

# Final Draft

## Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)



30 April 2015

*Submitted to:*



**Environmental Management Bureau**  
DENR Compound  
Visayas Ave., Diliman  
Quezon City, Philippines

*Submitted by:*



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April 30, 2015

**ATTY. JONAS R. LEONES**

Undersecretary and Concurrent EMB Director  
Environmental Management Bureau (EMB)  
DENR Compound, Visayas Ave.  
Diliman, Quezon City

**Attention:** Mr. Geri Geronimo R. Sañez, Chief – Hazardous Waste Management Section

**Subject:** Submission of the Final Draft Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

Dear **Usec. Leones:**

Innogy Solutions, Inc. (Innogy) is pleased to submit the Final Draft Guidelines on the ESM of WEEE for your review and approval. This Final Draft Guidelines incorporated relevant comments and suggestions discussed during the Public Consultation held on April 8, 2015. Minutes of the aforementioned consultation are also included in this deliverable.

Thank you and please feel free to call us if you have any questions or clarifications.

Sincerely,

  
**LLOLY V. DE JESUS, MBA**  
President



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## **DENR ADMINISTRATIVE ORDER**

No. \_\_\_\_\_  
Series of 20AA

### **SUBJECT: GUIDELINES ON THE ENVIRONMENTALLY SOUND MANAGEMENT (ESM) OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)**

Pursuant to Republic Act No. 6969, otherwise known as the “Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990” and Department of Environment and Natural Resources (DENR) Administrative Order No. 2013-22 or “Revised Procedures and Standards for the Management of Hazardous Wastes (Revising DAO 2004-36)”, the Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE) are hereby issued.

#### **Section 1.0 Basic Policy**

It is the policy of the State to protect the environment and promote the health of its citizens by regulating the importation, manufacture, processing, handling, storage, transportation, sale, distribution, use, and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to human health or to the environment.

#### **Section 2.0 Objectives**

This Administrative Order shall have the following objectives:

- a) Provide the framework mechanism for the appropriate management of WEEE;
- b) Reduce the amount of electrical and electronic equipment (EEE) type of waste and the hazards brought about by its components;
- c) Promote the reuse of EEE and valorization of its waste components;
- d) Encourage involvement of all relevant agencies and stakeholders in the life cycle of EEE through design innovation leading to their more efficient dismantling, recycling, and reuse; and
- e) Institutionalize the principle of “extended producers responsibility” (EPR) in addressing the financial requirements involved in the implementation of the WEEE Guidelines.

#### **Section 3.0 Scope and Coverage**

All producers, manufacturers, importers, distributors, retailers, consumers, and other stakeholders involved in the life cycle of EEE including scraps as classified under M506 and M507 of DAO 2013-22 shall comply with this Order.

The Guidelines prescribing detailed requirements and procedures for the ESM of WEEE are hereby appended and shall form an integral part of this Order.

Exceptions to this Order are producers of industrial (fixed and stationary) WEEE, military equipment directly used for national security purposes, and equipment containing radioactive materials as they are covered by other specific regulations.

#### **Section 4.0 Fines and Penalties**

Any person, both natural and juridical, found violating or failing to comply with any provision of this Order or that of the Guidelines shall be liable under Section 14 of RA 6969.

#### **Section 5.0 Separability Clause**

If any section or provision of this Order or that of the Guidelines is held or declared unconstitutional or invalid by a competent court, the other sections or provisions hereof shall continue to be in force as if the sections or provisions so annulled or voided had never been incorporated herein.

#### **Section 6.0 Repealing Clause**

All other orders and issuances, rules and regulations, or parts thereof inconsistent with this Order are hereby amended, modified, or repealed accordingly.

#### **Section 7.0 Amendments**

This Order and the Guidelines may be amended and/or modified from time to time by the DENR.

#### **Section 8.0 Effectivity**

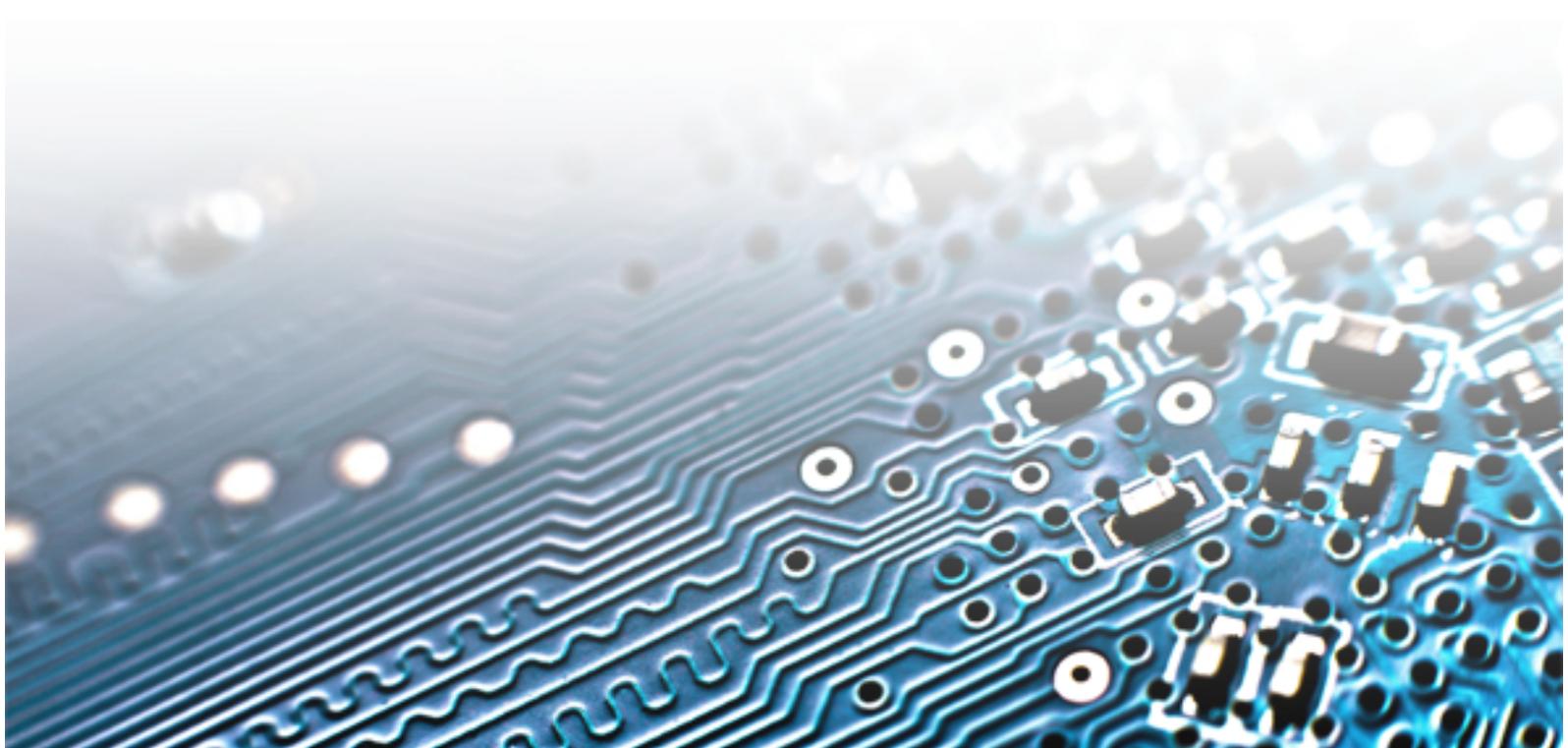
This Order shall take effect fifteen (15) days after its publication in a newspaper of general circulation and upon acknowledgement of receipt of a copy hereof by the Office of the National Administrative Register.

