# Initial Appraisal of a European Commission Impact Assessment



# Updating the EU regulatory framework for batteries

Impact assessment (SWD(2020) 335, SWD(2020) 334 (summary)) accompanying a Commission proposal for a Regulation of the European Parliament and of the Council concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020

This briefing provides an initial analysis of the strengths and weaknesses of the European Commission's impact assessment (IA) accompanying the above-mentioned proposal, adopted on 10 December 2020 and referred to the European Parliament's Committee on Internal Market and Consumer Protection (IMCO). The proposal seeks to update the EU's legislative framework for batteries as laid out in Directive 2006/66/EC (the Batteries Directive), whose objective is 'to minimise the negative impact of batteries and waste batteries on the environment, to help protect, preserve and improve the quality of the environment and to ensure the smooth functioning of the internal market' (IA, p. 10). With its proposal, the Commission intends to ensure that the existing framework could contribute to the ultimate objective of achieving an economy with net-zero greenhouse gas emissions (i.e. climate neutrality) by 2050, in line with the Commission communication on the European Green Deal, COM(2019) 640. In addition, the proposal aims to contribute to environmental protection, by stimulating investments in the production of batteries with a minimised environmental impact over their life cycle.

#### **Problem definition**

Based on the <u>evaluation</u> of the current framework (IA, Annex 6, pp. 100-104) and its <u>supporting</u> <u>study</u>, the IA identifies **three groups of problems** (IA, pp. 17-28):

- lack of framework conditions providing incentives to invest in production capacity for sustainable batteries. According to the IA, this problem is linked to potentially diverging regulatory frameworks within the internal market, as well as to the lack of reliable and comparable information;
- sub-optimal functioning of recycling markets and insufficiently closed materials loops (i.e. the repair and reuse of batteries, and the use of secondary materials coming from recycling are not being promoted), which limits the EU's potential to mitigate the risk of shortages in the supply of raw materials. According to the IA, shortcomings in the existing legal framework represent an obstacle to the profitability of recycling activities and to investment decisions in related technologies;
- social and environmental risks that are currently not covered by EU environmental law: according to the IA, these include a lack of transparency on sourcing raw materials and the use of hazardous substances.

The IA identifies three underlying drivers (IA, pp. 27-28):

> market failures: the IA refers to the misalignment of incentives across the battery value chain. The IA mentions a situation where the costs to the environment are not factored into the market price and are thus borne by society as a whole (IA, p. 27);

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- information failures: this is another market failure, although the IA considers it a distinct category (driver). According to the IA, information failure can lead to unfair competition or to sub-optimal levels of material recovery (IA, p. 27);
- **complexity of the battery value chain**: the battery value chain is comprised of many different steps, and most of them not only take place in different geographical locations but are also carried out by different market players. According to the IA, market and information failures are 'exacerbated' by this level of complexity, although it does not provide any supporting evidence to substantiate this statement (IA, p. 27).

According to the IA, even if the products and batteries placed on the market become more efficient and durable, this will not solve the identified problems. On the contrary, the exponentially increasing demand for batteries (IA, pp. 12-15 and Annex 7 to the IA, pp. 105-107) due, for instance, to the electrification of passenger cars, vans, buses and trucks (IA, p. 7), is expected to exacerbate the existing problems (IA, pp. 15-16 and Annex 7 to the IA, pp. 108-110). The IA (Figure 1, p. 7) gives an overview of what accelerating the transition to a low-carbon economy would imply for each segment of the battery value chain. The IA provides a clear, satisfactory, evidence-based and comprehensive description of the identified groups of problems and their consequences. The impact of the coronavirus pandemic is briefly mentioned when discussing the baseline, with the IA providing an example for the sale of electric vehicles (IA, p. 34); however, the IA does not dwell on this issue in greater depth. The analysis illustrating the three identified drivers does not appear to be well developed, especially with regard to market and information failures.

