



E-WASTE MANAGEMENT GUIDE FOR CONSUMERS

Prepared for

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PREFACE

Electronic and electrical waste or E-waste is an emergent cause of concern not just for India but globally. Growth of Information and Communication Technology sector in India has enhanced the usage of the electronic equipment exponentially. The increasing “*market penetration*” in developing countries, “*replacement market*” in developed countries and “*high obsolescence rate*” make e-waste one of the fastest growing waste streams. Our ever-increasing reliance on electronics has fuelled e-waste generation, which is growing at almost 10% per annum.

E-waste covers almost all types of electrical and electronic equipment that enters the waste stream. However, the generation, handling, treatment and disposal of e-waste in India is largely unorganised. It is picked and sold to the informal sector, where precious elements like copper and gold are extracted through hazardous means using acids, cyanide etc.

In India, according to the statistics issued by the Rajya Sabha, the main sources of e-waste in India are the government, public and private industrial sectors, which account for almost 70% of the total e-waste. The contribution of individual households is relatively smaller at about 15% and the remaining share is that of manufacturers. Out of the total e-waste volume in India, televisions, desktops (including servers) and mobile phones contribute to the waste generation the most.

Electronic waste is filled with a variety of toxic materials, which creates a serious risk for human health and the environment if released during processing, recycling or disposal. Many of these substances are toxic and carcinogenic. Exposure to heavy metals and toxic chemicals results in severe illnesses, including malignant cancer. To avoid serious environmental pollution and human exposure, adequate treatment of e-waste is crucial.

The Central Pollution Control Board is proactively regulating and monitoring e-waste. The E-waste (Management) Rules, 2016 have been

amended to widen the regulatory net and to fix responsibilities of the various players in the e-waste generation chain, including manufacturer, producer (which include dealers, retailers, e-retailers, importers etc.), consumer, bulk consumer, collection centres, dealers, e-retailers, refurbisher, dismantler and recycler.

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E-waste Management Guide for a Consumer

What is E-waste?

Electronic and electrical waste or e-waste commonly means all types of electrical and electronic equipment that enters the waste stream. This could be a mobile phone charger, CFL bulbs, laptop, server and generally every electronic item that we use in our homes, workplaces, schools, institutions etc.

Law regarding E-waste

In India, generation, handling, storage, refurbishment, dismantling and recycling of e-waste is regulated by the Central Pollution Control Board (**CPCB**) pursuant to the E-waste (Management) Rules, 2016 (**E-waste Rules**). The E-waste Rules fix responsibilities of the various players in the e-waste generation chain, including manufacturer, producer, **consumer**, **bulk consumer**, collection centres, dealers, e-retailers, refurbisher, dismantler and recycler.

The E-waste Rules define e-waste to mean electrical and electronic equipment, including their components, consumables, parts or spares (**EEE**) (i) that are discarded as waste, whether whole or in part, by the **consumer** or **bulk consumer**; and (ii) rejects from manufacturing, refurbishment and repair processes.

Categories of EEE under the E-waste Rules

Information technology and telecommunication equipment:

- Centralised data processing: Mainframes, Minicomputers
- Personal Computing: Personal Computers (Central Processing Unit with input and output devices)

- Personal Computing: Laptop Computers (Central Processing Unit with input and output devices)
- Personal Computing: Notebook Computers
- Personal Computing: Notepad Computers
- Printers including cartridges
- Copying equipment
- Electrical and electronic typewriters
- User terminals and systems
- Facsimile
- Telex
- Telephones
- Pay telephones
- Cordless telephones
- Cellular telephones
- Answering systems

Consumer electrical and electronics:

- Television sets (including sets based on (Liquid Crystal Display and Light Emitting Diode technology)
- Refrigerator
- Washing Machine
- Air-conditioners excluding centralised air conditioning plants

Fluorescent and other Mercury containing lamps

Exceptions to E-waste

1. used **lead acid batteries** as covered under the Batteries (Management and Handling) Rules, 2001.
2. **radio-active wastes** as covered under the provisions of the Atomic Energy Act, 1962.
3. **micro enterprises** as defined in the Micro, Small and Medium Enterprises Development Act, 2006.

