
The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Electric Clothes Dryers

January 2009

Energy Efficiency  **EMSD**

Electrical & Mechanical Services Department

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Homepage: <http://www.emsd.gov.hk>

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1. Purpose

This set of document is intended to give a general description on the introduction of the Hong Kong Voluntary Energy Efficiency Labelling Scheme (EELS) for Electric Clothes Dryers.

2. Background

The Nature of EELS

- 2.1 The EELS is an energy conservation initiative that the Government of the Hong Kong Special Administrative Region (HKSAR) has adopted. Under the scheme, some common types of household appliances and office equipment will incorporate an energy efficiency 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.

Objectives of EELS

- 2.2 The concept of EELS has been developed and implemented in several forms and in different stages of development. In some countries, it is a compulsory requirement for certain kinds of electrical appliances to be provided with an energy label before they can be put on the market. The labelling requirements may apply to equipment such as household refrigerators, freezers, washing machines, room coolers, clothes dryers, CFLs, storage water heaters, etc. The EELS generally aims to achieve the following:
- 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 manufacturers/market for phasing out less energy efficient models; and
 - Actual energy savings and environmental improvements etc.

2.3 Hong Kong also aims at achieving the above objectives and the Hong Kong Voluntary EELS now covers eighteen types of household appliances and office equipment. Ten types of which are electrical appliances including refrigerators, room coolers, washing machines, non-integrated type compact fluorescent lamps, electric clothes dryers, electric storage water heaters, electric rice-cookers, dehumidifiers, televisions and electronic ballasts. The seven types of office equipment include photocopiers and multi-function devices, laser printers, LCD monitors, computers, fax machines and hot/cold bottled water dispensers. There is also one type of gas appliance for domestic gas instantaneous water heaters. The scope of EELS has also been extended to cover petrol passenger cars.

3. Outline of the Voluntary Energy Efficiency Labelling Scheme

The following aspects of the scheme will be outlined in the subsequent sections.

- Scope (section 4)
- Definitions (section 5)
- Appliance Classification (section 6)
- Test Methodology and Standard (section 7)
- Energy Efficiency Grading (section 8)
- Energy Label (section 9)
- Testing Facilities, Laboratories and Accreditation Bodies (section 10)
- Registration & Participation (section 11)
- Legal Provisions (section 12)
- Compliance Monitoring & Inspection (section 13)
- Complaints and Appeal (section 14)
- Maintenance of Scheme (section 15)
- Future Development (section 16)

4. Scope

- 4.1 The scheme will only apply to the manufacturers and importers (local agents, retailers and the related parties) who have participated in the voluntary scheme.
- 4.2 The scheme was launched on 28 December 1999 and energy labels will expire on 31 December 2011 when re-registration is necessary.
- 4.3 The scope of application covers all **new** registered appliances imported to or manufactured in Hong Kong with effect from the date that is declared by the participant but does not cover second-hand products, products already in existing use, under trans-shipment or manufactured for export, etc.
- 4.4 Clothes Dryers under this labelling scheme apply to electrically operated Clothes Dryers that have drying capacity normally not exceeding 10 kg for household use. Appliances that have larger capacity, or for industrial use, or those using non-electric energy sources are excluded.
- 4.5 This labelling scheme also applies to the household electric clothes dryers of the air vented and condenser types, with or without automatic stop function for the drying process, and incorporating a heating device.
- 4.6 This labelling scheme does not apply to clothes dryers of cabinet type in which the heated air is blown to dry the hanged clothes and is exhausted through an outlet channel.

5. Definitions

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

<i>appliance</i>	means household clothes dryers described under Section 4 (scope) of this scheme
<i>authority</i>	means the Electrical and Mechanical Services Department, the Government of the Hong Kong Special Administrative Region
<i>clothes dryer</i>	means a machine in which the textile material is dried by tumbling in a rotating drum, through which heated air is blown.
<i>cotton base load</i>	means the combination of cotton sheets, pillowcases and hand-towels conforming to the IEC 61121.
<i>director</i>	means the Director of Electrical and Mechanical Services.
<i>easy care textiles</i>	means the textiles being produced by the use of fibres and treatments aimed to decrease the need for ironing.
<i>easy care textile base load</i>	Means the combination of men's shirts and pillowcases of easy-care textiles as being in conformity with IEC 61121.
<i>government</i>	Means the Government of the Hong Kong Special Administrative Region.
<i>air vented clothes dryer</i>	means the clothes dryer with a fresh-air intake which is heated and drawn or blown over the textile material and where the resulting moist air is exhausted into the room or vented outside.
<i>condenser clothes dryer</i>	means the clothes dryer in which the air used for the drying process is dehumidified by cooling.

