

Primary Battery Ban will have a negative Impact on Europe's Environment and Economy

EPBA's Response to Measure 4: "Restriction of Primary Batteries"

EPBA opposes a primary battery ban and underlines the assessment presented by the Öko-Institute which confirms that such drastic measures would **not bring any environmental, economic or social benefits**.

The two scenarios developed by the Öko-Institute result in an **extreme amount of unnecessary scrapped appliances which is incompatible with the European Green Deal and the new Circular Economy Action Plan**.

EPBA proposes to work together with the appropriate bodies to set **minimum quality standards** to ensure that European consumers have access to **safe and high-quality primary batteries**.

EPBA highlights the following points:

➤ ***Primary batteries are not single use products***

A primary battery is not a single use product. **It can be used multiple times and in multiple appliances**. Primary batteries can power an appliance for multiple years (depending on the energy output needed). To give concrete examples, a primary alkaline cell can last for 2 years in a wall-clock, a general-purpose lithium coin cell can function for more than 10 years; in metering applications it can be in use for 15 years.

➤ ***Primary batteries are the most environmentally sustainable solution in low drain applications (corresponding to half of today's appliances and continued growth is expected)***

Three EPBA member companies carried out LCAs. Based on the global warming potential parameter, the conclusions of the three **LCAs are unambiguous on primary batteries being more environmentally sustainable than rechargeable batteries in low drain applications** (see enclosed LCAs summary compilation). The lower and more efficient discharge level of primaries combined with the need for repeated recharging of rechargeables makes primaries the best choice for low drain devices since these require lower power levels (See graph comparing both products on **Annex 1**).

The market for miniature, portable and light weight devices is expected to continue growing and so will the demand for primary batteries which are better placed for such low drain applications. See in **Annex 2** a list of low drain devices.

➤ ***Primary batteries are ubiquitous and not always easily replaceable***

Primary batteries are used in a wide variety of applications. These are not only everyday general consumer devices but also industrial appliances, crucial sectors such as healthcare not to mention security-related applications. See in **Annex 2** a non-exhaustive list of appliances which only work or work best with primary batteries.

In many situations **recharging is simply not possible**:

- remote areas with poor or no connection to the grid;
- disaster and emergency situations where there is no power;
- small appliances with no space for integrating a charging circuit.

In medical applications, primary batteries are the norm due to hygiene aspects, but also to the **function of the product** (take for instance a pacemaker or a hearing aid device). In **applications subject to extreme weather conditions or high temperature** (e.g. tyre pressure monitoring systems, automatic toll devices) **there is no alternative to primary batteries**.

The **convenience aspect** is also to be taken into account and the impact on consumer behaviour should not be underestimated. If primary cells were gone, **rechargeable portable batteries will not always be immediately ready for use 24/7**. Primary batteries are included in emergency or disaster check lists precisely because they **can be immediately used**. In fact during the **covid-19 crisis** member states throughout the European Economic Area considered **portable batteries an essential item** and allowed factories to continue operating.

It is important to note that primary batteries are equally designed for both, consumer and industrial purposes while they share the same technology.

Lastly, **just because a battery can be recharged it doesn't mean it actually is**. If not fully charged and discharged, rechargeable batteries rapidly self-discharge and lose capacity.

➤ ***Primary batteries have to be assessed in connection with an appliance***

All chemistries, primaries or rechargeable, have to be **analysed in conjunction with the appliance they are meant to power**. A number of factors are to be taken into account such as **energy demand, use intensity and use frequency, not to forget convenience and consumer behaviour**. The digital camera example chosen by the Öko-Institute is not relevant since digital cameras shifted entirely to rechargeable batteries. In high drain applications (digital cameras, video game controllers, audio devices, etc) the market has naturally evolved to rechargeable batteries and without any legislation imposing it, because this is the wisest option from both an economic and environmental point of view.

➤ ***Extreme amount of device scrapping contrary to circular economy principles***

On average, a household (195 million in EU) has roughly 23,9 battery-powered devices¹, ranging from smoke detectors to all types of remote controls, radios, toys, thermometers, clocks, etc. The Öko-Institute estimates that **70% of these devices would be scrapped** if primary batteries were to be banned. This is an **incredible amount of unnecessary waste which is in no way compatible with any sustainability principles**, not to mention the new Circular Economy Action Plan.

Furthermore, we highlight that replacing an alkaline battery with a lithium-ion rechargeable one is contrary to existing safety regulations. Lithium-ion batteries are nominally 4 volts whereas alkaline batteries are 1.5 volts. This means that if we place an AA-size lithium-ion battery into a product currently taking AA alkaline batteries, the higher voltage would destroy the device and could cause a fire or explosion. The IEC standards have very strict rules on battery size and voltage to prevent such safety hazards.