**RAMON J.P. PAJE**  
Secretary

Recommending Approval:

**ATTY. JONAS R. LEONES**  
DENR Undersecretary and Concurrent EMB Director

GUIDELINES ON  
ENVIRONMENTALLY SOUND MANAGEMENT OF  
**WASTE** ELECTRICAL AND  
ELECTRONIC EQUIPMENT



Environmental Management Bureau  
Department of Environment and Natural Resources

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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## 1 Introduction

The Philippines is a traditional importer and exporter of electrical and electronic equipment (EEE), both new and used, including scraps. With the global rapid advances in technology for commercial, industrial, and household products and appliances, there is a corollary increase in Waste Electrical and Electronic Equipment (WEEE) as well as hazardous substances from the source materials involved in their manufacture and use. Recognizing the risks of these materials in part or in whole to human health and the environment and in compliance with the Basel Convention, the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB), has developed this Technical Guidelines on the Environmentally Sound Management (ESM) of WEEE (hereafter referred to as the Guideline).

This Guideline provides the compliance framework for producers, manufacturers, consumers, distributors, retailers, treatment facilities, and other stakeholders involved in the life cycle of WEEE.

### 1.1 Background of WEEE

WEEE is one of the fastest streams in the world due to escalating market penetration in developing countries, replacement market in developed countries, and high obsolescence rate.

There is a vital need to address the management of WEEE, particularly in developing countries where the existence of valuable recyclable components attracts the informal and unorganized sector, whose unsafe and environmentally precarious practices pose great risks to health and the environment.

### 1.2 Legal Framework

It is the policy of the State to protect the environment and promote the health of its citizens. To this end, Republic Act (RA) 6969 provides for the State regulation on the importation, manufacture, processing, handling, storage, transportation, sale, distribution, use, and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to human health or to the environment in accordance with national policies and international commitments.

Certain components or parts of WEEE are toxic and pose risk to human health and the environment. Thus, DENR Administrative Order (DAO) 2013-22: Revised Procedures and Standards for the Management of Hazardous Wastes classifies WEEE as hazardous wastes with waste number M506 and provides the following criteria:

*“All waste electrical and electronic equipment that contains hazardous components such as lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBBs), and polybrominated biphenyl ethers (PBDEs) that includes its peripherals i.e., ink cartridges, toners, etc.”*

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51 Additionally, DAO 2013-22 includes domestic sources of WEEE, classifies it  
52 as “Special Wastes” with waste number M507, and provides the following criteria:  
53

54 *“Household hazardous wastes such as paints, thinners, household batteries,*  
55 *lead-acid batteries, spray canisters and the like that are consolidated by*  
56 *Material Recovery Facilities (MRFs). These include wastes from residential*  
57 *and commercial sources that comprise of consumer electronics, white goods*  
58 *(i.e. refrigerators, washing machines, air conditioners, etc.) batteries, oil, and*  
59 *busted lamps.”*  
60

## 61 **1.3 Objectives**

62  
63 The protocols and standards stipulated in this Guideline intend to provide  
64 the framework mechanism for the appropriate management of WEEE. Specifically,  
65 this Guideline aims to:  
66

- 67 • Reduce the amount of EEE type of waste and the hazards brought about by  
68 its components;
- 69 • Promote the reuse of EEE and valorization of its waste components;
- 70 • Encourage involvement of all relevant agencies and stakeholders in the life  
71 cycle of EEE through design innovation leading to their more efficient  
72 dismantling, recycling, and reuse; and,
- 73 • Institutionalize the principle of “extended producers responsibility” (EPR) in  
74 addressing the financial requirements involved in the implementation of this  
75 Guideline.

## 76 77 **2 Definition of Terms**

78  
79 For purposes of this Guideline, the following terms shall have the following  
80 meanings:  
81

- 82 a) **“Collection”** refers to all activities related to the gathering of WEEE at  
83 “collection points”.
- 84 b) **“Collection Point”** refers to any entity with which the WEEE Management  
85 System Operator has an agreement to accept and temporarily store WEEE  
86 from generators until its removal by the transporter for transport to a  
87 consolidation center or a Treatment, Storage, and Disposal (TSD) facility.
- 88 c) **“Consolidation Center”** refers to a site for temporary storage and  
89 consolidation for onward delivery of WEEE from the collection points to a  
90 TSD facility.
- 91 d) **“Distributor”** refers to any person, natural or juridical, to whom EEE listed  
92 in Section 3 of this Guideline is delivered or sold for purposes of distribution  
93 in commerce, except that such term does not include a manufacturer or  
94 retailer of such EEE.
- 95 e) **“EEE”** refers to electrical and electronic equipment that is dependent on  
96 electric currents or electromagnetic fields in order to work properly,  
97 including components that can be removed from equipment and can be

