

# ITU-T

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SERIES L: ENVIRONMENT AND ICTS, CLIMATE  
CHANGE, E-WASTE, ENERGY EFFICIENCY;  
CONSTRUCTION, INSTALLATION AND PROTECTION  
OF CABLES AND OTHER ELEMENTS OF OUTSIDE  
PLANT

E-waste and circular economy

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### **Scheduled waste management for a base station (inclusive of e-waste)**

Recommendation ITU-T L.1036

## ITU-T L-SERIES RECOMMENDATIONS

### ENVIRONMENT AND ICTS, CLIMATE CHANGE, E-WASTE, ENERGY EFFICIENCY; CONSTRUCTION, INSTALLATION AND PROTECTION OF CABLES AND OTHER ELEMENTS OF OUTSIDE PLANT

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# Recommendation ITU-T L.1036

## Scheduled waste management for a base station (inclusive of e-waste)

### Summary

Recommendation ITU-T L.1036 has been developed following the general environment quality act of a member country. As the 5G era proceeds, a huge global discharge of telecommunication equipment and upgrading of equipment are expected at each base station (BS) globally. Recommendation ITU-T L.1036 is an extension to any requirement stipulated in national environment quality or protection acts, a technical requirement for the telecommunication industry to adopt as a practice to reduce scheduled waste including e-waste at a (BS. In addition, Recommendation ITU-T L.1036 provides guidance on how to dispose of e-waste from a BS including the shared responsibility of owners and third parties involved.

### History

| Edition | Recommendation | Approval   | Study Group | Unique ID*                                                                   |
|---------|----------------|------------|-------------|------------------------------------------------------------------------------|
| 1.0     | ITU-T L.1036   | 2022-02-13 | 5           | <a href="http://handle.itu.int/11.1002/1000/11830-en">11.1002/1000/14849</a> |

### Keywords

Base station, e-waste, telecommunication.

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\* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

## FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

## NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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# Recommendation ITU-T L.1036

## Scheduled waste management for a base station (inclusive of e-waste)

### 1 Scope

This Recommendation finalizes a previously proposed technical code to manage e-waste or waste electrical and electronic equipment (WEEE) in a systematic and zero waste approach. There will be continued efforts to minimize the pollution of waste disposal at a base station (BS), and subsequently enhance the sustainability of the telecommunication industry. Further management quality improvements in accordance with this Recommendation are expected to lead to zero waste disposal to BS, landfill, and incinerator.

### 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

None.

### 3 Definitions

#### 3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

**3.1.1 authorized person** [b-ISO 21009-2]: Person authorized by the applicable regulations.

**3.1.2 distributor** [b-EPA 2022]: Any natural or legal person in the supply chain, who makes an EEE available on the market. A distributor may also be a producer.

**3.1.3 electrical and electronic equipment (EEE)** [b-EA]: Equipment:

- which is dependent on electric currents or electromagnetic fields in order to work properly;
- for generating, transferring and measuring these currents and fields;
- designed for use with a voltage rating not exceeding 1 000 V or less for alternating current, and 1 500 V or less for direct current.

**3.1.4 e-waste or waste electrical and electronic equipment (WEEE)** [b-BEC]: Electrical or electronic equipment which is any substance or object which the user dismantles or intends or is required to dismantle. Including all components, sub-assemblies, and consumables which part of the product at the time and location of disposal.

**3.1.5 hazardous waste** [EPC 2002]: Any natural or artificial substances including any raw material, whether in a solid or liquid form, or in the form of gas or vapour, or in a mixture of at least two of these substances, or any living organism intended for any environmental conservation and control activity, which can cause pollution.

**3.1.6 recycling:** [b-ISO 22628]: Reprocessing in a production process of the waste materials for the original purpose or for other purposes, excluding processing as a means of generating energy.

## 3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

**3.2.1 audit:** Systematic, independent, documented process for obtaining records, statements of fact or other relevant information and assessing them objectively to determine the extent to which specified requirements are fulfilled.

NOTE – Based on [b-ISO 17000].

**3.2.2 base station (BS):** Station consisting of telecommunication transmission structure, electrical and electronic equipment necessary to communicate with related equipment on site. Each base station covers a specified area, known as a cell. Point of generation of e-waste is specified under the asset policy of each respective organization.

Telecommunications transmission structure consists of self-supporting structures (self-supporting tower – a four-legged lattice tower or three-legged lattice tower), guyed mast, poles and booms, for the purpose of installing telecommunications facilities.

**3.2.3 competent person:** A certified environmental professional who has been certified by the authority body to be competent to supervise the operation of a pollution control system or the management of scheduled wastes.

The individual is required to go through the certification process and to comply with all the requirements of the authority body before the person can be certified as competent.

**3.2.4 component:** Element with electrical or electronic functionality connected together with other components, usually by soldering to a printed wiring board, to create an electronic circuit with a particular function (for example, an amplifier, radio receiver or oscillator). For a given component, or part of the component, waste handling requirements apply to the original equipment or part of the equipment to which it belongs.

NOTE – Based on [b-BC 5 steps].

**3.2.5 direct reuse:** Any operation by which dismantled electrical or electronic equipment or components are used for the same purpose for which they were conceived, including the continued use of whole systems or components.

**3.2.6 dismantled:** State resulting from changes from a useful product to waste. Equipment that is dismantled cannot be directly re-used by someone else for the same purpose for which the product was originally designed.

**3.2.7 disposal:** The method of final disposition, final placement or destruction of scheduled waste. Material that cannot be recycled into raw material for use in manufacture of new electrical and electronic equipment or other products would need to be disposed of using other methods, such as energy recovery or landfill.

**3.2.8 generated date:** The date when scheduled wastes are first generated.

**3.2.9 generation of waste electrical and electronic equipment:** Quantity or weight of disposed products (waste) due to national consumption from a national territory in a given reporting year prior to any activity (collection, reuse, treatment, or export).

**3.2.10 generator:** The unit, individual or organization that owns and generates scheduled waste (SW) or waste electrical and electronic equipment, at the time and venue of its generation.

**3.2.11 lifetime of electrical and electronic equipment; residence time of electrical and electronic equipment:** The time the equipment spends in households, businesses and the public sector. This includes the exchange of second-hand equipment among and between households, and businesses.