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ENVIRONMENT

Directorate C - Sustainable Resource Management, Industry and Air  
**ENV.C.2 - Waste Management**

**Brussels, 23<sup>rd</sup> May 2011**  
**M/494 EN**

**MANDATE ADDRESSED TO CEN, CENELEC AND ETSI FOR THE  
ELABORATION OF A FEASIBILITY STUDY IN THE FIELD OF THE  
BATTERIES DIRECTIVE 2006/66/EC**

**1. SCOPE**

This mandate concerns the elaboration of a feasibility study of standardisation activities (at European and international level) in the area of batteries and accumulators technology.

The study will cover existing and future standardisation activity.

**2. MOTIVATION**

This study mandate is related to the Parliament and Council Directive on (waste) batteries and accumulators<sup>1</sup>. The Directive was adopted on 6 September 2006 and entered into force on 26 September 2006 when it was published in the Official Journal.

Article 21(2) of the Directive requires that all portable (rechargeable and non-rechargeable) and automotive batteries and accumulators carry a capacity label. At the moment there is no specific standardised European label for portable primary (non-rechargeable) batteries to indicate their capacity/performance and appropriate use whereas a similar label already exists for portable secondary (rechargeable) and automotive batteries and accumulators.

A study<sup>2</sup> on capacity labelling (July 2008) concluded that for portable rechargeable batteries, a capacity label appropriate for different end uses can be meaningful, because the frequency of use by the end-users does not very strongly influence the delivered capacity. On the basis of this study and several stakeholder consultations, the Commission services

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<sup>1</sup> OJ L 266, 26.9.2006, p. 1., amended by Directive 2008/12/EC (OJ L 76, 19.3.2008, p. 39–40).

<sup>2</sup> See BIO IS Final report (2008) on capacity labelling:  
[http://ec.europa.eu/environment/waste/batteries/pdf/battery\\_report.pdf](http://ec.europa.eu/environment/waste/batteries/pdf/battery_report.pdf)

prepared a "capacity labelling" regulation which was adopted and published in the Official Journal<sup>3</sup>.

For portable non-rechargeable batteries, the study pointed out that the delivered capacity is highly dependent on the use patterns of different battery-fed devices. Therefore, a single, simple and implementable capacity label for these battery types was not identified. Additional technical study<sup>4</sup> further identified three capacity labelling options worth considering in detail. Two of these<sup>5</sup> are specific for selected popular end-user applications (and therefore specific for typical use patterns e.g. radio, portable stereo, photo flash, electronic game etc). These two options can give useful information to end-users as to which battery type (and related capacity) would be most appropriate only for a specific application and not for all applications. The consultants indicated that the use of such labels may lead to reduced resource use, battery waste and CO<sub>2</sub> emissions. However, a magnitude of the EU-wide total environmental, economic and social benefits and costs could not be established, and it is not clear whether the benefits outweigh the costs.

**The capacity label/mark** will need to provide useful, easily understandable and comparable information for end-users when purchasing portable primary (non-rechargeable) batteries. This label has to be indicated on batteries in a visible, legible and indelible form. With this in mind, it would be advantageous that a recommendation for a standard for a label was available within 12 months from the acceptance of the mandate at the latest, taking into account information available in this respect (including labelling options presented in the Annex).

### **3. DESCRIPTION OF THE MANDATED WORK**

In order to elaborate a capacity label for portable primary (non-rechargeable) batteries by means of standardisation, the European Standardisation Bodies are mandated to execute the following tasks:

- a) Review of the current methods of measuring battery capacity and the standards relating to these methods, taking into account different and typical applications at national, European and international level.
- b) Identify the availability of stakeholders in the EEA with a view to associate them when necessary in the standardisation process.
- c) Study the appropriateness of formal standard(s) and/or new standardisation documents for the capacity labelling of portable primary (non-rechargeable) batteries taking account the evolution of the technology and the particular needs of the battery sector.
- d) Review of existing standards/provisions applicable to similar labelling schemes for consumer information, e.g. energy-efficiency labels on appliances, and analysis of possible suitability/transferability for capacity labelling of batteries.
- e) Provide recommendations on the further priorities for European and international standardisation in view of the European contribution to the European and international

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<sup>3</sup> Commission Regulation (EU) No 1103/2010 of 29 November 2010 establishing, pursuant to Directive 2006/66/EC of the European Parliament and of the Council, rules as regards capacity labelling of portable secondary (rechargeable and automotive batteries and accumulators) (OJ L 313, 30.11.2010, p. 3).

<sup>4</sup> See BIO IS Final Report (2010) on capacity labelling at:  
[http://ec.europa.eu/environment/waste/batteries/pdf/battery\\_report\\_june2010.pdf](http://ec.europa.eu/environment/waste/batteries/pdf/battery_report_june2010.pdf)

<sup>5</sup> See Option 1 and Option 2b in Annex

standardisation. CEN/CENELEC/ETSI must also identify areas where international and/or European standardisation work is needed.

- f) CEN/CENELEC/ETSI should issue a report covering the areas a) - e). The report should also describe the current technical situation at national, European and international level, addressing on-going work and identifying any technical specification and/or administrative procedure (regional or international) which may already satisfy the requirements of the battery economy.