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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- 98 tested for functionality and either be subsequently reused or reused after  
99 repair or refurbishment. This term does not include large-scale stationary  
100 industrial tools or large-scale fixed installations.
- 101 f) **“Extended Producers Responsibility (EPR)”** refers to an environmental  
102 policy approach in which a producer’s responsibility for a product is  
103 extended to the post-consumer stage of a product’s life cycle.
- 104 g) **“Importer”** refers to any person, natural or juridical, that undertakes the  
105 importation of EEE including its wastes into the country that are intended  
106 for direct consumption, sale, distribution, or reuse/recycling.
- 107 h) **“Local Government Unit”** means a body politic and corporate endowed with  
108 powers to be exercised by it in conformity with law. As such, it shall  
109 exercise powers as a political subdivision of the national government and as  
110 a corporate entity representing the inhabitants of its territory.
- 111 i) **“Manufacturer”** means any person who manufactures, assembles or  
112 processes EEE, except that if the EEE is manufactured, assembled or  
113 processed for another person who attaches his/her own brand name to the  
114 EEE, the latter shall be deemed the manufacturer. In case of imported EEE,  
115 the manufacturer’s representatives or, in his/her absence, the importer shall  
116 be deemed the manufacturer.
- 117 j) **“Producers”** refers to any person, whether natural or judicial, a category of  
118 persons, industry or, as the case may be, the third party representing them,  
119 that is performing Waste Generating Activities as described in this Guideline  
120 and therefore having the obligation to have and comply with the WEEE  
121 Management Plan.
- 122 k) **“Recycling”** refers to the treatment of WEEE through a process of making  
123 them suitable for beneficial use and for other purposes, and includes any  
124 process by which WEEE are transformed into new products in such a  
125 manner that the original products may lose their identity, and which may  
126 then be used as raw materials for the production of goods or services.
- 127 l) **“Scrap Material”** refers to metallic fragments (MF), non-metallic fragments  
128 (NMF) and other non-classified materials from discarded EEE products  
129 intended to be disposed or are required to be disposed in accordance with  
130 the provisions of RA 6969 and DAO 2013-22.
- 131 m) **“Second-Hand or used EEE”** refers to local or imported used EEE intended  
132 for direct reuse, where reuse includes repair, refurbishment or upgrading,  
133 but not major reassembly, and where functionality of essential key functions  
134 is evident.
- 135 n) **“Seller”** means a person engaged in the business of selling EEE in  
136 wholesale, retail, or directly to consumers.
- 137 o) **“Transporter”** refers to any person, group of persons, or entity that is  
138 registered to transport WEEE.
- 139 p) **“Treatment, Storage, and Disposal (TSD) Facility”** refers to a facility  
140 where WEEE, including its hazardous components, are transported to,  
141 stored, treated, recycled, reprocessed, or disposed of.
- 142 q) **“Valorization”** refers to placing a value or price to.

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- 143 r) **“Waste Electrical and Electronic Equipment (WEEE)”** refers to EEE that  
144 is waste, including all components, sub-assemblies and consumables, which  
145 are part of the equipment at the time the equipment becomes waste.
- 146 s) **“Waste Generating Activity”** shall mean:
- 147 i. Selling EEE or offering EEE for sale or for free for the first time in the  
148 Philippines, except in the case of a manufacturer selling EEE to a  
149 private label owner.
  - 150 ii. Selling EEE or offering EEE for free in the Philippines under his/her  
151 own brand, supplied by other manufacturers (a reseller not being  
152 regarded as a Distributor).
  - 153 iii. Reselling EEE in the Philippines (where it has an establishment),  
154 upon acquisition from a Producer which has not fulfilled its legal  
155 obligations in the Philippines as provided herein.
  - 156 iv. Buying EEE in the Philippines for own use as a generator from a  
157 Producer which has not fulfilled its obligations in the Philippines, as  
158 provided herein.
  - 159 v. Importing EEE and WEEE, including scraps, into the Philippines for  
160 own use as a generator from a supplier outside the Philippines.
  - 161 vi. Importing EEE and WEEE, including scraps, into the Philippines for  
162 commercial purposes, without selling or reselling any EEE within the  
163 Philippines.
- 164
- 165 t) **“Waste Management Fee”** refers to the financial contribution from  
166 producers to finance the implementation of the WEEE Management Plan,  
167 which shall be visibly shown as a separate line on the invoice, order, or  
168 comparable documents of participants to the WEEE Management Plan to  
169 ensure that the Waste Management Fee is shown separately throughout the  
170 entire supply chain.
- 171 u) **“WEEE Management System Operator”** refers to a non-for-profit  
172 organization created by producers per product category for the purpose of  
173 implementing the WEEE Management Plan; Provided that producers  
174 representing at least 51 percent of the Philippine market for each product  
175 category based upon the aggregated sales of all contracted participants in  
176 the previous year shall be entitled to create a system operator.
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# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

## 3 Scope and Coverage

This Guideline covers the EEE (both brand new and used) including their scraps as listed in Table 1.

**Table 1 – List of EEE Covered by this Guideline**

Type of WEEE	Description
Lighting products	Includes those listed in Joint DENR-Department of Energy Administrative Order (JAO) 2013-09-001: Lighting Industry Waste Management Guidelines in addition to the metallic, electronic, and electrical parts of the lighting products and their housing (e.g. luminaires).
Information Technology (IT) equipment/devices	Includes, but are not limited to: routers, repeaters, switches, servers, modems, computer hardware (e.g. keyboards, automatic voltage regulators, mice, etc.), computer units (e.g. desktop, laptop, netbook, etc.) including computer screens (e.g. CRT, LCD, LED, etc.), central processing units (CPU), external data storage devices (e.g. flash drives and hard disk drives), photocopiers, scanners, printers, etc.
Telecommunication devices	Includes, but are not limited to: telephones, fax machines, wireless telephones, mobile phones, tablets, radios, etc.
Electric appliances	Includes, but are not limited to: <ul style="list-style-type: none"> <li>Consumer appliances such as TV Sets (including CRT, plasma, LCD, or LED TV Sets), microwaves, coffee makers, toasters, automatic dispensers, electric fans, vacuum cleaners, cooking ranges/ovens, refrigerators, washing machines, heating/air conditioning units, etc.</li> <li>Industrial electronic and electrical appliances except those fixed and stationary industrial electronic and electrical appliances</li> </ul>
Entertainment, sports, leisure, and recreational devices/equipment	Includes, but are not limited to: gaming consoles (e.g. Playstation, Xbox, Wii, etc.), portable gaming devices (e.g. 3DS, PSP, etc.), portable music players, etc.
Image producing devices	Includes, but are not limited to: cameras, camcorders, video recorders, DVD, VCD, CD, and other tape readers, etc.
Sampling and laboratory equipment	Includes, but are not limited to: High Performance Liquid Chromatography, Atomic Absorption Spectrometer, UV-VIS Spectrophotometer, etc.
Medical devices except all implanted and infected products	Includes, but are not limited to: ultrasound, urinalysis system, patient monitor, defibrillator, jaundice meter, ventilator, radiotherapy equipment, cardiology, dialysis, pulmonary ventilators, analyzers, freezers, and other

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

Type of WEEE	Description
	appliances for detecting, preventing, monitoring, treating, alleviating illness, injury or disability
Monitoring and control instruments	Includes, but are not limited to smoke detectors, heating regulators, thermostats, measuring, weighing or adjusting appliances for household or laboratory equipment, and other monitoring and control instruments used in industrial installations

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The EMB shall update this list as new information comes along in consultation with the stakeholders.

