

Initial recommendations for the upcoming review of the battery directive 2013/56/EU

Brussels, 4 April 2016

The European digital technology industry (DIGITALEUROPE) expects the revision process of the Battery Directive 2013/56/EU to begin throughout 2016 and hereby sets out first, initial recommendations for what DIGITALEUROPE believes the priorities should be in the debate.

COLLECTION TARGETS

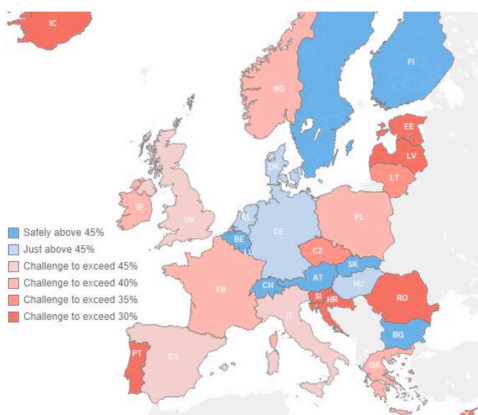


Figure 4: EEA + Switzerland, extrapolation of collection rates to 2016

Battery¹ collection targets have been difficult to achieve. According to a report for the European Portable Batteries Association (EPBA)², seven countries appear to have exceeded the 45% collection target for 2016 already (AT, BE, SE, LU, SK, FI, BG). However, an extrapolation of current data suggests that about two thirds of the EEA countries will be likely to struggle to meet the 2016 target to collect 45% of waste portable batteries.

DIGITALEUROPE believes the difficulty has several root causes: Apart from actual collection problems, two more statistical issues impact the challenge: not all batteries collected are reported and not all batteries put on the market are available for collection.

Source: EPBA³

“All actors” principle for batteries

One of the challenges to solve within the WEEE recast in 2012 has been to make sure that all permitted WEEE treatment operators report on all WEEE received in order to have an accurate picture of the collection rates achieved. Research in several Member States had revealed that there are significant flows of WEEE beyond the Producer take back systems. DIGITALEUROPE advocated the “all actors” principle that should ensure that all treatment operators report on WEEE separately collected and treated according to a set of minimum standards. A similar gap exists for batteries collection targets. The EPBA report suggests that “batteries in EEE contribute around 20% to 30% of portable batteries placed on the market” but that “organisations are often not able or willing to identify the share of waste batteries removed from WEEE in total collection volume” and that “the

1 For simplification, the term “batteries” will comprise both “batteries” and “accumulators”

2 <http://www.epbaeurope.net/documents/Reportontheportablebatterycollectionrates-UpdateDec-15-Exerpt.pdf>

