
The Hong Kong Voluntary Energy Efficiency Labelling Scheme for

Televisions June 2018

Energy Efficiency  **EMSD**

Electrical and Mechanical Services Department

3 Kai Shing Street, Kowloon, Hong Kong EMSD
Homepage: <http://www.emsd.gov.hk>

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1. Purpose

- 1.1 This set of document is intended to give a general description to the Hong Kong Voluntary Energy Efficiency Labelling Scheme for Televisions (The Scheme).

2. Background

- 2.1 The Energy Efficiency Labelling Scheme (EELS) is an energy conservation initiative that the Government of the Hong Kong Special Administrative Region (HKSAR) has adopted. Under the EELS, some common types of household electrical / gas appliances and office equipment will incorporate an energy label that serves to inform consumers of the product's energy consumption and efficiency. Consumers should then be able to take those factors into account in making their purchasing decision.
- 2.2 The concept of EELS has been implemented in several forms and in different stages of development in many countries. The EELS generally aims to achieve:
- greater public awareness of energy conservation and environmental improvement needs;
 - provision of readily available, pre-purchase information on energy consumption and efficiency data to enable ordinary consumers to select more energy efficient products;
 - stimulation to the manufactures/market for phasing out less energy efficient models; and
 - motivation of the actual energy savings behaviours and environmental improvements.
- 2.3 Hong Kong aims at achieving the above objectives. At present, the Hong Kong Voluntary Energy Efficiency Labelling Scheme covers 22 types of household electrical / gas appliances and office equipment. Amongst them, 13 types are electrical appliances, 7 types are office equipment, and 2 types are gas appliances.

3. Scope

- 3.1 The Scheme will only apply to the manufacturers and importers (i.e. local agents, retailers and the related parties) of televisions who are interested to or have participated in the Scheme.
- 3.2 The Scheme commenced from 22 December 2003. It is further revised on 1 June 2018. This document will be reviewed before 1 December 2019. The existing and newly registered labels will remain valid till 30 November 2019. By then, re-registration may be required subject to the review of the Scheme.
- 3.3 The Scheme applies to the television defined and specified below
- (a) that is an appliance for the reception and display of television broadcasts; and
 - (b) that—
 - (i) uses mains electricity as the only power source;
 - (ii) has a rated visible diagonal screen size exceeding 50 centimeters; and
 - (iii) has a built-in television tuner.
- 3.4 The Scheme does not include a product that displays broadcasts by means of front or rear projection.
- 3.5 The scope of the Scheme covers all new televisions to be sold in Hong Kong, imported to or manufactured in Hong Kong, with effect from the date that is declared by the participant but does not cover the second-hand products, products already in use, under trans-shipment or manufactured for export, etc.
- 3.6 The Scheme is operated as a 'Grading Type' labelling system. All participating televisions will be registered under this Scheme provided that they have met the testing and performance requirements specified in the Scheme.

4. Definitions

Unless otherwise specified, the following definitions shall apply throughout this document:

<i>Authority</i>	means the Electrical & Mechanical Services Department (EMSD), the Government of the HKSAR
<i>default picture setting</i>	means picture setting for televisions in the home or default configuration.
<i>Director</i>	means the Director of Electrical & Mechanical Services Department.
<i>Government</i>	means the Government of the HKSAR.
<i>IEC</i>	means International Electrotechnical Commission.
<i>inspecting officer</i>	means the officer authorized by the Director to carry out inspection on televisions.
<i>ISO</i>	means the International Organization for Standardization.
<i>label</i>	means the energy label as described in Section 8 of this document.
<i>luminance</i>	means photometric measure of the luminous intensity per unit area of light travelling in a given direction.
<i>mains electricity</i>	means the electricity that is supplied in Hong Kong at a voltage of 380/220V and a frequency of 50 Hz.
<i>on-mode</i>	means the condition where the television is connected to the mains power sources and produces sound and picture.
<i>on-mode power</i>	means the power being used when the television is in "on-mode" at the default picture setting.

<i>overall brightest preset picture setting</i>	means the brightest selectable preset picture setting that produces highest luminance picture.
<i>participants</i>	means the manufacturers, importers or the retailers of televisions participating in the Scheme.
<i>peak luminance ratio</i>	means the ratio of peak luminance produced between the default picture setting and the overall brightest preset picture setting.
<i>rated visible diagonal screen size</i>	means the visible diagonal screen size as determined and declared by the manufacturer or importer of the television in accordance with the standard and requirements specified in the scheme document.
<i>recognized laboratory</i>	means a laboratory that complies with the requirements as stated in Section 9 of this document and is acceptable to the Authority for carrying out tests and issuing test reports on televisions.
<i>standby-mode</i>	means the television is connected to a power source, produces neither sound nor picture, does not transmit nor receive program information and/or data, and is waiting to be switched to "on-mode".
<i>standby power</i>	means the power being used when the television is in "standby-mode".
<i>the/this Scheme</i>	means the Hong Kong Voluntary Energy Efficiency Labelling Scheme for Electric Televisions.
<i>IEC 62087</i>	means IEC 62087:2015
<i>IEC 62301</i>	means IEC 62301:2011

5. Test Methodology and Technical Standard

General

- 5.1 All test methods specified in this document are only related to checking compliance with the “On mode”, “Standby mode” power consumption, peak luminance ratio and diagonal screen size. It is not the intention of this document to detail out the test standards and requirements for checking compliance with the Electrical Products (Safety) Regulation of the HKSAR. The participant should conduct appropriate tests, where necessary, in addition to those specified in this document in order to comply with the requirements stipulated in the aforesaid Electrical Products (Safety) Regulation.