<i>cycle</i>	means complete drying process, as defined by the programme selected, consisting of a series of different operations (heat, cool down etc.).
<i>inspecting officer</i>	means the officer authorized by the director to carry out inspection on appliances.
<i>label</i>	means the energy label as described in Section 9.
<i>participant</i>	means the manufacturers, importers or the retailers of appliance participating in the scheme.
<i>rated capacity</i>	means the maximum mass of dry textile material, in kilogrammes, which the manufacturer declares can be treated in a specific drying operation
<i>rated frequency(ies)</i>	means the frequency(ies) shown on the nameplate of the equipment.
<i>rated voltage(s)</i>	means the voltage(s) shown on the nameplate of the equipment.
<i>recognized laboratory</i>	means a laboratory that complies with the requirements as stated in Section 10 and is acceptable to the Authority for carrying out tests and issuing test reports on clothes dryers.
<i>Scheme</i>	means the Hong Kong voluntary energy efficiency labelling scheme for electric clothes dryers
<i>drum volume</i>	means the inside volume, in litres, of the drum in which the textile material is placed, after subtraction of ribs or other inward protrusions, etc.

6. Appliance Classification

Basic Requirements on Classification

- 6.1 The classification of appliances shall be based on a common set of conditions so that meaningful comparison can be made. These basic requirements must cover the most vital aspects of the clothes dryers and shall ensure that consumers are provided with unambiguous information.

Physical Configuration

- 6.2 Electric clothes dryers under this Scheme are classified according to their working principle and physical configurations as follows: -
- (a) Air vented clothes dryer
Clothes dryer with a fresh-air intake, which is heated and drawn or blown over the textile material and where the resulting moist air is exhausted into the room or vented outside.
 - (b) Condenser clothes dryer
Clothes dryer in which the air used for the drying process is dehumidified by cooling.

Operating Functions on Drying Process

- 6.3 In addition to the above, clothes dryers are also classified according to their operating function as follows: -
- (a) Automatic stoppage
Clothes dryer, which switches off the drying process when a certain moisture content of the load is reached.
 - (b) Non-automatic stoppage
Clothes dryer, which does not switch off the drying process when a certain moisture content of the load is reached.

Overall Classification

- 6.4 All clothes dryers are proposed to be evaluated based on the above mentioned classification and categorized in accordance with Table 1: -

Table 1 Overall Classifications

Type	Function	Category	Description
Air vented	Automatic stoppage	1	Air vented type tumble dryer with automatic stoppage function
	Non-automatic stoppage	2	Air vented type tumble dryer with non-automatic stoppage function
Condenser	Automatic stoppage	3	Condenser type tumble dryer with automatic stoppage function
	Non-automatic stoppage	4	Condenser type tumble dryer with non-automatic stoppage function

7. Test Methodology & Standard

7.1 Clothes dryers can have varied designs and features. Besides load capacity, their drying programmes are also different and many are selectable by the operator. For example, temperature setting, drying time, and moisture control; etc. can all be modified according to the user's needs. Virtually all these aspects would affect the energy consumption of the machine. Therefore a common base is critical for measuring the electrical consumption of such machines. At present household electric clothes dryers are produced and tested always according to the manufacturers' national standards (e.g. DIN, BS, JIS, AS and AHAM) and they are not governed by any International standard. In Hong Kong, the clothes dryers, which are of European brands mainly constitute up to almost 90% of the existing local market. In view of this market situation, the testing methodology is modelled in accordance with IEC 6112 standard, entitled "Tumble dryers for household use - Methods for measuring the performance".

Rated Capacity

- 7.2 The clothes dryers are required to be tested at their rated capacity, which the manufacturer declares can be treated at specific drying operation or cycle of operations. If the manufacturer has not stated the rated capacity, a calculated value would be adopted based on the ratio of per kg dry textiles and the preset usable volume of the drum according to the aforesaid standard. The value shall be in kilogram (kg).

Standard Base Loads

- 7.3 The measurement requires the use of standard cotton base load. The load is made up of a load of textile material consisting of sheets, pillowcases and hand-towels conforming to the specifications as specified in Annex 1 approximately equal to the rated drying capacity.