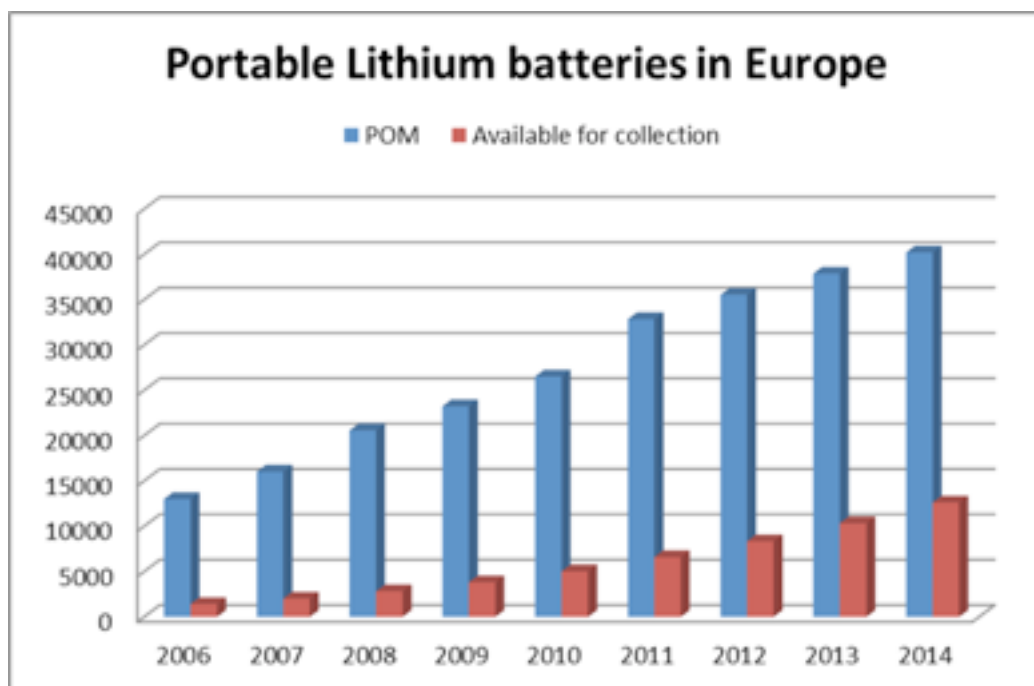
3 *ibid.*, p.8

share of batteries removed from WEEE is on average 7% in the 19 countries investigated”⁴. DIGITALEUROPE therefore recommends:

1. WEEE treatment operators need to be obliged to report portable batteries collected and separated in their streams to better account for the actual number of batteries collected (separately or in a WEEE stream).
2. Given the legal obligation to separate batteries from the WEEE flow before recycling (Annex VII with Art 8.2), proper enforcement needs to ensure that the environment is not neglected due to cost considerations.
3. Recyclers should ensure the integrity of batteries during the removal process.

Move to a “waste arising” calculation method

Currently, the collection targets are based on POM (placed on the market) data. The accuracy of reporting POM is statistically challenging due to shortcomings of the custom codes reporting, self-importing retailers in smaller countries, etc. However, it is also not informative with regards to how many batteries are actually available for collection. According to Recharge, the European Association for Advanced Rechargeable Batteries, there is a major difference between batteries put on the market and batteries available for collection. To illustrate what might be valid for many chemistry types, only a fraction of lithium-ion batteries is actually available for collection after three years (as shown below).



Source: Recharge calculations. Data in tons.

⁴ http://www.epbaeurope.net/documents/Reportontheportablebatterycollectionrates-UpdateDec-14-fullversion_LUadded.pdf, p. 29

According to the Belgian battery compliance scheme Bebat, the average usage and hoarding time combined for a rechargeable lithium-ion battery in Belgium was 7.46 years, with only about 20% of the lithium batteries coming back in the first 3 years. As EucoBAT, the European association of national collection schemes for batteries, points out, “there is no strong correlation between batteries recently put on the market and the waste batteries collected”, partly because of the hoarding effect and partly because the lifespan is “significantly longer than three years, in particular for ... laptops and cell phones”.⁵