Tests Required to be Carried Out

- 5.2 The tests specified in this clause are required to be carried out, in accordance with IEC 62087, IEC 62301 or other equivalent international standards approved by the Director, in order to find out the energy efficiency and performance characteristics of a television. A test report required to be submitted to the Director under section 6 of the Ordinance shall contain the results of these tests:
- (a) On-mode power consumption test;
 - (b) Standby power consumption test;
 - (c) Peak luminance ratio test; and
 - (d) Measurement of diagonal screen size.

Test Conditions

- 5.3 For all televisions, the test conditions shall be as follows:
- (a) Electrical supply 220Va.c. \pm 6%;
 - (b) Frequency 50Hz \pm 1Hz;
 - (c) Line impedance < 0.25 ohm;
 - (d) Total harmonic distortion < 2% (voltage); and
 - (e) Test room temperature 23 °C \pm 5 °C.

Measurement of On-mode Power Consumption

- 5.4 The on-mode power consumption test using dynamic broadcast-content video signal at the default picture setting shall be conducted in accordance with IEC 62087 or other equivalent international standards approved by the Director.

- 5.5 The measurement of on-mode power consumption at the default picture setting shall be the average power consumed over ten consecutive minutes.
- 5.6 The annual energy consumption shall be calculated by multiplying the measured power consumption by an average of 1460 hours per year.

Measurement of Standby Power Consumption

- 5.7 The standby power consumption test shall be conducted in accordance with IEC 62301 or other equivalent international standards approved by the Director.
- 5.8 The average standby power consumption of the television shall be determined by computing the average value of five (5) respective separate power consumption measurements.

Measurement of Peak Luminance Ratio

- 5.9 The measurement for peak luminance ratio (L_{ratio}) produced between the default picture setting ($L_{default}$) and the overall brightest preset picture setting ($L_{brightest}$) shall be conducted in accordance with IEC 62087 or other equivalent standards approved by the Director. The peak luminance ratio shall be calculated as follows:-

$$L_{ratio} = L_{default} / L_{brightest}$$

- 5.10 The peak luminance ratio of the default picture setting of the television as delivered by the manufacturer shall not be less than 65% of the peak luminance of the brightest on-mode condition provided by the television. Any television with the peak luminance ratio below 65% can only obtain a Grade 5 level.

6. Energy Efficiency Grading

Determination of Energy Efficiency Index (EEI)

- 6.1 The Energy Efficiency Index (EEI) is used to determine the energy efficiency of a television at the test condition and is calculated as follows:-

$$\text{Energy Efficiency Index (EEI)} = \frac{P}{P_{ref} A}$$

Where A = Television visible screen area (cm²)

P = On-mode power consumption (W)

$P_{ref} A = P_{basic} + (A/100) \times 4.3224 \text{ Watts/ cm}^2$

$P_{basic} = 20 \text{ Watts}$ for televisions with one tuner and no hard disc

$P_{\text{basic}} = 24$ Watts for televisions with one tuner with a hard disc; or two or more tuners

$P_{\text{basic}} = 28$ Watts for televisions with hard disc(s) and two or more tuners

Energy Efficiency Grading

6.2 The energy efficiency grading of a television shall be determined as shown in Table 1 with Grade 1 having the best performance and Grade 5 having the worst performance.

Table 1 – Derivation of energy efficiency grades

Energy Efficiency Index (EEI)	Energy Efficiency Grade (Notes)
$EEI < 0.13$	1
$0.13 \leq EEI < 0.195$	2
$0.195 \leq EEI < 0.265$	3
$0.265 \leq EEI < 0.36$	4
$0.36 \leq EEI$	5

Notes:

Any television with the maximum allowable standby power more than 0.5W or peak luminance ratio below 65% can only obtain a Grade 5 level.

An example illustrating the method on how to determine the energy efficiency grade of a television is shown in Annex 8.

7. Performance Requirements

7.1 In the test report submitted, the results of the tests carried out in accordance with IEC 62087, IEC 62301 or other equivalent international standards approved by the Director shall show that the concerned model conforms with the following performance requirements—

- (a) The measured on-mode power consumption at the default picture setting shall not exceed the rated on-mode power consumption at the default picture setting by more than 5%.
- (b) The average of measured standby power consumption shall not exceed 0.5W. Any television with the average measured standby power more than 0.5W can only obtain a Grade 5 level.
- (c) The measured peak luminance ratio at the default picture setting of a television as delivered by the manufacturer shall not be less than 65% of the peak luminance of the brightest on-mode condition provided by the

television. Any television with the measured peak luminance ratio below 65% can only obtain a Grade 5 level.

- (d) The measured visible screen size diagonal dimension shall not exceed the rated visible screen size by ± 1 cm.
- 7.2 The rated on-mode power consumption, rated standby power consumption, rated peak luminance and rated visible screen size diagonal as declared by the manufacturer or importer shall meet the requirements in clause 7.1.

