

Energy Conservation (Energy Labelling and Minimum Performance Standards for Registrable Goods) Regulations 2013

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No. S 557

ENERGY CONSERVATION ACT 2012 **([ACT 11 OF 2012](#))**

ENERGY CONSERVATION (ENERGY LABELLING AND MINIMUM PERFORMANCE STANDARDS FOR REGISTRABLE GOODS) REGULATIONS 2013

In exercise of the powers conferred by [section 78](#) of the [Energy Conservation Act 2012](#), the Minister for the Environment and Water Resources hereby makes the following Regulations:

Citation and commencement

1. These Regulations may be cited as the Energy Conservation (Energy Labelling and Minimum Performance Standards for Registrable Goods) Regulations 2013 and shall come into operation on 1st September 2013.

Definitions

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

“air-conditioner” means a single-phase non-ducted room air-conditioner as specified in [the Schedule](#) to the [Energy Conservation \(Registrable Goods\) Order 2013](#) (G.N. No. S 556/2013);

“casement or window type air-conditioner” has the same meaning as in [the Schedule](#) to the [Energy Conservation \(Registrable Goods\) Order 2013](#);

“clothes dryer” means a single-phase clothes dryer as specified in [the Schedule](#) to the [Energy Conservation \(Registrable Goods\) Order 2013](#);

“energy efficiency” —

(a) in relation to an air-conditioner, means the Coefficient of Performance as defined in [the First Schedule](#);

(b) in relation to a clothes dryer, means the Energy Consumption as defined in [the First Schedule](#);

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(c) in relation to a refrigerator, means the Annual Energy Consumption as defined in [the First Schedule](#); and

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(d) in relation to a television, means the On-Mode Power Consumption as defined in the First Schedule;

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“Energy Label” means an energy label that is in accordance with the requirements specified in [the First Schedule](#);

“refrigerator” means a single-phase refrigerator as specified in [the Schedule](#) to the [Energy Conservation \(Registrable Goods\) Order 2013](#);

“split type (inverter) air-conditioner” has the same meaning as in [the Schedule](#) to the [Energy Conservation \(Registrable Goods\) Order 2013](#);

“split type (non-inverter) air-conditioner” has the same meaning as in [the Schedule](#) to the [Energy Conservation \(Registrable Goods\) Order 2013](#);

“technical file”, in relation to any registered goods, means the file on the registered goods kept and maintained under [regulation 6\(1\)](#);

“television” means a single-phase television as specified in the Schedule to the Energy Conservation (Registrable Goods) Order 2013;

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“test report”, in relation to any registrable goods or registered goods, means —

(a) the report of the test carried out for the registrable goods or registered goods (as the case may be) in accordance with the prevailing test standard or method specified in [the Second Schedule](#); and

(b) where there is more than one such test report in respect of the registrable goods or registered goods (as the case may be), the test report that is the most recent.

Form and manner of registration

3.—(1) An application to be registered as a registered supplier shall be made —

(a) using the relevant form provided at the Agency’s Internet website at <http://www.nea.gov.sg>; and

(b) in the manner specified by the Director-General.

(2) Every application referred to in [paragraph \(1\)](#) shall be accompanied by —

(a) such documents and information as may be required in the relevant form; and

(b) a fee specified in [the Third Schedule](#), which shall not be refundable.

(3) An application to register any registrable goods, or to renew the registration of any registered goods, shall be made using the electronic application service provided at the Agency's Internet website at <http://www.nea.gov.sg>.

(4) Every application referred to in [paragraph \(3\)](#) shall be accompanied by —

(a) a test report issued in respect of the registrable goods or the registered goods (as the case may be), showing the energy efficiency of such goods and such other information as the Director-General may require;

(b) such other documents and information as the Director-General may require; and

(c) a fee specified in [the Third Schedule](#), which shall not be refundable.

(5) Notwithstanding [paragraphs \(1\)](#) and [\(3\)](#), in the event of a malfunction or failure, or an imminent malfunction or failure, of the website referred to in [paragraph \(1\)](#) or the electronic application service referred to in [paragraph \(3\)](#), the application shall be made in such written form as the Director-General may require.

(6) Upon the registration of any person as a registered supplier, the Director-General shall issue an identification number to the registered supplier in such form as the Director-General may determine.

