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No. S 559

ENERGY CONSERVATION ACT
(CHAPTER 92C)

ENERGY CONSERVATION
(ENERGY LABELLING AND MINIMUM PERFORMANCE
STANDARDS FOR REGISTRABLE GOODS)
(AMENDMENT NO. 2) REGULATIONS 2014

In exercise of the powers conferred by section 78 of the Energy Conservation Act, 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) (Amendment No. 2) Regulations 2014 and shall come into operation on 1 September 2014.

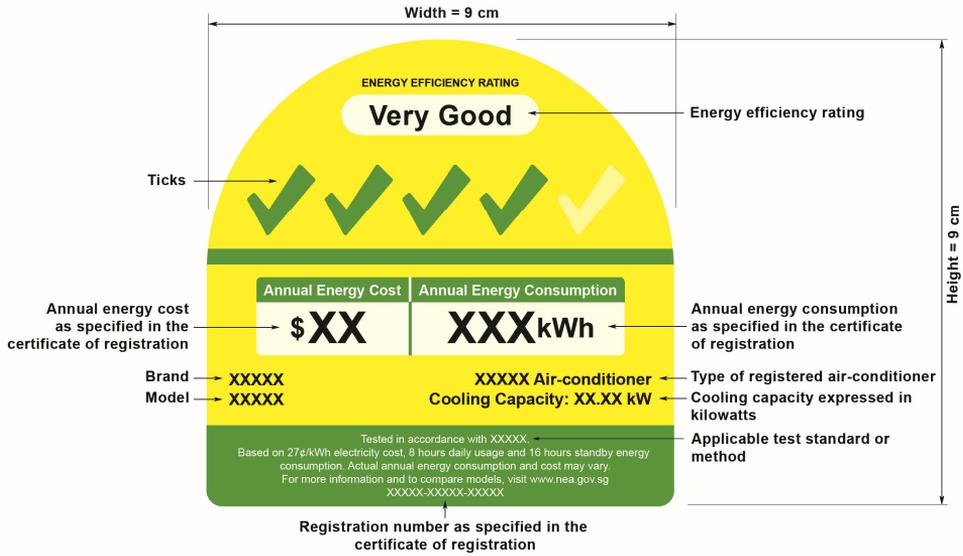
Amendment of First Schedule

2. The First Schedule to the Energy Conservation (Energy Labelling and Minimum Performance Standards for Registrable Goods) Regulations 2013 (G.N. No. S 557/2013) is amended —

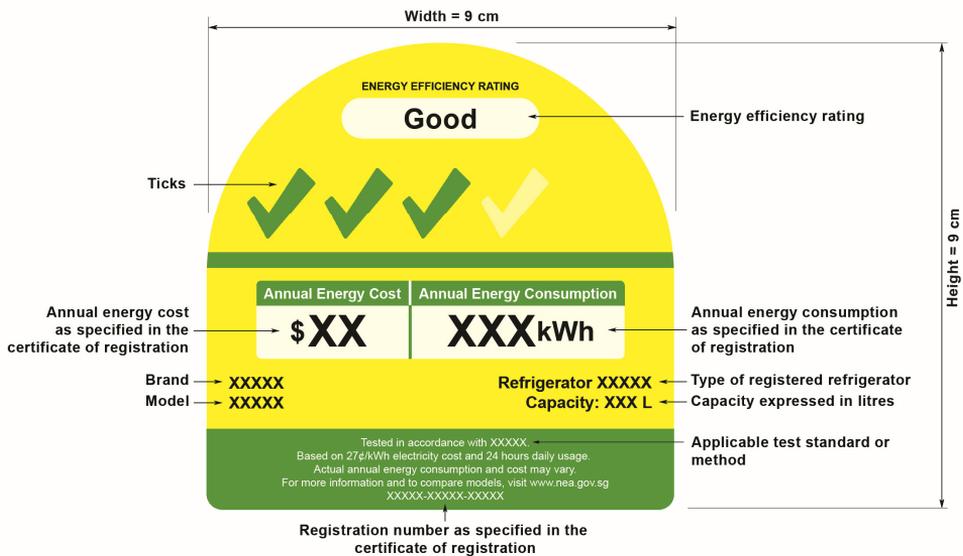
(a) by deleting paragraphs 2 and 3 and substituting the following paragraphs:

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

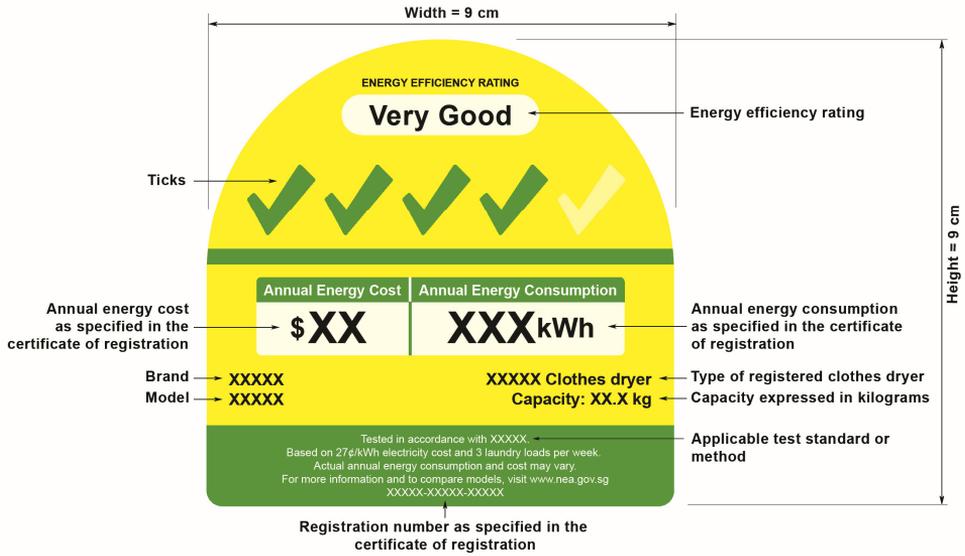
Label 1
ENERGY LABEL FOR AIR-CONDITIONERS



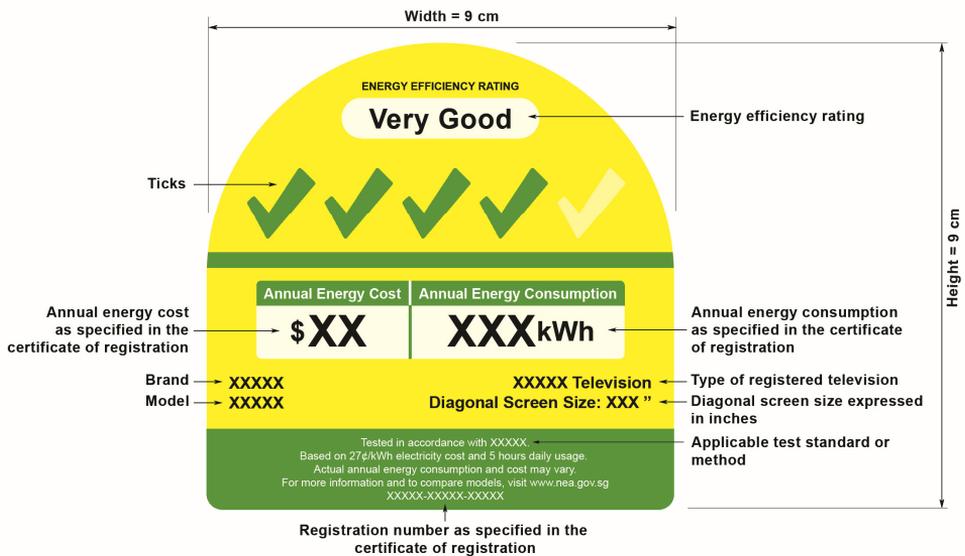
Label 2
ENERGY LABEL FOR REFRIGERATORS



Label 3
ENERGY LABEL FOR CLOTHES DRYERS



Label 4
ENERGY LABEL FOR TELEVISIONS



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) and standby power range</i>
1	Low	$2.90 \leq \text{COP} < 3.78$
2	Fair	$3.78 \leq \text{COP} < 4.29$
3	Good	$4.29 \leq \text{COP} < 4.86$
4	Very Good	$\text{COP} \geq 4.86$
5	Excellent	$\text{COP} \geq 5.50$ and standby power ≤ 4

(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) and standby power range</i>
1	Low	$3.34 \leq \text{COP} < 3.78$
2	Fair	$3.78 \leq \text{COP} < 4.29$
3	Good	$4.29 \leq \text{COP} < 4.86$
4	Very Good	$\text{COP} \geq 4.86$
5	Excellent	$\text{COP} \geq 5.50$ and standby power ≤ 4

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

<i>Ticks</i>	<i>Energy efficiency rating</i>	<i>Coefficient of Performance (COP) and standby power range</i>
1	Low	$2.78 \leq \text{COP} < 3.78$
2	Fair	$3.78 \leq \text{COP} < 4.29$
3	Good	$4.29 \leq \text{COP} < 4.86$
4	Very Good	$\text{COP} \geq 4.86$
5	Excellent	$\text{COP} \geq 5.50$ and standby power ≤ 4

