EUROPEAN
COMMISSION

Brussels, 9.4.2019
COM(2019) 166 final

REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

on the implementation and the impact on the environment and the functioning of the internal market of Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC

1. INTRODUCTION

Batteries are everywhere. They provide power for our vehicles and enable us to connect to communication networks through our personal devices. They store energy and ensure cleaner public transport. With the ongoing transformation in the way electric power is produced and used, the number of batteries on the EU market will only continue to grow, putting further pressure on the environment.

The Batteries Directive [1] is the only piece of EU legislation entirely dedicated to batteries. This is the Commission's second report[2] on the Batteries Directive. It has been prepared according to its Article 23, which tasks the Commission with preparing a report on the implementation of the directive and its impact on the environment and the functioning of the internal market. In its report, the Commission has to include an evaluation on some specific aspects of the directive, in particular,

- the appropriateness of further risk management measures for batteries containing heavy metals;
- the appropriateness of the minimum collection targets for all waste portable batteries;
- the possible introduction of further targets; and
- the appropriateness of recycling efficiency levels set by the directive.

The evaluation is part of a process that could lead to the directive's revision to take account of social and policy developments such as the shift towards a circular economy and low carbon policies, which involve an increased use of batteries for electric mobility and for decentralised power storage. The initiative for a 'European Batteries Alliance' (EBA) that aims to ensure a whole value chain for the manufacturing of advanced cells and batteries within the EU is also part of the new policy context. The related strategic action plan on batteries[3] includes the commitment to design innovative and future-proof regulation, of which the directive will be a key component.

The Batteries Directive aims to minimise the negative impact of batteries and waste batteries on the environment, to help protect, preserve and improve the quality of the environment. It also aims to ensure the smooth functioning of the internal market.

The directive addresses the environmental impacts of batteries related to the hazardous components they contain. If spent batteries are landfilled, incinerated or improperly disposed of at the end of their life, the substances they contain risk entering the environment, affecting its quality and affecting human health. To address these risks, the directive provides for reducing the presence of hazardous components in batteries and establishing measures to ensure the proper management of waste batteries.

---

1 DIRECTIVE 2006/66/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC OJ L 266, 26.9.2006, p. 1, as amended.

2 COM/2017/088 final

3 COM(2018) 293 final, ANNEX 2.

The directive requires Member States to maximise the separate collection of waste batteries and establishes targets for collection of waste batteries and recycling efficiencies. Member States are obliged to ensure that, by 2016, waste portable batteries are collected up to 45% of the amount placed on the market.

All batteries collected must be recycled through processes that at least reach the minimum efficiencies established by the directive, in order to attain a high level of material recovery. Targets are defined for three groups of batteries: lead-acid, nickel-cadmium and all other batteries ('general').

Producers of batteries and of products incorporating batteries are responsible for the management of the waste generated by the batteries they place on the market ('extended producer responsibility').

2. PREPARATION OF THE REPORT

This report is based on several sources of information: (i) Member States' reports[4] covering the 3 years from 26 September 2012 to 26 September 2015; (ii) the results of the Commission's evaluation of the directive in 2018[5]; and (iii) information on the collection rates and recycling efficiencies submitted to the Commission[6].

The well-documented implementation of the directive so far is in itself an input to the evaluation. Independent consultants have supported the Commission's assessment of the information collected[7]. The evaluation has followed the European Commission's better regulation policy. Moreover, the directive was partially evaluated in 2014 together with other waste stream directives (the 'fitness-check')[8]. The current evaluation has considered the five usual criteria, i.e. the directive's relevance, effectiveness, efficiency, coherence, and EU added value, along with the topics requested by its Article 23, mentioned above. Key issues identified in the fitness-check have also been looked at.

3. IMPACT ON THE ENVIRONMENT

The directive contributed to reducing the use of hazardous substances in batteries and to preventing waste portable batteries from being landfilled or incinerated, but not up to the level envisaged. Risks for the environment therefore persist.

3.1. CHEMICALS

The directive has reduced the amount of mercury and cadmium in batteries, but has not led to a reduction in the other hazardous substances. 'Old' types of batteries containing mercury and

---

4 Prior to its latest amendment in June 2018, the directive required Member States to provide the Commission with a report on its implementation every 3 years. To this end, a questionnaire was established by the Commission Decision 2009/851/EC. This obligation has now been discontinued.