Safety Requirements

- 7.3 In addition to the energy efficiency performance requirements, all Televisions shall comply with the Electrical Products (Safety) Regulation, Chapter 406G of the Laws of Hong Kong, and the safety standards specified under the Regulation, and all other legislation concerning the safety of the televisions.

Number of Samples to be Tested

- 7.4 For submission of product information of a television model under clause 10.4 of the Scheme, a test report on one sample of the model shall be submitted.

8. Energy Label

- 8.1 The specification of the energy label for television is shown in Annex 1. After a reference number has been assigned to a product model in the name of a specified person and included in the Director's record, the specified person shall produce the energy label for his/her products showing the information and its grading in strict accordance with the requirements in Annex 1.
- 8.2
- (a) Subject to clause 8.2(c), the energy label is to be attached or affixed to a prominent position of the television and is to be clearly visible. The participant should ensure that the label appears on every registered television on display, sale or hire.
 - (b) For the avoidance of doubt, if only part of the television is being exhibited, the energy label is to be attached or affixed to a prominent position of that part and is to be clearly visible.
 - (c) The energy label may be attached to the television or its packaging in a manner specified by the Director where the Director has approved its being so attached.
- 8.3 The energy label shall be of cardboard, if it is to be attached as a swing tag, or

be self-adhesive and shall be cut to the outline shown in Annex 1 or otherwise approved by the Director. A trim or die cut margin of up to 2 mm around the energy label is acceptable.

- 8.4 The paper used for the energy label shall be durable with good wear and tear characteristics.
- 8.5 The energy label should be printed in both Chinese and English. Soft copy of the energy label can be obtained from Energy Efficiency Office, Electrical and Mechanical Services Department.

9. Testing Facilities, Laboratories & Accreditation Bodies

- 9.1 The testing shall be carried out either by independent test institutes or by the manufacturers or by the importers themselves at their own test facilities. The Authority will accept the results and certificates issued by the test laboratory, which fulfills one of the following criteria as specified in clause 9.2 or 9.3.
- 9.2 The laboratory is accredited by the Hong Kong Accreditation Service (HKAS) for the relevant test under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or a scheme with which HKAS has concluded a mutual recognition agreement (MRA) #, and the results are issued in a test report or certificate bearing the accreditation mark.

HKAS has concluded mutual recognition arrangements with overseas accreditation bodies for testing laboratory accreditation. The list of mutual recognition arrangement partners may change from time to time and the up-to-date list is available from the HKAS website of www.info.gov.hk/itc/hkas. Partners to these arrangements recognise the accreditations granted by one another as equivalent.

- 9.3 The Authority will also consider the following –
- (a) Self-certification by original manufacturers that the operations of their in-house laboratories satisfy the requirements of ISO/IEC 17025; and
 - (b) The manufacturers are currently operating according to a recognized international quality system (such as ISO 9001); and
 - (c) The manufacturer's in-house laboratories had successfully carried out tests on televisions based on IEC 62087 and IEC 62301, and where these tests had been evaluated and certified by third party internationally recognised certification organisations.

Recognized Independent Certificate Body

- 9.4 The recognised independent certification body mentioned in clause 9.3 shall meet the following minimum requirements:
- (a) Being recognized internationally to be competent for certifying product energy efficiency performance tests; and
 - (b) Having experience in assessing and certifying the relevant energy efficiency performance tests; and
 - (c) Having well established assessment procedures, including staff training and assessment criteria, relating to assessment and certification of energy efficiency performance tests.

10. Registration and Participation

Registration Procedures

10.1 All manufacturers, importers and the other parties involved in the televisions distribution network are welcome and encouraged to participate in the Scheme. The Authority will send invitation to those known manufacturers and importers. However, no matter whether invited or not, any interested parties may submit their applications for the registration.

10.2 The proforma letter of invitation is shown in Annex 2.

10.3 Applicant should submit formal application to

*Chief Engineer/Energy Efficiency A
Energy Efficiency Office
Electrical and Mechanical Services Department
3 Kai Shing Street, Kowloon*

by means of an application letter through mail, facsimile or electronic mail. In order to ensure effective implementation of the Scheme, the applicant must commit himself to fully comply with the duties, responsibilities and obligations set out in the Scheme. The proforma letter of application as shown in Annex 7 details the aforesaid obligations and should be used for application. To facilitate the application process, the application form can be downloaded from EMSD website or via online application services.

Information/Documents to be Submitted for Registration

10.4 Each make and model of a television participating in the Scheme should be provided with a test report issued by a recognized laboratory. The test report should contain energy consumption tests and performance test results. The details of the technical information to be submitted together with the application are listed as follows: -

- a) Information on the company
Name, Address, Telephone number, Fax number, E-mail address, Contact person, Importer, Distributor, etc.
- b) Product to apply for participating in the Scheme:
Name of products, types, brand names, models, countries of origin, manufacturer declared screen size diagonal dimension expressed in cm rounded up to nearest whole number.
- c) The parties which will be responsible for making and fixing the Energy Labels;
- d) Commencement date to affix Energy Label on television
Year_____, Month_____
- e) Detailed test reports and relevant photos shall provide at least the following relevant technical and measured data for the television:
 - Product Category (e.g. Plasma TV, LCD TV, etc.).
 - The average power consumption of the television in Standby mode“ operation expressed in Watt round up to two decimal places” ;
 - “On mode” power consumption (measurements using dynamic broadcast-content video signals) expressed in Watt round up to two decimal places;
 - Peak luminance ratio expressed in % round up to one decimal places
 - Visible screen dimensions (Width x Height) including diagonal dimension expressed in cm rounded up to one decimal place.
- f) Certificate of Safety Compliance prescribed by the “Electrical Products (Safety) Regulation of the Hong Kong Special Administrative Region” (Chapter 406G).

