



RIGHT TO REPAIR



ENVIRONMENTAL IMPACT OF IMAGING EQUIPMENT, INCLUDING CONSUMABLES

PUBLIC CONSULTATION

15 August 2023

ECOS, Deutsche Umwelthilfe, and the Right to Repair Europe and Coolproducts campaigns, welcome the publication of the Public Consultation on the environmental impact of imaging equipment, including consumables. We hope that this will trigger the drafting of robust energy and material efficiency requirements through Ecodesign and Energy Labelling measures. We consider these requirements essential for this product category that has been for too many years covered by a particularly weak voluntary agreement.

Often sold at a loss to recoup profits through the sales of cartridges (or toners in the case of laser printers), home printers – and their consumables – are hardly ever designed with reparability or longevity in mind. This leads to vast amounts of short-lived imaging equipment being placed on the EU market, and then added to the ever-growing pile of e-waste.

Through this paper, we intend to clarify some of the responses that we have provided to the public consultation through the 'Have your say' webpage. We also take this opportunity to mention several other Ecodesign and Energy Labelling measures that we believe have been omitted by the questionnaire but should be tackled for imaging equipment and their consumables. This includes, among others, information about the price of spare parts, a repair scoring system and a ban on certain toxic components.

CLARIFICATIONS

QUESTIONS WITH A PERSPECTIVE ON THE WHOLE MARKET

Question 5: How important do you consider introduction of the following measures for printers and cartridges?

- ▶ Minimum product performance requirements to reduce the energy consumption of printers

We have marked this issue as “important” rather than as “very important” because there has already been a significant amount of work completed in this area. However, many improvements still need to be made, and reducing the energy consumption of printers cannot be neglected either.

- ▶ Introduction of an energy label

We consider that the “Introduction of an energy label, allowing consumers to choose the most energy efficient printer at the point of sale” is “very important”. However, the energy label must also contain information about the material efficiency of printers, as will be the case for mobile phones in a few years thanks to the forthcoming Energy Labelling requirements for this type of product¹. For example, the number of pages that a printer can print before reaching its limiting state² is a good indicator of the material efficiency of the product. An energy label would also allow for a repair index to be displayed, and therefore considered for this category of product (more information about this issue in section ‘Issues not covered by the public consultation’).

Question 6: Requirements to improve the material efficiency of a product can cover different aspects. How important do you consider regulating the following aspects to improve the material efficiency of printers and cartridges?

- ▶ Ensuring that printers are separately collected at their end of life

We have answered “important” for home printers and “very important” for office printers. The reasoning is that office printers have a higher reuse potential. However, we believe that every home printer must also be separately collected for preparing for re-use or recycling at its end of life.

¹ ANNEXES to the Commission Delegated Regulation (EU) .../... supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to the energy labelling of smartphones and slate tablets – available [here](#)

² The limiting state being reached when, because of a limiting event, the product no longer fulfils its normal use or intended use, as defined by “SIST EN 45552:2020 - General method for the assessment of the durability of energy-related products”

- ▶ The use of recycled materials in the production of printers and cartridges

Recycled content targets are crucial to close material loops and improve the competitiveness of recycled materials. However, we have marked this issue as “important” rather than “very important” as we are aware of some recent evidence³ suggesting that recycling can increase the toxicity of plastics. Rather than concentrating on plastic recycling, product manufacturers must reduce the amount of plastic used in products and product lifetimes must be extended through increased repairability and durability. Also, to encourage the development of a healthier plastic recycling market, the use of substances of concern such as flame retardants must be banned for the manufacturing of consumer products such as printers, as is already the case for electronic displays⁴. In any case, if recycled content objectives are set for printers, recycled content must be measured with robust methodologies, as suggested by ECOS in the context of the Single-Use Plastic Directive (SUPD)⁵. Techniques such as pyrolysis and gasification should not be accepted for calculation of recycled content.

Question 8: How important are the following aspects in making it more likely that cartridges for home printers are remanufactured compared with the current situation?

- ▶ Increased use of cartridge subscription services with take-back schemes for the collection of empty cartridges

We have answered “Neutral” to this question as the potential environmental impacts associated with cartridge subscription services with take-back schemes will vary depending on several factors. For example, if cartridge subscription services result in significant numbers of cartridges being remanufactured then environmental impacts could be reduced. However, if the consumables returned via cartridge subscription services are not remanufactured (e.g. they are sent for material recycling or energy recovery) then these services may not result in environmental improvements associated with consumables. In addition, cartridge subscription services could result in a reduction of cartridge remanufacturing as remanufacturing organisations are unable to access used consumables.

