



## Urgent call to improve WEEE treatment, collection, logistics and preparation for re-use in Europe

### How standards can inspire upcoming EU requirements

#### Our call in a nutshell

This joint position paper from 12 environmental NGOs and representatives of waste treatment operators aims to improve the collection, logistics and recycling of waste electrical and electronic equipment (WEEE) in Europe. A revision of the legal requirements on these processes is urgently needed to avoid emissions that harm the environment and human health while enhancing waste prevention and material cycles.

To reach this, **the WEEE Directive must be completed by an EU Implementing Act laying down ambitious minimum quality standards as soon as possible<sup>1</sup>.**

For this purpose, we put forward five recommendations:

**1. Integrate provisions from WEEE standards on treatment, collection and logistics in such a way that their coherence and improvements are considered**

This act should rapidly and consistently integrate the provisions from the standards developed by the European standardisation organisation CENELEC and even go beyond them to increase environmental ambition.

**2. Promote ‘preparing for re-use’**

New EU-wide treatment requirements should pave the way for preparation for re-use of WEEE as re-using remains the most environmentally friendly action according to the EU waste hierarchy. For this, it shall be ensured that requirements are adapted to ‘preparing for re-use’ operators and damage to WEEE is prevented during collection, transport, and storage.

<sup>1</sup> As provided for in Article 8.5 of [Directive 2012/19/EU](#).

### 3. Give free access to complete information on relevant standards

Once used in an EU legal act, the provisions of the CENELEC standards should be made available free of charge for all concerned actors, especially to avoid financial burdens for small and medium-sized (SME) operators preparing WEEE for re-use. For these actors, cost coverage of compliance must also be provided, e.g. through EPR schemes.

### 4. Ensure effective enforcement and compliance

To fully realise the environmental benefits, an effective enforcement and compliance must be established.

### 5. Implement recurring reviews

A regular review procedure should be implemented into EU legislation to keep requirements on WEEE treatment, collection and logistics and preparation for re-use in line with the state of the art.

The 2012 recast of the WEEE Directive left the treatment requirements unchanged from the previous Directive, approved in 2002. Eighteen years on, these requirements are outdated, not reflective of technical and scientific progress, as well as inconsistent across EU Member States. There is therefore a pressing need to define a set of ambitious treatment requirements to help reduce environmental pollution and harmonise economic conditions for waste operators.

The European Commission mandated the standardisation organisations to develop European standards for the treatment of WEEE. These standards, prepared by CENELEC, fulfil an important function by defining technical provisions for safe and environmentally-sound collection, logistics and treatment of WEEE, as prescribed by the WEEE Directive.

The [study](#) on 'quality standards for the treatment of waste electrical and electronic equipment (WEEE)', published on 17 February 2021, points out the enormous environmental benefits the implementation of the CENELEC standards would bring about: meeting these provisions would save 6.3 MtCO<sub>2e</sub> emissions a year from waste fridges and freezers, and greatly enhance preparation for re-use, removal of toxic substances, such as Persistent Organic Pollutants (POPs), and plastics recycling.

This is why **we support the adoption of an EU Implementing Act under Article 8(5) of the WEEE Directive based on these standards, and recommend five main considerations:**

## 1. Integrate provisions from WEEE standards on treatment, collection and logistics in such a way that their coherence and improvements are considered

The CENELEC standards EN 50625 series for the recycling, collection and treatment of WEEE are a coherent set of technical provisions, auditing procedures and test methods. Their environmental, health and social benefits have been detailed in the consultant's study commissioned by DG Environment<sup>2</sup>. They should thus form **the baseline upon which EU WEEE treatment regulatory requirements are established.**

<sup>2</sup> Study ref. ENV.B.3/ETU/2018/0014, part III.

In order to improve requirements for collection, logistics and recycling of WEEE in this context, two important aspects should be considered:

**a. Coherence of the standard set from CENELEC**

The minimum provisions (e.g. limit values) and associated assessment methodology described in the CENELEC standards form a coherent framework and should be consistently stipulated in an EU Implementing Act under the WEEE Directive to avoid loopholes and guarantee environmentally safe collection, transport and treatment of WEEE. This is important to preserve **their level of ambition in all environmental, health and social aspects**.

To guarantee an effective surveillance of the required limit values, it is important that **conditions of documentation, performance tests and methods used for analysis are well defined**. CENELEC integrated a lot of experience from practical auditing to develop very detailed provisions and avoid loopholes.

A case from Germany on Temperature Exchange Equipment (TEE, i.e. cooling and freezing appliances)<sup>3</sup> shows that methodological details may be relevant for effective surveillance: plants frequently do not determine the water content of recovered Chlorofluorocarbons (CFCs) and thus claim the whole volume of water recovered to be CFCs. To avoid such loopholes in legislation at the expense of the environment, it is crucial that the whole set of provisions from the CENELEC standards on collection, logistics and treatment of WEEE are taken as a basis for the ongoing democratic process to establish an EU Implementing Act under the WEEE Directive.