The above list of information can also be found in Annex 4, Information to be submitted to Energy Efficiency Office.

10.5 Company's name and chop should be stamped on all the documents provided. All photocopy test reports submitted to the Authority shall be certified true copy by appropriate organization.

Acceptance of Registration

- 10.6 On receipt of the application, the Authority will process the application and verify whether the television meets the energy efficiency and performance requirements based on the submitted data. The accuracy of the energy consumption data, their inconsistencies and non-compliance will be dealt with in accordance with section 12.
- 10.7 If the application is accepted, the participants will be notified of the result in writing within 17 working days upon receipt of all necessary information requested. The participants will then be allowed to affix the label onto the 'registered' televisions. Both manufacturer and importer of the registered television should ensure that the energy label is correctly printed and affixed on the television in accordance with section 8. The proforma letter of acceptance is shown in Annex 5.
- 10.8 If the application is rejected, the notification letter will also be issued within 17 working days upon receipt of all necessary information requested. The proforma letter of rejection is shown in Annex 6.
- 10.9 The flow chart for registration is shown in Annex 7

Participant's Duties, Responsibilities and Obligations

- 10.10 The participant is obliged to:-
- a) submit application and information including test results in accordance with format & procedures set out in clauses 10.3 to 10.5;
 - b) conduct tests via recognized laboratories and to comply with the specified test methodology and classification scheme;
 - c) produce and affix labels at his own costs;
 - d) fully inform other sales agents in his distribution network once the particular make and model of a television is registered under the Scheme;
 - e) allow random/ad-hoc inspection to be conducted by persons authorized by the Authority on registered television at his premises;
 - f) conduct re-test(s) at his own costs at some recognized laboratories, if non-compliance is found on his television, or if the results of inspection suggest inaccurate energy label information being displayed. The result of re-test(s) shall reach the Authority within the prescribed period of time specified by the Authority;

- g) inform the Authority of any change in the technical information and data that were previously submitted to the Authority together with the application letter;
- h) accept the fact that if registered television fails to perform in accordance with the required standard performance as given in section 5 and this cannot be readily rectified, the Authority may order it be de-registered from the Scheme; and
- i) remove all labels from the de-registered televisions immediately.

10.11 The details of the registered televisions under the Scheme will be kept in a register list maintained by the Authority. The registration records will be regularly uploaded and maintained in the EMSD Internet for public and interested parties for browsing and reference.

Termination

10.12 Under circumstances of poor performance such as –

- (a) (repeated) failure to fulfill the obligations set out under clause 10.10; or
- (b) false, inaccurate or misleading information is given on the energy label; or
- (c) in any other case where the Director is of the opinion that registration of the particular television is contrary to the public interest,

the Authority may de-register the concerned television from the Scheme with immediate effect by giving the participant a notice in writing. Once the television is de-registered, energy label is not allowed to fix on it. De-registration may occur even when there is no legal action taken under either the Trade Description Ordinance (Chapter 362) or the Copyright Ordinance (Chapter 528).

10.13 Participant who decides to discontinue participating in the Scheme or to withdraw any registered model from the registered televisions list shall give at least three months' advance notice to the Authority.

11. Legal Provisions

11.1 The Scheme is a voluntary scheme. However, a participant who abuses the Scheme by giving false information on an energy label may contravene provisions of the Trade Description Ordinance (Chapter 362).

11.2 No one could take advantage of the Scheme by using the energy label on his

Televisions without authorization of the Authority as that shall constitute an infringement of copyright under the Copyright Ordinance (Chapter 528).

12. Compliance, Monitoring and Inspection

Purpose

- 12.1 To uphold the credibility of the Scheme and to continue maintaining the confidence of the consumers, compliance check on energy labels on those televisions participating in the Scheme are needed. Also, to avoid the non-participating parties from taking advantage of the Scheme by using unauthorized labels, suitable form of inspection shall be conducted on those televisions which have not been registered under the Scheme.

Scope

- 12.2 The scope of inspection includes sample **checking** and **testing** of the following items:-
- (a) whether the energy label is affixed on the registered television;
 - (b) whether the energy label on the registered television is affixed to a prominent position in accordance with clause 8.2;
 - (c) whether the energy label being displayed is of correct format in accordance with section 8;
 - (d) whether the information on energy label accords with record;
 - (e) whether the registered television complies with the energy efficiency and the performance requirements;
 - (f) whether the data submitted by the participants are correct by random re-testing; and
 - (g) whether the unregistered televisions display unauthorized energy labels.
- 12.3 The participants will be requested to take immediate remedial action and report of follow-up action taken if non-compliance is found on their televisions.
- 12.4 During the compliance monitoring testing carried out by the Director, a registered model of television will be accepted as conformance if the test results of a single sample of the registered model meet the following criteria:
- (a) The tested on-mode power consumption at the default picture setting shall not exceed the rated power consumption by more than 7%.