## Subsidiarity / Proportionality

The IA justifies EU action from both a Treaty and an added value perspective (IA pp. 30-32). As, according to its own analysis, primary importance is mostly assigned to the internal market objectives, the IA considers it appropriate to use Article 144 of the Treaty on the Functioning of the European Union (TFEU) as the sole legal basis. While pointing out that the proposed measures do touch on environmental issues, the IA argues that they are not directly covered by EU environmental law and are therefore all linked to the functioning of the internal market. As concerns subsidiarity, the IA sees a need for EU-level action to set the harmonised rules necessary to achieve a level playing field for manufacturers, recyclers, importers and other economic operators. The IA also states that there is clear added value of EU action: the creation of a harmonised and well-functioning internal market should stimulate large-scale investment and enable the transition to a circular economy. While observing that these aims cannot be sufficiently achieved by the Member States alone and that therefore EU action is justified and necessary, the IA does not provide any further evidence to back its statement. No national parliament submitted a reasoned opinion by the deadline of 8 March 2021 under the subsidiarity control mechanism. Contrary to the Better Regulation Guidelines, the IA does not contain a specific section on or assessment of proportionality, nor does it consider this principle when comparing the policy options. It simply states that the proposed measures do not go beyond what is necessary to achieve the required regulatory certainty (IA, p. 31).

# Objectives of the initiative

The IA identifies three general objectives (IA, p. 33): strengthening the functioning of the internal market; promoting a circular economy; reducing the environmental and social impact throughout all stages of the battery life cycle. These objectives appear to be clear and consistent with the identified groups of problems, although there seems to be a discrepancy between what the IA identifies as the first group of problems (the lack of incentives to support investments in production capacity for sustainable batteries) and the first general objective, which the IA states it aims to realise 'by ensuring a level playing field through a common set of rules' (IA, p. 33). However, it does not clarify whether these rules are meant to overcome the lack of the aforementioned incentives or, rather, other weaknesses associated with the batteries value chain. The IA identifies 10 specific objectives for what the policy intervention is meant to achieve (IA, p.33), namely to:

- foster the production and placement on the EU market of high-quality batteries;
- ensure functioning markets for secondary raw materials and related industrial processes;
- promote innovation and the development and take-up of EU technological expertise;
- increase the resilience of the battery value chain and close the materials loop;
- reduce the EU's dependence on imports of *materials of strategic importance (primary raw materials* as indicated in the problem tree of Figure 7 on p. 17), i.e. mitigate the supply risks:
- ensure an appropriate collection and recycling of all waste batteries;
- contribute to a responsible sourcing;
- use and source resources, including raw and recycled materials, in an efficient and responsible way;
- reduce greenhouse gas (GHG) emissions across the entire life cycle of a battery;
- reduce the risks to public health (deriving from the use of hazardous substances) and to the quality of the environment (deriving from the extraction of raw materials) and improve the social conditions of local communities (outside the EU).

As regards the aforementioned specific objectives, it is worth noting that they appear to be largely consistent with the problems identified in the problem tree in Figure 7 (IA, p. 17), and to broadly comply with the SMART (specific, measurable, achievable, relevant, and time-bound) criteria. However, the IA does not define any operational objectives, which would illustrate what the deliverables of specific policy actions are. This is in contradiction with the Commission's Better Regulation Guidelines (Tool #16, p. 100), which recommend that operational objectives should be identified after having selected the preferred option (and in relation to monitoring and evaluation).

## Range of options considered

The proposed measures are based on: the analysis done as part of the evaluation of the Batteries Directive; the public consultation; multiple support studies; and political goals such as the Green Deal. The IA generally considers two policy options in addition to the baseline for each measure. These options are classified according to the level of ambition associated with them. For measures 3, 4 and 8, a third 'very high level of ambition' option was assessed as well. The following table illustrates the policy options retained for assessment, with the preferred options highlighted in grey.

