UNIVERSITÀ
DEGLI STUDI
DI PADOVA

OPERATING PROCEDURE NO. 12

MANAGEMENT OF WEEE

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Curated by:

Environment and Safety Office

MANAGEMENT OF WEEE

Introduction

In Italy, the European Parliament and Council Directives 2002/95 - 96/EC and 2003/108/EC on Waste Electrical and Electronic Equipment (WEEE) were implemented through Legislative Decree 151/05, which imposed restrictions on the use of certain hazardous substances in Electrical and Electronic Equipment (EEE).
Legislative Decree No. 151/05 of 2005 was replaced by Legislative Decree No. 49 of 2014, which has been amended **by Legislative Decree No. 118 of 2020**. This decree transposes European Directive 2018/849, related to waste batteries and accumulators, and Directive 2012/19/EU on WEEE. The new decree, which came into force on September 27, 2020, provides new provisions on data communication, producer responsibility (EPR), and establishes new rules regarding WEEE from photovoltaics.
The goal of the legislation includes not only requiring producers and distributors to finance systems for the recovery and recycling of products placed on the market but also implementing measures to reduce the generation of WEEE waste, including in terms of waste volume to be disposed of.
WEEE fall under the category of special waste produced by the university, and in many cases, they are also hazardous waste (e.g., monitors and screens, refrigerators and freezers), and must be treated accordingly, both regarding safety measures in Temporary Storage and the management of the loading/unloading registers and related forms.
Many electrical appliances contain valuable and recyclable raw materials; if treated and managed correctly, they can be recovered and reused, creating new resources in line with the principles of the circular economy.

Terms and definitions

EEE: This term defines Electrical and Electronic Equipment, which includes devices that rely on electric currents or electromagnetic fields for proper functioning, as well as equipment used for generating, transferring, and measuring these currents and fields. These devices are designed to be used with a voltage not exceeding 1000 volts for alternating current and 1500 volts for direct current.
WEEE: This term defines Waste Electrical and Electronic Equipment. WEEE can be classified based on their use **into household WEEE** or **professional WEEE**, establishing different recovery and disposal paths.
WEEE are classified into five categories based on the type of equipment and can be hazardous or non-hazardous:

- **Cold and Climate (R1):** Refrigerators, freezers, air conditioners, etc;
- **Large White Goods (R2):** Washing machines, dishwashers, range hoods, ovens, etc;

- **Equipment with Screens (R3):** Televisions and flat screens, CRT televisions and screens, tablets, smartphones, digital frames, etc;
- **Small Household Appliances and Consumer Electronics (R4):** Small household appliances, electronic or digital devices, lighting devices, photovoltaic panels, etc;
- **Light Sources (R5):** Discharge lamps, fluorescent lamps, neon tubes, LED light bulbs, etc.

Specifically:

Household WEEE: These are waste products from electrical and electronic equipment originating from households. This category also includes waste from other activities (industrial, commercial, institutional) that, by nature and quantity, can be considered similar to those originating from households. Household WEEE is managed as municipal waste, and its E.E.R. code belongs to category **20.01.**

Professional WEEE: These are WEEE produced by administrative and economic activities, other than those from households. Professional WEEE is divided into:

1. **Historic Professional WEEE:** If the equipment was placed on the market before December 31, 2010. In this case, the responsibility for disposal lies with the holder of the WEEE. The producer's financial responsibility is only required if, when selling new EEE, they also take back the same type and function of historic WEEE (up to twice the weight of the new equipment);
2. **New Professional WEEE:** If the equipment was placed on the market after December 31, 2010. The producer is responsible for collection, transport, and treatment operations. The producer can fulfill these obligations individually or by joining a collective system. The financial responsibility is on the producer. The producer must fulfill these legal obligations either individually or through a collective system.

Professional WEEE is indicated by E.E.R. codes from category **16.02**. The following E.E.R. codes are related to the disposal activities at the university:

Hazardous WEEE:

- **E.E.R. Code 16.02.11*:** Equipment containing HCFC, HFC refrigerants, freezers, air conditioners, and portable or fixed air conditioning units;
- **E.E.R. Code 16.02.13*:** WEEE containing hazardous components not covered by E.E.R. codes 16.02.09* and 16.02.12* (e.g., televisions, monitors, portable personal computers);
- **E.E.R. Code 16.06.01*:** Lead-acid batteries.