The report may serve as a basis for further standardisation mandates in the battery sector. The report may serve also to further develop the Commission's policy in the field of waste management.

There may be relevant pre-existing international or voluntary marking schemes. Account should be taken of existing marks or work in preparation by interested parties and Member States, at the EU and international level, to avoid duplication of work or confusion as to marking requirements.

Where batteries and accumulators are subject to labelling requirements as provided for by other Directives or requirements, existing or known to be in preparation, the standard recommendations elaborated under this mandate should be coherent and not overlap with aspects mandated under other Directives. However, the recommendations should take account of, and where necessary make reference to, other European standards in the field, either existing or in preparation. Account should be taken of the implications for other aspects of Community policy - for example, safety questions.

#### **4. EXECUTION OF THE MANDATE**

- 4.1. The Commission hereby asks CEN/CENELEC/ETSI to carry out the work described above.
- 4.2. CEN/CENELEC/ETSI will provide an indication of the time schedule for the completion of this work to the Commission before they accept the mandate. CEN/CENELEC/ETSI should take into consideration that the mark should be available as soon as possible, if appropriate.
- 4.3. CEN, CENELEC and ETSI will provide, within 5 months after the acceptance of the mandate, a status report (interim report) of the progress of the work.
- 4.4. The final report mentioned above will be submitted to the Commission 12 months after the acceptance of the mandate.
- 4.5. While executing the mandate, CEN/CENELEC/ETSI must also take into account on-going pre-normative research and development and coordinate their activities in order to avoid any duplication of work.

#### **5. BODIES TO BE ASSOCIATED**

The execution of the mandate should be undertaken in co-operation with the broadest possible range of interested groups, including international and European level associations. Those given the possibility to be involved should include manufacturers and importers of batteries and accumulators, consumers, the waste treatment industry and the

competent authorities of the Member States. As appropriate, CEN, CENELEC and ETSI will invite the representative organisations of consumers' interests (ANEC), environmental protection (ECOS), workers (ETUI-REHS) and small and medium-size enterprises (NORMAPME) to take part in the standardisation work.

CEN, CENELEC and ETSI are also requested to consult with the European Commission Directorate-General Joint Research Centre in order to explore if the Commission's research institutes dispose of specific competence to support the standardisation work.

Note: The present mandate may be amended by common agreement if that proves to be necessary during the course of the works.

## **Background information on capacity labelling options for portable primary (non-rechargeable) batteries <sup>6</sup>**

### **Option 1: First level labelling based on application device for the battery**

This label provides the most complete information (on capacity and possible specific device applications) to the end-users, however it is highly technical in nature.

The icons, and the textual expression used in this labelling scheme, provide a good understanding of the "lifetime" of the battery, and means of comparison between products (end-use-devices). However, the delivered capacity of portable primary batteries varies with the operating conditions in which they are used. Therefore, the capacity number indicated in this label could be misleading for the end-users and prone to variations. This would therefore risk a low level of accuracy in terms of end-user interpretation of information.

### **Option 2b: Second level labelling based on application device for the battery**

Labelling option 2b is a more elaborate version of labelling option 1. This labelling scheme provides complete information, however, not as precise as the labelling option 1.

The letters provides an indication of the level of performance of the battery in comparison to the average European products. The icons and the textual expression of the performance provide a good understanding of the "lifetime" (relative to the "lifetime" of the European average product of such a battery type) of the battery, and means of comparison between products. However, the nature of the message conveyed by this labelling scheme is not easy for the end-users to understand due to the technical nature of the information.

### **Option 3b: Comparative black and white star ranking system based on battery chemistry**


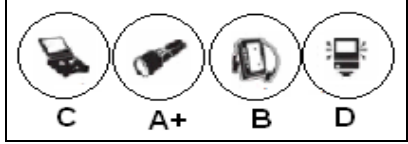
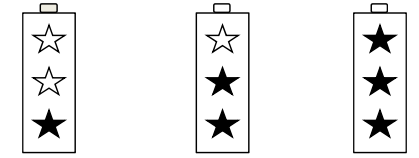
It provides information on the relative performance of a battery using the "star" icons. The filled black "star" icons provide a means of comparison between various chemical composition (1 star for zinc carbon, 2 stars for zinc chloride and 3 stars for alkaline). However, this labelling option does not explicitly indicate the potential end-use application devices.

Furthermore, this labelling option might need to be supported by complementary end-user information (e.g. display counters in shops, brochures, manufacturers' websites, etc) which do not lead to informed choice for the end-users at the moment of purchasing their batteries.

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<sup>6</sup> See BIO IS Final Report (2010) on capacity labelling at:  
[http://ec.europa.eu/environment/waste/batteries/pdf/battery\\_report\\_june2010.pdf](http://ec.europa.eu/environment/waste/batteries/pdf/battery_report_june2010.pdf)

**Table 1: Selected capacity labelling options for analysis**

Option 1: First level labelling	Option 2b: Letter grading for popular end-use applications	Option 3b: Comparative black and white star ranking system based on battery chemistry
 <p>XX h    XX h    XX h    XX pulses</p>	 <p>C    A+    B    D</p>	 <p>Zinc Carbon    Zinc Chloride    Alkaline</p>