(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) and standby power range</i>
1	Low	$3.34 \leq \text{COP} < 3.78$
2	Fair	$3.78 \leq \text{COP} < 4.29$
3	Good	$4.29 \leq \text{COP} < 4.86$
4	Very Good	$\text{COP} \geq 4.86$
5	Excellent	$\text{COP} \geq 5.50$ and standby power $\leq 9 \times \text{N}$

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

<i>Ticks</i>	<i>Energy efficiency rating</i>	<i>Coefficient of Performance (COP) and standby power range</i>
1	Low	$2.64 \leq \text{COP} < 3.78$
2	Fair	$3.78 \leq \text{COP} < 4.29$
3	Good	$4.29 \leq \text{COP} < 4.86$
4	Very Good	$\text{COP} \geq 4.86$
5	Excellent	$\text{COP} \geq 5.50$ and standby power $\leq 9 \times \text{N}$

(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) and standby power range</i>
1	Low	Weighted COP ≥ 3.34 and COP ≥ 3.06
2	Fair	Weighted COP ≥ 3.78 and COP ≥ 3.34
3	Good	Weighted COP ≥ 4.29 and COP ≥ 3.78
4	Very Good	Weighted COP ≥ 4.86 and COP ≥ 4.29
5	Excellent	Weighted COP ≥ 5.50 , COP ≥ 4.86 and standby power ≤ 4

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

<i>Ticks</i>	<i>Energy efficiency rating</i>	<i>Coefficient of Performance (COP) and standby power range</i>
1	Low	Weighted COP ≥ 2.78
2	Fair	Weighted COP ≥ 3.78 and COP ≥ 3.34
3	Good	Weighted COP ≥ 4.29 and COP ≥ 3.78
4	Very Good	Weighted COP ≥ 4.86 and COP ≥ 4.29
5	Excellent	Weighted COP ≥ 5.50 , COP ≥ 4.86 , and standby power ≤ 4

(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) and standby power range</i>
1	Low	Weighted COP ≥ 3.34 and COP ≥ 3.06
2	Fair	Weighted COP ≥ 3.78 and COP ≥ 3.34
3	Good	Weighted COP ≥ 4.29 and COP ≥ 3.78
4	Very Good	Weighted COP ≥ 4.86 and COP ≥ 4.29
5	Excellent	Weighted COP ≥ 5.50 , COP ≥ 4.86 and standby power $\leq 9 \times N$

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

<i>Ticks</i>	<i>Energy efficiency rating</i>	<i>Coefficient of Performance (COP) and standby power range</i>
1	Low	Weighted COP ≥ 2.64
2	Fair	Weighted COP ≥ 3.78 and COP ≥ 3.34
3	Good	Weighted COP ≥ 4.29 and COP ≥ 3.78
4	Very Good	Weighted COP ≥ 4.86 and COP ≥ 4.29
5	Excellent	Weighted COP ≥ 5.50 , COP ≥ 4.86 and standby power $\leq 9 \times N$

(f) for refrigerators —

(i) without freezer:

<i>Ticks</i>	<i>Energy efficiency rating</i>	<i>Annual Energy Consumption (AEC) in kWh</i>
1	Low	$(368 + 0.892 \times V_{adj \text{ tot}}) \times 0.64 \geq AEC > (368 + 0.892 \times V_{adj \text{ tot}}) \times 0.461$
2	Fair	$(368 + 0.892 \times V_{adj \text{ tot}}) \times 0.461 \geq AEC > (368 + 0.892 \times V_{adj \text{ tot}}) \times 0.332$
3	Good	$(368 + 0.892 \times V_{adj \text{ tot}}) \times 0.332 \geq AEC > (368 + 0.892 \times V_{adj \text{ tot}}) \times 0.239$
4	Very Good	$(368 + 0.892 \times V_{adj \text{ tot}}) \times 0.239 \geq AEC$

(ii) with freezer:

<i>Ticks</i>	<i>Energy efficiency rating</i>	<i>Annual Energy Consumption (AEC) in kWh</i>
1	Low	$(465 + 1.378 \times V_{adj \text{ tot}}) \times 0.585 \geq AEC > (465 + 1.378 \times V_{adj \text{ tot}}) \times 0.427$
2	Fair	$(465 + 1.378 \times V_{adj \text{ tot}}) \times 0.427 \geq AEC > (465 + 1.378 \times V_{adj \text{ tot}}) \times 0.312$
3	Good	$(465 + 1.378 \times V_{adj \text{ tot}}) \times 0.312 \geq AEC > (465 + 1.378 \times V_{adj \text{ tot}}) \times 0.228$
4	Very Good	$(465 + 1.378 \times V_{adj \text{ tot}}) \times 0.228 \geq AEC$

