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Comments on draft standardisation mandate to CEN/CENELEC/ETSI on generic standards addressing material efficiency aspects in the context of the implementation of the Ecodesign Directive

Orgalime, as the voice of European metalworking, mechanical engineering, electrical and electronic engineering industries, welcomes the opportunity to comment on the Standardisation request addressed to the European standardisation organisations on standards concerning material efficiency aspects in support of the implementation of Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products (M/XXX¹).

As producers of almost all equipment regulated or currently assessed under the Eco design Directive (2009/125/EC), Orgalime industries are by far the most affected sector. Given the experience gained with the implementation of the Eco design Directive so far, Orgalime would like to provide the following comments related to the above mentioned standardisation request.

General comments

- Orgalime generally supports the EU Resource Efficiency Policy objectives. Our industries are committed to continuously improving the overall environmental performance of products within the remits of the Eco design Directive's criteria and procedural aspects. Orgalime however still remains to be convinced that resource efficiency requirements under the Ecodesign Directive will bear "significant potential of improvement without entailing excessive costs", as required by article 15. Overall, we ask for setting workable, justified product requirements, which in our view requires keeping the focus on technological aspects of the product that the manufacturer can control and influence that are measurable and enforceable.
- Material efficiency, as one element of resource efficiency, still appears a vague concept, while energy efficiency is the identified overriding environmental aspect for most products falling in the scope of the existing Eco Design Directive and represented by Orgalime.
- Any aspect of the environmental performance of a product should not be taken in isolation from other environmental aspects. Instead, it is only a truly holistic approach that will deliver sustainable solutions. Therefore, we prefer standards/specifications, which are based on this holistic approach providing practicable guidance for manufacturers (see for example CEN/TS 16524). In that sense, Orgalime fully supports the approach of the Eco design Directive, which addresses all environmental aspects of energy-related products from a life cycle perspective, including material efficiency.

¹ The reference number is given by ENTR before submitting to the Committee on Standards.

Orgalime, the European Engineering Industries Association, speaks for 40 trade federations representing some 130,000 companies in the mechanical, electrical, electronic, metalworking & metal articles industries of 23 European countries. The industry employs some 10.3 million people in the EU and in 2013 accounted for some €1,800 billion of annual output. The industry not only represents some 28% of the output of manufactured products but also a third of the manufactured exports of the European Union.

- A better use of market relevant standardisation (which would become all the more relevant the more implementation shifted to B2B products) can in general successfully support the implementation of the Directive. We therefore generally support to involve CEN/CENELEC/ETSI at this stage, while at the same time we mind caution in how far implementing measures regulating material efficiency aspects of energy-related products would indeed qualify against the criteria of the Ecodesign Directive, and in how far they should therefore indeed be pursued.

In this context, we also remind of the decision of the European Council that the competitiveness of manufacturing industry must be at the centre of all policy making, including the development of the EU's environmental acquis.

Comments with reference to the standardisation request

- The aim of the proposed standardisation mandate (as mentioned in the sections 1.1 and 1.2) is to cover generic / horizontal indicators and criteria for material efficiency covering all products. However, the proposed "requirements" in sections 4.1.2., 4.1.4. and 4.1.6. allow the development of product-specific or even component-specific standards. We recognise the benefit of having generic standards where these are possible, but the standardisation request needs, in 1.1 and 1.2, to recognise that in many cases it may be not feasible to develop generic standards. For example, it would be very difficult to prepare some generic standards for specifications particularly relating to disassembly or durability. Those standards would be very complex and would not provide sufficient added value for an application by industry. Such specifications are very much dependent on a particular product type and how it is used.

Only a case by case assessment of products subject to the Eco design Directive, following a whole life cycle approach, would allow taking into account the impacts and consequences of setting requirements for generic standards.

Generic requirements according to Annex I of the Ecodesign Directive 2009/125/EC can make sense in a truly holistic approach, which takes all environmental impacts into account. The standardisation process could then assess the relevance and applicability of such generic requirements in the light of a specific product. When aiming to develop requirements for different environmental parameters, there are bound to be trade-off effects which have to be weighed against each other. It seems impossible to tackle all impacts without risking the loss of functionality and productivity of a product. The logic of the Ecodesign Directive is to identify and tackle the most significant impact(s) that qualify against the Directive's criteria. That would be following the New-Legislative Framework's (NLF) approach and could be supported.