## 4 Environmentally Sound Management

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Environmentally Sound Management (ESM) is defined as taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner that will protect human health and the environment against adverse effects that may result from such wastes. It includes the identification and management of wastes throughout their entire life cycle with a strong emphasis on reduction, reuse, and recycling.

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The following are the criteria to assess ESM:<sup>1</sup>

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- There exists a regulatory infrastructure and enforcement that ensures compliance with applicable regulations;
- Sites or facilities are authorized and of an adequate standard of technology and pollution control to deal with hazardous wastes in the way proposed, in particular taking into account the level of technology and pollution control in the exporting country;
- Operators of sites or facilities at which hazardous wastes are managed are required as appropriate to monitor the effects of these activities;
- Appropriate actions are taken in cases monitoring gives indication that the management of hazardous wastes have resulted in unacceptable emissions; and
- Persons involved in the management of hazardous wastes are capable and adequately trained in their capacity.

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WEEE recycling requires specialized technologies that would make possible the separation of the following components with the least impact to health and the environment from the WEEE listed in Section 3 of this Guideline:

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- Metallic fragments (MF)
- Non-metallic fragments (NMF) such as plastics and glass; and
- Hazardous chemicals in printed circuit boards

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<sup>1</sup> Guidance Document, Technical Guidelines for ESM, Basel Convention

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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## 5 Environmental and Health Hazard

The treatment of WEEE should avoid the dispersion of pollutants in the waste stream, including sanitary landfills. Of the substances coming from WEEE, lead is the leading toxic element in terms of quantity and toxicity level. Mercury, cadmium and hexavalent chromium are also toxic substances with leaching properties that can contaminate landfills and water reservoirs. Polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs) are mostly used in small and large capacitors. Capacitors made prior to 1991 must be assumed to contain PCBs. Brominated flame retardants are also among those that have the potential for adverse impacts to health and the environment.

DAO 2013-22 provides the guideline for the type and threshold limits of hazardous substances and shall be the determinant on whether or not components or substances from WEEE components come within its implementing provisions.

Safe system of work processes must be implemented by responsible entities to ensure the safety of workers along the collection, processing, recycling, reuse, and disposal chain.

## 6 Suitability of Wastes for the Operation

Where appropriate, the reuse or recycling of WEEE and its components shall be prioritized. Before reuse or recycling, and taking in consideration the applicability and viability of the same, hazardous substances and components of selectively collected WEEE must be removed prior to processing.

The best option for components is for the same to be dismantled from its system as a whole if it is going to be reused or if the materials removed can be easily recycled. The following is a non-inclusive list of components that may be removed as a whole prior to reuse or recycling:

- Capacitors containing PCBs
- Mercury-containing components
- Asbestos
- Components containing refractory ceramic fibers
- Components containing radioactive substances
- Gas discharge lamps
- Cathode ray tubes
- Electrolyte capacitors containing substances of concern

Lastly, the following non-inclusive items should be safely removed as material from WEEE:

- Plastic containing brominated flame retardants
- Chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), and bromocarbons (BCs)

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- 268 • External electric cables
- 269 • Circuit boards
- 270 • Liquid Crystal Displays
- 271 • Batteries
- 272 • Fluorescent coating in cathode ray tubes

273  
274 For WEEE that can be neither reused as a whole nor recycled, other options  
275 may be considered (e.g. shredding, crushing). These options are dependent on the  
276 TSD facility's capability.

277  
278 Pre-treatment in either case shall be guided by the relevant procedures for  
279 hazardous substances under DAO 2013-22.

## 280 **7 Waste Avoidance**

281  
282 Producers of EEE shall adhere to the following:

- 283 • Design of EEE shall minimize the presence of hazardous substances within  
284 the threshold limits specified in DAO 2013-22. Only EEE that are compliant  
285 with this provision shall be allowed for repair and use;
- 286 • Design of EEE shall be such that dismantling, reuse, and recycling  
287 strategies could be facilitated without sacrificing health and safety; the  
288 design shall apply equally to the TSD facilities set up for the purpose;
- 289 • Information on dismantling procedures shall be provided by the producers;
- 290 • EEE shall not contain polybrominated diphenyl ethers (PBDEs); and
- 291 • Consumers must be informed of the ESM of household EEE and the  
292 mechanism for the correct disposal/treatment of the same.

## 293 **8 Responsibilities of Parties**

294  
295 The overarching principle that governs the responsible parties for the  
296 implementation of the national WEEE policy is hazardous waste avoidance through  
297 clean production methods wherein the objective is the attainment of longest life of  
298 EEE with minimum environmental impact during their production, use and  
299 disposal.

### 300 **8.1 Producers**

301 All producers shall jointly work together in coming up with a WEEE  
302 Management Plan and in setting up a WEEE Management System Operator as  
303 defined in this Guideline. The producers and WEEE Management System Operator  
304 are responsible for the preparation, implementation, review, and monitoring of the  
305 WEEE Management Plan.

