Batteries Directive 2006/66/EC. Since 2001, the Government-appointed battery organisation INOBAT has been authorised to grant producers exemptions from the financing obligation. INOBAT mainly collects waste batteries from voluntary municipal collection points and obligated retailers. Producers of batteries in EEE do not need to join INOBAT and comply through the two voluntary WEEE organisations who report battery volumes to INOBAT.

A collection rate* of well above 60% has been achieved since 2000 (**2014: 71%**). **In 2014, POM increased by 9% to about 495g, the collection volume by 8% to 338 g per capita, both all-time highs.** The high collection rate is supported by comparatively low POM volumes which may not fully reflect the volumes of batteries POM in EEE: **Though the share of built-in-batteries in 2014 was increased to 20% of the portable battery POM (2013: 16%; 2012: 15%) it is still somewhat lower than data from other countries suggest.**



Source: Inobat; POM volumes (and the collection rate shown here) reflect the average of the current and the preceding year

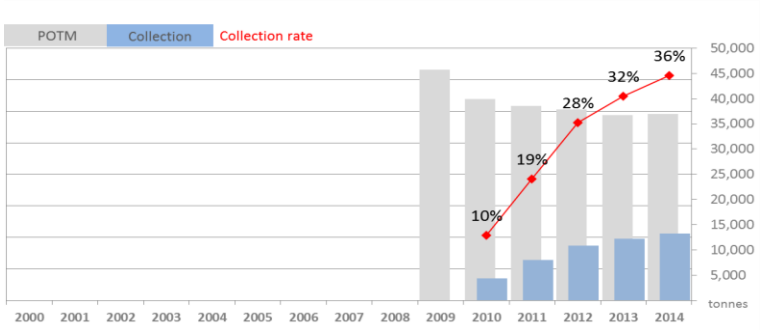
The price INOBAT must pay to the only approved battery recycler, BATREC, is set by the Government. It will decrease from currently CHF 4,00015 (EUR 3,316) per tonne to CHF 3,520 (EUR 2,918) from 2016.

15 Before 2013: CHF 4,400

UNITED KINGDOM

The **Waste Batteries and Accumulators Regulations** of April 2009 require only 'large' producers (POM > 1 tonne) to finance waste battery management, and only retailers selling more than 32 kilos of batteries annually are required to take back waste batteries. The Regulations do not contain any provisions regarding industrial batteries (except for the definition). Producers comply through approved Battery Compliance Schemes (BCS) which must achieve collection targets increasing by 5% annually from 25% in 2012 to 45% in 2016. BCS' are free to choose how they collect batteries but must 'co-operate' to ensure that waste batteries are picked up from local authorities and obligated retailers. About 450 'large' producers currently comply through the five approved schemes: BatteryBack, Valpak, Budget Pack, ERP UK and Repic eBatt.

The collection rate increased from 10% in 2010 – the first 'compliance period' for battery collection organisations – **to 36% in 2014.** However, the collection rates may be disputed as the weight of lead 'portable' batteries collected has been multiple (up to five times) of lead portable batteries POM. **The collection rate of all other chemistries has increased from a 5% in 2013 to 11% in the first half of 2015. Assuming a plausible scenario in which all lead batteries POM are collected (return rate 100%) the 2014 collection rate would be 15%.**



Source: EA

Discussions about the introducing of a weight threshold for portable batteries were concluded: In August 2015, the Department for Environment, Food and Rural Affairs (DEFRA) announced that a 4kg weight threshold will be applied to portable batteries from 2016 by way of official guidance, down from currently 10kg. The lower threshold is expected to result in additional collection and processing costs of GPB 33 million over 10 years.

PORTABLE BATTERIES LEGISLATION ELSEWHERE

EU neighbours

Russia

Since January 2015, an amendment of the Federal Law on Waste Production and Consumption has obligated producers and importers to independently manage packaging and product waste, including from batteries, or pay an environmental fee. In October 2015, the Environment Ministry announced a de facto exemption reporting and fee payment obligations for the first nine month in 2015 as some implementing regulations remain yet to be published.