(b) The average of tested standby power consumption shall not be greater than the rated standby power consumption by more than 0.1W.

(c) The tested peak luminance ratio at the default picture setting of a television as delivered by the manufacturer shall not be less than 60% of the peak luminance of the brightest on-mode condition provided by the television for Grade 1 to 4. For Grade 5, the tested peak luminance ratio at the default picture setting shall not be less than 95% of the peak luminance at the default picture setting determined by the test results submitted to the Director by the specified person.

(d) The tested visible screen size diagonal dimension shall not exceed the rated visible screen size by ± 1 cm.

(e) The tested energy efficiency grade meeting either one of the followings:-

(i) The energy efficiency grade calculated in the compliance monitoring testing being equal to or better than the energy efficiency grade determined by the test results submitted to the Director by the specified person; or

(ii) If the energy efficiency grade calculated in the compliance monitoring testing being not equal to nor better than the energy efficiency grade determined by the test results submitted to the Director, the tested energy efficiency index calculated in the compliance monitoring testing being not greater than 110% of the measured energy efficiency index calculated by the test results submitted to the Director.

12.5 The Director may remove from the registered record of television, if he has reasonable grounds to believe that the television does not conform with the specified information or a specified document, or their updates if any, submitted to the Director. The specified person may provide explanation on the failure of a product to pass the compliance monitoring testing stipulated in clause 12.4 above and apply for further testing of the concerned model for the Director's consideration.

12.6 If further testing is approved to be carried out, three samples of the same model shall be tested at the specified person's own costs. A registered model of television will be accepted as conformance if the results of further testing meet the following criteria:

(a) The tested on-mode power consumption at the default picture setting shall not exceed the rated power consumption by more than 7%.

(b) The average of tested standby power consumption shall not be greater than the rated standby power consumption by more than 0.1W.

- (c) The tested peak luminance ratio at the default picture setting of a television as delivered by the manufacturer shall not be less than 60% of the peak luminance of the brightest on-mode condition provided by the television for Grade 1 to 4. For Grade 5, the tested peak luminance ratio at the default picture setting shall not be less than 95% of the peak luminance at the default picture setting determined by the test results submitted to the Director by the specified person.
- (d) The tested visible screen size diagonal dimension shall not exceed the rated visible screen size by ± 1 cm.
- (e) The tested energy efficiency grade meeting either one of the followings:-
 - (i) The energy efficiency grade calculated in the compliance monitoring testing being equal to or better than the energy efficiency grade determined by the test results submitted to the Director by the specified person; or
 - (ii) If the energy efficiency grade calculated in the compliance monitoring testing being not equal to nor better than the energy efficiency grade determined by the test results submitted to the Director, the tested energy efficiency index calculated in the compliance monitoring testing being not greater than 110% of the measured energy efficiency index calculated by the test results submitted to the Director.

12.7 If non-compliance is confirmed and no remedial action is to be taken by the applicant, the Authority may order it be de-registered from the Scheme. Failure to remove energy labels from the de-registered televisions after the Director has withheld his authorization for using such labels may contravene the relevant ordinances.

Inspecting Officers

12.8 The Authority will authorize inspecting officers to carry out compliance monitoring and inspection on televisions. The officers will carry proper identification cards which will be produced upon request during their inspection operations. However, the officer will not inform the participants in advance of their intended inspection operation.

12.9 It is the participants' obligation to allow the inspecting officers to gain access to their premises to carry out inspection.

Mode of Inspection

12.10 Inspections will be carried out on registered televisions under the Scheme on

random basis. Based on the record of the registration, random inspection programmes will be developed.

- 12.11 In addition to the random inspections, the inspecting officers will carry out ad-hoc inspections in response to complaints. The items to be inspected in such a case will depend upon the nature of complaint and may include all types of inspection as stated in clause 12.2.
- 12.12 Inspections will normally be carried at the television retail outlets and showrooms. Where necessary, inspection will also be done at warehouses.
- 12.13 The inspection results will be properly recorded for future analysis as well as on evaluation of the effectiveness of the Scheme.

13. Complaints and Appeal

- 13.1 The Authority will be responsible for dealing with the complaints from participant and other parties against matters related to the Scheme.

Complaints Handling Procedures

- 13.2 The Director shall ensure that complaints are properly recorded and handled without undue delay.
- 13.3 The Authority shall carry out preliminary investigation on complaints and reply to the complainants within a reasonable time. For complaints that require site inspection and laboratory test, the complainant shall be notified through an interim reply.
- 13.4 The Authority shall inform the complainant of the results or decisions made on the complaint.