Measurement of Energy Consumption

- 7.4 The testing methodology for measurement of energy consumption is based on the international standards as aforesaid. An outline of the test conditions, and general methodology is provided in Annex 1. For detailed requirements and procedural descriptions one should refer to the IEC 61121 standard.

The energy consumptions of the appliance shall be measured during the dry cotton programme with cotton base load specified in standard. The energy consumption in kWh shall be the arithmetic mean of the values measured for at least five test cycles. The energy consumption measured shall not be greater than the value declared by the manufacturer plus 10%.

Other Performance Requirements

- 7.5 The appliance shall be tested for conformity with the following performance requirements based upon the IEC 6112 standard and the results shall be stated in the test report to be submitted to Energy Efficiency Office:

Programme time;

Condensation efficiency applicable for the condenser type clothes dryer;

Drying evenness; and

Water consumption.

Methodology on Energy Efficiency Comparison

Specific Energy Consumption (E_{sp})

- 7.6 Appliance energy efficiency is expressed as specific energy consumption defined as the energy consumption per unit of rated drying capacity. Therefore, an energy efficient appliance is

associated with a low value of the specific energy consumption. The specific energy consumption shall be in kWh/kg/cycle.

Average Appliance Energy Consumption (E_{av})

7.7 In ideal situation, the **Average Appliance Energy Consumption** figures should be obtained from some acceptable statistical method. The development of these statistical data will require larger sample sizes. Under the prevailing market situation where there are less than fifty models of clothes dryers in the Hong Kong market, it cannot support the development of a statistical method. In view of the constraint, the Authority decides to adopt the statistical analysis results^① of the European Union for electric clothes dryers and make necessary adjustment for suiting the Hong Kong market situation. The Average Specific Energy Consumption data established are shown in Table 2.

Table 2: Average Specific Energy Consumption

Appliance Category	Average Specific Energy Consumption (kWh/kg/cycle)
Category 1 & 2	$E_{av} = 0.81$
Category 3 & 4	$E_{av} = 0.86$

Note : ① The study report on the "Washing Machines, Driers and Dishwashers" by the Group for Efficient Appliance (GEA) Working Group – European Energy Network (Eⁿ R) (June 1995)

8. Energy Efficiency Grading

8.1 The availability of Table 2 enables formulation of a methodology to calculate the energy efficiency indices and the appliance efficiency grading. The methodology entails ultimate like-with-like meaningful comparison.

Energy Efficiency Indices (I_e)

8.2 The energy efficiency index (I_e) of an appliance is defined as the ratio of the actual specific energy consumption of the appliance to the average specific energy consumption. The indices

are expressed in percentages. Thus, by comparing the energy efficiency indices, all appliances can have meaningful comparison of their energy efficiencies. In other words, within a category appliance that has a lower energy efficiency index (i.e. lower percentage) consumes less energy than an appliance of higher energy efficiency index (i.e. higher percentage). The energy efficiency index is calculated as follows: -

$$\text{Energy Efficiency Index (} I_{\epsilon} \text{)} = \frac{E_{sp}}{E_{av}} \times 100\% \dots\dots\dots(\text{eq.1})$$

Where

E_{sp} = the actual appliance “Specific Energy Consumption” obtained from energy consumption test per rated drying capacity.

E_{av} = Average Specific Energy Consumption as determined from Table 2.

Appliance Energy Efficiency Grading

8.3 To make the concept of appliance energy efficiency more readily understood by ordinary consumers, appliance energy efficiency grade is introduced by linking the energy consumption index (percentage) to the 5 grades as shown in Table 3, with Grade 1 being the most energy efficient and Grade 5 the least.

Table 3 Converting Energy Consumption Indices to Energy Efficiency Grades

Energy Consumption Index : I_{ϵ} (%)	Energy Efficiency Grade
$I_{\epsilon} \leq 80$	1
$80 < I_{\epsilon} \leq 95$	2
$95 < I_{\epsilon} \leq 110$	3
$110 < I_{\epsilon} \leq 125$	4
$125 < I_{\epsilon}$	5

8.4 An example illustrating the method on how to determine the energy efficiency grade of an appliance is shown in Annex 2.

8.5 A flow chart for developing the complete appliance energy efficiency grading is shown in Annex3.

9. Energy Label

A self-adhesive label should be used.

Label Location

- 9.1 The label should be affixed to the appliance at a prominent location and should be easily visible. The participant should ensure that the label appears on every registered appliance on display, sale or hire.

Colour Scheme & Dimensions

- 9.2 The label should be printed on white-coloured self-adhesive sheet material and should have dimensions as shown in Annex 4. It should be printed in English and in Chinese. Soft copy of this label can be obtained from Energy Efficiency Office, Electrical and Mechanical Services Department.