Table 1 - Policy options retained for assessment

MEASURES	OPTION 1 BASELINE	OPTION 2  MEDIUM LEVEL OF  ambition	OPTION 3 HIGH LEVEL OF AMBITION	COMMENTS
1.Classification and definition	Current classification of batteries based on their use	New category for EV batteries Weight limit of 5 kg to differentiate portable from industrial batteries	New calculation methodology for collection rates of portable batteries based on batteries available for collection	Option 2 was originally assessed as two separate sub-measures (a and c) A 2 kg weight limit was assessed as part of a sensitivity analysis Option 3 proposed to be re-assessed through a review clause
2. Second life of industrial batteries	No provisions at present	At the end of their first life, used batteries are considered as waste (except for reuse). Repurposing is considered a waste treatment operation. Repurposed (second-life) batteries are considered as new products that have to comply with the product requirements when they are placed on the market	At the end of their first life, used batteries are not waste. Repurposed (second-life) batteries are considered as new products that have to comply with the product requirements when they are placed on the market	

MEASURES	OPTION 1 BASELINE	OPTION 2  MEDIUM LEVEL OF  ambition	OPTION 3 HIGH LEVEL OF AMBITION	COMMENTS
3. Collection rate for portable batteries	45 % collection rate	65 % collection target in 2025	70 % collection target in 2030	Option 2 and 3 are cumulative. A 75 % collection target in 2025 was assessed as Option 4
4. Collection rate for automotive and industrial batteries	No losses of automotive and industrial batteries	New reporting system for automotive, EV and industrial batteries	Collection target for batteries powering light transport vehicles	Option 3 proposed to be re-assessed through a review clause. An explicit collection target for industrial, EV and automotive batteries was assessed as Option 4
5.Recycling efficiencies and recovery of materials	Recycling efficiencies defined for lead- acid (65 %), nickel-cadmium (75 %) and other batteries (50 %) 'Highest degree of material recovery' obligation for lead and cadmium without quantified targets	Lithium-ion batteries & Co, Ni, Li, Cu:  Recycling efficiency for lithium-ion batteries: 65 % by 2025  Material recovery rates for Co, Ni, Li, Cu: resp. 90 %, 90 %, 35 % and 90 % in 2025  Lead-acid batteries and lead:  Recycling efficiency for lead-acid batteries: 75 % by 2025  Material recovery for lead: 90 % in 2025	Lithium-ion batteries & Co, Ni, Li, Cu:  Recycling efficiency for lithium-ion batteries: 70 % by 2030  Material recovery rates for Co, Ni, Li, Cu: resp. 95 %, 95 %, 70 % and 95 % in 2030  Lead-acid batteries and lead:  Recycling efficiency for lead-acid batteries: 80 % by 2030  Material recovery for lead: 95 % by 2030	Option 2 and 3 are cumulative  The recycling efficiency rates and material recovery rates were assessed separately for lithium-ion batteries (sub-measure a) and lead-acid batteries (sub-measure b)
6. Carbon footprint for industrial and EV batteries	No provisions at present	Mandatory carbon footprint declaration	Carbon footprint performance classes and maximum carbon thresholds for batteries as a condition for placement on the market	Option 2, possibly to be complemented over time with Option 3  The carbon footprint is sometimes referred to as 'carbon intensity'
7. Performance and durability of rechargeable industrial and EV batteries	No provisions at present	Information requirements on performance and durability	Minimum performance and durability requirements as a condition for placement on the market	Possibility of introducing Option 3 at a later stage
8. Non- rechargeable portable batteries	No provisions at present	Technical parameters for performance and durability of portable primary batteries	Phase out of portable primary batteries of general use	Total phase out of primary batteries was assessed as Option 4
9. Recycled content in industrial, EV and automotive batteries	No provisions at present	Mandatory declaration of levels of recycled content achieved as of 2025	Mandatory levels of recycled content achieved as of 2030 and 2035	Option 2 and 3 are complementary
10. Extended producer responsibility	EPRs and PROs obligations reflect the provisions of the Waste Framework Directive, as amended	Clear specifications for extended producer responsibility obligations for industrial batteries Minimum standards for PROs	/	Option 2 was originally assessed as two separate sub-measures (a and b)

MEASURES	OPTION 1 BASELINE	OPTION 2  MEDIUM LEVEL OF  ambition	OPTION 3 HIGH LEVEL OF AMBITION	COMMENTS
11. Design requirements for portable batteries	Obligations on removability	Strengthened obligation on removability	New obligation on replaceability	Option 2 and 3 are complementary
12. Provision of information	Specifications on information and labelling	Provision of basic information (in the form of labels, technical documentation or online)  Provision of more specific information to end users and economic operators (with selective access)	Setting up an electronic information exchange system for batteries and a passport scheme for industrial and electric vehicle batteries only	Option 2 and 3 are complementary  Option 2 was originally assessed as two separate sub-measures (a and b)
13. Supply-chain due diligence for raw materials in industrial and EV batteries	No provisions at present	Voluntary supply-chain due diligence	Mandatory supply chain due diligence	

Source: Authors, based on the IA (pp. 59-66).