What is E-waste management?

In light of the environmental degradation that can result from e-waste and the progressive increase in its quantities due to widespread use, **environmentally sound management of e-waste** is an essential priority. This means taking all steps required to ensure that e-waste is managed in a manner which protects health and environment against any adverse effects that may result from such e-waste.

Advantages
Conserves natural resources.
Acts as an alternate resource.
Reduces environmental pollution.
Prevents health risks from hazardous constituents.

Who is responsible for e-waste management?

E-waste management is the collective responsibility of every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, transporter, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste.

The primary obligation for e-waste management is that of the **Producer** to channel e-waste ensuring that its disposal is eco-friendly. The producers are obligated to collect and channelise e-waste generated from end-of-life products.

Producer is any person who, irrespective of the selling technique used, including dealers, retailers, e-retailers :

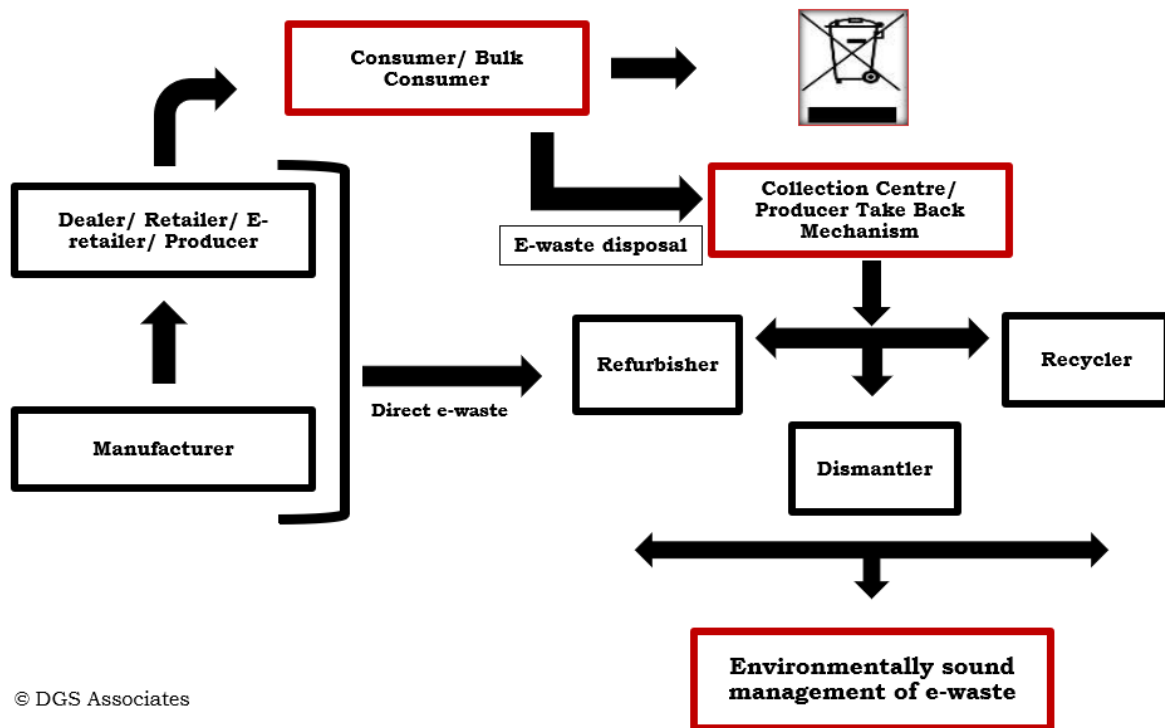
- Manufactures and sells EEE;
- Sells EEE produced by other manufacturers and suppliers and under its own brand;
- Sells imported EEE.

This can be done through a take back system, buy-back arrangement, exchange scheme, Deposit Refund System or setting up of collection centres, either directly or through an authorised agency. Several producers of the same product may also act collectively through a Producer Responsibility Organisation.

