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**RESOURCE SUSTAINABILITY ACT 2019
(ACT 29 OF 2019)**

**RESOURCE SUSTAINABILITY
(E-WASTE RECYCLERS)
REGULATIONS 2021**

ARRANGEMENT OF REGULATIONS

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In exercise of the powers conferred by section 52 of the Resource Sustainability Act 2019, the Minister for Sustainability and the Environment makes the following Regulations:

Citation and commencement

1. These Regulations are the Resource Sustainability (E-waste Recyclers) Regulations 2021 and come into operation on 1 July 2021.

Definitions

2. In these Regulations, unless the context otherwise requires —

“compliance year” means the period starting 1 July in any year and ending 30 June in the following year (both dates inclusive);

“data-bearing device” means any medium constructed to contain data and includes the following, or their equivalent:

- (a) a blu ray disc;
- (b) a compact disc (CD);
- (c) a compact disc-read only memory (CD-ROM);
- (d) a digital video disc (DVD);
- (e) a digital video disc-read only memory (DVD-ROM);
- (f) an electronic flash memory data storage device;
- (g) a flash drive with an integrated USB interface;
- (h) a floppy disc;
- (i) a hard disc drive;
- (j) a magnetic tape;
- (k) a memory stick;
- (l) an optical disc;
- (m) a punch card;
- (n) a secure digital card;
- (o) a solid state device;
- (p) a solid state drive;

“disposal facility” has the meaning given by section 2 of the Environmental Public Health Act (Cap. 95);

“recycle”, in relation to a regulated product, means to process the regulated product into recycled materials, but does not include any energy recovery process where the regulated product is combusted to generate energy;

“recycled material” means any object, material or substance that is recovered from recycling a regulated product and —

- (a) that may be used instead of a raw material in the manufacture of a product; or
- (b) that is of economic value;

“regulated product” has the meaning given by section 7(1) of the Act;

“re-purpose”, in relation to a regulated product, means to manufacture a new product by modifying the regulated product to perform a different set of functions or applications from the regulated product’s original function or application;

“re-use”, in relation to a regulated product, includes repairing, refurbishing or re-purposing the regulated product for re-use;

“specified pollutant” means any item, component or substance specified in the First Schedule.

Material recovery target

3.—(1) The licensed e-waste recycler who operates one or more disposal facilities that process or treat one or more categories of regulated products specified in the first column of Part 1 of the Second Schedule, must ensure that the weight of materials recovered in each compliance year, for each category of regulated product, is not less than the material recovery target weight for that category of regulated product calculated for that compliance year in accordance with paragraph (2).

(2) For the purposes of paragraph (1), the material recovery target weight for a category of regulated product in any compliance year, is the weight (in kilogrammes) calculated according to the following formula:

$$(A + B - C - D) \times \frac{E}{100\%},$$

where —

- (a) A is the total weight of regulated products in that category which is received by the licensed e-waste recycler during that compliance year;
- (b) B is the total weight of regulated products in that category which is received by the licensed e-waste recycler at any time during the compliance year immediately preceding

that compliance year and stored unprocessed and untreated in the preceding compliance year;

- (c) C is the total weight of regulated products in that category which is transferred at any time during the compliance year to another licensed e-waste recycler or any disposal facility outside of Singapore, without processing or treatment in that compliance year;
- (d) D is the total weight of regulated products in that category which is received by the licensed e-waste recycler at any time but is stored at the end of that compliance year by the licensed e-waste recycler in an unprocessed and untreated condition; and
- (e) E is the corresponding material recovery target for regulated products in that category, specified in the second column of Part 1 of the Second Schedule, for that compliance year.

(3) A licensed e-waste recycler who, without reasonable excuse, contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000.

(4) In this regulation, the weight of materials recovered in a compliance year from each category of regulated products received is the sum of the following:

- (a) the total weight of regulated products in that category, prepared for re-use in that compliance year;
- (b) the total weight of recycled materials recovered from the regulated products in that category in that compliance year.

Processing or treating specified pollutants

4.—(1) Subject to paragraph (2), a licensed e-waste recycler must take all reasonable steps to —

- (a) remove all specified pollutants from any electrical or electronic product (whether or not that product is a regulated product) that is processed or treated in a disposal facility the licensed e-waste recycler operates; and

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- (b) process or treat the specified pollutants removed so as to prevent the specified pollutants from polluting the environment.

(2) Paragraph (1) does not apply to any electrical or electronic product that the licensed e-waste recycler prepares for re-use.

(3) A licensed e-waste recycler who, without reasonable excuse, contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000.

Preparing electrical or electronic product for re-use

5.—(1) A licensed e-waste recycler must ensure that any electrical or electronic product that is a regulated product and received by the licensed e-waste recycler in the course of operating one or more disposal facilities is not prepared for re-use if the person from whom the electrical or electronic product was received —

- (a) gives the licensed e-waste recycler, before or at the time the electrical or electronic product is received, written notice that the electrical or electronic product must not be re-used; and
- (b) does not give the licensed e-waste recycler written notice to rescind the person's notice mentioned in sub-paragraph (a).

(2) A licensed e-waste recycler who, without reasonable excuse, contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000.

Data security

6.—(1) A licensed e-waste recycler must ensure that all data stored in a data-bearing device that the licensed e-waste recycler received for disposal, is permanently erased or destroyed before the licensed e-waste recycler does or allows any of the following to be done to the data-bearing device:

- (a) prepare for re-use;
- (b) recycle;

- (c) dispose of;
- (d) transfer to a disposal facility (whether within or outside Singapore) that is not operated by the licensed e-waste recycler.

