

21 March 2016

Strategy of the European Portable Battery Association Circular Economy

Introduction: EPBA and sustainability

The European Portable Battery Association (EPBA) is the authoritative voice of the portable power industry. The association supports the common interests of its members regarding portable batteries and battery chargers with European institutions and other leading international bodies to provide consumers with complete power solutions which are sustainable across their life-cycle.

EPBA members have consistently made progress over the years in terms of reducing the environmental impact of its products and raising awareness of different aspects of battery use.

- Back in 1985, EPBA members launched an important and wholly voluntary initiative to remove mercury from alkaline and zinc batteries, a program that was successfully completed in 1994, six years before relevant legislation came into force.
- Another of our objectives involved the substitution of mercuric oxide batteries. EPBA has repeatedly supported the implementation of a ban on mercury button cells, which Directive 2013/56/EU on Batteries put in place in October 2015.
- Since 1995, EPBA has gained a wealth of experience in setting up and working with national waste battery collection and recycling organisations (CROs) to help our members meet their producer responsibility obligations. Subsequent to the Battery Directive 2006/66/EC, compliance organisations were already set up in (almost) all member states, allowing EPBA members to engage in producer responsibility practices before the legislation was in place.

Position of EPBA on the Communication on the Circular Economy

Ecodesign of products

The European Commission's Communication states that the actions under the framework of the Circular Economy will emphasise circular economy aspects in future product design requirements under the Ecodesign Directive. Until now, ecodesign requirements have targeted energy efficiency but in the future, issues such as reparability, durability, upgradability, recyclability, or the identification of certain materials or substances will be systematically examined.

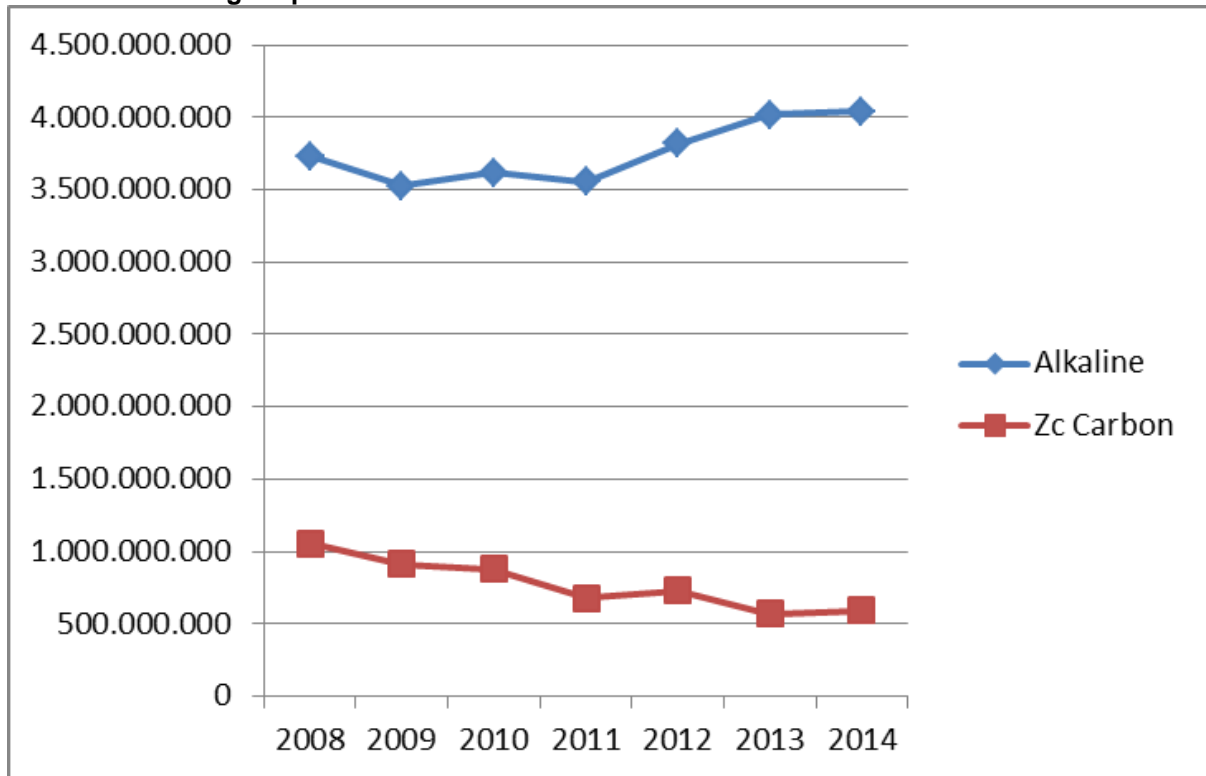
As mentioned in the Commission's communication, each product has a distinct specificity that has to be taken into account regarding their product design.