Baseline scenario (Option 1): the IA states that, in the absence of action at EU level, there would be negative consequences for the environment, as it is unlikely that unguided market forces would lead to sustainable outcomes. The IA illustrates well what the implications from the 'business-asusual' option would be. As regards Options 2, 3 and 4, the IA explains what each of them would entail in detail in its Annex 9. In some cases, Option 3 is more of a natural progression than an alternative policy option, for example for measure 3, where Option 2 is a collection target of 65 % in 2025 and Option 3 one of 70 % in 2030. The choice of preferred option(s) is succinctly presented in a well-reasoned way, based on their effectiveness and taking into account the stakeholders' opinions of their efficiency, without however mentioning coherence (IA, pp. 59-64). As the preferred option is often a mix of Options 2 and 3, the IA could have indicated more clearly when these options are complementary and when they are cumulative. All in all, the IA seems to present a sufficient range of policy options, in accordance with the Better Regulation Guidelines. The options appear to be linked to the problems and objectives defined and to enjoy general stakeholder support, based on the information provided (except for measure 10's extended producer responsibility, which some industrial battery producers thought was unnecessary, measure 11's obligation on removability, which manufacturers thought should be left to their decision, and measure 12's electronic information exchange system, which some producers were concerned would be too costly).

#### Assessment of impacts

The IA focuses mainly on economic and environmental impacts, and less on social ones, as it considers the measures' direct social effect to be often insignificant. The IA focuses only on the direct impacts, as it expects indirect impacts to be significant but impossible to accurately quantify (IA, pp. 44-59). Annex 9 (IA, pp. 136-316) provides a detailed analysis of the economic, environmental and social impacts of all the measures and their option ranges, as well as a helpful overview. The measures are numerous (as are their impacts and the analyses made) and have varying goals. The direct economic and social benefits are expected to be insignificant compared to the indirect economic benefits that a stable regulatory framework should bring. The direct impact on jobs is not estimated to be higher than 2 500 additional jobs for any of the measures' preferred options, but the IA estimates that developing a competitive lithium-ion cell manufacturing capability in the EU could result in the creation of 90-180 direct jobs per GWh/y production volume (IA, p. 44). The preferred options are all expected to have a positive environmental impact either by directly reducing emissions or indirectly leading to more efficient recycling or production. Beyond calculating the baseline, the IA does not explore the environmental impact of increased battery

production itself. Rather, it points out that the measures are aimed at promoting a circular economy that would increase the recycling efficiencies and efficiently use and monitor resources. This should help decrease emissions connected to the battery production necessary for the transition to a low-carbon economy. The IA illustrates well how each measure will contribute to the goal of a low-carbon circular economy, including measures with a more subtle effect. All measures except measure 2 entail at least some costs or some level of administrative burden, due to new or modified reporting and monitoring systems. For most measures, these are not expected to be significant thanks to already existing obligations. The most significant cost for industries comes with measures 6 and 9, which foresee mandatory declarations. In the cases where no significant administrative burden is expected due to already existing obligations, the IA could have been more precise in explaining how these obligations relate to the new ones; overall, however, the IA substantiates its assessments well from both a quantitative and a qualitative point of view. Two tables summarising the direct and indirect benefits and costs are provided in Annex 3 (IA, pp. 85-93). The IA's assessment of the measures' impact appears generally well reasoned and grounded in evidence, and the figures appear to be sufficiently robust due to assumptions producing conservative estimates.