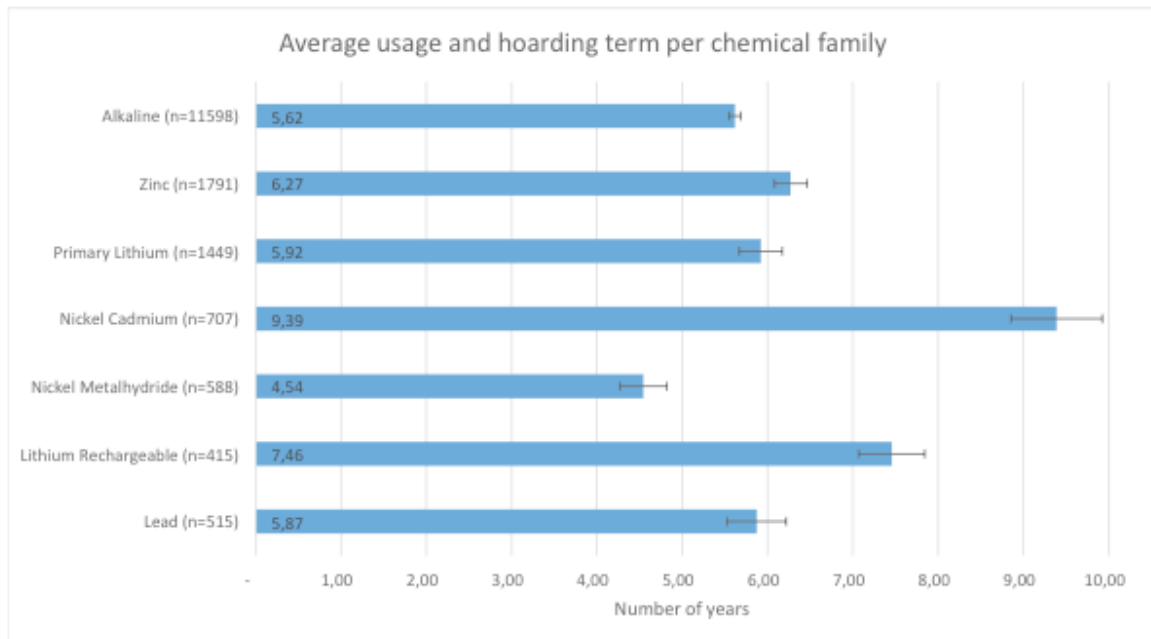


Figure 8 – Average usage and hoarding term per chemical family

Source: Report for Bebat: “Sampling Battery Life Cycles”, Moebius, 2014, p.16

DIGITALEUROPE knows from own experience that IT products have a second and often even third life as they are being passed on to family, friends or sold onwards. Therefore a considerable part of the batteries put on the market integrated into IT devices will simply not be available for collection after three years. For those who are available for collection, collection efforts need to be increased and improved to tackle the hoarding effect. For those who are not, the calculation method should reflect the long lifetime of our products. A move to “available for collection” as called for by many battery compliance schemes would make sense and be in line with efforts to create collection rate calculations on basis of WEEE generated.

With regards to another question of methodology, Member States and recyclers currently have a wide margin of interpretation of recycling efficiency. To create a level-playing field for all actors a better standardisation and harmonisation of legislation is necessary.

⁵ <http://www.eucobat.eu/system/files/PP%20Collection%20Rate%20v1.3.pdf>

RCYCLING INNOVATION

The IT sector and the batteries manufacturing sector would like to see higher material recovery rates from end-of-life products. Even if waste products and batteries are collected, many materials are not recovered or at rates below 70%. The high costs of innovative recycling technology make it difficult for recyclers to keep up with the innovations in the products they receive for EoL treatment and many recyclers still do not pursue a technological strategy to sort and treat products. Conventional mixed-WEEE recycling typically involves shredding and leaves significant material value untapped. Europe has to start investing in recycling technology the same way it does in supporting other manufacturing innovations. DIGITALEUROPE is willing to cooperate with the recycling industry to jointly identify future technology trends and the safe use and environmental end-of-life aspects of new technologies.

DIGITALEUROPE believes that innovation in recycling will increase the environmental benefits of recycling even further by creating cleaner waste streams, which allow for material recovery in dedicated smelting and refining processes. In the spirit of the digital agenda and advanced manufacturing, there are likely European jobs and growth creation opportunities in an even more high-tech recycling industry. Such a move would require significant investments and R&D efforts, which could be supported by the funds earmarked for circular economy under Horizon 2020 or other European instruments.

Cleaner material streams would also invite another look at reuse and recycled content. Whereas the reuse of batteries is not necessarily desirable due to their depletion, the increased risk of short circuits and issues of product liability, other components might be harvested in this process and be available for reuse. However, before quantitative targets for reuse or recycled content mandating % of recovered material in products can be set it must be ascertained that the current collection rate, recycling technology, and recycling volume can support the market needs for such a goal. Additionally, there are technical issues related to "secondary" vs. "virgin" materials, which would need to be taken into account. In many cases, such regulatory targets would not be productive.

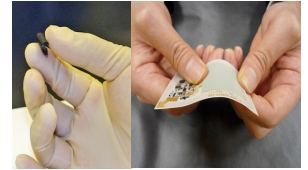
BATTERY REMOVABILITY

DIGITALEUROPE is of the opinion that the battery removability provision in Art. 11 of 2013/56/EC has proven successful and recommends to safeguard it. The current wording has allowed the IT industry to continue innovating. The last years have seen further miniaturisation, leading to resource efficiency increases through thinner and lighter products and more integrated circuitry. These innovations have been achieved without compromising, and even increasing battery capacities.

