COMMENTS

ON THE REVIEW OF THE MEERP – METHODOLOGY FOR ECODESIGN OF ENERGY-RELATED PRODUCTS (TASKS 1 TO 5)

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Following the second stakeholder consultation meeting on 23 June 2022, the environmental stakeholders hereby submit their views on the draft JRC Technical Report on the Review of the Methodology for Ecodesign of Energy-related Products (MEErP). We appreciate the work undertaken by the JRC to refine the methodology to examine the wider resource efficiency impacts of energy-related products and to facilitate the shift toward more durable, reparable, and circular products. In particular, we support the following aspects:

- Improvements in packaging and distribution aspects
- New datasets to enable modelling of packaging, distribution, maintenance and repair separately
- New capabilities to account for direct emissions in manufacturing/assembly and use phases

- Ability to include consumable impacts during the use phase
- Improvements to the tables of upgradability and reparability levels

It is paramount that material efficiency aspects and lifetime considerations are addressed in adequate detail to arrive at meaningful outcomes from analysis. There is a balance to be reached between simplicity and flexibility of the tool and providing sufficient infrastructure and guidance to ensure ease of use and consistency between studies. We believe that, in many cases, simple solutions such as correction factors and supplemental spreadsheet tools can ensure that aspects of the analysis essential to policy objectives are considered. The integration of societal costs in the LLCC must be properly addressed, as well as complexities around repair levels and the labour impacts of more durable products.

The remainder of this paper details several associated recommendations for the attention of the project team.

DATA SETS

SECTION 1.3, SUBTASKS 1.A & 1.B

- **Non-EU production data sets**: The Bill of Materials datasets are only "representative for the average EU context", meaning for production in the EU. Yet many electronic products are manufactured outside the EU. We strongly recommend that the JRC includes two data set options as standard in the tool – one for EU production and one for non-EU production – whilst allowing custom edits where necessary. This would ensure a degree of consistency between studies and reduce the work of those carrying out the preparatory studies. If a non-EU data set is not included, there must be clear guidance regarding the need to take production origin into consideration when setting up the model and tailor production data to match the manufacturing context on a product-by-product basis.

- **Distribution data sets**: As noted in the stakeholder meeting, air freight has been omitted from the distribution data set. Air freight should be included as it may be relevant for high value materials and products.

END OF LIFE MODELLING

SECTION 1.2, SUBTASKS 1.D & 1.G

- **Use of the IEC/TR 62635:2012 definition of recyclability:** This proposed definition is imprecise ("ability of waste product to be recycled, based on actual practices"). The reference to "waste" product is unclear, which is one of the reasons it was not adopted in the EN 45555:2019 standard. It was considered that recyclability was more complex because it also related to how easy it was to recycle materials from the product considering current practices, rather than just if the ability was present or not.

  We therefore propose a new definition is developed along the lines shown below:

Recyclability: How easily materials from a product can be recycled based on the design of the product and the degree of recycling possible in actual practices.

If the above definition is not adopted, it should at least be clarified what is a waste product according to the IEC definition.

- **CFF formula:** We consider the current approach to simplify the CFF formula problematic as it only addresses emissions related to recycling, without considering emissions in energy recovery or landfill. This means that an increase in recycling content has higher impact, which is misrepresentative of the real-life impacts and runs counter to circular economy goals by disadvantaging design options that would increase recycling. The rationale that landfills and incineration are not relevant for ErP is not clearly justified, especially considering the % mass factors to landfill and incineration for different materials, which often add up to a greater proportion of the product than the content that is recycled. To correct this disparity, it is necessary to consider the end-of-life emissions for each end-of-life processing option in a consistent way.

MODELLING OF ANNUAL SALES

SECTION 1.5, SUBTASK 1.F

- **Importance of guidance**: Whilst examples of how the Weibull distribution can be adjusted are useful, there is a need for clear guidance on the modelling of annual sales to explain how to choose parameters in the Weibull distribution to facilitate informed and consistent approaches, particularly where there is no literature providing such values for the product group.