**Snapshot: The environmental benefits of standards on depollution, recycling and (final) treatment of Temperature Exchange Equipment**

Environmentally sound treatment of TEE is of particular environmental importance: nearly half of old freezers and fridges still contain refrigerants and blowing agents such as CFCs, which, when released into the environment, destroy the ozone layer and accelerate global warming.

In this respect, the study on WEEE standards, commissioned by DG Environment, quantifies the annual benefits of CENELEC standards during transport and treatment of TEE at 3.2 MtCO<sub>2</sub>e and 3.1 MtCO<sub>2</sub>e annually, respectively<sup>4</sup>. As a comparison, greenhouse gas emissions were about 2.7 MtCO<sub>2</sub>e in Malta in 2018<sup>5</sup>.

Standard EN 50625-2-3 and technical specification CLC/TS 50625-3-4 contain specific and comprehensive provisions for the treatment and depollution of TEE according to the best available technology. Provisions dictate an effective manual removal of refrigerants, and safe separation of blowing agents during subsequent shredding of TEE. Additionally, they guarantee a continuous quality control of plants by comparing input and output of climate-damaging and ozone-depleting substances, such as CFCs, Hydrochlorofluorocarbons (HCFCs), Hydrofluorocarbons (HFCs) and other substances.

<sup>3</sup> TEE include “Refrigerators, Freezers, Equipment which automatically delivers cold products, Air conditioning equipment, Dehumidifying equipment, Heat pumps, Radiators containing oil and other temperature exchange equipment using fluids other than water for the temperature exchange” (Directive 2012/19/EU Annex IV.1).

<sup>4</sup> Study ref. ENV.B.3/ETU/2018/0014, part III, table 3 p.17.

<sup>5</sup> [Eurostat](#) greenhouse gas emission statistics - emission inventories, June 2020.

## b. Improvements to the provisions of the standards

When adopting the EU Implementing Act under the WEEE Directive, several legal requirements should go beyond the standardisation **provisions in order to remain up to date with EU legislation** (e.g. POP Regulation, RoHS Directive, see snapshot below) in order to ensure the use of best available technology.

This is required to avoid pollution and ensure treatment operations do not undermine employee health and safety. The provisions on infrastructure and pollution prevention measures should be upgraded based on new insights on WEEE composition (due to the ‘open scope’ of the WEEE Directive and new products on the market) and the risk of exposure to heavy metals, dust particles, fire, etc.

This is also the case for Critical Raw Material (CRM) recovery, for which collection and treatment requirements should be added in line with the [CEWASTE](#) and [SCREEN](#) project recommendations.

For determining the requirements that should be improved in EU legislation, an open consultation process shall be conducted including a representative and fully balanced set of stakeholders, with the participation of the European Commission and the Member States.

The EU Implementing Act should also describe which exact requirements are additional to the CENELEC standards provisions and which ones are amendments to existing provisions in the standards. This will help update the CENELEC standards accordingly in a second stage.

### **Snapshot: How to enhance standard EN 50625-1 regarding general WEEE treatment (see further examples in ECOS’ paper [here](#))**

When developing the EU Implementing Act, the European minimum legal requirements should go beyond the standardisation provisions from standard EN 50625-1 to reflect the latest legislative developments, such as Regulation (EU) 2019/1021 on POPs. This could notably be done by setting a more systematic depollution monitoring process not only for ‘each step of the process’ but also for each output fraction likely to contain hazardous substances.

Today, this monitoring is only required ‘where appropriate’ and for a narrow scope. It affects just capacitors, batteries, and Brominated Flame Retardants (BFRs) - only in materials from fractions  $\geq 20\%$  of input material, that might contain BFRs and are likely to contain at least 10% by mass of plastic.

However, the first criteria (weighing at least 20% of the input) may exclude significant quantities of plastics from this monitoring for some WEEE streams and treatment processes where a high number of small fractions is generated. Reviewing this rule together with more rigorous monitoring will thus contribute to decreasing the risks of pollutants in input and output fractions.

Moreover, the thresholds and conditions set in the POP Regulation should be considered, for instance to distinguish plastic fractions ‘containing’ and ‘not containing’ BFRs. This should be assessed for all WEEE streams, including temperature exchange equipment, large household appliances and professional WEEE. For this purpose, transparency on embedded hazardous substances from POP, REACH and RoHS regulations alike should be enhanced, for example by using QR codes or product passports, or by marking plastics and plastic casings.

## 2. Promote ‘preparing for re-use’

Specifying treatment requirements for WEEE in EU legislation should have the best possible effect for the environment. Preparing for re-use operators have a high value for the successful implementation of the waste hierarchy and often also perform social functions at a local or regional level. Therefore, requirements should be preserved and extended, especially because most of these actors are SMEs and the costs for accessing commercial standards, reporting and audits may be a high burden for them. This is especially true since priority that should be given to preparing for re-use activities over recycling is often not enforced by Producer Responsibility Organisations (more details [here](#)).

This is why **standard EN 50614, if used as a basis for the EU Implementing Act, should be adapted to SME preparing for re-use operators**. This can be achieved by simplifying reporting obligations, supplying manufacturer’s repair and maintenance manuals as well as detailed product recall information on freely accessible websites for preparing for re-use operators. Special provisions shall also be set to facilitate their access to the standards (see point 3) and takeover audit costs (see point 4).