- It should be recognised that, where necessary, relevant resource efficiency parameters, and even material efficiency parameters, could already be addressed and regulated in application of the existing MEErP (Methodology for the Ecodesign of Energy-related Products). Standardisation can rather provide helpful mechanisms and calculation tools to support measurability and enforceability of resource and material efficiency parameters. With the enhancements recently built into the MEErP on material efficiency aspects, it is clear that no future parameter on RRR or Durability can be addressed in Ecodesign without considering a standardisation strategy.
- Standards must be built on a solid foundation to ensure they reflect the technical reality (state of the art). We support the role of TF4 in assessing the feasibility of future standards in this area.
- Based on the principles of European Standardisation bodies, material efficiency aspects should be standardised in such a way that they lead to process and product innovations. If meant to support the Ecodesign Framework Directive, it will be necessary for both economic operators and market surveillance authorities to be able to assess compliance, within quantifiable metrics on measurement uncertainty, of products when first placed on the market. Standards that do not fulfil these criteria will not adequately enable attestation of CE marking provisions.

- It is expected that the criteria to be fulfilled will be expressed in a Regulation, while the compliance methodology will be contained within the standards outlined in this standardisation request. This is in line with the NLF Directives, such as the Ecodesign Directive, which sets out essential requirements in the framework while developing product specific verification methods in standards. Part of the work to be carried out by the standardisation bodies will therefore be to determine whether the referenced documents (such as work conducted by the JRC) meet these criteria.

Our detailed comments are provided hereafter:

4.1.1. General Requirements

Orgalime fully supports that any standards in the field of material efficiency should be based on reliable, accurate and reproducible procedures and methods ensuring that a broad consensus on the development of criteria is established for material efficiency, so that in particular the relevance, measurability, verifiability and enforceability of measures are ensured by valid methods. Standardisation should aim at providing the necessary procedures and processes for this.

4.1.2. Requirements on generic standards on reusability/ recyclability/recoverability (RRR) indexes by mass

A mass-based indicator on the reusability/recyclability/recoverability of parts raises more questions than it answers. Therefore, we challenge the appropriateness of future mass-based indicators in the following respects:

Firstly, it is not clear whether “reusability and recoverability” are addressed to waste or to the equipment.

Secondly, in both cases, it is not clear whether there will be a market for reused or recovered equipment/parts in the future. In several industry sectors, the reusability potential of components is somewhat limited. By the time products are entering the waste phase, most of the electronic parts of any considerable value have changed in their technical specifications. This requires a significant change to the electronics as well as a constant refinement of mechanical design.

Furthermore, reusing parts, such as capacitors, is not cost efficient due to the low individual value compared to the high costs of identification, recovering, and refurbishment.

In other sectors, reuse and refurbishment are already well established practices for which the proposed standards on RRR indexes would be useless.

Also, the reuse of components raises quality issues, which must not result in jeopardizing the reliability of any new product containing refurbished parts.

No detailed technical requirements on disassembly should, in our views, be defined.

Specifying technical solutions on (dis-)assembly of products in the product design doesn't tie in with the fact that recovery and recyclability always depend on the recycling technology available at the time of the actual recycling of a product. It is, however, difficult to determine future recycling technology development at the product design stage.

Finally, a producer cannot determine at the beginning of the market introduction, which components of a device will fit to future product generations, because many parameters (for example, user behaviour, detrimental environmental impacts) have to be taken into account.

In general, neither components that undergo attrition nor other parts, for example the housing, can reasonably be called reusable. It may be a different case if the reuse for repair of devices of the same series is meant. However, in this area, only a case by case approach should be considered.

Finally, “RRR” must not compromise the safety of the product, its functionality, other (and even more significant) environmental performances, including energy efficiency, or its overall sustainable performance from a life cycle perspective.