- **Practicality of examples:** On page 24, a confusing example is provided. The 2% sales increase case is applied retrospectively to the level of 100 in year zero reducing sales in prior years compared to the first example. This means that a 2% increase results in lower stock levels. A more intuitive example would begin sales in year -40 at the level of 100 and increase sales by 2% each year from this point, so that stock levels were higher than the first example.

GUIDANCE ON ERT AND PROCEDURE FOR FUTURE UPDATES

SECTION 1.9, SUBTASKS 1.C AND 1.I

- **ERT manual Weibull guidance**: As previously mentioned, the ERT manual needs to include better guidance on addressing how users should adapt the Weibull distribution for the products they are addressing, for both sales and repair considerations (see sections in this document on 'Modelling of annual sales' and 'More systematic inclusion of material efficiency aspects.)'

- **Need for a formal feedback mechanism:** We support the proposed feedback processes for study contractors to provide information on problems encountered, new datasets introduced and improvement suggestions. However, the feedback mechanism should be more concretely and formally defined as it is currently specified very vaguely.

MORE SYSTEMATIC INCLUSION OF MATERIAL EFFICIENCY ASPECTS AND OF ENVIRONMENTAL FOOTPRINT/ECOLOGICAL PROFILE ASPECTS IN THE DESIGN OPTIONS AND IN THE LLCC CURVE

SECTION 2 & TECHNICAL ANNEX III

- Terminology: As already highlighted in previous discussions, terminology consistent with the EN 4555X series of standards should be adopted: 'critical components' should be referenced as 'priority parts' instead.

- Reparability cost / expected future lifetime: Table 4 refers to the "Typical times and cost of repair operations according to the reparability level". This table is very difficult to fill out as there is no specificity to parts, and the guidance in Annex III on Weibull modelling to determine these values via statistical formulae is very technical. These calculations depend upon study teams who: "have the adequate technical skills and competences to do that seamlessly." (pg 75). We consider it inappropriate to prescribe an approach that requires study teams to make complex statistical calculations without a clear framework. This opens a potential for error and lack of consistency in studies. The JRC should establish within the ERT the technical foundation of such calculations with a user interface that makes it accessible and easy to use in a consistent way for study contractors, avoiding exposing the full complexity to the user. We consider it paramount that the JRC creates an additional sheet (in the ERT or via a supplementary spreadsheet/tool) that would simplify and standardise the statistical analysis of repair from raw data (failure frequency probability, cost of repairing each part, etc.) on a part-by-part basis to arrive at the typical values to be input to table 4, table 6, and table 7. Not including this in the current approach does not make the methodology simpler or give study teams greater flexibility. It simply conceals the existing complexity, opens greater possibility for errors, and reduces transparency and consistency.

- Insufficient detail in examples: Whilst we support the provision of a specific product example (p39 to 40), we consider the laptop example extremely generalised/approximate. It does not sufficiently explain how study contractors would determine these typical/generalised repair costs from part-specific repair insights (e.g. the price of replacing a screen could be much lower than the price of replacing a connector port, and these may fail at different points in the product lifetime). A fully worked example should be provided. This should show how the 'typical' repair figures are arrived at from divergent data covering a range of different parts.

- Reuse and remanufacturing: Reusability and remanufacturability are harder to address, especially as only one failure and corresponding repair action can be considered in the tool before end-of-life occurs. Therefore clear guidance should be provided on how reusability and remanufacturability can be addressed within the existing structure. This is especially important for futureproofing as the new approach is likely to be in place for several years.

- Learning curve for repair costs: Considering the delay in the implementation of regulatory measures from the time when the preparatory study is completed, learning/experience curves for costs should be integrated into the tool to consider future cost decreases, for example due to economies of scale or strategic pricing to encourage a higher volume of lower price paying customers. If the degree of complexity this entails is considered untenable, methodological guidance should explain the need for sensitivity analysis to be implemented on repair costs to account for learning curves.