Appeal Procedures

- 13.5 A participant who feels aggrieved by the decision or action given by the Authority according to section 12 may appeal to the Director in writing stating the reason for the appeal.
- 13.6 The Director may decide to suspend the decision or action given by the Authority from the day on which the appeal is made until such appeal is disposed of, withdrawn or abandoned unless such suspension would, in the opinion of the

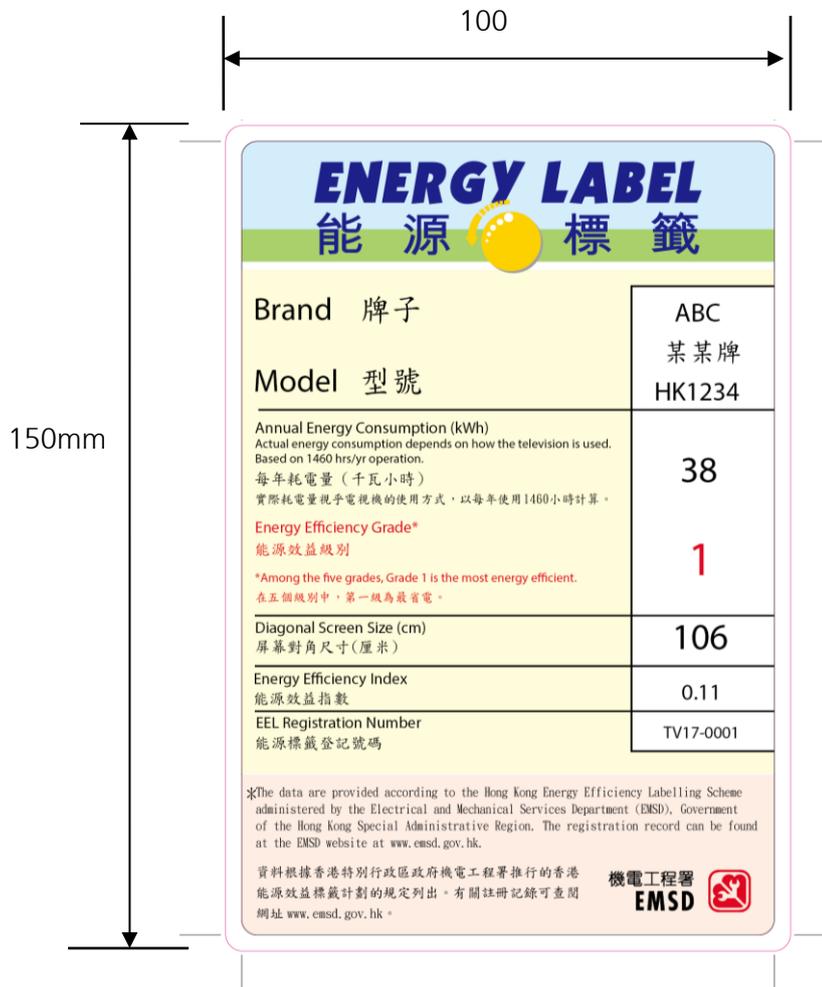
Director, be contrary to public interest.

- 13.7 The Director may by notice to the appellant require that appellant to attend meeting with him or his representative, provide documents and give evidence relevant to the appeal.
- 13.8 The Director shall notify the appellant of his decision and the reasons for it. The decision will be final and binding.

14. Maintenance of Scheme

- 14.1 To ensure that the Scheme can continue to operate effectively and efficiently after its introduction, a proper system of maintenance is needed.
- 14.2 The maintenance system consists essentially of -
- (a) Continuous updating of the following relevant information of the participants in the Scheme -
 - i. Details of the registered televisions such as registration number, date of registration or de-registration if it occurs, energy consumption data, energy efficiency index, performance data, make, model, category and other related information; and
 - ii. Details of the registered importers, manufacturers, local agents, etc.; in the distribution network such as address, date of registration or de-registration if it incurs, etc.
 - (b) Periodic review of the test methodology, and procedures for application of registration and compliance monitoring, etc., to bring them in line with the latest needs of the manufacturers, importers and retailers, etc.
 - (c) Continuous evaluation of the effectiveness of the Scheme and assessment of what changes are necessary.

The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Televisions – Energy Label Format



(Not to Scale)

Notes : The figure of the energy label is shown not to scale.

Soft copy of this label can be obtained from Energy Efficiency Office, Electrical and Mechanical Services Department.

Proforma Letter of Invitation

Our ref. () EMSD/EEO/LB/25

Your ref.

Tel.

Fax.

Date

[Name and Address of
Manufacturers/Importers/Agents

]

Dear Sir/Madam,

Invitation of Application for Registration in The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Televisions

Having gone through the necessary consultations and duly considered the views from various concerned parties, the government has decided to introduce a Voluntary Energy Efficiency Labelling Scheme for Televisions to Hong Kong with effect from (_____). The details of the Scheme^① have been finalized and the revised Scheme document can be downloaded from EMSD web-site: <http://www.emsd.gov.hk>.

Being one of the major television manufacturers / importers / agents^② in Hong Kong, you are invited to participate in the Scheme so as to take part in promoting public awareness in energy conservation and environmental improvement to Hong Kong. If you are interested to participate in the Scheme, please apply in accordance with the proforma letter of application (Annex 3) and submit details including technical information in accordance with the attached Annex 4 to the 'Chief Engineer / Energy Efficiency A' at the following address.

Energy Efficiency Office
Electrical and Mechanical Services Department
3 Kai Shing Street, Kowloon Hong Kong

Please be reminded to submit accurate test data to support your application. Under this Scheme, routine compliance monitoring and checking will be performed and if a registered television is found to be non-compliant, we may consider deregistering the television from the Scheme.