- **Higher quality, less waste:** EPBA would advocate for a flexible approach to safeguard the quality of materials in batteries. Ensuring quality of materials will translate into higher performance delivered to the consumer while less waste is generated. The goal should not be to increase the quantity of material recycled without a mechanism that allows producers to ensure the quality of the recycled material. With less quality materials, a battery will have a lower performance. Low performance batteries end up depleting more rapidly and hence are quickly discarded and thrown out by the consumer, increasing waste generation.
- **Resource efficiency indicators:** There is no "one-size-fits-all" tool to comprehensively allow indicators to dictate to best design and recyclability criteria of products. The success of the

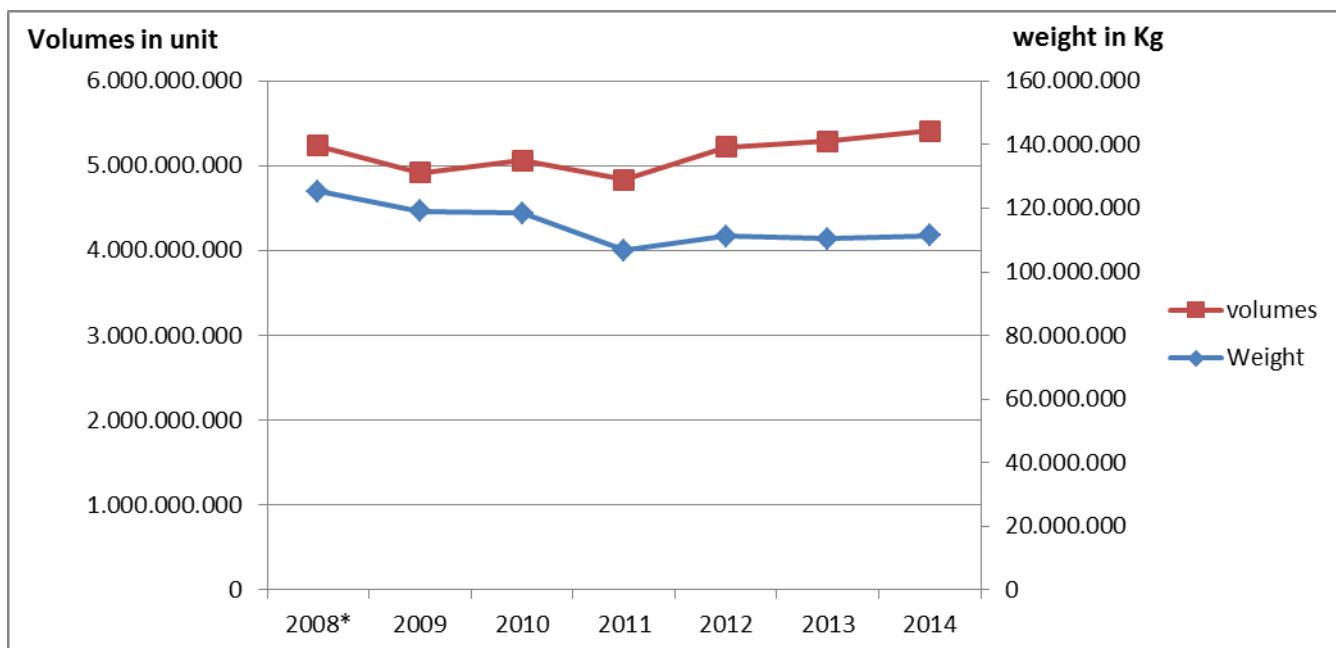
Circular Economy will depend greatly on its ability to recognise differences across materials and products. The EPBA is willing to participate in the design of the circular economy by providing our expertise and knowledge on the effective and workable solutions for the portable battery industry.