(7) Upon the registration of any registrable goods or the renewal of the registration of any registered goods, the Director-General shall issue a certificate of registration to the registered supplier of those goods in such form as the Director-General may determine.

Registered supplier to notify Director-General of change in particulars

4.—(1) A registered supplier shall notify the Director-General of any change to any of the particulars provided to the Director-General when making an application under [regulation 3\(1\)](#) not less than 14 days before the change.

(2) Any person who, without reasonable excuse, contravenes [paragraph \(1\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

Modification of registered goods

5.—(1) Where any registered goods are modified in any way by the manufacturer of those registered goods, the registered supplier concerned shall do the following before the modified registered goods are supplied in Singapore:

(a) notify the Director-General in writing of the modification to the registered goods;

(b) where the modification alters the energy efficiency of the registered goods, submit to the Director-General a test report showing the energy efficiency of such goods, as modified, and such other information as the Director-General may require; and

- (c) update the technical file on the registered goods with details of the modification, including the test report referred to in [sub-paragraph \(b\)](#).

(2) Any person who contravenes [paragraph \(1\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

Maintenance of records

6.—(1) For the purposes of [section 18](#) of [the Act](#), a registered supplier shall keep and maintain a technical file on each of the registered goods for the period of the registration of the registered goods.

(2) The technical file shall include —

- (a) the certificate of registration issued by the Director-General under [regulation 3 \(7\)](#) in respect of the registered goods;
- (b) the test report referred to in [regulation 3\(4\)\(a\)](#);
- (c) detailed records of any modification to the registered goods, including the test report referred to in [regulation 5\(1\)\(b\)](#), where applicable; and
- (d) such other documents and information as the Director-General may, from time to time, require by notice in writing.

Minimum energy efficiency standards

7. The minimum energy efficiency standards specified in [the Fourth Schedule](#) for the following registrable goods are prescribed minimum energy efficiency standards for the purposes of [section 12\(1\)\(c\)](#) of [the Act](#):

- (a) air-conditioners;
- (b) clothes dryers;
- (c) refrigerators.

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Display and affixing of Energy Label

8.—(1) Every registered supplier of any registrable goods shall affix an Energy Label in the manner specified in [paragraph \(2\)](#), or permitted or directed by the Director-General under [paragraph \(3\)](#) —

- (a) after the certificate of registration has been issued by the Director-General in respect of such goods; and
- (b) before supplying such goods in Singapore.

(2) Every Energy Label shall be affixed securely in a prominent position on the registered goods, conspicuous and unobstructed.

(3) Where the Director-General is of the opinion that —

- (a) any registered goods are of such a nature as to prevent such goods from being affixed with the Energy Label in the manner specified in [paragraph \(2\)](#); or

- (b) any registered goods are to be supplied in circumstances which do not require the Energy Label to be displayed to an intending purchaser or user,

the Director-General may, subject to such terms and conditions as he may impose, permit the Energy Label to be affixed —

- (i) to anything in or on the registered goods or with which the registered goods are supplied; or
- (ii) in such other manner as the Director-General may direct so as to be easily read by an intending purchaser or user.

(4) Any person who contravenes [paragraph \(1\)](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

Misuse of Energy Label, etc.

9.—(1) Any person who, without reasonable excuse, affixes an Energy Label to any thing or matter other than as required or permitted by [regulation 8](#) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

(2) Where an Energy Label is affixed to any registered goods or anything with which those goods are supplied as required or permitted by [regulation 8](#), any person who, without reasonable excuse —

- (a) obscures the display of the Energy Label; or
- (b) defaces or removes the Energy Label,

shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

(3) Any person who forges or alters to make false any Energy Label shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000 or to imprisonment for a term not exceeding 3 months or to both.