Non-Hazardous WEEE:

- **E.E.R. Code 16.02.14:** WEEE not covered by E.E.R. codes 16.02.09* to 16.02.13* (e.g., PCs without monitors, keyboards, photocopiers, printers, scanners, telephones, electric heaters, calculators, electrical panels, plotters);
- **E.E.R. Code 16.02.16:** Components removed from WEEE not covered by E.E.R. code 16.02.15 (e.g., electronic boards, external hard drives, processors, relays).

Method of Disposal

All hazardous and non-hazardous WEEE must be placed on pallets by the structure's personnel and separated based on the E.E.R. code and the type of waste, as outlined in the attached table. If the structure requires handling services for loading and moving the equipment to be disposed of, the related cost and activity will remain the responsibility of the structure.
Based on the above, the currently applicable procedure is as follows:

1. For Structures "affiliated" with a **Temporary Waste Storage Facility:**

The Structure:

- Manages the procedures for de-inventorying materials/equipment;
- Creates a list of materials/equipment to be disposed of, divided by E.E.R. code (with possible support from the Temporary Storage Facility contact person), indicating approximate weight/volume and number of packages;
- Sends the list to the Temporary Storage Facility contact person (without the need, in most cases, to physically transport the materials to the storage facility). The storage facility contacts manage the required registrations;
- If there is no university contract for the management of WEEE, the structure identifies and enters into a contract with an authorized company;
- Arranges the collection of the materials with the **Temporary Storage Facility** contact person, who will support the disposal process with the authorized companies.

2. For Structures in the Historic Center and for all those **not** affiliated with a **Temporary Waste Storage Facility:**

The Structures:

- Manage the procedures for de-inventorying materials/equipment;
- Create a list of materials/equipment to be disposed of, divided by E.E.R. code (with support from the Environment Office, following the table), indicating approximate weight/volume and number of packages;
- Send the list to the Environment and Safety Office;
- By agreement with the Environment Office, they may send the WEEE to the university warehouse at Corso Stati Uniti (at the structure's expense) for evaluation of their condition, potential reuse, recovery, or disposal;
- The Environment and Safety Office, together with the Goods and Services Management Office, arranges the collection of the materials with authorized companies for disposal.

E.E.R. List and Corresponding Divisions (PALLETS)

E.E.R. CODE	GROUPING	TYPE OF WASTE	TYPE OF WASTE	TYPE OF WASTE	TYPE OF WASTE
16.02.13*	R3	CATHOD RAY TUBE (CTR) MONITORS AND TVs	LCD, LED, OR PLASMA MONITORS AND TVs	LAPTOP PERSONAL COMPUTERS	
16.02.13*	R4	UPS WITH BATTERY			
16.02.14	R4	***Computer electronics:*** PRINTERS, PHOTOCOPIERS, MOUSE, KEYBOARDS, PLOTTERS, SCANNERS	***Various electronics:*** TELEPHONES, FAX MACHINES, PROJECTORS, CALCULATORS, TYPEWRITERS, VCRS, MEDICAL EQUIPMENT, ELECTRICAL PANELS	***Personal Computers:*** PC UNITS, SERVERS, MAINFRAMES, DESKTOP COMPUTERS	UPS WITHOUT BATTERY
16.06.01*		LEAD-ACID BATTERIES			
16.02.16	R4	COMPUTER BOARDS, CABLES, CDS, DVDS, HARD DISKS, PC CASINGS (Metallic Structure)			
16.02.11*	R1	REFRIGERATORS	AIR CONDITIONERS		

Regulatory References

Legislative Decree No. 118 of 3 September 2020 – Implementation of Articles 2 and 3 of Directive (EU) 2018/849, amending Directives 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE);
Legislative Decree No. 49 of 14 March 2014 – Implementation of Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE);
Ministerial Decree No. 65 of 8 March 2010 – Regulation on simplified management of waste electrical and electronic equipment (WEEE) by distributors and installers of electrical and electronic equipment (EEE), as well as operators of technical assistance centers for such equipment (One-for-One Decree);
Legislative Decree No. 152 of 2006 – Environmental regulations.

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