#### SMEs / Competitiveness

The IA does not dwell on SMEs, except to specifically identify them as part of the battery recycling process for both waste battery collection as well as dismantling and pre-processing (IA, p. 30). This is contrary to the Better Regulation Guidelines, which require potential impacts on SMEs to be considered and reported systematically (Tool #22, pp. 155-162). As regards competitiveness, the IA names batteries development and production as a key component of the competitiveness of the EU's automotive sector (IA, p. 8). However, there is no in-depth assessment of the proposed regulation's impact on competitiveness as foreseen by the Better Regulation Guidelines. The IA states that (p. 67) international competitiveness would not be affected, as there would not be a significant impact on production costs. However, no further evidence is presented to back up this statement. Considering the administrative burden and costs that are predicted for some of the measures, a more detailed and substantiated analysis of their impact on SMEs and overall competitiveness would have been appropriate.

#### Simplification and other regulatory implications

The IA states (p. 67) that one of the findings resulting from the evaluation of the Batteries Directive, SWD(2019) 1300, was that the implementation of this directive involved necessarily complex procedures that could have sometimes entailed significant costs for local authorities, but that national administrations did not perceive the implementation as resulting in unnecessary regulatory burdens. In addition, the IA states (p. 67) that the proposal includes a number of measures ensuring that the regulatory environment is 'updated and fit for purpose'. Finally, the IA states (p. 67) that the proposal makes 'maximum use' of the potential of digitalisation to reduce administrative costs, referring for instance to Option 3 under measure 12, which proposes to set up an electronic information exchange system. As regards the overall regulatory burden, the IA considers that it would not have a significant impact on the price of batteries, although clearly acknowledging that the financial costs and benefits of the options package are uncertain (IA, p. 66). In addition, it is unclear if, and in case yes, in what form, the current proposal has implications for the broader regulatory framework that includes the Waste Framework Directive 2008/98/EC and the Industrial Emissions Directive 2010/75/EU. In general, the regulatory implications of the proposal and its simplification potential could have been considered with a greater level of detail.

#### Monitoring and evaluation

The IA states that the monitoring envisaged for some of the objectives can be integrated into existing reporting systems. For other measures, the Commission intends to provide a web-based tool, e.g. for the reporting obligations concerning the carbon footprint of batteries placed on the market. To verify the declarations and in line with the new due diligence policy, third-party verification via notified bodies would be necessary. Lastly, national market authorities would be

responsible for checking the validity of the information provided (IA, p. 68). The IA does not provide any indicators, but instead gives a list of improvements that would indicate the success of the new rules that can be used to evaluate the measures in the future. However, some of these are rather general and therefore appear to leave considerable room for interpretation (IA, p. 68). The monitoring strategy seems coherent but clearer benchmarks could facilitate future evaluation.

#### Stakeholder consultation

The IA benefitted from the feedback provided by stakeholders to the Commission inception IA, which received 103 valid contributions – published on the consultation website – between 28 May and 9 July 2020. The IA states that the proposal was generally recognised by stakeholders as a response to technological, economic and social changes. Topics considered particularly important were harmonisation across Member States, coherence between the legal provisions, and whether recycling should be closed-loop (IA, pp. 76-78). There was no open public consultation specifically dedicated to the proposal, but the IA also presents the results from a public consultation organised by DG GROW between June and November 2019 in the context of a regulatory initiative on sustainability requirements for batteries. However, the reference cited yields only the original questionnaire and no further information is provided on the regulatory initiative or evidence of the responses submitted to the open public consultation that the IA cites, nor their precise dates (IA, pp. 78-81). After the political decision was taken to replace the Batteries Directive and the sustainability requirements that DG GROW had been working on with a single legal instrument, the IA reports that there was another round of consultation activities between February and May 2020. These activities are not mentioned on the consultation website and no reference is provided in the IA. It appears that the Commission consulted a wide range of stakeholders whose views were reported in the IA. However, it is difficult to fully assess the IA's reporting of stakeholder views, as the consultations that took place before the inception impact assessment are not referenced well.