FIRST SCHEDULE

[Regulation 2](#)

ENERGY LABEL REQUIREMENTS

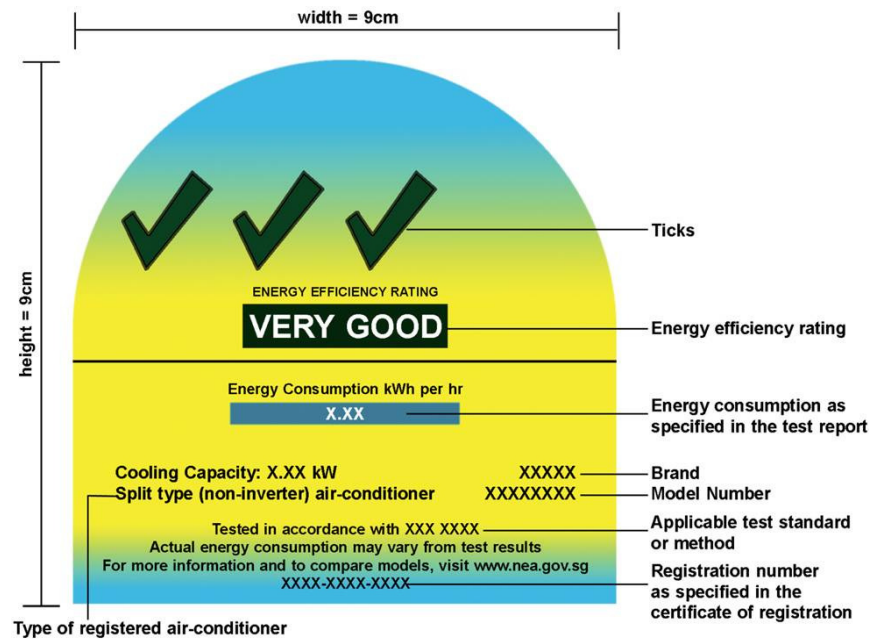
1. Subject to these Regulations, every Energy Label —

- (a) shall be of the dimensions as shown in [paragraph 2](#) of this Schedule or be proportionately larger;
- (b) shall be of the shape, colour and contain text that is of the typeface Arial as shown in [paragraph 2](#) of this Schedule, legible and in the English language only;
- (c) shall contain information that is consistent with or drawn from the relevant test report;
- (d) shall be printed in an indelible manner and with a minimum resolution of 300 pixels per inch; and
- (e) shall be made of such material as the Director-General may approve.

