

Electricity (Inefficient Lighting Products Ban and Labelling)
Regulations, 2017

ARRANGEMENT OF SECTIONS

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IT is hereby notified that the Minister of Energy and Power Development, in terms of section 65 of the Electricity Act [Chapter 13:19] and after consultation with the Zimbabwe Energy Regulatory Authority, has made the following regulations: —

Title

1. These regulations may be cited as the Electricity (Inefficient Lighting Products Ban and Labelling) Regulations, 2017.

Application and date of commencement

2. (1) These regulations are binding on all importers, wholesalers, retailers, consulting engineers and contractors or installers of lighting products.

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(2) These regulations shall come into force three months after date of promulgation.

Interpretation

3. In these regulations—

“colour rendering index (CRI)” means a quantitative measure of the ability of a light source to reveal the colours of various objects faithfully in comparison with an ideal or natural light source;

“compact fluorescent lamp (CFL)” means a light bulb which has electrodes at both ends of the tube, a gas emitting argon or mercury vapour wherein a stream of electrons flows through the gas from one electrode to the other which gives off ultraviolet radiation that hit the phosphor coating inside the tube and creates visible light, and other similar light bulb;

“efficacy (lumen/watt) efficacy” refers to the amount of light emitted measured in lumens (lm) by a lamp for each watt (W) of power consumed;

“electronic ballast” refers to a solid state electronic circuitry to provide the proper starting and operating electrical conditions to power discharge lamps and operates at high frequencies i.e. 20–40 kilohertz (kHz) and are 3–4 *per centum* more efficient than magnetic ballasts;

“halo phosphate fluorescent tubes” means halo phosphate fluorescent tubes which have a colour rendering index of 50–70 *per centum*;

“high intensity discharge lamp (HID)” means a type of electrical gas discharge lamp which produces light by means of an electric arc between tungsten electrodes housed inside a translucent or transparent fused quartz or fused alumina arc which contain high luminous efficiency of around 75–100 lumens per watt;

“international electro-technical commission (IEC)” refers to the international standards and conformity assessment body for all fields of electro-technology;

“incandescent light bulb (ILB)” refers to a light bulb which has an electricity resistant filament inside that turns electrical energy into a heat and makes the filament while hot, the “white” being light, and other similar light bulb;

“lamp” means a unit whose performance can be assessed independently and which consists of one or more light sources. It may include additional components necessary for starting, power supply or stable operation of the unit or for distributing, filtering or transforming the optical radiation, in cases where those components cannot be removed without permanently damaging the unit;

“lamp rating (power)” means average measured value shall be between 90 *per centum* and 110 *per centum* of rated value (IEV 60969);

“light emitting diode (LEDs)” means a light emitting diode (LED), a semiconductor device that emits visible light when an electric current is passed through it. LED lamps require ballast (called a “driver”) to convert and regulate mains voltage into an electrical supply that will operate the LEDs;

“lumen” means the lumen (Symbolised lm), it is the International Unit of luminous flux. It is defined in terms of candela steradians (cd multiplied by sr). One lumen is the amount of light emitted in a solid angle of 1 sr, from a source that radiates to an equal extent in all directions, and whose intensity is 1 cd;

“luminous flux” means the quantity of the energy of the light emitted per second in all directions and its unit of measurement is the lumen (lm);

“magnetic ballast” means an electromagnetic device intended to limit the amount of current in an electric circuit and operates at line frequency (50 Hz);

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“minimum energy performance standards (MEPS)” means standards which specify the minimum level of energy performance that lighting products must meet or exceed before they can be imported, distributed or offered for sale or use in Zimbabwe;

“triphosphate fluorescent tubes” means triphosphate fluorescent tubes which have a colour rendering index of 85 *per centum*;

“T-series fluorescent tubes (T)” means the number on any fluorescent tube refers to the diameter of the tube only, expressed in eighths of an inch, a T8 tube is 8/8 or 1 inch in diameter. Likewise a T12 is 12/8 or 1-1/2 inches and the T5 is 5/8 inches in diameter;

“watt” refers to a measure of power;

“ZERA” refers to the Zimbabwe Energy Regulatory Authority.

Prohibition of inefficient lighting products

4. (1) No person shall import, manufacture, distribute or sell any or all of the following—

- (a) lighting products which do not meet the Minimum Performance Standard specified in the First Schedule;
- (b) T10 and T12 halophosphate fluorescent lamps and/or magnetic ballasts for use in Zimbabwe;
- (c) a fluorescent lamp with a colour rendering index less than 80 (eighty);
- (d) a lighting product with a power factor less than 0.55 for lamps less than 25 Watt and less than 0.9 for lamps greater than or equal to 25 Watts (IEC 60969);
- (e) a lighting product with a mercury content greater than the values as shown in the Second Schedule;
- (f) an incandescent or filament light bulb.

(2) Any person who contravenes the provisions of subsection (1) shall be guilty of an offence and liable to a fine not exceeding level five or imprisonment not exceeding six months, or both such fine and such imprisonment.

Exempted lighting products

5. The incandescent lighting products exempted from the prohibition are as listed in the Third Schedule.

Testing standards

6. The testing standards applicable to the lighting technologies are listed in the fourth schedule.

Inspection and seizure

7. (1) An inspector appointed under section 62 of the Electricity Act [*Chapter 13:19*] shall at a reasonable time enter any premises where the inspector has reason to believe that a lighting product not meeting the minimum standards is being imported, manufactured, stored, distributed or offered for sale.