Americas

Ecuador

A 2013 a Ministerial Agreement requires manufacturers and importers of batteries of certain chemistries which can be removed from EEE to properly treat expired batteries.

Asia

China

The Waste Battery Pollution Control Policy of October 2003 stipulates collection of rechargeable batteries (nickel-cadmium batteries, nickel hydrogen batteries, lithium-ion batteries, lead acid batteries) and button cells and makes producers responsible for recycling. Retailers of such batteries should provide take back of waste batteries. However, a central collection organisation has so far not been deemed necessary as batteries have reached low mercury levels. **This appears to have changed as the Government is considering a waste policy now also for non-rechargeable batteries.**

ANNEX

Sources

The study's findings rely on primary research of publications by collection organisations (notably annual reports) and national authorities, supported by questionnaires and interviews with representatives from selected organisations.

Austria

Lebensministerium, Government
Umweltbundesamt, Environment Agency
EAK, Coordination centre
CCR Austria, Compliance organisation
ERA, Compliance organisation
ERP Austria, Compliance organisation
Interseroh Austria , Compliance organisation
UFH, Compliance organisation
Saubermacher AG, Waste Management Company

Belgium

IBGEBIM (Brussels), Environment Agency (Brussels)
OVAM (Flanders), Environment Agency (Flanders)
OWD (Wallone), Environment Agency (Wallone)
BEBAT, Compliance organisation
FEE, Waste management association

Bulgaria

Ministry of Environment and Water, Government
EMEPA, Environment Agency
Ecobattery, Compliance organisation
Ecobulbattery, Compliance organisation
Eltechresource, Compliance organisation
Greentech Bulgaria, Compliance organisation
Nooro, Compliance organisation
Nord Recycling, Compliance organisation
Recobat, Compliance organisation
Transins Battery, Compliance organisation
UBA Recycling, Compliance organisation

Croatia

Ministry of Environment and Nature Protection, Government
Eko-Ozra , Compliance organisation (prospective)
Fund for Environmental Protection and Energy Efficiency, Recycling Fund

Cyprus

Ministry of Agriculture, Natural Resources and Environment, Government
AFIS Cyprus, Compliance organisation

Czech Republic

Ministry of Environment, Government
ECOBAT, Compliance organisation
REMA Battery, Compliance organisation

Denmark

Ministry of the Environment, Government
VIRK (battery tax), Government
Environmental Protection Agency
DPA System, Coordination centre
Elretur, Compliance organisation
ERP Denmark, Compliance organisation
RENE AG , Compliance organisation
Returbat, Lead battery organisation
Batteri foreningen, Producer association

Estonia

Ministry of the Environment , Government
EES-Ringlus, Compliance organisation
Elektroonikaromu , Compliance organisation
Probleemtooteregister, Producer register

Finland

Pirkanmaa, Environment Agency
ERP Finland, Compliance organisation
RECSER OY, Compliance organisation

France

MoE, Government
MoI, Government
ADEME, Environment Agency
RegistreDEEE, Producer register
Corepile, Compliance organisation
Screlec, Compliance organisation

Germany

BMU, Government
UBA, Environment Agency (Federal)
Batteriemelderegister, Producer register
GRS , Compliance organisation
CCR Rebat, Compliance organisation
ERP Germany, Compliance organisation
Öcorecell, Compliance organisation
ZVEI, Producer Association

Greece

Ministry of Environment, Government
E.O.AN., Government agency overseeing separate waste streams
AFIS, Compliance organisation

Hungary

KVVM Ministry of Environment, Government
OKTV, Environment Agency
OHÜ, National Waste Management Agency
Customs Association, Government
CCR Rebat Nonprofit Kft , Compliance organisation
RE´LEM Nonprofit Kft, Compliance organisation
Re-bat Nonprofit Kft, Compliance organisation

Iceland

Ministry for the Environment , Government
Icelandic Recycling Fund, Recycling Fund