Moreover, electronic files that include the information necessary for preparing for re-use and recycling operators – such as manufacturers’ repair manuals and diagnostic codes – should be accessible and readable with an open-source format, i.e. without the need for a dedicated software to read embedded general and technical data. This will, for instance, allow a preparing for re-use operator to read and understand an error code on a washing machine display, and then reset the machine.

Even though out of the waste regime and, therefore, not susceptible to implement EN 50614, re-use operators and independent repairers should have access to the same repair information as preparing for re-use operators. Their role in preventing WEEE should be recognised and supported by EPR schemes.

### Snapshot: How to enhance the preparation for re-use of WEEE

According to EN 50614, preparing for re-use operators are required to consult manufacturer’s repair and maintenance manuals as well as detailed product recall information, both of which today are either non-existent, incomplete or impossible to access. Manufacturers should be obligated to provide this information in an easily accessible standardised format free of charge, as stipulated in the WEEE Directive. Whilst not directly implied in the standard itself, this should also apply to the provision of manufacturer repair and service information to the preparation for re-use operators. This will help make repair and servicing more efficient, in line with Article 15 of the WEEE Directive.

Additionally, implementing the specification CLC/TS 50625-4 for the collection and logistics of WEEE is necessary to further preserve the re-use potential of e-waste, e.g. through the following measures:

- the condition of collected WEEE should be systematically checked at an early stage to a) separate WEEE that is suitable for preparation for re-use from WEEE that is destined for recycling, and b) assess the presence of pollutants and risks of emissions and leakages;
- WEEE shall be physically covered during transport and storage at least until a diagnosis of its potential for re-use is done while WEEE separated for preparation for re-use should be kept covered at all times to avoid damage, also in the case of large household appliances;
- WEEE separated for recycling should stay covered. If not possible, at least the WEEE for re-use should stay covered;

- any form of tipping should be forbidden.

Last, but not least, any preparing for re-use operator respecting its national legislation on waste should be granted early access to WEEE collection points.

### 3. Give free access to complete information on concerned standards

A key advantage of an EU Implementing Act is that it would be translated in all EU languages, as well as in EFTA countries' languages where it will be applied too. In addition, if the CENELEC standards for the recycling, collection and treatment of WEEE are referenced in the EU Implementing Act, they shall be translated into all EU languages to be accessible to all operators.

In this case, it is also important that the European Commission develops a procedure to make the content of these CENELEC standards available free of charge for all concerned parties and persons. This may be possible through three methods: a) buying the standards completely to make them available free-access b) negotiating a license agreement to make standards available to all concerned parties and persons c) setting up a solidary system between all producers, which would bear the costs for standard availability (and maybe also audit costs).

### 4. Ensure effective enforcement and compliance

Specifying treatment requirements at EU level must be connected to effective enforcement and penalties for non-compliance. Otherwise, positive environmental effects may be lost. National authorities in all EU countries may not have the capacity and expertise to guarantee high quality inspections which take all details of the CENELEC standards into account. In certain countries, only one or very few plants may exist for some WEEE types. Therefore, pooling expertise at EU-level is necessary to improve enforcement and compliance.

Currently, the CENELEC standards do not specify how compliance confirmation must be conducted. In fact, even self-declaration is a valid confirmation method; which is obviously less credible than other confirmation methods. If CENELEC provisions are stipulated in the WEEE Implementing Act, this procedure needs to be clarified and self-declaration should be refused. If conformity assessment through auditing is included into EU law, we strongly recommend to only accept verifications from certification bodies that are accredited for the certification of CENELEC standards and, thus, have proven their credibility and independence.

Any enforcement and compliance costs must be paid by EPR schemes: either through fees or direct covering of audit costs. This must include potential audit or surveillance related costs, as well as costs related to reporting. For example, software used by treatment operators to measure input and output should be financed by PROs. Higher burdens for SMEs can be avoided through financing of preparing for re-use and prevention activities by Producer Responsibility Organisations (PROs)<sup>6</sup>. Preparing for re-use operators should nevertheless be exempted from compliance costs as this group of operators especially contribute to waste prevention and environmental relief.

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<sup>6</sup> PROs are already required to support financially WEEE preparing for re-use activities according to the WEEE Directive article 13, but it is very rarely the case because of a lack of enforcement.

## 5. Implement recurring reviews

WEEE requirements must be implemented into law in such a way that extensions and tightening of the requirements are easily possible at any time. A review clause should be specified allowing for additional minimum treatment requirements in the WEEE Directive, and hence overwrite specific provisions from the CENELEC standards. Such a procedure would allow the set of WEEE requirements to remain consistent and homogeneous.

In order to keep requirements on collection, transport and treatment of WEEE in line with the state of the art, the regular review process should take into account new waste groups, quality changes of existing waste streams as well as technical innovations. Promotion of preparing for re-use shall be particularly considered. We propose a revision of all WEEE requirements every five years by means of a democratic process and involvement of all relevant stakeholders.

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