- **Bringing industrial symbiosis to the front of communications:** The use of secondary raw materials coming from recycled batteries may not be primarily recovered to “close the loop” as input for the production of new batteries. However, these materials such as zinc concentrate and nickel may be recovered to be part in the production of other processes and products like electrolysis in industry and manufacturing of stainless steel respectively.
- **Effective use of raw materials:** Sustainability has been at the top of the agenda for all EPBA members for many years. As a result, the industry has made a significant effort to achieve a more efficient use of resources. In our experience, one of the keys of this success has been the role of market forces driving the shift toward more sustainable choices which is reflected in a constant improvement in product design:
 - **Foster the change to higher performance batteries:** Progressive substitution of zinc-carbon and zinc-chloride for higher performance batteries (Fig 1.)
 - **More energy with less material use:** The portable power industry has achieved a higher level of delivery of energy with a consistent reduction in the size of the battery (Fig 2.)

Substitution to higher performance batteries



Source: EPBA data



Source: EPBA data

Enforcement of product rules and requirements

EPBA members would like to underline the need for adequate enforcement as an area of urgent action under the upcoming circular economy initiatives. Effective enforcement by authorities would allow for a more enhanced sustainability approach of the battery waste management process, as well as a leveled playing field for producers.

The ambition set out in the action plan can only be achieved when the proposed measures are accompanied by a sufficiently developed enforcement framework on a European and national level.

Enabling the best choices for the consumer

EPBA members strive to provide up to date, relevant, and easy to understand information to the consumers. With the goal of communicating to the consumer of the correct lifespan of battery products, EPBA members developed in 2012 a guide that aims to assist consumers in selecting batteries for intended applications. The recommended battery chemistry is based on:

1. The expected power demand of the appliance
2. The intensity with which the appliance is used

		POWER DEMAND			
		LOW			HIGH
Application →	Usage ↓	Remote control	Keyboard/mouse	Game controller	Digital camera
		Clock	Toys	Video game	Photo flash
		Calculator	Radio	Remote control toys	
		Weather station	Flash light		
		Scale			
		Smoke alarm			
USAGE INTENSITY ↑ LOW ↓ HIGH	OCCASIONALLY (less than 5h/week)	Alkaline	Alkaline	Alkaline	Alkaline
		Zinc Carbon / Zinc Chloride		Rechargeable NiMH ⁽¹⁾	Rechargeable NiMH ⁽¹⁾
				Primary Lithium	Primary Lithium
	REGULARLY (6-15h/week)	Alkaline	Alkaline	Alkaline	Alkaline
		Zinc Carbon / Zinc Chloride	Rechargeable NiMH ⁽¹⁾	Rechargeable NiMH ⁽¹⁾	Rechargeable NiMH ⁽¹⁾
			Primary Lithium	Primary Lithium	Primary Lithium
	FREQUENTLY (more than 15h/week)	Alkaline	Rechargeable NiMH ⁽¹⁾	Rechargeable NiMH ⁽¹⁾	Rechargeable NiMH ⁽¹⁾
			Primary Lithium		

(1) Rechargeable Nickel Metal Hydride