Additionally, Europe continues to globally lead with the Art. 11 requirement as is today. Few other countries around the globe have implemented battery removability requirements and if they have, these are modelled on the EU Directive 2013/56EU. Examples of similar legislation can be found in Brazil, whereas other geographies like China are just at the beginning of discussing this. DIGITALEUROPE recommends the EU to maintain its leadership by sticking to a successful provision. There are a number of good reasons for the flexibility offered in Art 11, allowing professional service removability.

Professional service removability is a precondition for the functionality and usability of many existing and future products and has a positive effect on material efficiency

There is a clear trend towards thin, flexible, wearable and portable IT technologies. The applicability of such material efficient innovations strongly relies on the efficient integration of all components, including the (custom designed) battery. The current Art. 11 and its Q&A interpretation allow for many of these innovations, having a positive effect on material efficiency and the availability of cutting edge technology in the EU.



Professional service removability enhances products' performance and reliability

Professional service removability ensures high performance and reliability. Reliability parameters often dictate that batteries are securely connected and encased in a product to ensure adequate mechanical protection of the battery. This is particularly important for products, which are exposed to high levels of shocks and vibration when in use and/or are used in a humid environment that makes water resistance a key feature. Removable batteries typically require additional safety circuitry and hard protective casing (which reduces the actual battery size, capacity and performance).

Professional service removability ensures that products are safe throughout their entire life cycle and comply with applicable safety legislation

Removability by professional services enables products to meet the EU General Product Safety Directive 95/2001/EC, which requires that a product must be designed to be safe. Removability by professional services significantly reduces the likelihood of mistreatment of products during the battery removability process (e.g. static discharge, short circuits or mechanical damage, etc.). Harm to untrained persons and consumers from direct contact with a charged battery cell or by using non-approved and low-quality replacement batteries is prevented as well. For products using soft cell batteries, removability by professional services ensures proper treatment of the battery and avoids the danger of puncturing or damaging the battery.

Professional service removability ensures proper collection and treatment of waste batteries

In order to achieve primary objective of the Battery Directive “to minimise the negative impact of [...] waste batteries and accumulators on the environment”⁶, proper collection and treatment of waste batteries is of the utmost importance. Battery collection rates across the EU indicate that consumers still dispose of their batteries through the normal household waste stream, with adverse impacts on battery collection targets. Professional service removability is usually offered by professionals in remanufacturing or recycling facilities. It contributes to proper collection and treatment of batteries.

6 Recital 1 of the Battery Directive

LABELLING AND MARKING

Standardisation is currently looking into a mandate to colour code certain types of rechargeable batteries (IEC 62902 – secondary batteries marking symbols for identification of their chemistry). The Austrian government took this debate into the Technical Adaptation Committee meeting of the Battery Directive in December 2014. DIGITALEUROPE supports measures, which promote and ensure a safe use of batteries and is aware of the potential risks of battery disposal, processing and recycling.

With regard to any colour coding proposals, DIGITALEUROPE would recommend against pursuing this legislative path. At the least, DIGITALEUROPE would like to see a full impact assessment to what extent the experienced issues of overheating or mechanical stress could actually be prevented by colour coding batteries. DIGITALEUROPE is concerned that this discussion would lead to imposing a colour marking requirement for batteries for which a colour indication would not make any difference regarding risk minimisation and/or optimisation of end of life management. In particular embedded batteries are easy to identify as lithium-ion batteries by their soft pouches, by the devices they are integrated in and oftentimes the voluntary implementation of the existing label with the Li-ion symbol. A duplication of labelling requirements should be avoided.

GOVERNANCE

DIGITALEUROPE is aware that the revision of the battery directive will have to confront the difficult task of regulating an industry that notoriously outpaces regulation with its innovations. Future innovations are already being explored such as batteries based on lithium-sulfur, zinc air, lithium air, sodium-ion, copper foam substrate, aluminium graphite or aluminium air. Not only battery chemistries but also their form factor is changing at high pace. Examples of future possibilities under research include nanobatteries being 80,000 times smaller than a human hair, batteries using ambient sound (piezoelectric effect) as well as batteries that are printable, bendable, foldable, transparent or flexible. What technology will make it successfully to the market place is yet to be seen, hence it is an arduous task to regulate the unknown.