Paper Quality

- 9.3 The paper used for the label should be durable and possess good wear and tear characteristics. It should stick tightly on the appliance surface and can be removed easily when needed.

Information on the Label

- 9.4 The information that appears on the label should accord to the label format and meanings as indicated in the Annex 4.

10. Testing Facilities, Laboratories & Accreditation Bodies

- 10.1 The testing is carried out either by independent test institutes or by the manufacturers or by 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 10.2, 10.3 or 10.4.
- 10.2 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 for which

HKAS has concluded a mutual recognition agreement [#], and the results are issued in a test report or certificate bearing the accreditation mark.

10.3 The Authority will also consider the following arrangements:

- (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 been successful in carrying out energy consumption tests on clothes dryers based on IEC 61121 or other internationally recognized clothes dryer standards and where these tests had been evaluated and certified by internationally recognised third party certification organizations.

10.4 The Authority will also consider test results issued by a laboratory which is accredited by HKAS (or is accredited by an accreditation body which has concluded a mutual recognition arrangement with HKAS for testing laboratories) for laboratory testing of electrical and mechanical appliances other than testing based on the technical standards stipulated in this scheme, if the laboratory can demonstrate their capability of carrying out energy consumption tests on clothes dryers based on IEC 61121.

Laboratory Accreditation

10.5 The Government takes cognizance of the need to ensure acceptable and compatible quality standards of testing laboratories, and considers that they need to be accredited by some independent bodies.

10.6 The criteria of accreditation should be based on ISO/IEC 17025 and accreditation bodies should operate in accordance with ISO/IEC Guide 17011.

10.7 The Authority will recognize accreditation granted by the HKAS under the HOKLAS and by overseas schemes which have concluded mutual recognition agreements with HKAS for accreditation of testing laboratories. The Authority will consider accreditation granted by other bodies on a case-by-case basis.

Energy Efficiency Verification Service

10.8 An increasing number of countries now accept, as proof of product conformance, energy efficiency verification services provided by third-party organisation that has been accredited as

a certification organisation. In accordance with this trend, the Authority will consider seriously test results that have been evaluated and verified against the IEC 61121 standard by reputable third-party certification organisations.

*HKAS has concluded mutual recognition arrangements with **fifty-six** overseas accreditation bodies for testing laboratory accreditation, namely, **UKAS** of the United Kingdom, **NATA** of Australia, **AZLA**, **NVLAP** and **IAS** of the United States, **IANZ** of New Zealand, **RvA** of Netherlands, **SAC-SINGLAS** of Singapore, **BMwa** of Austria, **BELTEST** and **BKO/OBE** of Belgium, **DANAK** of Denmark, **FINAS** of Finland, **COFRAC** of France, **DAR-DAP**, **DAR-DATECH**, **DAR-DASMIN**, **DAR-DKD**, and **DAR-DACH** of Germany, **INAB** of Ireland, **SINAL** and **SIT** of Italy; **NA** of Norway,, **ENAC** of Spain, **SWEDAC** of Sweden, **SAS** of Switzerland, **CNAS** of People's Republic of China, **CNLA** of Chinese Taipei, **CAI** of Czech Republic, **INMETRO** of Brazil, **IAJapan**, **JAB** and **VLAC** of Japan, **KOLAS** of Korea, **SANAS** of South Africa, **SCC** of Canada, **NABL** of India, **VILAS/STAMEQ** of Viet Nam, **LA** of Lithuania, **SNAS** of Slovakia, **KAN** of Indonesia, **ISRAC** of Israel, **DSM** of Malaysia; **TISI** of Thailand, **OAA** of Argentina, **ONARC** of Cuba, **NLAB** of Egypt, **EAK** of Estonia, **ESYD** of Greece, **LATAK** of Latvia, **PCA** of Poland, **SNAS** of Slovakia, **SA** of Slovenia, etc. 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.*

11. Registration & Participation

Registration Procedures

- 11.1 All manufacturers, importers and the other parties involved in the appliance distribution network are welcomed and encouraged to participate in the scheme. For some known manufacturers and importers, invitation letters will be issued to them. However, any party may submit their applications for registration no matter whether they are invited or not.
- 11.2 The proforma letter of invitation is shown in Annex 5.
- 11.3 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 this scheme. The proforma letter of application as shown in Annex 6 details the aforesaid obligations and should be used for application. To facilitate the application process, the application form can be downloaded from EMSD website.

