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Batteries: Commission requires collection and recycling of all batteries

The European Commission has adopted a Proposal for a new Battery Directive, which will require the collection and recycling of all batteries placed on the EU market. It aims to prevent spent batteries ending up in incinerators or landfills and therefore to recover the various metals used in batteries. Due to the metals they contain, batteries pose environmental concerns when they are incinerated or landfilled. Since thousands of tonnes of different metals are used in battery production, their collection and recycling will also contribute substantially to saving natural resources. The proposed Directive aims to create an EU-wide framework for national battery collection and recycling schemes and will enhance the proper functioning of the internal market. An Extended Impact Assessment, carried out by the Commission in the preparation of this Proposal, has identified the proposed measures as the most sustainable policy options from environmental, economic and social points of view.

"By aiming to ensure that no spent batteries leak out of the collection and recycling system, this proposal will protect us and the environment from the risks that old batteries pose when they are incinerated or end up in landfills," said Margot Wallström, Commissioner for the Environment. "Discussions on a new Battery Directive have been on-going for several years and today we are presenting a concrete and well-balanced Proposal. Its implementation will encourage environmentally friendly behaviour from all actors involved in the battery life-cycle. Most importantly, consumers will have to contribute to environmental protection by bringing back their spent batteries to collection points."

The problem

Approximately 800,000 tonnes of automotive batteries, 190,000 tonnes of industrial batteries and 160,000 tonnes of portable (consumer) batteries are placed on the EU market annually. The metals used in those batteries vary considerably: automotive batteries are mainly lead-acid batteries whereas industrial batteries comprise both lead-acid batteries and nickel-cadmium batteries. The portable battery market consists of general purpose batteries (mainly zinc carbon and alkaline manganese batteries), button cells (mainly mercury, zinc air, silver oxide, manganese oxide and lithium batteries) and rechargeable batteries (mainly nickel-cadmium, nickel-metal hydride, lithium ion and sealed lead-acid batteries).

Mercury, lead and cadmium are by far the most problematic substances in the battery waste stream and mercury, lead and cadmium batteries are classified as hazardous waste by Commission Decision 2000/532/EC.[1] But other metals used in batteries, such as zinc, copper, manganese, lithium and nickel may also constitute environmental hazards. In case of incineration, the metals used in batteries contribute to air emissions and pollute incineration residues. When batteries end up in landfills, the metals contribute to the leachate from landfills. Moreover, on a resource management level, batteries are considered as an ore of secondary raw materials. Thousands of tonnes of metals, including valuable metals such as nickel, cobalt and silver, could be recovered if batteries did not go to landfills/incinerators.

Existing EU legislation on batteries has failed to adequately control the risks posed by batteries in the waste stream and to create a homogeneous framework for battery collection and recycling. As existing legislation only applies to batteries containing certain quantities of cadmium, mercury or lead it covers only 7% of the all portable batteries placed on the EU market annually. Its limited scope has led to inefficiencies in national battery collection and recycling schemes. Moreover, consumers have been confused by what to collect and what not to collect and have therefore not tended to participate in the national collection schemes. Consequently, today, many batteries still end up in the environment. For example, in 2002, approximately 45% of the total quantity of portable batteries sold in the EU-15 (i.e. 72.155 tonnes) went to final disposal operations, i.e. landfilling/incineration.

Proposed measures

The purpose of the Proposal is twofold: Firstly, it aims to establish a closed-loop system for all batteries to avoid their incineration or disposal in landfill when they reach the end of their lives. On the basis of the closed-loop system, all batteries will have to be collected and recycled, and their metals will be re-introduced in the economic cycle. Secondly, it sets minimum rules for the functioning of national collection and recycling schemes in order to enhance the proper functioning of the internal market and guarantee a level playing field for all the actors involved in the battery life-cycle.

In order to prevent batteries from entering the waste stream, the proposed Directive puts forward a number of different measures and targets:

Ban on landfilling/incineration

Automotive and industrial batteries, which are mainly lead-acid and nickel-cadmium batteries, are already being collected effectively today, because of the positive value of recycled lead and the availability of collection schemes of industrial nickel-cadmium batteries. In order to guarantee a 100% collection of those batteries, it is proposed to ban their landfilling and incineration.