5 See the staff working document SWD(2019)1300.

6 See EUROSTAT Webpage

7 Trinomics, (2017), 'Study in support of the preparation of the implementation report on Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators'

H Stahl et al., (2018) 'Study in support of evaluation of the Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators'.

8 SWD/2014/0209.

cadmium are still in use and the 'new' batteries contain harmful substances such as cobalt and some organic electrolytes.

The directive encourages the development of batteries containing smaller quantities of dangerous substances. However, it does not specify the criteria to identify the substances concerned (including heavy metals) or the type of management measures that could be adopted. Consequently, the evaluation suggests that these issues could be more appropriately addressed by other legal instruments.

3.2. COLLECTION AND RECYCLING OF WASTE BATTERIES

On the implementation of their collection and recycling obligations, Member States reported that measures for collecting, treating and recycling waste batteries are in place at national level following the transposition of the directive.

Most Member States have met or exceeded the 2012 target for the **collection of waste portable batteries** (set at 25 %), but only 14 Member States have met the **2016 target** (set at 45 %). The evaluation points out that these targets are generally insufficient to ensure a high level of collection of waste portable batteries. Provisions for collecting the different types of batteries are too diverse: a target has only been set for the collection of portable batteries, not for industrial and automotive batteries.

The management of used batteries remains a concern within the EU. An estimated 56.7 % of all waste portable batteries are not collected, annually. This has led to around 35 000 tonnes of waste portable batteries entering municipal waste streams, causing negative environmental impacts and a loss of resources. This amount is significant enough to jeopardise the achievement of the directive's environmental protection objectives.

On the **level of recycling**, the vast majority of waste batteries collected in the EU are recycled in line with the directive's requirements. The lack of specialised recycling facilities would explain the few cases where recycling is not ensured. Moreover, battery-recycling processes did meet the **efficiency targets** set by the directive, particularly for lead-acid batteries and to a lesser extent for nickel-cadmium and 'other' batteries.

The directive's overall objective to achieve a high level of material recovery is not being met, however. The directive only targets two substances — lead and cadmium — and does not consider other valuable components, as cobalt or lithium. Moreover, the definitions of recycling efficiencies is not geared towards increasing material recovery.

In the light of technical progress and practical experience gained, it can be concluded that the current minimum collection targets for waste portable batteries and the minimum recycling requirements are not appropriate. Further targets for collection and recycling should therefore be considered.

4. IMPACT ON THE INTERNAL MARKET

The directive has contributed significantly to the smooth functioning of the single market for batteries when compared with the previous situation of individual requirements at national level.

Overall, the directive has had a positive economic impact on the sectors linked to the manufacturing and recycling of batteries. While it has entailed significant costs for industrial operators, stakeholders generally agree that these are outweighed by present and future benefits.

While complying with the directive involves complex procedures, some of which can generate significant costs for local authorities, national administrations do not consider that implementing the directive carries any unnecessary regulatory burden.

The evaluation underlines how the directive's requirement that all collected batteries undergo treatment and recycling, is key to ensuring the viability of recycling activities. This obligation, linked to efficient and sufficient collection, helps ensure the supply of raw materials for recyclers, supporting better economic results for recycling activities.

In addition to lowering the EU's reliance on imports of particularly important raw materials — including critical ones — recycling may have economic benefits. The directive, however, limits these positive effects as it only establishes efficiency targets for lead and cadmium.

In a number of cases, the obligations and definitions in the directive are not very detailed, which could have had an impact on the level of harmonisation achieved. Aspects needing further clarification include, for instance differences in the classification of spent batteries according to the List of Waste, the criteria for granting exemptions to removability or labelling obligations, the obligations for collecting waste industrial batteries or the consideration of slag as a finished recycled product.