SafeNet has provided information of the locally available collection, dismantling and recycling services it has established, in association with Greeniva Recycler, on its website.

This information is available at <https://safenet.gemalto.com/uploadedFiles/India%E-waste%20Collection%20Points.pdf>

E- Waste Channelization Process



Collection centre

Centre and/or a collection point established by Producer(s) to collect e-waste for channelising the e-waste to recycler.

Dismantler

Person engaged in dismantling used EEE

Recycler

Person engaged in recycling or reprocessing of used EEE.

Refurbisher

Person who repairs EEE to extend its working life for its originally intended use and selling the same in the market or returning to owner/consumer.

Who is a Consumer and Bulk Consumer?

A **consumer** is any person using electrical and electronic equipment other than a bulk consumer. **Bulk consumer** includes Central or State Government Departments, public sector undertakings, banks, educational institutions, multinational organisations, international agencies, partnerships, public or private companies, factories and health care facilities, which have a turnover of more than one crore or have more than twenty employees.

As consumers, it is our responsibility, not only under law but as a good citizen, to ensure that e-waste is discarded in a responsible manner. All EEE producers with an EPR Authorisation have collection centres in the various States and are mandated to publish the contact details of the collection centres on their websites.

Responsibilities of a Consumer and Bulk Consumer

1. If the consumer or bulk consumer sees the following symbol, it means the product must not be dropped in garbage bins containing general waste or in municipal bins.



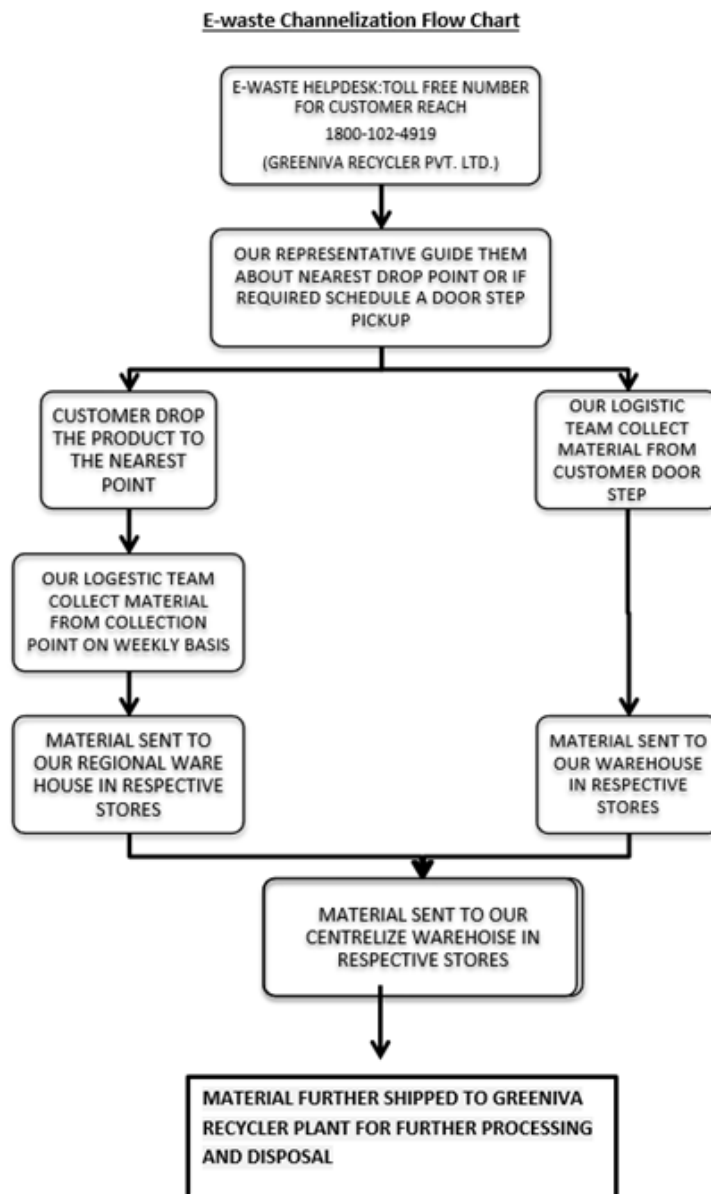
2. The consumer and bulk consumer must look out for the contact details such as address, e-mail address, toll-free telephone numbers or helpline numbers at the time of disposal of e-waste. This will usually be found on the product packaging, the website and product user documentation so as to facilitate the return of end-of-life electrical and electronic equipment.
3. SafeNet appliance's packaging material is recyclable. Your appliance also contains recyclable matter which is marked with the label. Therefore, it must not be mixed with general waste.
4. The consumer and bulk consumer must look out for the details of the channelization that may also be provided, such as a take back system, buy-back arrangement, exchange scheme, Deposit Refund System or setting up of collection centres.