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## Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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- 312  
313 The following are the responsibilities of the producers:  
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- 315 a) Register with the respective WEEE Management System Operator and form  
316 part of the contracted participant of the EMB-approved WEEE Management  
317 Plan;
  - 318 b) Contribute a WEEE Management Fee in the amount to be determined by the  
319 WEEE Management System Operator, which shall be used for the  
320 implementation of the EMB-approved WEEE Management Plan;
  - 321 c) Ensure that the WEEE Management Fee is visibly shown as a separate line  
322 on the invoice, order or comparable document;
  - 323 d) Inscribe their EEE with markings as prescribed in the EMB-approved WEEE  
324 Management Plan;
  - 325 e) Allow all data (e.g. sales volume, imported volume) to be audited by the  
326 WEEE Management System Operator to validate whether or not the  
327 registered sales and import data are correctly reported. The data shall be  
328 confidentially treated and used for the purpose of complying with the EMB-  
329 approved WEEE Management Plan;
  - 330 f) Provide the WEEE Management System Operator with the forecast recovery  
331 amount and forecast percentages recovery of reuse, recycling, and  
332 valorization;
  - 333 g) Submit an audited annual report to DENR-EMB not later than the first  
334 quarter of every year. The annual report shall contain the following audited  
335 information, at the minimum:<sup>2</sup>
    - 336 i. Category and type of equipment placed on the market
    - 337 ii. Origin
      - 338 - Manufactured and placed on the market by the same business
      - 339 - Manufactured by the same business in the Philippines
      - 340 - Imported
      - 341 - Exported
      - 342 - Country of acquisition
    - 343 iii. Quantities, weight in tons, or where this is not possible, number of  
344 units
    - 345 iv. Uses
      - 346 - Households
      - 347 - Non-households
      - 348 - Both
  - 349 h) Identify appliances meant for households with an appropriate symbol to be  
350 agreed upon by the producers with the approval of EMB. If the EEE cannot  
351 be marked or labeled due to its size or function, said requirement must be

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<sup>2</sup> Spain/3242 Royal decree 208/2005, 25<sup>th</sup> of February, on electrical and electronic waste and the management of its wastes

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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352 stamped on the packaging with instructions for use together with the  
353 appropriate guarantee;

354 i) Inform users as to the correct criteria for the ESM of WEEE including, but  
355 not limited to, systems of return and free-of-charge status, as appropriate,  
356 particularly for households; and

357 j) Provide information on the possible effects on human health and the  
358 environment of hazardous substances that the EEE and appliances might  
359 contain.

360  
361 No producer shall engage in any waste generating activity without registering  
362 with the WEEE Management System Operator in accordance with this Guideline.  
363

## 364 **8.2 Importers**

365  
366 All importers are automatically producers and therefore must comply with  
367 the responsibilities of producers as stipulated in this Guideline as well as other  
368 pertinent laws and regulations.  
369

## 370 **8.3 Distributors**

371  
372 Distributors shall have the following responsibilities:  
373

374 a) Purchase only from registered producers and distribute or sell EEE in  
375 accordance with this Guideline;

376 b) Ensure that when buying from a producer, the registration number is  
377 correctly displayed on the invoice or other commercial documentation  
378 received, and verify that the producer is registered;

379 c) Ensure that WEEE Management Fee is visibly shown as separate line on the  
380 invoice, order, or comparable document;

381 d) Provide the relevant data in cases of consignment sales to enable compliance  
382 of the producers to this Guideline;

383 e) Distribute only products that bear the EEE-prescribed marking on the  
384 product/packaging; and

385 f) Provide space for temporary storage of WEEE at no cost and in accordance  
386 with the EMB-approved WEEE Management Plan.

## 387 388 **8.4 Retailers/Resellers**

389  
390 Sellers of EEE, whether wholesale or retail, shall have the following  
391 responsibilities:  
392

393 • Purchase only from registered producers and distribute or sell EEE in  
394 accordance with this Guideline;

395 • Ensure that when buying from a producer, the registration number is  
396 correctly displayed on the invoice or other commercial documentation  
397 received, and verify that the producer is registered;

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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- 398 • Ensure that WEEE Management Fee is visibly shown as separate line on the  
399 invoice, order, or comparable document
- 400 • Provide the relevant data in case of consignment sales to the producer  
401 allowing the producer to comply with the requirements of the WEEE  
402 Management System Operator; and
- 403 • Provide space for temporary storage of WEEE at no cost and in accordance  
404 with the EMB-approved WEEE Management Plan

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## **8.5 WEEE Management System Operator**

408 Each type of WEEE listed in Table 1 of this Guideline shall have a  
409 corresponding WEEE Management System Operator, which shall:

410

- 411 a) Prepare or cause the preparation of the WEEE Management Plan and seek  
412 approval of EMB Central Office (CO);
- 413 b) Provide evidence that the WEEE Management System is participated in by at  
414 least 51 percent of the Philippine market for specific type of EEE based upon  
415 the aggregate sales of all contracted participants during the previous year;
- 416 c) Submit a database of producers under the WEEE Management System to  
417 EMB CO together with the WEEE Management Plan;
- 418 d) Together with the producers, implement the WEEE Management Plan, review  
419 and amend it as necessary, subject to the approval of EMB CO;
- 420 e) Prescribe a WEEE management fee subject to the approval of the Steering  
421 Committee;
- 422 f) Collect the WEEE management fee from the producers either based on  
423 volume of import or volume of sales or other parameters, whichever is agreed  
424 upon by the producers concerned, subject to the approval of the Board of  
425 Trustees of each WEEE Management System Operator; provided, that details  
426 on the collection process is described in the WEEE Management Plan;
- 427 g) Provide EMB CO and the Steering Committee with an annual audit report  
428 from an independent auditor regarding the activities performed in relation to  
429 the WEEE Management Plan and the producers' financial reports. The  
430 independent auditor shall be commissioned by each WEEE Management  
431 System Operator at its own expense; provided that the audit is done in  
432 accordance with the technical standard that is approved by the Philippine  
433 Institute of Chartered Accountants;
- 434 h) Hire a third party accountant that is responsible for the invoicing and  
435 preparation of the required financial statements of the WEEE Management  
436 System Operator;
- 437 i) Provide an Information Technology system to guarantee that competitive  
438 market data remains confidential; and
- 439 j) Comply with the permitting and reporting requirements of DAO 2013-22, RA  
440 6969 and/or RA 9003 as applicable regarding the transport manifest,  
441 storage, treatment, reuse, recycle, and/or disposal of WEEE.

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# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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## 8.6 Collection Points or Consolidation Centers

The following are the obligations of Collection Points or Consolidation Centers:

- a) Accept and allow the temporary storage of containers and WEEE, and provide appropriate storage area(s) in accordance with the requirements of DAO 2013-22 and Section 15 of this Guideline;
- b) Comply with applicable Environmental, Health, and Safety regulations;
- c) Provide all requirements to the WEEE Management System Operator for the application of applicable licenses and permits as may be needed to set up and operate the collection point or the consolidation center;
- d) Ensure security of all WEEE and its containers at the storage areas;
- e) Ensure proper handling of WEEE;
- f) Ensure secure and safe access to the storage areas for the transport contractor(s);
- g) Inform the public on the purpose and use of the collection point(s) or consolidation center;
- h) Submit report to the WEEE Management System Operator the information required under the WEEE Management Plan and such other information as may be required; and
- i) Provide appropriate protection and training for staff to prevent health and safety impacts.