- **Spare parts prices:** We consider the approach to spare parts in the current proposal insufficient. Spare parts prices are already considered in the French repair score, underlining their importance and the possibility of addressing these. Yet in the reparability levels of table 3, spare part prices are not considered (although it is considered in table 4 as part of the repair cost). We consider spare part prices both in scope of the MEErP approach and important to address. To ensure that the major impact spare part prices (in relation to the product purchase price) can have on repair is not lost in the total repair cost, we propose that the ratio of spare part price to product purchase price is included in the table 3 reparability levels. Otherwise, a product could have a prohibitive spare part price (for example, in the stakeholder meeting it was stated that printer EPS have been found to cost 86% of product RRP) and still be considered at level 1 (best) reparability.

- **Repair Level 4 (unrepairable):** We consider the presence of a level 4 repair level which allows for an unrepairable product that is durable enough to be inappropriate. This opens the possibility to prioritise durability over repair which we do not consider acceptable within an ecodesign framework that is increasingly including provisions on repair. A product can and should be designed for both reparability and durability. Therefore level 4 repair only makes sense in the context of products that have yet to be regulated, not in the context of design options and LLCC. We therefore recommend that level 4 of the reparability levels is removed or marked as "unused".

- **End of life design options:** The following bullet point does not seem relevant (p46): "Cost-benefit assessment of selective recycling treatments (e.g., through manual or automatic separation) vs mechanical treatments (e.g. via fine shredding and sorting);". A CBA of different recycling approaches does not link to the way the product is designed. This bullet point needs to link to a characteristic of the product itself, such as a design that facilitates lower cost recycling treatments.

MORE SYSTEMATIC INCLUSION OF SOCIETAL LIFE CYCLE COSTS

SECTION 3

- **Insufficient opportunity for stakeholder input:** We do not consider it acceptable that, due to the section on societal life cycle costs being absent in the second stakeholder consultation, there can be no direct consultation on how the societal life cycle costs will be handled within the new MEErP approach. Once the text in this section of the report and ERT are completed, there must be an opportunity for stakeholders to review and comment on these, even if this is via a written consultation.

- **Integration of societal costs:** The vague discussion around societal costs in the second stakeholder consultation meeting suggested that societal costs would be included as "side information" for the time being. Considering the Commission's goal to shift towards a more integrated approach whereby the preparatory study and impact assessment are carried out simultaneously, as is the current approach for external power supplies, the infrastructure to systematically integrate societal costs and other aspects included in impact assessments must be integrated in this current revision of the MEErP and ERT. Without this, it is unlikely that societal costs will guide the consideration of design options and there will be a risk that impact assessments and preparatory studies are out of sync - for example:

- LLCC design options being chosen that have problematic societal costs and are rejected in the impact assessment.
- Design options being dropped because their lifecycle cost is not as low as some other options, even though they have greater societal savings such as reduced pollution for human health & the environment.

Further, a more integrated approach best leverages the technical expertise of the preparatory study contractors. It is important that the relevant actors are included in this process such as the Regulatory Scrutiny Board who review impact assessments. Consideration of SME impacts should be integrated within this approach as these are an important consideration at impact assessment stage.

- **EU- centricity**: Whilst the EU perspective is important, we recommend, on an ethical level, that the global pollution and job impacts are also highlighted for consideration at least in a qualitative way through the guidelines. For some products, these impacts could be substantial. It should not be acceptable to reward products that have high impacts just because these impacts are displaced outside Europe.

MORE REFINED EVALUATION OF THE ECONOMIC IMPACTS IN TASK 7 OF THE MEERP

SECTION 4

- **Locality of labour impacts:** The assumption that labour impacts of repair and upgrade are of an "intrinsically local nature" (p.49) is not certain. It is important to recognise the differences in impacts between the different repair actors. When repair is restricted by OEMs to their own facilities, products (especially lighter weight electronics) can be shipped overseas to make the most of cheaper repair labour in more dedicated facilities, incurring environmental impacts in transportation and resulting in job increases only outside of Europe. If barriers to wider repair are removed, for example through the prevention of OEM product pairing / serialisation (which can restrict the ability to repair products to the OEM only), local repair becomes much more likely as transportation impacts would be reduced. This would also result in benefits in local jobs and higher likelihood of repair as the product is returned to the end-user in a shorter timescale. Guidelines could, in a qualitative way, specify that contractors consider any potential international labour impacts.