2. The dimensions, shape, colour and text of the Energy Labels required by these Regulations shall be as follows:

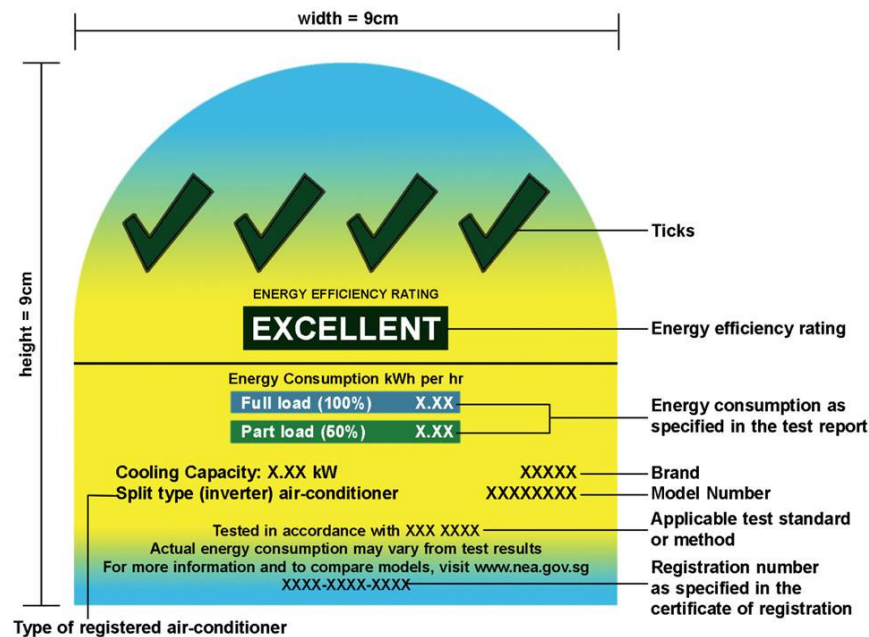
Label 1

ENERGY LABEL FOR CASEMENT, WINDOW AND SPLIT TYPE (NON-INVERTER) AIR-CONDITIONERS



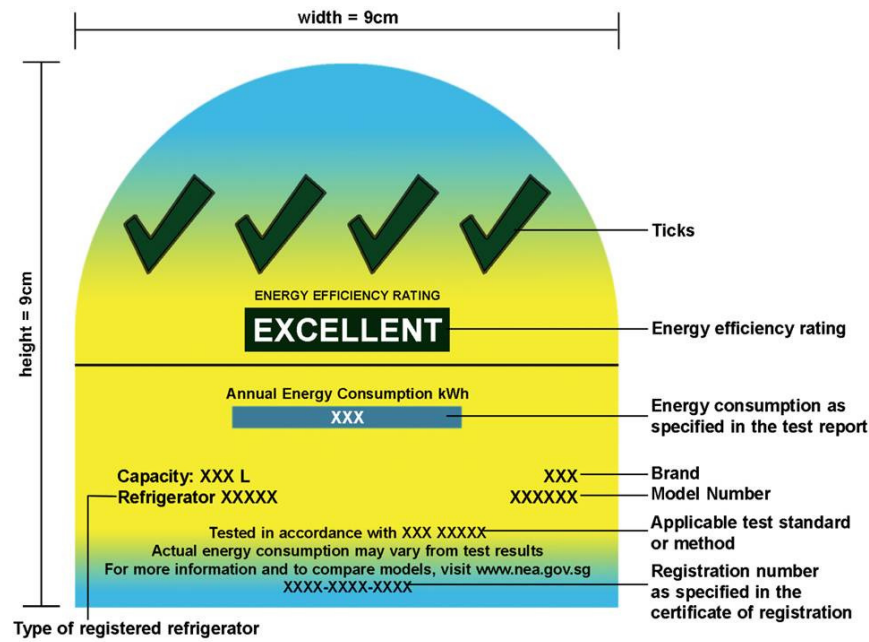
Label 2

ENERGY LABEL FOR SPLIT TYPE (INVERTER) AIR-CONDITIONERS



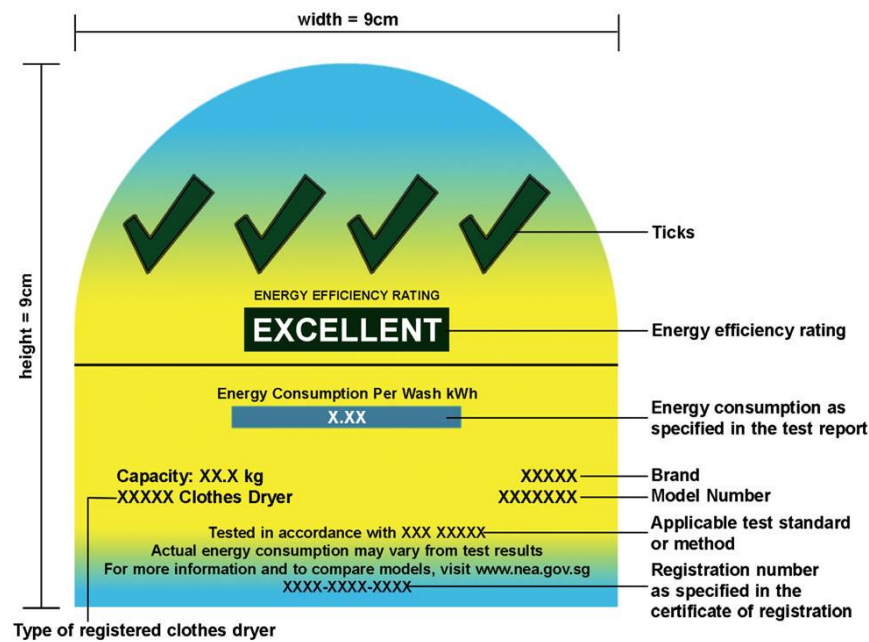
Label 3

ENERGY LABEL FOR REFRIGERATORS



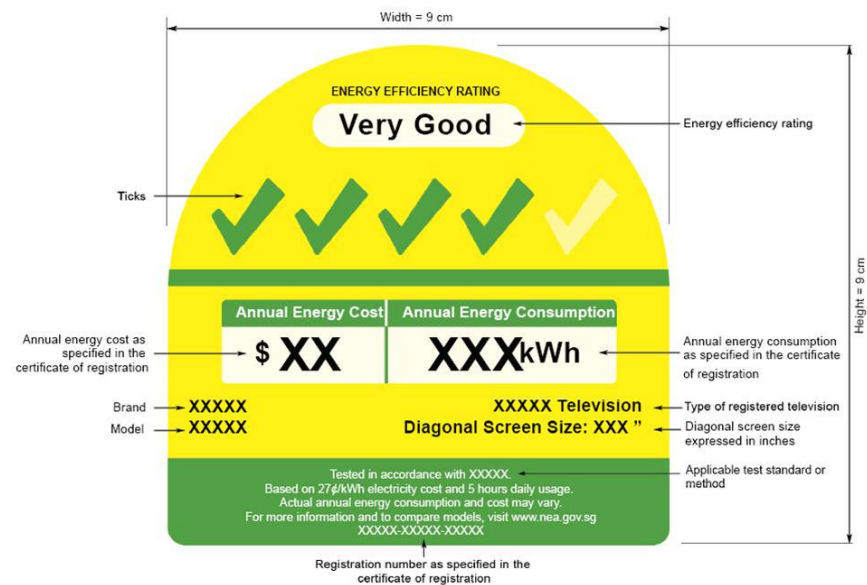
Label 4

ENERGY LABEL FOR CLOTHES DRYERS



Label 5

ENERGY LABEL FOR TELEVISIONS



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3. The number of ticks and energy efficiency rating to be shown on the Energy Label for air-conditioners, refrigerators, clothes dryers and televisions shall be determined as follows:

(a) for casement and window type air-conditioners —

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 2 | Good | $2.90 \leq \text{COP} < 3.20$ |
| 3 | Very Good | $\text{COP} \geq 3.20$ |

(b) for split type (non-inverter) air-conditioners with one indoor unit —

(i) cooling capacity less than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 3 | Very Good | $\text{COP} \geq 3.34$ |

(ii) cooling capacity equal to or more than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 2 | Good | $2.78 \leq \text{COP} < 3.20$ |
| 3 | Very Good | $\text{COP} \geq 3.20$ |

(c) for split type (non-inverter) air-conditioners with more than one indoor unit —

(i) cooling capacity less than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 3 | Very Good | $\text{COP} \geq 3.34$ |