- ▶ I think it is already easy to use remanufactured cartridges

We have answered “Neutral” to this affirmation as we consider it lacks clarity. Remanufactured cartridges can be easy to use where imaging equipment does not employ any restrictions on the use of these types of consumables. Indeed some manufacturers remanufacture consumables themselves and there are no known

³ Greenpeace, Forever Toxic: The science on health threats from plastic recycling, 05/24/2023, available [here](#)

⁴ Article D.4 of Annex II of COMMISSION REGULATION (EU) 2019/2021 of 1 October 2019 laying down ecodesign requirements for electronic displays pursuant to Directive 2009/125/EC of the European Parliament and of the Council, amending Commission Regulation (EC) No 1275/2008 and repealing Commission Regulation (EC) No 642/2009 states that “The use of halogenated flame retardants is not allowed in the enclosure and stand of electronic displays”.

⁵ ECOS feedback – The implementing decision of the Single-Use Plastic Directive (SUPD) defining the methodology for recycled content, available [here](#)

issues with these products. However, there are considerable issues with imaging equipment either completely restricting the use of remanufactured consumables or significantly impacting their functionality.

ISSUES NOT COVERED BY THE PUBLIC CONSULTATION

We note that several other important environmental aspects must be considered to reduce the environmental impacts associated with imaging equipment in both domestic and nondomestic premises. These include:

- ▶ Price of spare parts

Even though the question of high repair costs is somewhat tackled in final user question n°3 (*Why is your previous printer no longer in use?*), transparency on the price of spare parts is never mentioned in the list of suggested resource efficiency measures. However, two EU legislative texts that are about to be published in the Official Journal suggest that this is possible for another category of products and for batteries. Annexes to the Regulation laying down ecodesign requirements for smartphones, mobile phones other than smartphones, cordless phones and slate tablets (Smartphone Regulation) provide that *'the manufacturers, importers or authorised representatives shall provide indicative pre-tax prices at least in euro for spare parts [available to professional repairers and end-users], including the pre-tax price of fasteners and tools, if supplied with the spare part, on the free access website of the manufacturer, importer or authorised representative'* (e.g. Annex II.B.1.1.(4) for smartphones). Also, the provisional agreement resulting from interinstitutional negotiations on the Proposal for a Regulation concerning batteries and waste batteries (Battery Regulation), provides in article 11.5 that *'Any natural or legal person that places on the market products incorporating portable or LMT batteries shall ensure that batteries shall be available as spare parts of the equipment they power for a minimum of 5 years after placing the last unit of the model on the market, with a reasonable and non-discriminatory price for independent professionals and end users'*. To maximise the share of end-users who repair rather than replace defective printers, manufacturers must provide access to information on the maximum price of spare parts and ensure that the price of these parts does not exceed 30% of the price of the product when purchased new. This must be reflected in the proposed ecodesign requirements for printers.

- ▶ Availability of spare parts and consumables.

The list of spare parts that will be available to end-users and independent repairers should be available for at least 10 years. Also, consumables should be available for at least 20 years as their availability is crucial to the functionality of these products. In the case where a manufacturer would not be able to provide cartridges or spare parts anymore, it would have to publish the technical specifications to allow for independent production.

- ▶ Bundling of spare parts

Question 9 on how important some elements are in making it easier to repair home printers compared with the current situation suggests to *"design products that are easier to disassemble (e.g. shorter disassembly time, feasible with commonly available tools)"*. We believe that preventing the bundling of spare parts is missing from this element. Bundling some spare parts means that, instead of replacing a faulty part, repairers might be required to replace larger parts that might end up being costlier. In the Smartphones

Regulation, the list of spare parts that should be accessible to professional repairers and end-users is protected against bundling. For smartphones, it is through Article B.1.1.(1).(b). We encourage the Commission to adopt the same approach for printers.

- ▶ Replacement of serialised parts

In the questionnaire, the question of software practices that limit the replacement of spare parts (sometimes also called part pairing) is tackled for remanufactured cartridges. This is a very relevant step considering this product category, but this should not be limited to consumables. Indeed, part pairing could create major barriers to independent and self-repair. As for the price of spare parts, provisions exist in the forthcoming Smartphones and Battery Regulations that should be used as a blueprint for printers:

- Annex II.B.1.1.(4) in the Smartphone Regulation
- Article 11.7 in the Battery Regulation

Software techniques that prevent the replacement of spare parts, or the usage of third-party spare parts or consumables, must be banned.