5. OTHER EVALUATION FINDINGS

5.1 RELEVANCE

While the current provisions of the directive are still relevant, the evaluation has highlighted a number of aspects that the directive needs to address more comprehensively in light of developments such as the shift towards a circular economy, climate policy objectives or technological advancements

While key circular economy goals are reflected in the directive, such as addressing the supply of materials and recycling, there is still significant untapped potential. The directive is also insufficiently equipped to easily incorporate technical novelties. For instance, lithium-based batteries, while included in the scope of the directive, are not addressed as a specific category and there is no mechanism to incorporate new battery chemistries into the directive. Likewise, the directive does not specifically address the possibility of giving advanced batteries a 'second life'.[9]

The current system established by the directive does not appear to be suitable for dealing with industrial batteries either. There are no detailed provisions for battery collection, for setting up national schemes or for extended producer responsibility for this category of batteries, whose number will very rapidly increase in future and became unavoidable for implementing low carbon policies in the EU.

[9] The ongoing Innovation Deal on batteries, intended to address specifically this issue, should be mentioned.

5.2 COHERENCE AND INTERNAL CONSISTENCY

Many stakeholders consider that the provisions dealing with batteries should be concentrated in a reduced number of legislative acts, particularly for chemicals and end-of-life issues, with a clear relationship between these acts. They also think that there should be a reflection on whether the EU chemicals legislation REACH is a more adequate instrument to manage chemicals in batteries.

The specific issues identified on coherence with other EU legislation also relate to the demarcation with legislation that covers products that incorporate batteries and the implementation of extended producer responsibility. The recently adopted minimum requirements for extended producer responsibility under the Waste Framework Directive[10] will help address risks of inconsistency.

Some basic concepts in the directive are not well defined and some objectives remain vague, in particular those that do not relate to specific measures or targets. This is particularly the case for the reduction in the disposal of batteries as municipal waste, the separate collection of automotive and industrial batteries, or the obligation to ensure that batteries are removed from waste electrical and electronic equipment

Shortcomings in internal consistency and coherence of the directive will need to be further addressed to avoid overlaps, to ensure clarity for stakeholders and Member States authorities and to maximise the functioning of extended producer responsibility.

5.3 EU ADDED VALUE

The evaluation concluded that it is appropriate to continue to set the conditions for the sale, collection and recycling of batteries at EU level. The implementation of the directive is perceived as a major contribution to the well-functioning of the single market for batteries.

Stakeholders consider that trade barriers, if any, are of lesser importance compared to what national regulations could entail. Stakeholders nevertheless pointed to cases where the lack of detail in the directive could hamper the development of a level playing field for recyclers, creating de facto barriers (see point 3.2 above) and propose to address those at EU level. Gaps in the enforcement of the directive could also distort the internal market, by creating a disadvantage for producers that strictly follow the provisions in the directive (as e.g. the levels of heavy metals or ensuring the proper labelling) as compared to producers who do not make the same efforts.

5.4 REPORTING, LABELLING AND INFORMATION TO THE PUBLIC

The directive has been effective in ensuring that portable and automotive batteries are labelled. However, improvements are needed to ensure that information reaches end-users.

The difficulties in meeting the collection targets for waste portable batteries illustrate the need to strengthen the provisions aiming to ensure that end-users are properly informed.

Labelling alone is not enough. Complementary activities such as public information campaigns can also be effective. A more accurate definition of producers' obligations to finance such activities would have helped end-users be more aware of their expected role in

[10] Directive 2008/98/EC, OJ L 312, 22.11.2008

ensuring the collection of spent batteries, for example.

Reporting obligations are only established when targets are set. The absence of quantified targets therefore makes assessing Member States' performance on these particular aspects very difficult.

6 CONCLUSIONS

As requested by Article 23 of the Batteries Directive, the Commission has evaluated the directive and assessed its implementation along with its impact on the environment and on the internal market.

Based on the assessment of the national reports, the Commission concludes that the Member States have adopted the measures needed to implement the directive's provisions.

The evaluation demonstrates that the directive has delivered positive results in terms of a better environment, the promotion of recycling and better functioning of the internal market for batteries and recycled materials.

However, the observed limitations in some legal provisions or in their implementation prevent the directive from fully delivering on its objectives. This is particularly true as regards the collection of waste batteries or the efficiency in the recovery of materials.

Moreover, the absence of an efficient mechanism to incorporate technological novelties and new usages of batteries into the directive casts doubts on its ability to keep pace with fast technological developments in this field.

Further work should particularly aim to identify and assess the feasibility of measures to improve the directive's impact on environmental protection, the proper functioning of the internal market, the promotion of circular economy and low carbon policies and the ability to adapt to technological and economic developments.