(2) A licensed e-waste recycler who, without reasonable excuse, contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000.

Transferring electrical or electronic products to disposal facility outside Singapore

7.—(1) A licensed e-waste recycler must not transfer any regulated product to another person who operates one or more disposal facilities outside Singapore (called in this regulation the foreign recycler) that process or treat one or more categories of regulated products specified in the first column of Part 1 of the Second Schedule, except in accordance with paragraph (2).

(2) A licensed e-waste recycler may transfer a regulated product to a foreign recycler if the licensed e-waste recycler takes reasonable steps to satisfy itself that the foreign recycler will ensure that the weight of materials recovered by the foreign recycler in each compliance year, for each category of regulated product, is not less than the material recovery target weight for that category of regulated product calculated for that compliance year in accordance with paragraph (3).

(3) For the purposes of paragraph (2), the material recovery target weight for a category of regulated product in any compliance year, is the weight (in kilogrammes) calculated according to the following formula:

$$(A + B - C) \times \frac{D}{100\%},$$

where —

- (a) A is the total weight of regulated products in that category which is received by the foreign recycler during that compliance year;

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- (b) B is the total weight of regulated products in that category which is received by the foreign recycler at any time during the compliance year immediately preceding that compliance year and stored unprocessed and untreated in the preceding compliance year;
 - (c) C is the total weight of regulated products in that category which is received by the foreign recycler at any time but is stored at the end of that compliance year by the foreign recycler in an unprocessed and untreated condition; and
 - (d) D is the corresponding material recovery target for regulated products in that category, specified in the second column of Part 1 of the Second Schedule, for that compliance year.

(4) In this regulation, the weight of materials recovered in a compliance year from each category of regulated products received is the sum of the following:

- (a) the total weight of regulated products in that category, prepared for re-use in that compliance year;
- (b) the total weight of recycled materials recovered from the regulated products in that category in that compliance year.

(5) A licensed e-waste recycler must not transfer any electrical or electronic product (whether or not that product is a regulated product) to a foreign recycler, unless the licensed e-waste recycler has taken reasonable steps to satisfy itself that the foreign recycler will —

- (a) prepare the electrical or electronic product for re-use; or
- (b) remove all specified pollutants from the electrical or electronic product (whether or not that product is a regulated product) when processing or treating that product, and process or treat the specified pollutants removed so as to prevent the specified pollutants from polluting the environment.

(6) A licensed e-waste recycler who, without reasonable excuse, contravenes paragraph (1) or (5) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000.

Keeping of records

8.—(1) A licensed e-waste recycler must keep and maintain complete and accurate records of any information relevant to monitoring or evaluating compliance with these Regulations as the Agency may require.

(2) The records kept and maintained pursuant to this regulation may be kept and maintained in electronic form.

(3) The licensed e-waste recycler mentioned in paragraph (1) must keep any record made under that paragraph for a period of 5 years after the record is made.

(4) During the period mentioned in paragraph (3) for a record made under paragraph (1), the licensed e-waste recycler must —

(a) make the record available for inspection by an authorised officer when so requested by the authorised officer; and

(b) submit to the Agency the record in the time or at such frequency and in the form and manner, specified by the Agency.

(5) A licensed e-waste recycler who, without reasonable excuse, contravenes paragraph (1), (3) or (4) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000.

FIRST SCHEDULE

Regulation 2

SPECIFIED POLLUTANTS

1. Parts containing mercury including switches, backlight lamps and bulbs.
2. Capacitors with a height or diameter of more than 25 mm.
3. Batteries and accumulators.
4. Printed circuit boards with a surface area greater than 10 cm².
5. Plastics containing brominated flame retardants in excess of 1000 parts per million.
6. Toner cartridges and colour toners, in liquid or paste.

FIRST SCHEDULE — *continued*

7. Refrigerant gases that are ozone-depleting or have a Global Warming Potential of more than 15, including hydrofluorocarbons, hydrochlorofluorocarbons and its blends, and hydrocarbon refrigerants.

SECOND SCHEDULE

Regulations 3 and 7

PART 1

MATERIAL RECOVERY TARGET

<i>First column</i>	<i>Second column</i>
<i>Category of regulated product</i>	<i>Material recovery target</i>
1. Batteries	50%
2. ICT equipment	70%
3. Large appliances	80%
4. Solar photovoltaic panels	70%
5. Specified single-phased lamps	80%

PART 2

INTERPRETATION

1.—(1) In this Schedule —

“batteries” means the following:

- (a) industrial batteries;
- (b) portable batteries;
- (c) electric vehicle batteries;

“ICT equipment” means the following:

- (a) computers;
- (b) desktop monitors;
- (c) mobile telephones;
- (d) modems;
- (e) network hubs;
- (f) network switches;

SECOND SCHEDULE — *continued*

- (g) printers;
- (h) routers;
- (i) set-top boxes;
- (j) wireless access points;

“large appliances” means the following:

- (a) air-conditioners;
- (b) dryers;
- (c) electric mobility devices;
- (d) refrigerators;
- (e) televisions;
- (f) washing machines;

“specified single-phase lamp” has the meaning given by Part 2 of the Third Schedule to the Energy Conservation (Prescribed Regulated Goods) Order 2017 (G.N. No. S 747/2017).

(2) Unless a contrary intention appears, words and expressions used in this Schedule have the meanings given by the Resource Sustainability (Prescribed Regulated Products) Regulations 2019 (G.N. No. S 900/2019).

Made on 28 June 2021.

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Ministry of Sustainability and
the Environment,
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