Regulation needs to be sufficiently flexible to allow for these innovations to be developed and brought to market. At the same time, these innovations need a regulatory framework that offers enough certainty in terms of market conditions, transport, use, disposal and safety.

DIGITALEUROPE is acknowledging the challenge of the rigidity of directives and regulations. At the same time, it would discourage the legislator to treat the product-related aspects of Directive 2013/56/EU by moving into a governance system similar to the ErP Directive. The process of regulating through implementing measures ('Lots') can take equally long as normal co-decision procedures and is not necessarily more flexible or speedier than the normal process.

CONCLUSION

Based on the arguments provided in this paper, DIGITALEUROPE welcomes the upcoming revision of the Battery Directive 2013/56/EU and recommends the following for the debate:

- 1) Reflect the all actors principle in the collection targets revision and move to a calculation based on available for collection.
- 2) Explore possibilities to enable the recycling industry to innovate their processes, particularly with regard to disassembly manufacturing. Provide R&D funding through Horizon 2020.

- 3) Safeguard the battery removability provision in Art. 11 as is and do not re-open this requirement.
- 4) Steer away from colour coding and marking for integrated batteries.
- 5) Create a legislative framework that is flexible enough to deal with the fast-moving pace of innovation in the IT and batteries sector.

DIGITALEUROPE very much welcomes a dialogue with the European Commission and other stakeholders on the suggested approaches.

--

For more information please contact:
 Sylvie Feindt, DIGITALEUROPE's Policy Director
 +32 2 609 53 19 or Sylvie.feindt @digitaleurope.org

ABOUT DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Our members include some of the world's largest IT, telecoms and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE wants European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies.

DIGITALEUROPE ensures industry participation in the development and implementation of EU policies. DIGITALEUROPE's members include 60 corporate members and 37 national trade associations from across Europe. Our website provides further information on our recent news and activities: <http://www.digitaleurope.org>

DIGITALEUROPE MEMBERSHIP

Corporate Members

Airbus, AMD, Apple, BlackBerry, Bose, Brother, CA Technologies, Canon, Cisco, Dell, Epson, Ericsson, Fujitsu, Google, Hewlett Packard Enterprise, Hitachi, HP Inc., Huawei, IBM, Ingram Micro, Intel, iQor, JVC Kenwood Group, Konica Minolta, Kyocera, Lenovo, Lexmark, LG Electronics, Loewe, Microsoft, Mitsubishi Electric Europe, Motorola Solutions, NEC, Nokia, Nvidia Ltd., Océ, Oki, Oracle, Panasonic Europe, Philips, Pioneer, Qualcomm, Ricoh Europe PLC, Samsung, SAP, SAS, Schneider Electric IT Corporation, Sharp Electronics, Siemens, Sony, Swatch Group, Technicolor, Texas Instruments, Toshiba, TP Vision, VMware, Western Digital, Xerox, Zebra Technologies, ZTE Corporation.

National Trade Associations

Austria: IOÖ

Belarus: INFOPARK

Belgium: AGORIA

Bulgaria: BAIT

Cyprus: CITEA

Denmark: DI Digital, IT-BRANCHEN

Estonia: ITL

Finland: FFTI

France: AFNUM, Force Numérique, Tech in France

Germany: BITKOM, ZVEI

Greece: SEPE

Hungary: IVSZ

Ireland: ICT IRELAND

Italy: ANITEC

Lithuania: INFOBALT

Netherlands: Nederland ICT, FIAR

Poland: KIGEIT, PIIT, ZIPSEE

Portugal: AGEFE

Romania: ANIS, APDETIC

Slovakia: ITAS

Slovenia: GZS

Spain: AMETIC

Sweden: Foreningen Teknikföretagen i Sverige, IT&Telekomföretagen

Switzerland: SWICO

Turkey: Digital Turkey Platform, ECID

Ukraine: IT UKRAINE

United Kingdom: techUK