Should you need further clarification or information, you are most welcome to contact the undersigned or Mr _____, at the telephone number _____.

Yours faithfully,

for Director of Electrical & Mechanical Services

(Note : ① 'Scheme' means 'The Voluntary Energy Efficiency Labelling Scheme for Televisions '
② delete as appropriate)

Proforma Letter of Application

Your ref. () EMSD/EEO/LB/25

Our ref.

Tel.

Fax.

Date

Chief Engineer/Energy Efficiency A
Electrical & Mechanical Services Department
3 Kai Shing Street, Kowloon
Hong Kong

Dear Sir/Madam,

Application for Registration in The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Televisions

Our company is the (manufacturer/importer/agent*) of _____ in Hong Kong. We support the introduction the labelling scheme to Hong Kong and would like to be one of the participants in the Scheme to promote energy efficiency.

I understand fully the obligations and duties stated in the Scheme and will comply with all relevant requirements, in particular those specified below:

- i) conduct tests via recognized laboratories and to comply with the specified test standards;
- ii) produce and affix specified labels at my own costs;
- iii) allow random/ad-hoc inspection to be conducted by persons authorized by the issuing Authority on registered television at my premises;
- iv) conduct re-test(s) at my own costs at some recognized laboratories, if the results of inspection suggest inaccurate energy label information being displayed. The result of re-test(s) shall reach the Authority within the prescribed period time specified by the Authority;
- v) inform the Authority of any change in the technical information and data that were previously submitted to the Authority together with the application letter; and
- vi) accept the fact that if television fails to perform in accordance with the required energy efficiency standards and performance as given in section 5 and this cannot be readily rectified, the Authority may order it be de-registered from the Scheme.

The details of information of those televisions which we intend to register with the Authority are shown in the attached document (Annex 4), and are submitted herewith for your vetting.

Yours faithfully,

(Manufacturer/Importer/Agent's Name and Company Chop)

* *delete as appropriate*

Information to be submitted to Energy Efficiency Office

1. Information on the Company:
Name, Address, Telephone number, Fax number, Email address, Contact person, Importer, Distributor, etc.
2. Product to apply for participating in the Scheme:
Names of products, types, brand names, model references, countries of origin, manufacturer declared screen size diagonal dimension expressed in cm rounded up to nearest whole number.
3. Parties which will be responsible for making and fixing the Energy Label.
4. Commencement date to affix Energy Labels on television package
Year _____, Month _____
5. Detailed test reports and relevant photos shall provide at least the following relevant technical and measured data for the television:
 - (a) Product Category (e.g. Plasma TV, LCD TV, etc.).
 - (b) The average power consumption of the television in “Standby mode” operation expressed in Watt round up to two decimal places ;
 - (c) “On mode” power consumption (measurements using dynamic broadcast-content video signals) expressed in Watt round up to two decimal places;
 - (d) Peak luminance ratio at the default picture setting expressed in % with an accuracy of 1 decimal point.
 - (e) Visible screen dimensions (Width × Height) including diagonal dimension expressed in cm rounded up to one decimal place.
6. Certificate of Safety Compliance prescribed by the Electrical Products (Safety) Regulation of HKSAR for the concerned televisions in the application.

Note: *Company's name and chop should be stamped on the all documents provided.
All test reports submitted to the office should be certified true copy by appropriate organization.*

Proforma Letter of Acceptance

Your ref.

Our ref. () EMSD/EEO/LB/25

Tel:

Fax:

Date

[

Name and Address of
Manufacturers/Importers/Agents

]

Dear Sir/Madam,

Acceptance of Application for Registration in The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Televisions

With reference to your letter of ref. _____ dated _____, we are pleased to inform you that your application to participate in the captioned scheme has been accepted.

We enclose herewith the registration certificates of televisions registered. The registered televisions are as follows:

<u>Brand/Make/Model</u>	<u>Registration No.</u>	<u>Effective date</u>
(_____)	(_____)	(_____)

You are allowed to affix a specified energy label onto each and every television package registered under the Scheme. The contents of the energy label should be based on the information that you have provided in your application ref. _____ and dated _____.

Should you have any queries regarding the scheme, please contact this office.

Yours faithfully,

for Director of Electrical & Mechanical Services

Proforma Letter of Rejection

Our ref. () EMSD/EEO/LB/25

Your ref.

Tel.

Fax.