(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>
1	Low	$(585 + 1.378 \times V_{adj \text{ tot}}) \times 0.56 \geq AEC > (585 + 1.378 \times V_{adj \text{ tot}}) \times 0.409$
2	Fair	$(585 + 1.378 \times V_{adj \text{ tot}}) \times 0.409 \geq AEC > (585 + 1.378 \times V_{adj \text{ tot}}) \times 0.298$
3	Good	$(585 + 1.378 \times V_{adj \text{ tot}}) \times 0.298 \geq AEC > (585 + 1.378 \times V_{adj \text{ tot}}) \times 0.218$
4	Very Good	$(585 + 1.378 \times V_{adj \text{ tot}}) \times 0.218 \geq AEC$

(g) for clothes dryers —

<i>Ticks</i>	<i>Energy efficiency rating</i>	<i>Energy Consumption (EC) per Wash in kWh</i>
1	Low	$\text{Rated Capacity} \times 0.67 \geq EC > \text{Rated Capacity} \times 0.55$
2	Fair	$\text{Rated Capacity} \times 0.55 \geq EC > \text{Rated Capacity} \times 0.45$
3	Good	$\text{Rated Capacity} \times 0.45 \geq EC > \text{Rated Capacity} \times 0.37$
4	Very Good	$\text{Rated Capacity} \times 0.37 \geq EC > \text{Rated Capacity} \times 0.30$
5	Excellent	$\text{Rated Capacity} \times 0.30 \geq EC$

(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	$P \leq 0.16 \times (20 + 4.3224 \times \text{screen area})$

”;

(b) by inserting, immediately after the definition of “Energy Consumption” or “EC” in paragraph 4, the following definition:

““N”, in relation to split type air-conditioners, means the total number of mountings which are assembled to form a matched functional unit;” and

(c) by inserting, immediately after the definition of “screen area” in paragraph 4, the following definitions:

““standby mode” means a condition where the good is connected to the mains power source and consumes energy to do the following only:

- (a) allowing the activation of any other mode;
- (b) displaying information, including time;
- (c) indicating the status of the good;
- (d) continuously regulating or monitoring internal components of the good, based on information collected by sensors; or
- (e) heating the crankcase;

“standby power” means the power consumed when the good is in standby mode, expressed in Watts, as specified in the test report;”.

Amendment of Second Schedule

3. Paragraph 1 of the Second Schedule to the Energy Conservation (Energy Labelling and Minimum Performance Standards for Registrable Goods) Regulations 2013 is amended —

(a) by inserting, immediately after the last row in the item relating to “Air-conditioner”, the following item:

<i>Registrable goods</i>	<i>Type</i>	<i>Applicable test standard or method</i>
	“All (for standby power)”	IEC 62301 (2005) or IEC 62301 (2011)”;

(b) by inserting, immediately after the words “ISO 15502 (2005)” in the item relating to “Refrigerator”, the word “or”.

Transitional provisions

4.—(1) Where a registered good is supplied by any person in connection with an agreement, including a sale and purchase agreement for a unit of housing accommodation, entered into before 1 September 2014, the registered good may be affixed with the relevant Energy Label prescribed in the principal Regulations in force immediately before 1 September 2014, as if these Regulations had not been made.

(2) Subject to paragraph (3), where —

(a) a housing developer supplies a registered good to a purchaser of a unit of housing accommodation in connection with a sale and purchase agreement entered into on or after 1 September 2014; and

(b) the housing developer enters into an agreement with any other person before 1 September 2014 to purchase the registered good,

the registered good supplied by the housing developer to the purchaser may be affixed with the relevant Energy Label prescribed in the principal Regulations in force immediately before 1 September 2014, as if these Regulations had not been made.

(3) Paragraph (2) does not apply where the housing developer is the importer of the registered good.

(4) In this regulation —

“housing accommodation” has the same meaning as in the Housing Developers (Control and Licensing) Act (Cap. 130);

“housing developer” has the same meaning as in the Housing Developers (Control and Licensing) Act.

[G.N. No. S 234/2014]

Made on 29 August 2014.

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Ministry of the Environment and
Water Resources,
Singapore.*

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AG/LLRD/SL/92C/2012/9 Vol. 1]