(2) If a person is charged with contravening these regulations, the inspector may seize—

- (a) lighting products referred to in section 4(1) being imported, manufactured, stored, sold, used, or transported in contravention of these regulations; and
- (b) any vehicle or other equipment used in connection with the importation, manufacturing, storing, selling, use or transportation of inefficient lighting products in contravention of these regulations;

pending an investigation into the offence.

(3) Where a vehicle or other equipment is seized under subsection (2)(b), and the person from whom it is seized alleges that the vehicle or equipment used in connection with the offence concerned was availed to him or her by another person who owns the vehicle or equipment, the vehicle or equipment shall still be liable to seizure under this section unless the owner proves to the satisfaction of a court of law that he or she was unaware that the vehicle or equipment would be so used.

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Disposal

8. Disposal of seized, used or faulty lighting products such as fluorescent tubes which contain mercury and lead shall be as set out in accordance with local regulations which are—

- (a) Statutory Instrument 10 of 2007—Environmental Management Hazardous Waste Regulations, 2007.
- (b) ISO 14001, Environmental Management Systems—Requirements with guidance for use.

Registration of lighting products importers

9. (1) All importers of lighting products for sale or distribution shall register such products with ZERA.

(2) Such registration shall include the name of the manufacturer/distributor, country of origin and submission of documentary evidence indicating compliance to minimum energy performance standards.

Energy labelling

10. All lighting products shall be labelled in a manner as detailed below—

- (a) input power in Watts;
- (b) lumens output;
- (c) life in hours;
- (d) voltage rating;
- (e) energy efficiency labelling (A to G rating).

Offences and penalties

11. Any importer, wholesaler, retailer, consulting engineer and contractor or installer of lighting products that contravenes these regulations shall be guilty of an offence and liable to a fine not exceeding level fourteen or imprisonment not exceeding one year, or both such fine and such imprisonment.

FIRST SCHEDULE (Section 4(1)(a))

LIGHTING PRODUCTS MINIMUM ENERGY PERFORMANCE STANDARDS

| Type | Lamp Rating (W) | Minimum efficacy (lm/W) | Lumen maintenance (per centum of initial lumen output) | Lifetime (hours) | Voltage | Performance Testing Standard |
|---|-----------------|-------------------------|--|------------------|------------|------------------------------|
| T8 double-Capped Fluorescent | >18 to >31 | 70 | >80 per centum | 6,000 | 160 to 260 | IEC 60081 |
| | >31 | 80 | | | | |
| | | | | | | |
| | | | | | | |
| T5 double Capped Fluorescent | >14 to <15 | 75 | >80 per centum | 6,000 | 160 to 260 | IEC 60969 |
| | >15 | 80 | | | | |
| Self-ballasted Single-capped Fluorescent lamps (CFL's) | <9 | 46 | >80 per centum | 6,000 | 160 to 260 | IEC 60901 |
| | >9 to <15 | 52 | | | | |
| | >10 to <19 | 55 | | | | |
| | >25 | 62 | | | | |
| Single-capped Fluorescent lamps (non-Integrated CFL's) | <10 | 46 | >80 per centum | 6,000 | 160 to 260 | IEC 60901 |
| | >10 to <19 | 55 | | | | |
| | >19 to <27 | 59 | | | | |
| | >27 | 70 | | | | |

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| Type | Lamp Rating (W) | | Minimum efficacy (lm/W) | Lumen maintenance (per centum of initial lumen output) | Lifetime (hours) | Voltage | Performance Testing Standard |
|--------------------------|----------------------------------|----------|-------------------------|--|------------------|------------|------------------------------|
| Self-ballasted LED lamps | Lamp cap type (as in IEC60061-1) | G13 | 75 | >70 per centum | 6,000 | 160 to 260 | IEC 62612 |
| | | GU10 | 50 | | | | |
| | | E27/B22d | 60 | | | | |
| | | E14 | 60 | | | | |

SECOND SCHEDULE (Section 4(1)(e))

MAXIMUM MERCURY CONTENT OF FLUORESCENT LAMPS

| Type of Lamp | Mercury Content (mg) |
|---|----------------------|
| CFL | <5mg |
| Straight Fluorescent Lamps (general purpose) | <10mg |
| Halophosphate (standard lamps) | <5mg |
| Triphosphate normal life (80 colours) | <8mg |
| Triphosphate long life | Exempted |
| Fluorescent lamps for special purposes Compact (HID) lamps | Exempted |

THIRD SCHEDULE (*Section 5*)

EXEMPTED LIGHTING PRODUCTS

The following incandescent lighting products exempted from the prohibition—

- (a) components in electrical appliances such as electric stove ovens for illumination;
- (b) medical and laboratory equipment;
- (c) shows and exhibition;
- (d) safety and signalling;
- (e) conservation of animals and as repellent for insects;
- (f) heating and testing;
- (g) airport runway lights;
- (h) special purpose lights, including theatre and stage lights;
- (i) cleanliness and health;
- (j) beauty treatment;
- (k) poultry lighting and heating;
- (l) any other lighting product the Authority may exempt.

FOURTH SCHEDULE (*Section 6*)

LIGHTING PRODUCTS TESTING STANDARDS

| Lighting type | Standard |
|---|------------------|
| Self-ballasted LED lamps for general lighting services with supply voltages >50V – Performance requirements | IEC 62612 (2013) |
| T5 and T8 Double-capped fluorescent lamps—performance specifications | IEC 60081 |
| Single-capped fluorescent lamps (non-integrated)—performance specifications | IEC 60901 |
| Self-ballasted single-capped lamps for general lighting services – performance requirements | IEC 60969 |