Ireland

Department of the Environment, Community and Local Government
EPA, Environment Agency
ERP Ireland, Compliance organisation
WEEE Ireland, Compliance organisation
WEEE Register Society, Producer register

Italy

MoE, Government
Registro Pile e Accumulatori, Producer register
CDCNPA , Coordination centre
Remedia, Compliance organisation
RAEcycle, Compliance organisation
ERP Italia,
Ecoped, Compliance organisation
CCR Italia, Compliance organisation
Ecodom, Compliance organisation
EcoR'it, Compliance organisation
Cobat, Compliance organisation
ANCI, Association of regions
ANIE , Producer association
ISPRA Institute for Protection and Environmental Research

Latvia

MoE, Government
Green Dot Latvia , Compliance organisation
Latvia Green Electronics , Compliance organisation
ZAĻĀ JOSTA , Compliance organisation
ZAĻAIS CENTRS , Compliance organisation
BAO , Waste management company

Lithuania

Ministry of Environment, Government
Aplinkos Apsaugos Agentūra, Environment Agency
EEPA Collective system, Compliance organisation
GIA System , Compliance organisation
Zalvaris, Compliance organisation
EMP, Waste management company

Luxembourg

Administration de l'Environnement, Division des Déchets
SuperDrecksKëscht , Waste collection program
Ecobatterien, Compliance organisation

Macedonia (FYR)
MOEPP, Government

Malta
MEPA, Environment Agency
WasteServ Malta, Waste collection programme
GreenPak, Compliance organisation (potential)

Montenegro
EPA Montenegro, Environment Agency

Netherlands
SenterNovem, Government
Stibat, Compliance organisation
ARN, Lead battery organisation

Norway
Climate and Pollution Agency, Environment Agency
Batteriretur AS, Compliance organisation
Rebatt AS, Compliance organisation
EE Registreret, WEEE coordination centre

Poland
MoE, Government
GIOS, Environment Agency
NFEP, Recycling Fund
REBA, Compliance organisation
Biosystem, Compliance organisation
ERP Batteries Poland Sp. z o. o., Compliance organisation
Auraeko, Compliance organisation
CCR Polska, Compliance organisation

Portugal
Apambiente, Environment Agency
ANREEE, Producer register
Ecopilhas, Compliance organisation
AMB3e, Compliance organisation
ERP Portugal, Compliance organisation

Romania
Ministry of Environment and Climate Change
ANPM, Environment Agency
CCR Rebat, Compliance organisation
ECOTIC BAT, Compliance organisation
RECOBAT Plus, Compliance organisation
RoRec, Compliance organisation
SNRB, Compliance organisation
SNRB, Compliance organisation

Serbia
Ministry of Environment and Spatial Planning
SEPF, Recycling Fund

Slovakia
Ministry of Environment, Government
Slovak Environmental Agency, Environment Agency
Recycling Fund, Recycling Fund
INSA, Battery collection programme
Asekol, Compliance organisation
Elektrorecyling, Compliance organisation
Natur Elektro, Compliance organisation
SEWA , Compliance organisation
Mach Trade , Waste management company

Slovenia,
MoE, Government
ZEOS, Compliance organisation
Interseroh, Compliance organisation
Slopak, Compliance organisation

Spain
Registro P&A, Producer register
OfiPilas , Coordination centre (voluntary)
Ecopilas , Compliance organisation
El Kretsen, Compliance organisation
ERP Spain, Compliance organisation
Asimelec, Producer association

Sweden
MoE, Government
Naturvardsverket, Environment Agency
EE- & Batteriregistret, Producer register
Batteriinsamlingen, Battery collection programme
El-Kretsen , Compliance organisation
Avfall Sverige, Waste management association
SKL, Association of regions

Switzerland
BAFU, Government
INOBAT, Compliance organisation

Turkey
TAP, Compliance organisation

UK

Department for Business, Innovation & Skills
Environment Agency
BatteryBack, Compliance organisation
Budget Pack , Compliance organisation
ERP UK, Compliance organisation
Repic eBatt, Compliance organisation
Valpak, Compliance organisation

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