## Supporting data and analytical methods used

The IA appears to be based on solid sources and methods. It draws on the <u>preparatory study</u> on ecodesign and energy labelling, the <u>evaluation</u> of the Batteries Directive, numerous recent publications, and data from Avicenne Energy, a private consulting firm, among others. A comprehensive bibliography would have been useful, as some of the footnotes in Annex 7 ('Facts and figures') of the IA are imprecise (for example 'Criticality study 2017', IA, p. 112), but otherwise this annex contains comprehensive information about the data used to construct the figures cited in the IA. The IA openly acknowledges the scarcity of data for certain measures and, to ensure robustness, it uses conservative estimates. For measures 3 and 10, a mass flow model was employed, which is described further in Annex 4 of the IA. While the IA states that the model is based on one developed by the Oeko-Institut (IA, p. 94), there is no further reference to the source.

# Follow-up to the opinion of the Commission Regulatory Scrutiny Board

On 24 July 2020 the Commission Regulatory Scrutiny Board (RSB) adopted a negative opinion, which is not available on the RSB website, on a draft version of the IA report submitted earlier on (the date is not indicated in the IA). On 18 September 2020, the RSB adopted a second positive opinion with reservations on a draft version of the IA report submitted on 11 September 2020, acknowledging the improvements with respect to the first version, for instance as regards the more focused analysis in comparing the policy options. However, the RSB noted the presence in the report of 'significant shortcomings' regarding, in particular, the evidence provided on recent and emerging developments in the batteries sector in the EU (entailing a baseline not adequate for carrying out a comparison). Another such significant shortcoming was the argumentation regarding the composition of measures within the retained options, which, according to the RSB, appears to be unclear and incoherent. The final version of the IA summarises in its Annex 1 (pp. 70-74) the RSB's recommendations in its first and second opinion and how they have been addressed, in line with the Better Regulation Guidelines. Based on the explanations provided in the Annex, the IA does appear to have addressed the RSB's recommendations.

# Coherence between the Commission's legislative proposal and the IA

Overall, the proposal seems to be aligned with the analysis provided in the IA. For measure 6, Article 7 (together with Annex II) of the proposal sets an implementation timeline by which batteries will need to comply with maximum life-cycle carbon footprint thresholds, thereby implementing options 3 and 2. As regards measure 8, the proposal does not lay down the minimum requirements for durability and performance parameters that need to be fulfilled, and rather empowers the Commission to do so by 31 December 2025, as noted in Article 9 (together with Annex III). The legislative proposal reflects well the IA's suggested monitoring strategy. While Article 77 lays out an obligatory review of the proposed regulation to be conducted by the Commission by 31 December 2030, it does not mention the list of improvements that the IA proposed as a measure of the success of the new rules.

The IA clearly defines the problems to be addressed and their drivers. The objectives appear to be clear and consistent with the manner in which the problems have been defined. However, the IA does not identify any operational objectives. The IA appears to present a sufficiently broad range of policy options that are linked to the problems and objectives defined. The IA's assessment of the individual measures' economic and environmental impact appears generally well reasoned, grounded in evidence, and the figures sufficiently robust due to assumptions producing conservative estimates. Social impacts received less attention. Where numerical targets were set, a quantitative analysis of the environmental impacts was conducted, otherwise it remained purely qualitative. The IA, however, makes hardly any mention of SMEs and there is no overarching assessment of the proposed regulation's impact on competitiveness. The Commission appears to have consulted a wide range of stakeholders whose views have been reported in the IA and taken into account when considering the policy options, but the IA's reporting of stakeholder views could not be fully assessed because no references were provided. The IA appears to have addressed the RSB's recommendations. The proposal seems to be aligned with the analysis carried out within the IA and overall reflects faithfully the IA's suggested monitoring strategy.

#### **ENDNOTES**

<sup>1</sup> See V. Halleux, <u>New EU regulatory framework for batteries: setting sustainability requirements</u>, briefing, EPRS, European Parliament, 2021. See also E. Karamfilova, <u>Batteries Directive</u>, briefing, EPRS, European Parliament, 2020.

This briefing, prepared for the IMCO committee, analyses whether the principal criteria laid down in the Commission's own Better Regulation Guidelines, as well as additional factors identified by the Parliament in its Impact Assessment Handbook, appear to be met by the IA. It does not attempt to deal with the substance of the proposal.

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