Date

「

Name and Address of
Manufacturers/Importers/Agents

」

Dear Sir/Madam,

Rejection of Application for Registration in The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Televisions

With reference to your letter of ref. _____ dated _____, we regret to inform you that your application for registration in the scheme has not been accepted for the following reasons:-

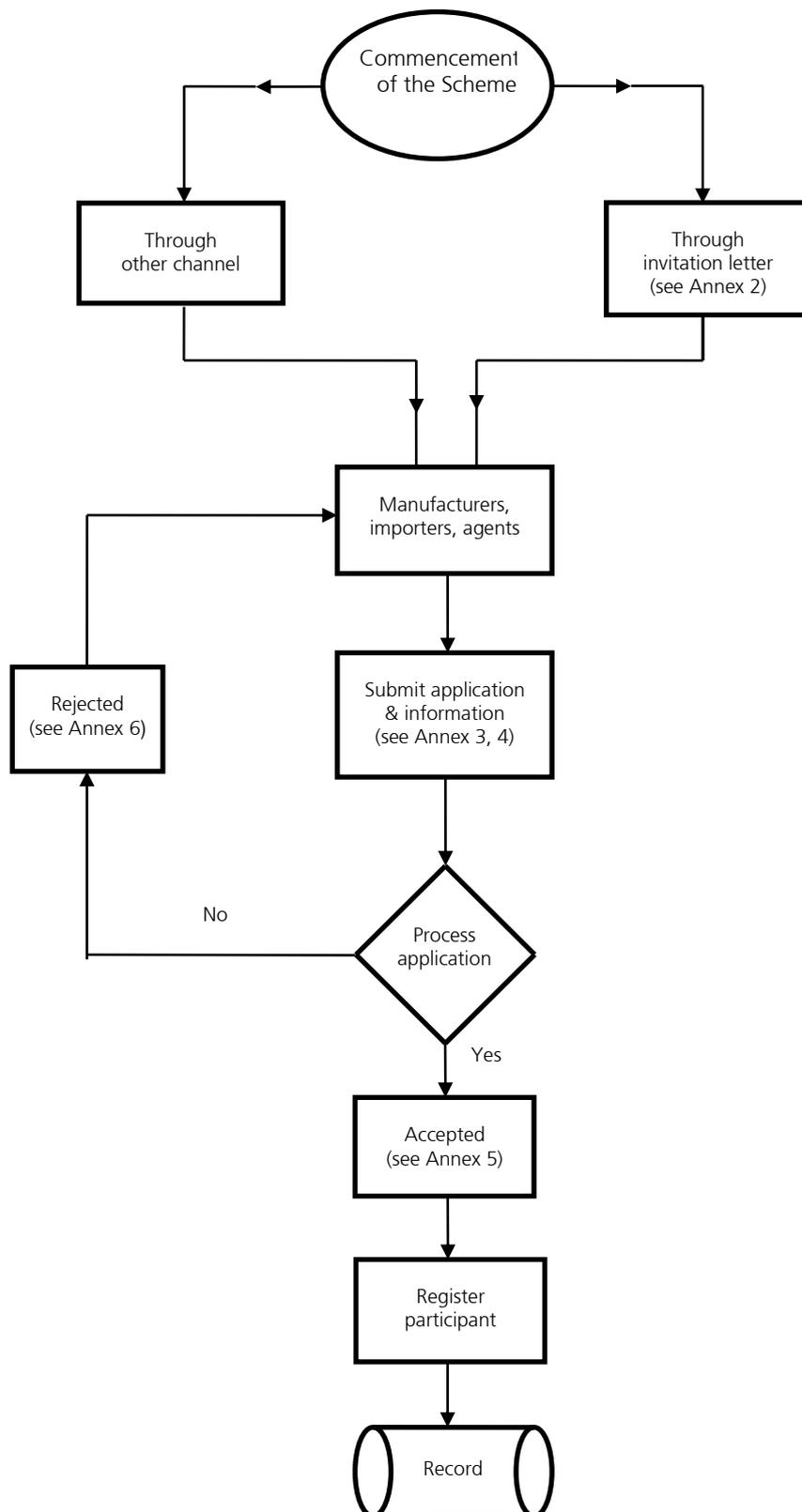
1. _____,
2. _____, etc.

You are most welcome to submit new application again in future, when you have the necessary documents / information to support your application.

Yours faithfully,

for Director of Electrical & Mechanical Services

**The Hong Kong Voluntary Energy Efficiency Labelling Scheme
for Televisions –
Flow Chart of Registration**



Example for Calculating the Energy Efficiency Grade for Television

The given television is a standard television of two tuners.

Measured on-mode power consumption at the default picture setting	120W
Measured visible screen area	11000cm ²
Measured peak luminance ratio.....	70%

Standby power consumption

1 st measurement (P _{s1}).....	0.30W
2 nd measurement (P _{s2})	0.32W
3 rd measurement (P _{s3})	0.31W
4 th measurement (P _{s4})	0.29W
5 th measurement (P _{s5})	0.30W

Energy Efficiency Index (EEI)

$$\begin{aligned} P_{refA} &= P_{basic} + (A/100) \times 4.3224 \\ &= 24 + (11000/100) \times 4.3224 \\ &= 499 \text{ Watts/cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Energy Efficiency Index (EEI)} \\ &= 120/499 = 0.24 < 0.265 \end{aligned}$$

Standby Power Consumption

$$\begin{aligned} \text{Average standby power consumption} \\ &= (P_{s1} + P_{s2} + P_{s3} + P_{s4} + P_{s5})/5 \\ &= (0.30 + 0.32 + 0.31 + 0.29 + 0.30)/5 \\ &= 0.304W < 0.5W \end{aligned}$$

The peak luminance ratio at the default picture setting is more than 65% of the peak luminance of the brightest on-mode condition provided by the television, and the average standby power consumption is less than 0.5W. According to Table 1 in clause 6 of the Code, the television is rated as a **Grade 3** television.