5. The consumer and bulk consumer must read the information on hazards of improper handling, disposal, accidental breakage, damage or improper recycling of e-waste. They must follow the instructions for handling and disposal of the equipment after its use, along with the Do's and Don'ts.
6. The consumer and bulk consumer must read the information on hazardous constituents in the electrical and electronic equipment. For instance, the consumers must ensure that they do not throw end-of-life fluorescent and other mercury containing lamp in the municipal bin. It must be handed over (in a properly packed form) to the appropriate party in the producer channelisation system. The end-of-life intact fluorescent and other mercury containing lamp may be stored either in the same boxes in which new lamps are brought or other boxes of similar size. They should be sorted upright. Due precaution may be taken while packing more than one used lamp, so as not to cause the possibility of breakage during the storage and transpiration.
7. Consumer or bulk consumer must ensure that its e-waste is not mixed with e-waste containing radioactive material.
8. **Bulk consumer** must file annual returns to the concerned State Pollution Control Board on or before the 30th day of June following the financial year to which that return relates.
9. Bulk consumers must maintain records in specified formats, which must be readily available for scrutiny by the concerned State Pollution Control Board.

SafeNet's e- Waste Channelization Flowchart

SafeNet has a well-established waste channelization mechanism in place. This can be used to not only channelize products purchased from SafeNet or its group companies but for any e-waste available with you.

The Process is depicted below.



Dos	Don'ts
<p>Channelize e-waste through collection centre or dealer of authorised producer or dismantler or recycler or through the designated take back service provider of the producer.</p>	<p>E-waste must not be channelised through the unorganised or informal sector like rag pickers or <i>kabaadi wallahs</i>.</p>
<p>Check the product at the time of purchase to record details of the collection centres. Information will generally be provided on the catalogue with your product for end-of-life equipment handling. This can also be found on the website of the producer or in the product information.</p>	<p>Do not throw electronics in bins having "Do Not Dispose" sign. Do not dispose your e-waste in garbage bins along with municipal waste that ultimately reaches landfills.</p> 
<p>Collect your e-waste and have it deposited / delivered to the nearest collection centre. Always call Local Greeniva Recycler to dispose products that have reached end-of life. Ensure that only Greeniva Recycler repair and handle your electronic products.</p>	<p>Do not pay or take money for disposal of e-waste. You will not be needed to pay for the same if it is done through the authorized channel.</p>
<p>Always disconnect the battery from product, and ensure any glass surface is protected against breakage.</p>	<p>Do not dismantle your electronic products on your own</p>

Wherever possible or as instructed, separate the packaging material according to responsible waste disposal options and sorting for recycling.	
Conduct periodic drives in your locality, possibly through the Resident Welfare Associations (RWAs) to collect e-waste from the residents and local shopkeepers and have the same delivered to the nearest collection centre.	
Maintain a record of each item collected during the drive and provide it to the collector, dismantler or recycler.	

What do **YOU** need to **DO**?



Pack the electronics item in light packaging, so that the device is secured inside safely.

Identify and drop off the EEE at the relevant Collection Point.

At the Collection Point, provide necessary details and submit the e-waste.