- **Need to account for complexities around repair levels:** Although it was not clearly expressed in the report, we understand from stakeholder presentations and discussions with the JRC that the base assumptions behind the different repair levels are:
  - **Time to repair:** For each repair level there is a percent increase in time to repair, with level 3 taking the longest and level 1 the shortest. In the example on page 41 of the report, this was "assumed" as 25% per class. This would tilt the economic/societal benefits toward options where repair is more difficult.
  - **Reduced labour rate:** The benefits of easier repair are accounted for as increased repair competition by a default reduction of 20% in the hourly labour rate. In the page 41

example, this was "assumed" as 20% per class. This would tilt economic benefits related to easier repair.

- **Likelihood of repair:** This is determined by taking the cost of repair (time x labour rate) into account in the cost per day of use. This is calculated using the cost of repair (time to repair, hourly rate, spare parts) and lifetime cost of product, distributed over the expected lifetime.

This approach is likely to be highly sensitive to the differences in time to repair and labour rate between levels. If the job creation benefits of level 3 repair outweigh the reductions in labour rate in line with the example, it would be concluded that a more difficult to repair design option is the optimal one. **This is a distortion of the model and is not an acceptable outcome.** An overly simplified focus on jobs created through repair will encourage less reparable designs.

We consider that additional factors to balance these calculations towards more reparable options should be included. We believe that this can be done in ways that do not involve too much complexity in the model, and that some changes are unavoidable as the approach in the model is not currently working. We suggest that amongst other options the following are explored:

- **More transparency** on the methodology, default assumptions and the complexities around this issue within the report and MEErP guidelines.
- **Rigour on class assumptions:** Accounting for the high sensitivity of the model to the percent difference between classes for labour rate and time to repair, guidelines should make clear that these differences should be based on an analysis of real product-specific data from repairers. If this is not possible, or if it is decided to define default values for differences between classes, there needs to be a clear scientific justification for the default values (accompanied by a sensitivity analysis to ensure the chosen defaults favour options with improved reparability), with detailed guidance on how to sanity check and adapt these for each product group.
- **Correction factors for inconvenience of long repair time:** Beyond a certain repair time, the repair operation becomes less likely due to unacceptable increased labour costs and the user inconvenience of being without the product for an extended time. One option to optimise for likelihood of repair could be to allow a maximum convenient repair time to be specified and include a correction factor in the cost per day of use to account for the user inconvenience of lengthy repairs over this level.
- **Learning curves:** As commented previously, the methodology fails to anticipate the long-term impacts of decreasing repair prices with economies of scale. We suggest that this could be tackled in a simple way through sensitivity analysis combined with a correction factor.

- **Need to account for employment complexities due to more durable products:** It has been stated that decreasing sales due to more durable products could impact sales revenues and employment effects (both due to less products being produced and less repair labour). Further, more durable products may still require maintenance services for the replacement of consumables and worn parts (without a point of failure as such) - in fact, durability may depend on these aspects. In addition they may require longer production processes to ensure quality, meaning more man hours spent per product. Therefore durable products may still have job benefits, as well as potentially higher prices that could offset decreased sales revenues. More durable products are a necessity in the context of a circular economy. Therefore, it is essential to ensure that the analysis can balance the economics of greater sales related to short-lived products against the environmental benefits such as avoided pollution and reduced virgin material usage of longer lasting products. **Guidance should be developed to aid study (and impact assessment) contractors in recognising where** economic reductions occur due to improved durability and explain how these should be interpreted within the wider policy context.

ADDITIONAL CONSIDERATIONS

IMPORTANT OMISSIONS

- **Special consideration for business to business and in-building products:** Feedback in the stakeholder meeting highlighted that EF approaches may not work so well for business to business and in-building products. Examples provided to date are for typical ErP products, and products such as boilers, heat pump, ventilation units, air conditioning units and others do not appear to have been considered. There may also be a need to consider how ecodesign approaches will interact with national transpositions of the Energy Performance of Buildings Directive (EPBD). We urge the Commission to explore alternative examples and carry out an evaluation of the appropriateness of the proposed approach for these products, which can have for example very long lifetimes and different costs of maintenance, repair and replacement.

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