## 8.7 TSD Facilities

TSD Facilities must comply with the requirements under DAO 2013-22 and the provisions under Section 15 this Guideline.

## 8.8 Local Government Units (LGUs)

In coordination with the Department of Interior and Local Government, the DENR shall enjoin all LGUs to:

- Establish collection points or consolidation centers by integrating WEEE collection in its Material Recovery Facility (MRF) or creating a new facility as WEEE collection point or consolidation center; and
- Formulate and implement pro-forma guidelines in WEEE management requiring sellers of EEE within their jurisdiction to comply with the requirements as presented in this Section and providing sanctions for non-compliance therewith, such as, but not limited to, the non-issuance or revocation of business permit.

LGUs establishing a WEEE collection point and/or consolidation center shall enter into agreement with WEEE Management System Operators for inclusion in the WEEE Management Plan and comply with the applicable requirements of RA 6969 and its relevant implementing rules and regulations and this Guideline.

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## 9 Registration of Producers

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491  
492 All producers, existing or new, shall register with the appropriate WEEE  
493 Management System Operator prior to engaging in any waste generating activity.  
494 The following are the procedures for the registration:  
495

- 496 a) The producer must provide the following information upon registration and  
497 pay the corresponding registration fee to the WEEE Management System  
498 Operator:
- 499 o Name and documents of incorporation or registration;
  - 500 o Registered address of the producer within the Philippines;
  - 501 o Physical address where the waste generating activities of the producer is  
502 conducted in the Philippines with respect to the WEEE Management  
503 Plan; and
  - 504 o Contact details: name, address, and contact numbers of the legal  
505 representative and, in the case of exported WEEE, the place of export, the  
506 type and weight/number of units, and consignee name.
- 507 b) As proof of registration, the WEEE Management System Operator shall issue  
508 a registration number to the producer. The producer shall display this  
509 registration number on all trading documentation and in the premises where  
510 the waste generating activities are conducted whenever possible.
- 511 c) The WEEE Management System Operator shall prepare a database of  
512 registered producers and submit the same as part of the WEEE Management  
513 Plan.

## 10 Establishment and General Requirements of the WEEE Management System Operator

514  
515 Producers comprising of at least 51 percent of the particular EEE market  
516 (based upon the aggregated sales of the participants in the previous year) shall  
517 establish a non-profit, non-stock organization for implementing a WEEE  
518 Management Plan subject to the provisions of this Guideline.  
519

520  
521 The establishment and operations of the WEEE Management System  
522 Operators shall be supervised and monitored by a Steering Committee to enforce  
523 effectively the WEEE Management Plan in accordance with this Guideline.  
524  
525

526  
527 Each WEEE Management System Operator shall:  
528

- 529 a) Be a duly-registered non-stock and non-profit organization with the  
530 Securities and Exchange Commission (SEC);
- 531 b) Be governed by a Board of Trustees composed of producers and  
532 representatives; and
- 533 c) Be operationally independent but subject to the supervision and oversight  
534 functions of the Steering Committee.  
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# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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## 11 Contents of the WEEE Management Plan

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The WEEE Management Plan shall provide the following minimum information:

- a) Identification of producer(s) or, as the case may be, the organization on behalf of the producer(s) that develops the WEEE Management Plan and the producer(s) that register as a contracted participant to the WEEE Management Plan;
- b) Annual projections of the quantities of WEEE for which the WEEE Management Plan is developed;
- c) A 5-year Operational Plan to include, but will not be limited to, a detailed forecast of the items under Section 11b of this Guideline including additional capabilities and activities and identification of the collection network;
- d) A 5-year Business Plan detailing the following:
  - i. Budget estimation covering the 5-year Operational Plan;
  - ii. WEEE management fee development that includes incentive scheme, as may be applicable, to encourage domestic WEEE generators to bring their WEEE to the designated collection or consolidation points;
  - iii. Financial planning for the WEEE Management Plan;
  - iv. Financing coverage for historical wastes; and
  - v. Development and management of reserve funds.
- e) Detailed procedure on the collection of WEEE management fee including the documentary requirements as basis for the payment of the WEEE management fee;
- f) Enforcement strategy and monitoring and reporting procedures to ensure producer participation and financing of the operation of WEEE management; including but not limited to working with relevant government agencies in identifying non-registered producers and/or sellers that are selling EEE from non-registered producers;
- g) Strategy for marking EEE to signify compliance with this Guideline;
- h) Terms of references that will govern waste collection transport, recycling/reuse/disposal of WEEE;
- i) Monitoring and reporting procedures to be applied in the collection, transport, recycling/reuse/disposal of WEEE;
- j) Information, Education, and Communication (IEC) plan to raise awareness of generators regarding WEEE management;
- k) Measures that address issues of social responsibilities in the waste management industry;
- l) Description of job creation potential in the framework of the implementation of the WEEE Management Plan;
- m) Environmental, Health, and Safety Standards compliance plan; and
- n) Emergency and contingency plan detailing the procedures and protocols in cases hazardous waste-containing components are broken/spilled to ensure

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

580 that worker, populace, and the environment are protected from the  
581 hazardous substances released during the incident.