(ii) cooling capacity equal to or more than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 1 | Fair | $2.64 \leq \text{COP} < 2.92$ |
| 2 | Good | $2.92 \leq \text{COP} < 3.34$ |
| 3 | Very Good | $\text{COP} \geq 3.34$ |

(d) for split type (inverter) air-conditioners with one indoor unit —

(i) cooling capacity less than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 3 | Very Good | Weighted COP ≥ 3.34 and COP ≥ 3.06 |
| 4 | Excellent | Weighted COP ≥ 3.76 and COP ≥ 3.34 |

(ii) cooling capacity equal to or more than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 1 | Fair | $2.78 \leq \text{Weighted COP} < 2.92$ |
| 2 | Good | $2.92 \leq \text{Weighted COP} < 3.34$ |
| 3 | Very Good | Weighted COP ≥ 3.34 and COP ≥ 3.06 |
| 4 | Excellent | Weighted COP ≥ 3.76 and COP ≥ 3.34 |

(e) for split type (inverter) air-conditioners with more than one indoor unit —

(i) cooling capacity less than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 3 | Very Good | Weighted COP ≥ 3.34 and COP ≥ 3.06 |
| 4 | Excellent | Weighted COP ≥ 3.76 and COP ≥ 3.34 |

(ii) cooling capacity equal to or more than 10kW:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Coefficient of Performance (COP) range</i> |
|--------------|---------------------------------|---|
| 1 | Fair | $2.64 \leq \text{Weighted COP} < 2.92$ |

| | | |
|---|-----------|---|
| 2 | Good | $2.92 \leq \text{Weighted COP} < 3.34$ |
| 3 | Very Good | $\text{Weighted COP} \geq 3.34$ and $\text{COP} \geq 3.06$ |
| 4 | Excellent | $\text{Weighted COP} \geq 3.76$ and $\text{COP} \geq 3.34$ |