Collection targets

For portable batteries a ban would be difficult to enforce because of their smaller size and wider range of users (both professionals and consumers). Therefore, Member States will be required to set up national collection systems to allow consumers to return spent portable batteries free of charge. The proposed target, on the basis of which the efficiency of the national collection system will be evaluated, is 160 grams per inhabitant and year. This target, which was identified by the Extended Impact Assessment as the most cost-efficient target, corresponds roughly to four - five portable batteries per person per year.

[1] OJ L 226/3 of 06.09.2000.

Portable nickel-cadmium batteries are of special concern due to the cadmium they contain. Their collection is covered by the 160 grams-target. However, it is proposed to set an additional collection target, as a safeguard to ensure that those batteries do not end up in the dustbin. This additional target is set at 80% of all portable nickel-cadmium batteries generated annually in each Member State. This is the amount of portable nickel-cadmium batteries collected plus the amount of portable nickel-cadmium batteries found in the municipal solid waste stream. Member States will thus be obliged to monitor the quantities of portable nickel-cadmium batteries discarded in the municipal solid waste stream. On the basis of these monitoring results, the Commission may also, if necessary, propose additional risk management measures in the future.

Recycling targets and recycling efficiencies

As a principle, after collection all batteries should be sent to recycling facilities in order to close the materials loop. The Proposal sets high recycling targets, which nonetheless make allowance for the fact that some portable batteries collected are technically not in a condition to be recycled (100% for automotive and industrial batteries and at least 90% portable batteries).

In addition, it proposes minimum recycling efficiencies, which focuses on the output of the recycling process. The recycling process of lead-acid batteries should recover all the lead and 65% of the average weight of those batteries. The recycling process of nickel-cadmium batteries should recover all the cadmium and at least 75% of the average weight of those batteries. For other batteries, the recycling process should recover 55% of the average weight.

In order to contribute to the proper functioning of the internal market, treatment operations taking place abroad will count for achieving the recycling requirements for the exporting Member State. For all types of batteries, the producers would be responsible for costs related to the collection, treatment and recycling. For spent portable batteries, the collection costs could be shared with the national, regional or local authorities. For spent industrial and automotive batteries, producers could conclude agreements on financing with their users. Member States will have to keep a register with all battery producers who will have to provide financial guarantees that they are able to manage spent batteries prior to placing their products on the market. Furthermore, producers are allowed to use a "visible fee" on new battery sales for a maximum of four years after implementation.

Costs

The Commission estimates that the additional annual costs of the proposed collection and recycling rates per household will be between €1 - 2.

Background

The main underlying drivers for this new EU initiative are the objectives set by the Sixth Community Environment Action Programme[2] as well as Directive 2002/96 on waste electrical and electronic equipment[3] which calls for the need to revise the current EU legislation on batteries and accumulators (Directive 91/157/EEC)[4] as soon as possible.

In line with the Better Regulation Package[5] which advocates simplification and improvement of EU legislation, the new Proposal repeals the existing Directives on batteries[6] and replaces them by one single legal instrument.

The Commission carried out an Extended Impact Assessment (ExIA) for the evaluation of the most sustainable policy options for this new Proposal. One of its main elements was a public stakeholder consultation, to which approximately 149 stakeholders (including national, local and regional authorities, industry, battery associations, trade associations, NGOs and consumer- and retail organisations) contributed.

The Proposal and further information related to this Proposal is available on the Commission's website at the following address:

http://europa.eu.int/comm/environment/waste/batteries_index.htm

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2 OJ L 242, 10.9.2002, p. 1.

3 OJ L 37/24 of 13.02.2003, recital 11.

4 OJ L 78, 26.3.1991, p. 38, amended by Commission Directive 98/101/EC, OJ L, 5.1.1999, p. 1 and supplemented by Commission Directive 93/86/EC, OJ L 264, 23.10.1993, p.51.

5 See COM(2002) 728final and COM(2003)71final.

6 Directive 91/157/EEC, OJ L 78, 26.3.1991, p. 38, amended by Commission Directive 98/101/EC, OJ L, 5.1.1999, p. 1 and supplemented by Commission Directive 93/86/EC, OJ L 264, 23.10.1993, p.51.