- ▶ Expected lifetime and repair scoring system

Upon sale, consumers should have access to reliable information on the longevity and repairability of the products they buy. This would allow them to compare and potentially go for the most reliable products. A horizontal standard now exists to inspire the development durability testing methodologies for energy related products (EN45552:2020 - General method for the assessment of the durability of energy-related products). The ecodesign requirements for printers must call for such a durability testing methodology to be developed by the European Standardisation Organisations. Once such a methodology developed, manufacturers would be obliged to test the durability of their products and display the expected lifetime upon sale. Eventually, this methodology would also allow policy makers to set minimum lifetime requirements.

On top of that, a repair scoring system, as developed within the forthcoming Energy Label for mobile phones and tablets, should be considered more systematically when new material efficiency ecodesign requirements are developed.

- ▶ Information about when to replace cartridges

It has been noticed that some manufacturers design their printers to send “low ink” error messages even though cartridges actually still contain a significant proportion of their ink⁶. Ecodesign requirements should also aim at preventing this practice. These techniques lead to premature replacement of ink cartridges and can represent a high cost for their users.

- ▶ Emissions

The Blue Angel ecolabel already includes requirements addressing substance emissions from printers, including volatile organic compounds (VOCs), ozone, and fine and ultrafine particles. The Commission must

⁶ InkJetWholesale, Are Empty Epson Ink Cartridges Really Empty? – 02/10/2015

address this issue as it is likely to be a concern for some users, especially where imaging equipment is used in poorly ventilated areas.

- ▶ Knowledge of how returned cartridges are treated

Not all cartridge take-back programmes are equal in terms of their environmental performance. Some cartridge take-back schemes prioritise energy recovery of plastics rather than remanufacturing of the cartridges. Users of cartridge take-back schemes must be provided with information on the end-of-life process for their returned cartridges. This could encourage users of printer consumables to favour cartridge take-back schemes which prioritise remanufacturing over recycling or energy recovery.

- ▶ Take back for other consumables in addition to cartridges

The Preparatory Study on Imaging Equipment has shown that there are several other types of consumables used by printers beyond cartridges (e.g. Toner, waste toner cartridges, print heads, transfer belts, transfer roller, fusers, drum units and drum maintenance units). These other consumables must also be considered to reduce overall environmental impacts.

- ▶ Common components

The questionnaire includes a reference to designing printers and cartridges in such a way that they are more compatible over time (meaning that the same model of cartridge can be used for different generations of printers, unless design changes are necessary). This is an important issue that could encourage the development of more robust cartridges that can be remanufactured more easily and more often. However, printers must also be designed so that other parts are common across different models. This is, actually, one of the recommendations of the PROMPT project⁷ which suggests that “Standardization reduces spare part costs, tooling, component identification complexity, and skill level required, and increases interchangeability of components during maintenance and repair”.

- ▶ Common charging connection

The USB Power Deliver (PD) Revision 3.1 specification enables up to 240W of power to be delivered over full featured USB Type-C cables and connectors. Most inkjet printers will not use more than 240W of power even during active printing. As such, the Commission could consider applying the common charger specification to inkjet printers. This could reduce the need for additional cables and power supplies.

- ▶ Toxic components in ink and toner and photoconductor drums

It is understood that the RoHS Directive is the primary legislative method to restrict the use of hazardous substances in electrical and electronic equipment. However, there are specific hazardous substances used in printers and consumables which are not commonly found in other electrical and electronic equipment. As

⁷ PROMPT, D.4.3: Design for physical durability, diagnosis, maintenance, and repair, 30/04/2022 – available [here](#)

such, the Commission must consider including limitations on some of the hazardous substances, such as PFAS chemicals, that are specific to printers and consumables.

- ▶ Duplex printing

Duplex printing (i.e. double-sided printing) can save a significant amount of paper, reducing both environmental impacts and costs. The Commission must ensure that all printers provide at least manual duplex printing and that laser-based products, and higher speed inkjet products, provide automatic duplexing.

- ▶ Ensuring compliance for all products put on market by including obligations for online marketplaces

Online platforms and fulfillment service providers play a crucial role in ensuring compliance with environmental and consumer protection regulations for imaging equipment within the EU. Online platforms must check whether there is a liable actor in the EU who guarantees compliance with the environmental requirements of the implementing act on imaging equipment, including consumables. Furthermore, online platforms must check whether the obligations of manufacturers and distributors are being met (e.g. energy label availability, comprehensive information for consumers, provision of spare parts, etc.) before a product is put online for sale. Fulfillment service providers must be subject to similar obligations. If no such checking obligations are set, massive amounts of illegal products will keep on being imported into the EU market.

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