(f) for refrigerators —

(i) without freezer:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Annual Energy Consumption (AEC) in kWh</i> |
|--------------|---------------------------------|--|
| 4 | Excellent | $(368 + 0.892 \times \text{Vadj tot}) \times 0.64 \geq \text{AEC}$ |

(ii) with freezer:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Annual Energy Consumption (AEC) in kWh</i> |
|--------------|---------------------------------|---|
| 3 | Very Good | $(465 + 1.378 \times \text{Vadj tot}) \times 0.585 \geq \text{AEC} > (465 + 1.378 \times \text{Vadj tot}) \times 0.457$ |
| 4 | Excellent | $(465 + 1.378 \times \text{Vadj tot}) \times 0.457 \geq \text{AEC}$ |

(iii) with freezer and through-the-door ice dispenser:

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Annual Energy Consumption (AEC) in kWh</i> |
|--------------|---------------------------------|--|
| 3 | Very Good | $(585 + 1.378 \times \text{Vadj tot}) \times 0.56 \geq \text{AEC} > (585 + 1.378 \times \text{Vadj tot}) \times 0.457$ |
| 4 | Excellent | $(585 + 1.378 \times \text{Vadj tot}) \times 0.457 \geq \text{AEC}$ |

(g) for clothes dryers —

| <i>Ticks</i> | <i>Energy efficiency rating</i> | <i>Energy Consumption (EC) per Wash in kWh</i> |
|--------------|---------------------------------|--|
| 3 | Very Good | $\text{Rated Capacity} \times 0.67 \geq \text{EC} > \text{Rated Capacity} \times 0.50$ |
| 4 | Excellent | $\text{Rated Capacity} \times 0.50 \geq \text{EC}$ |

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(h) for televisions —

| <i>Ticks</i> | <i>Energy efficiency rating</i> |
|--------------|---------------------------------|
|--------------|---------------------------------|

| <i>On-Mode Power Consumption (P) in Watts</i> | | |
|---|-----------|--|
| 1 | Low | $P > 0.60 \times (20 + 4.3224 \times \text{screen area})$ |
| 2 | Fair | $0.60 \times (20 + 4.3224 \times \text{screen area}) \geq P > 0.42 \times (20 + 4.3224 \times \text{screen area})$ |
| 3 | Good | $0.42 \times (20 + 4.3224 \times \text{screen area}) \geq P > 0.30 \times (20 + 4.3224 \times \text{screen area})$ |
| 4 | Very Good | $0.30 \times (20 + 4.3224 \times \text{screen area}) \geq P > 0.16 \times (20 + 4.3224 \times \text{screen area})$ |
| 5 | Excellent | $P \leq 0.16 \times (20 + 4.3224 \times \text{screen area})$ |

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4. In this Schedule, unless the context otherwise requires —

“Annual Energy Consumption” or “AEC” means the amount of energy consumed over 8,760 hours expressed in kilowatt-hour as specified in the test report;

“Coefficient of Performance” or “COP” means the ratio of the total cooling capacity expressed in Watts to the total effective input power expressed in Watts, as specified in the test report;

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“Energy Consumption” or “EC”, in relation to clothes dryers, means the amount of energy consumed per cycle expressed in kilowatt-hour as specified in the test report;

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“On-Mode Power Consumption” or “P”, in relation to televisions, means the power consumed when the television produces sound and picture, expressed in Watts, as specified in the test report;

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“screen area”, in relation to a television, means the area of the television screen expressed in square decimetres as specified in the test report;

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“Weighted COP” means the sum of $0.4 \times \text{COP}$ at full-load cooling capacity and $0.6 \times \text{COP}$ at part-load cooling capacity.

SECOND SCHEDULE

[Regulation 2](#)