4.1.3. Requirements on generic standards on reusability recyclability/recoverability (RRR) indexes by environmental impact

Material efficiency parameters of a product should not be taken in isolation from other environment aspects related to the product (e.g. energy efficiency, material use or waste generation), since arbitrary environmental results could be the consequence. For example, the amount of copper used in electric motors immediately impacts the energy efficiency performance of the motor. In this context, we acknowledge the social benefits of reuse/reusability, giving priority to “re-use” outside a life cycle approach risks counterproductive, overall unsustainable environmental results, especially with respect to energy efficiency, which is the identified overriding environmental aspect for most products falling in the scope of the existing Eco Design Directive.

4.1.4. Requirements on generic standards on the durability of products or some of their key components

Durability of products depends on variable parameters, for example consumer use/behaviour, market forces etc. Determining methodologies for the measurement/assessment of a particular aspect of durability that has any practical relevance to consumers is another matter. Therefore, feasibility of having durability standards must be assessed on an individual product basis and/or on an individual component basis.

Requirements on generic standards on the durability of products or some of their key components must in any case be measurable and verifiable. Such requirements would require significant efforts to carry out complex and time-consuming testing. Furthermore, there could be conflicts with other material efficiency aspects: forcing the use of certain recycled contents (for example, recycled plastics) can conflict with product durability.

In particular, we are concerned that the currently ongoing DG Environment study on durability of products (see <http://www.productdurability.eu/>) risks undermining standardisation efforts. Duplication of assessments and opposing findings could be a major barrier.

We also challenge the appropriateness of the Simplified Durability Index (SDI) of the JRC for the purpose of developing standards according to section 4.1.4 of the Commission’s standardisation request, as it is suggested.

The SDI does not provide a method for measuring/testing the durability of products and/or their critical components and is not to be directly used for some requirements.

4.1.5. Requirements on generic standards on measuring the time for the reversible disassembly, substitution and re-assembly of key components of products

Against the background of the wide variety of product branches, which Orgalime represents, we see difficulties in developing standards that meet the criteria of being capable of being assessed in a repeatable and reproducible manner by both economic operators and market surveillance authorities.

The time to perform reversible disassembly operations is likely to be very dependent on the skills and experience of the person performing the operation.

If the operation can be automated it will be dependent on design of the machine and will be difficult for a market surveillance authority to assess.

Liability issues need to be considered when granting access for market surveillance purposes to “life parts” of machines. Therefore, setting such requirements must be cross-checked with other technical regulation, as in this case the Machinery Directive.

4.1.6. Requirements on generic standards on measuring the dismantling time of products (or of its components) at end-of-life

In general, requirements in the field of dismantling time would impose costs and burdens on manufacturers of these products, while it does not mean that manual dismantling would indeed take place during the end of life recycling process of the product, as manual dismantling is very costly and is increasingly being phased out.

Therefore, the application of such a requirement is likely to result in additional cost and administrative burdens on product manufacturers which will negatively impact the competitiveness of European manufacturers. This will also be likely to increase costs for consumers and will reduce the affordability of products, however, without any environmental benefits. Trying to standardise treatment technologies would in our view stifle innovation and make it less likely that environmentally beneficial innovations, such as extracting rare earth metals, would be developed.

We also challenge the meaningfulness of such requirements as it would require one standardised method for disassembly which would be stable over time so that requirements applied on products at the moment of their first placing on the market would indeed be relevant at the moment the product becomes waste. We do not consider this realistic, nor reliable, since it is difficult to determine future recycling technology development at the product design stage.

Recycling is following price signals in the up taking markets and the level of material recovery (in a broad sense) depends more on the profitability of the recycling activity than on parameters the producers of products can influence by design. Standards relating to design for disassembly facilitating manual disassembly of key component in a certain time at end of life would not ensure that manual disassembly really takes place in end of life treatment. The decisive factor is economic and depends on time but also labour costs and the benefit gained with dismantling instead of shredding. Recyclers, like any other industry, continuously work to improve efficiency.

It should also be assessed if setting standards for recyclability requirements through product legislation will really bring significant benefits, as the Ecodesign Directive requires, and if it brings additional benefits than those already being experienced under the WEEE Directive. Materials in EEE products are already recycled very effectively today with high recycling rates.