582  
583 **12 Submission and Approval Process of the WEEE Management Plan**  
584

585 Each WEEE Management System Operator shall submit the WEEE  
586 Management Plan and initiate the Retrieval and Disposal in accordance to the  
587 schedule set forth in Table 2.  
588

589 **Table 2 – Schedule of Submission and Implementation of WEEE Management**  
590 **Plan**

Type of EEE	Description	Submission of WEEE Management Plan
Lighting products	Including those listed in the JAO 2013-09-001 in addition to the metallic, electronic, and electrical parts of the lighting products and their housing (e.g. luminaires).	Not later than 30 days upon the effectivity of this Guideline
Information Technology (IT) equipment/devices	Includes, but are not limited to: routers, repeaters, switches, servers, modems, computer hardware (e.g. keyboards, automatic voltage regulators, mice, etc.), computer units (e.g. desktop, laptop, netbook, etc.) including computer screens (e.g. CRT, LCD, LED, etc.), central processing units (CPU), external data storage devices (e.g. flash drives and hard disk drives), photocopiers, scanners, printers, etc.	One year from the effectivity of this Order
Telecommunication devices	Includes, but are not limited to: telephones, fax machines, wireless telephones, mobile phones, tablets, radios, etc.	One year from the effectivity of this Order
Electric appliances	Includes, but are not limited to: <ul style="list-style-type: none"> <li>• Consumer appliances such as TV Sets (including CRT, plasma, LCD, or LED TV Sets), microwaves, coffee makers, toasters, automatic dispensers, electric fans, vacuum cleaners, cooking ranges/ovens, refrigerators, washing machines, heating/air conditioning units, etc.</li> <li>• Industrial electronic and</li> </ul>	One year from the effectivity of this Order

## Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

Type of EEE	Description	Submission of WEEE Management Plan
	electrical appliances except those fixed and stationary industrial fixed electronic and electrical appliances	
Entertainment, sports, leisure, and recreational devices/equipment	Includes, but are not limited to: gaming consoles (e.g. Playstation, Xbox, Wii, etc.), portable gaming devices (e.g. 3DS, PSP, etc.), portable music players, etc.	Two years from the effectivity of this Order
Image producing devices	Includes, but are not limited to: cameras, camcorders, video recorders, DVD, VCD, CD, and other tape readers, etc.	Two years from the effectivity of this Order
Sampling and laboratory equipment	Includes, but are not limited to: High Performance Liquid Chromatography, Atomic Absorption Spectrometer, UV-VIS Spectrophotometer, etc.	Two years from the effectivity of this Order
Medical devices except all implanted and infected products	Includes, but are not limited to: ultrasound, urinalysis system, patient monitor, defibrillator, jaundice meter, ventilator, radiotherapy equipment, cardiology, dialysis, pulmonary ventilators, analyzers, freezers, and other appliances for detecting, preventing, monitoring, treating, alleviating illness, injury or disability	Five years from the effectivity of this Order
Monitoring and control instruments	Includes, but are not limited to smoke detectors, heating regulators, thermostats, measuring, weighing or adjusting appliances for household or laboratory equipment, and other monitoring and control instruments used in industrial installations	Five years from the effectivity of this Order

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The preparation shall be based on the requirements set forth in Section 11 of this Guideline and shall observe the following procedures:

- a) Each WEEE Management System Operator shall submit to EMB CO the following requirements for the approval of the WEEE Management Plan and pay the processing fee as per DENR Memorandum Circular 2000-12 of RA 6969.
  - o Notarized WEEE Management Plan;

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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- 600           ○ Board Resolution endorsing the WEEE Management Plan; and
- 601           ○ Notarized Affidavit of Undertaking of each Producer indicating that they
- 602           will fulfill the assigned obligations under the WEEE Management Plan.
- 603        b) Upon receipt of the WEEE Management Plan, the EMB CO shall:
- 604           ○ Review the WEEE Management Plan and approve in writing; or
- 605           ○ Require additional information to be furnished within 15 calendar days;
- 606           or
- 607           ○ Require amendments to be made to the WEEE Management Plan within
- 608           15 calendar days.
- 609        c) In case the EMB CO requires additional information or amendments, EMB
- 610        CO shall act upon the submitted additional information or the amended
- 611        WEEE Management Plan within 30 calendar days.
- 612        d) The approved WEEE Management Plan shall be valid for a period of 5 years
- 613        or for a period specified by the EMB CO starting on the date of the approval
- 614        thereof by the EMB CO.
- 615        e) Upon approval, the producer shall comply with the WEEE Management Plan
- 616        immediately and initiate retrieval and disposal no later than the schedule set
- 617        forth in Table 2 of this Guideline.
- 618        f) The approved WEEE Management Plan may be revised by the WEEE
- 619        Management System Operator subject to the approval of the Steering
- 620        Committee and the EMB CO.

621           Initial implementation of the approved WEEE Management Plan should not

622           be later than six (6) months from securing approval of the WEEE Management Plan

623           from EMB.

624

625

## 13 Enforcement Requirements

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627

628           No producer shall be allowed to manufacture, trade (import/export), or sell

629           EEE in the Philippines without being included in the database of registered

630           producers of EEE defined under Section 9 of this Guideline. Each WEEE

631           Management System Operator shall endeavor to identify non-registered producers

632           and/or sellers procuring from non-registered producers, and report to EMB CO and

633           to other relevant agencies for investigation of non-compliance to this Guideline.

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### 13.1 Requirements for Importing EEE

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637           No producer shall import EEE into the Philippine without securing a pre-

638           importation clearance for every importation from EMB Coupon the effectivity of this

639           Guideline. Importers shall apply for pre-importation clearance from EMB CO and

640           shall submit the following requirements:

641

- 642        a) Copy of the certification of registration as producer from the WEEE
- 643        Management System Operator;
- 644        b) Certificate of compliance with the WEEE Management Plan issued by the
- 645        WEEE Management System Operator; and

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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646 c) Liquidation report of the previously issued pre-importation clearances.

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## 648 **13.2 Requirements for Importing Second-hand or Used EEE**

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650 In addition to securing pre-importation clearance as described in this  
651 Guideline, producer importing second-hand or used EEE must provide the  
652 following information to show proof that such equipment are not wastes:

653

654 a) Copy of the invoice and contract relating to the sale and/or transfer of  
655 ownership of the second-hand or used EEE;

656 b) Signed declaration that indicates that the second-hand or used equipment  
657 has been tested and is destined for direct reuse and fully functional; or is  
658 destined for reuse following minor repair, refurbishment, or upgrading;

659 c) Information on the further user and the distributor(s) or retailer(s);

660 d) Copy of Certificate of Testing or proof of functionality on every item within  
661 the consignment; and

662 e) Signed declaration from the holder who arranges the transport of the EEE  
663 that none of the equipment within the consignment is defined as or  
664 considered to be waste in any of the countries involved in the transport  
665 (countries of export and import, and, if applicable countries of transit).

666

667 Appropriate protection against damage during transportation, loading and  
668 unloading, in particular through sufficient packaging and stacking of the load must  
669 be provided.

670

671 This section is without prejudice to the authority of the Bureau of Customs  
672 (BOC) under the Tariff and Customs Code and/or the DTI under the Consumer Act  
673 of the Philippines and related laws.