TEST STANDARD OR METHOD

1. The test report shall contain the results of tests carried out for the registrable goods in accordance with the applicable test standard or method, as follows:

| <i>Registrable goods</i> | <i>Type</i> | <i>Applicable test standard or method</i> |
|--------------------------|--------------------------|---|
| Air-conditioner | Casement/ Window type | ISO 5151 (2010) |
| | | ISO 15042 (2011) |

| | | |
|---------------|--|--|
| | Split type (inverter) with more than one indoor unit | The cooling tests shall be conducted at 2 points, namely, the full-load cooling capacity and the part-load cooling capacity |
| | Split type (inverter) with one indoor unit | ISO 5151 (2010) The cooling tests shall be conducted at 2 points, namely, the full-load cooling capacity and the part-load cooling capacity |
| | Split type (non-inverter) with more than one indoor unit | ISO 15042 (2011) |
| | Split type (non-inverter) with one indoor unit | ISO 5151 (2010) |
| Clothes Dryer | All | IEC 61121 (2005) The test shall be conducted on cotton textiles using the dry cotton drying programme |
| Refrigerator | All | ISO 15502 (2005) IEC 62552 (2007) |
| Television | All | IEC 62087 (2008) or IEC 62087 (2011) The test shall be conducted using dynamic broadcast-content video signal |

[\[S 234/2014 wef 01/04/2014\]](#)

2. In this Schedule, unless the context otherwise requires —

“IEC” means the International Electrotechnical Commission;

“ISO” means the International Organization for Standardization.

THIRD SCHEDULE

[Regulation 3\(2\)\(b\)](#) and (4)(c)

FEES

| <i>First column</i> | <i>Second column</i> |
|---|----------------------|
| 1. Application for registration as a registered supplier | No charge |
| 2. Application for registration for each registrable good — | |
| (a) air-conditioner | \$34 |

- | | |
|-------------------|------|
| (b) clothes dryer | \$34 |
| (c) refrigerator | \$34 |
| (d) television | \$34 |
3. Application for renewal of registration for each registrable good —
- | | |
|---------------------|-------|
| (a) air-conditioner | \$18 |
| (b) clothes dryer | \$18 |
| (c) refrigerator | \$18 |
| (d) television | \$18. |

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FOURTH SCHEDULE

[Regulation 7](#)

MINIMUM ENERGY EFFICIENCY STANDARDS

| <i>Registrable Goods</i> | <i>Minimum Energy Efficiency Standards</i> |
|---|---|
| 1. Casement or window type air-conditioner | $\text{COP} \geq 2.90$ |
| 2. Split type (non-inverter) air-conditioner with one indoor unit (cooling capacity less than 10kW) | $\text{COP} \geq 3.34$ |
| 3. Split type (non-inverter) air-conditioner with one indoor unit (cooling capacity equal to or more than 10kW) | $\text{COP} \geq 2.78$ |
| 4. Split type (non-inverter) air-conditioner with more than one indoor unit (cooling capacity less than 10kW) | $\text{COP} \geq 3.34$ |
| 5. Split type (non-inverter) air-conditioner with more than one indoor unit (cooling capacity equal to or more than 10kW) | $\text{COP} \geq 2.64$ |
| 6. Split type (inverter) air-conditioner with one indoor unit (cooling capacity less than 10kW) | $\text{COP} \geq 3.06$ and $\text{Weighted COP} \geq 3.34$ |
| 7. Split type (inverter) air-conditioner with one indoor unit (cooling capacity equal to or more than 10kW) | $\text{Weighted COP} \geq 2.78$ |
| 8. Split type (inverter) air-conditioner with more than one indoor unit (cooling capacity less than 10kW) | $\text{COP} \geq 3.06$ and $\text{Weighted COP} \geq 3.34$ |
| 9. Split type (inverter) air-conditioner with more than one indoor unit (cooling capacity equal to or more than 10kW) | $\text{Weighted COP} \geq 2.64$ |
| 10. Refrigerator without freezer | $\text{AEC} \leq (368 + 0.892 \times \text{Vadj tot}) \times 0.640$ |
| 11. Refrigerator with freezer | $\text{AEC} \leq (465 + 1.378 \times \text{Vadj tot}) \times 0.585$ |
| 12. Refrigerator with freezer and through-the-door ice dispenser | $\text{AEC} \leq (585 + 1.378 \times \text{Vadj tot}) \times 0.560$ |

13. Clothes dryer

EC per Wash \leq Rated Capacity \times
0.67.

[\[S 234/2014 wef 01/04/2014\]](#)

Made this 27th day of August 2013.

CHOI SHING KWOK
*Permanent Secretary,
Ministry of the Environment and
Water Resources,
Singapore.*

[MEWR C030/01/129 V5; NEA/LD/41 V.1; AG/LLRD/SL/92C/2012/9 Vol. 1]