¹ Kantar Global Device inventory Study 2019.

➤ **Primary batteries – a thriving and committed industry in Europe**

EPBA emphasises the **continuous technological improvement process of primary batteries** which brought significant results in terms of increased **resource efficiency and performance, reduced size and therefore less waste**:

- The runtime of primary batteries increased between 27% and 48% the past decades. Primary batteries have become smaller and lighter whilst delivering more energy which resulted in less packaging and less waste at the end of life².
- EPBA member companies have implemented ambitious programmes to lower the carbon footprint of their factories and continue investigating how to optimise the use of resources and the design of their products.

➤ **End of portable battery production in Europe**

The social and economic impacts of the two scenarios presented by the Öko-Institute are highly underestimated. A ban would only further strengthen the battery business in Asia where rechargeable batteries are produced. EPBA member companies that manufacture in Europe **employ 5,200 people who would simply lose their job. Additional jobs would be lost in the various collection schemes, retail, transport, supply chain, recyclers and other related sectors.** Most recyclers are specialised on a specific primary cell technology and cannot easily switch to treating rechargeable cell technologies.

Promoting manufacturing in Europe, in line with the European Battery Alliance objectives, would **foster the regional economy, secure an efficient functioning of the supply chain and keep emissions at a lower level, when compared to imports from Asia.**

A ban on primary batteries would be the end of portable battery production in Europe!

➤ **Way forward – Setting Minimum Quality Standards for Primary Cells**

EPBA and its members remain committed to developing primary cells of the highest safety and quality standards

It was our understanding that the impact assessment would also evaluate minimum quality standards. EPBA nor its members have been explicitly approached to provide input on this issue.

EPBA sees merit in **setting minimum quality standards for primary batteries** to ensure that European consumers have the **safest and highest-quality choices** available to power their appliances.

That's why we would like to work together with the appropriate bodies (European/International) on setting minimum quality standards for primary cells. We recommend to first evaluate, what is already available regarding performance-based requirements. We believe that the **IEC standard 60068-2 (Physical and electrical specifications of primary batteries)** can be a good starting point since it includes **Minimum Average Duration (MAD)** values with which primary batteries have to comply. MAD values are minimum performance standards set in relation to a selected number of applications. The evaluation should investigate **how these MAD values can be strengthened to increase the minimum level of performance for primary batteries placed in the European market.** This will also be an opportune moment to look into stricter requirements for ensuring health and safety when using batteries such as requirements for **leakage prevention.**

² See EPBA Circular Economy Position Paper: <https://www.epbaeurope.net/policy-areas/circular-economy/>.

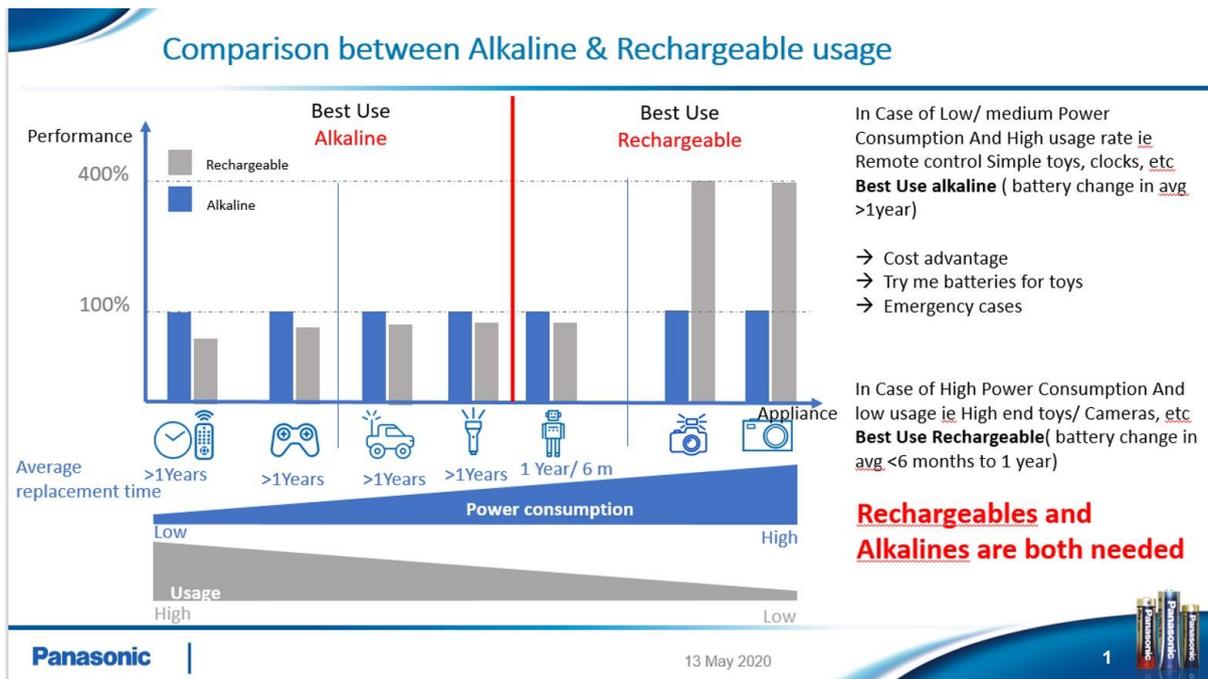
EPBA Position:

- EPBA opposes a ban on primary batteries. The assessment of the Öko-Institute confirms this would not bring any environmental, economic or social benefit. On the contrary it would lead to an extreme amount of waste which is certainly not aligned with the EU Green Deal and Circular Economy Action Plan.
- Primary batteries are the best option from an environmental point of view to power low-drain appliances. The market for low-drain applications like miniature, light weight, wearable and portable devices is expected to continue growing.
- A ban would lead to the end of portable battery manufacturing in Europe and impact negatively on other adjacent sectors (retail, supply, recyclers, collection schemes, etc)
- EPBA sees merit in setting minimum quality standards for primary batteries to ensure that European consumers have the safest and highest-quality choice available. We want to work together with the appropriate bodies (European/International) on setting these minimum quality standards, ideally based on IEC parameters.

About EPBA

The EPBA advocates the portable power solutions of its members working with regulators, NGOs and other stakeholders to create an environment of harmonized and fair legislation so consumers may enjoy efficient and safe batteries to be conveniently used and recycled. For more information, visit our website: www.epbaeurope.net/.

Annex 1 – Comparison between Primary & Rechargeable Use



Annex 2 List of low drain devices (meaning low energy demand) which only function or function in an optimal manner on primary batteries

Connected Electronic remote control door locks (installed on house doors)
Connected Automatic window blinds (Wi-Fi enabled for remote operation)
Electronic door locks (installed on house doors)
Automatic window blinds
Stud finders / laser levels / tapeless measures / meters / testers
Pencil sharpener / stapler / hole punch / other desk tool
Emergency strobe / signal / flare / other visual locator
Connected Home security system or device
Connected Amazon Dash button or Wand
Connected Home hazard detector (water leaks, humidity, temperature)
Connected Bluetooth smart tag / Location indicator (for tracking keys, pets, children, and other items)
Connected garage door opener / gate opener
Connected Smart vents (for home heating / AC)
Connected bathroom scale / body analyser
Connected smoke or carbon monoxide detector
Smoke detector / fire alarm
Carbon monoxide detector
Combined smoke and carbon monoxide detector
Radon detector
Home security system or device
Home hazard detector (water leaks, humidity, temperature)
Doorbell transmitter (button)
Home or Kitchen appliance with battery back-up (such as gas stove, gas meter, or water heater)
Weather stations
Outdoor timers (such as for lawn lights or sprinklers)
Kitchen timers
Kitchen scales
Hand-held kitchen mixer / knife / meat thermometer / wine opener / other kitchen cooking appliance
Battery operated pet collars (invisible fence)
Wrist watch or pocket watch
Travel alarm clock
Alarm clock / clock radio
Wall clock or other clocks
Keychain or light smaller than a penlight
Touch/tap light
Wearable light (i.e., light you place on the body other than headlamp - clip lights, hat lights, etc.)
Book light
Laser pointer
Decorative lighting / ornaments
Flameless candle or tealight
Garage door opener / gate opener
Garage door or gate keypad
Keyless remote / key fob for car (security system, unlock doors, remote start, etc.)
Remote for remote controlled vehicle
Remote control for TV / video / audio
Remote control for fan / ceiling fan / air conditioner

Remote control for home lights / blinds / etc.
Bathroom scale
Thermometer
Hearing aid (single or pair)
Blood glucose monitor
Blood pressure monitor
Personal wearable medical emergency response device
Medical alert system (non-wearable)
Medical emergency response device (wearable or non-wearable)
Pulse oximeter finger detector
Heart rate monitor
Pedometer
Stopwatch or multifunction sport watch
Rifle scope
Laser range finder