674

## 675 **14 Steering Committee**

676

677 The Steering Committee shall be instituted by EMB CO and shall be  
678 composed of representatives from government, the industry, and relevant consumer  
679 non-profit organization(s).

680

681 It shall exercise the following functions:

682

683 a) Ensure the establishment of the WEEE Management System Operator;

684 b) Recommend policies on WEEE management, including its implementation  
685 by the WEEE Management System Operator;

686 c) Review and endorse the fees pertinent to the operations involved in WEEE  
687 management;

688 d) Review and endorse the amount to be allocated as reserve funds from the  
689 WEEE management financial plan; and

690 e) Perform such other functions as may be necessary for the effective  
691 implementation of this Guideline.

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# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

693 The DENR, through the Steering Committee, shall coordinate with DTI to  
 694 establish procedures for the conduct of functionality test of second-hand EEE and  
 695 the issuance of their corresponding test certificates. The Steering Committee may  
 696 also establish memoranda of agreement or any other instruments with relevant  
 697 agencies for strengthening this Guideline, such as but not limited to product  
 698 markings and sanctions that may be applied.

## 15 TSD Facilities

701  
 702 In accordance with DAO 2013-22, no hazardous wastes from the  
 703 components of WEEE shall be stored, recycled, reprocessed, treated, and disposed  
 704 of in facilities other than those facilities permitted by DENR.

705  
 706 Facilities must comply with the relevant requirements for TSD facilities  
 707 embodied in DAO 2013-22. Additionally, the following precautionary measures  
 708 must be in place.  
 709

Component	Requirements
Storage Areas	<ul style="list-style-type: none"> <li>• Impermeable surfaces for appropriate areas with corresponding appropriate spillage collection facilities, and where appropriate, decanters and degreasers</li> <li>• Weatherproof covering for appropriate areas</li> </ul>
Treatment Areas	<ul style="list-style-type: none"> <li>• Impermeable surfaces with corresponding spillage collection facilities, and where appropriate, decanters and degreasers</li> <li>• Appropriate storage for disassembled spare parts</li> <li>• Appropriate containers for storage of batteries, capacitors containing PCBs or PCTs, and other hazardous wastes such as radioactive wastes</li> <li>• Equipment for treatment of water including rainwater</li> <li>• Suitable balances for measuring the weight of treated wastes</li> </ul>
Covering	<ul style="list-style-type: none"> <li>• Must be weatherproof to minimize the contamination of clean surface and to facilitate the reuse of those whole appliances and components intended for reuse</li> <li>• Specifically required for those storing and treating hazardous or fluid containing WEEE or whole appliances or components intended for reuse</li> </ul>
Surfaces	<ul style="list-style-type: none"> <li>• Must be impermeable surfaces to prevent the transmission of liquids beyond the pavement surface</li> <li>• Shall include sealed drainage system that needs weatherproof covering with impermeable components which does not leak and which will ensure that no liquid will run off the pavement other than via the system and that except where they may be lawfully discharged, all liquids entering the system are collected in a sealed sump</li> </ul>
Spillage Collection Areas	<ul style="list-style-type: none"> <li>• Must include the impermeable pavement and sealed drainage system as the primary means of containment</li> <li>• Provision of spill kits to deal with spillages of oils, fuel, and acids</li> </ul>
Storage for Disassembled Parts	<ul style="list-style-type: none"> <li>• Separate areas for storage of disassembled parts from WEEE</li> <li>• Proper containers for some parts that may contain oil and/or other fluids</li> </ul>

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

Component	Requirements
	<ul style="list-style-type: none"> <li>• Provision of impermeable surface and a sealed drainage system</li> </ul>
Storage for Other Components and Residues	<ul style="list-style-type: none"> <li>• Appropriate storage areas for other components and residues arising from the treatment of WEEE following their removal for disposal or recovery</li> <li>• Should have impermeable surfaces with weatherproof covering</li> <li>• Should have tight-sealed containers with proper labeling</li> <li>• Components should be segregated with regard to their eventual destinations and the compatibility of the component types.</li> </ul>

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## 16 Penal Provisions

EEE products covered by this Guideline that are being sold, stored, used, manufactured, or transported in violation of this Guideline shall be impounded or confiscated upon order issued by the Secretary of DENR.

Storage fees of confiscated EEE, whether new, second-hand/used or wastes, and other expenses attendant to the confiscation thereof, shall be charged solidarily or proportionately to the importers and/or distributors, sellers, and/or end-users found violating this Guideline. In case of auction of confiscated EEE, the same shall be sold only to registered producers, who shall be deemed the importer thereof within the context of this Guideline; Provided that such EEE passed the required product quality standards by DTI; Provided further that all expenses attendant to the required product quality testing shall be charged to importers and/or distributors, sellers, and/or end-users found violating this Guideline.

Confiscated lighting products that fail to pass the DTI product quality standards shall be considered wastes and shall be collected and recycled through the respective WEEE Management System Operator, and that collection and recycling expenses shall be charged solidarily to the importers and/or distributors, sellers, and/or end-users found violating this Guideline.

The WEEE Management System Operator shall likewise be held liable together with the collection point or consolidation center in case of injury or damage to public health and the environment and shall properly compensate the affected parties and restore the damaged area or areas resulting from any incident or accident involving the storage, transport, treatment, and disposal of lamp wastes.

An application for the pre-importation clearance may be denied by the EMB for non-compliance with the Lamp Waste Management Plan.

The sanctions imposed pursuant to this Guideline are without prejudice to the administrative and criminal penalties and liabilities as specified under Title V, Chapter XI, Sections 43 and 44 of DAO 29, series of 1992, pursuant to Section 13, 14, and 15 of RA 6969 or to the administrative and criminal penalties and liabilities imposed by the BOC under the Tariff and Customs Code and/or the DTI under the Consumer Act of the Philippines.

# Technical Guidelines on the Environmentally Sound Management (ESM) of Waste Electrical and Electronic Equipment (WEEE)

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## 17 Other Sanctions

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Each WEEE Waste Management System Operator may prescribe sanctions against erring producers for violation of the WEEE Management Plan. These may include but not limited to the following:

- a) A producer may be de-listed from the registry of producers for non-compliance with the WEEE Management Plan and this Guideline.
- b) A producer may be blacklisted from the registry of producers for repeated non-compliance with the WEEE Management Plan and this Guideline.

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