Information/Documents to be Submitted for Registration

11.4 Each make and model of an appliance 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, E-mail Address, Contact person, Importer, Distributor etc.
- b) Product to apply for participating in the scheme:
Name of products, types, makes, models, countries of origin
- c) Which parties will be responsible for making and fixing the Energy Label
- d) Commencement date to affix label on appliance
Year____ , Month_____
- e) Completion of the Information stated in the Energy Label for each product including the following:
Brand (English & Chinese)
Model
Country of Origin
Appliance Category
Annual Energy Consumption
Energy Efficiency Grade
Drying Capacity
Water Consumption (if applicable)

f) Supporting Technical Information and Calculations

Test reports: -
Energy Consumption Test*
Performance Tests

Note: All photocopy test reports submitted to the office should be certified true copy by appropriate organization.

(* For test reports which indicate the measured energy consumption is 10% more than the rated value, additional test reports for the same model may be required.)

Calculations:-

Energy Consumption Index
Energy Efficiency Grading

g) Miscellaneous Technical Information:

Product information catalogue
Information of driving motor
Information of the heater
Brand & model of the reference clothes dryer
Others

h) Certificate of Safety Compliance prescribed by the Electrical Products (Safety) Regulation.

Note: Company's name and chop should be stamped on all the documents provided.

The above information can also be found in the Appendix to Annex 5, the proforma letter of invitation.

Acceptance of Registration

11.5 On receipt of the application, the Authority will process the application and verify whether the appliance to be registered falls into the appropriate appliance category, and the energy efficiency grade is correctly obtained based on the submitted data. The accuracy of the energy consumption data and the drying performance, their inconsistencies and non-compliance will be dealt with in accordance with Section 13.2.

11.6 If the application is accepted, the participants will be notified of the result in writing within 17 working days. The participants will then be allowed to affix the energy label onto the

'registered' appliances. Both manufacturer and importer of the registered appliance should ensure that the energy label is correctly printed and affixed on the appliance in accordance with Section 9. The proforma letter of acceptance is shown in Annex 7.

11.7 If the application is rejected, the notification letter as shown in Annex 8 will also be given within 17 working days upon receipt of all necessary information requested.

11.8 The flow chart for registration is shown in Annex 9.

Participant's Duties, Responsibilities and Obligations

11.9 The participant is obliged to:-

- a) submit application and information including test results in accordance with format & procedures set out in section 11.4;
- 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 an appliance is registered;
- e) allow random/ad-hoc inspection to be conducted by persons authorized by the Authority on registered appliance at his premises;
- f) conduct re-test(s) at his 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 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 appliance fails to perform in accordance with the required standard performance as given in Sections 6 & 7 and this cannot be readily rectified, the Authority may order it be de-registered from the scheme; and
- i) remove all labels from appliances which had been de-registered within three months.

11.10 The details of the registered appliances will be kept in a register maintained by the Authority. The registration records will be regularly uploaded and maintained in the EMSD Internet for public and interested parties for access and information.

Termination

11.11 Under circumstances of poor performance such as:

-
- a) (repeated) failure to fulfill obligations set out under section 11.9;
 - b) once false or inaccurate or misleading information is given on a label; or
 - c) in any other case where the Director is of the opinion that registration of an appliance is contrary to the public interest,

the Authority may de-register a registered appliance with immediate effect by giving the participant notice in writing. Once an appliance is de-registered, no one is allowed to fix a label on it. However, participant will normally be given a grace period of three months to remove all labels from the de-registered appliances.

De-registration may occur even when there is no legal action taken under either the Trade Description Ordinance (Cap. 362) or the Copyright Ordinance.

- 11.12 Participant who decides to discontinue participating in the scheme or to withdraw any registered model from the registered appliances list shall give at least three months' advance notice to the Authority.

12. Legal Provisions

- 12.1 This is a voluntary scheme. However, a participant who abuses the scheme by giving false information on a label may contravene provisions of the Trade Description Ordinance (Cap. 362).
- 12.2 No one could take advantage of the scheme by using the label on his appliances without authorization of the Authority as that may constitute an infringement of copyright under the Copyright Ordinance.

13. Compliance Monitoring & Inspection

Purpose

- 13.1 To uphold credibility of the scheme and to maintain continuous confidence of the consumers, compliance check on energy labels on those appliances participating in the scheme are needed. Also to avoid the unsatisfactory situation that the non-participating parties taking

advantage of the scheme by using unauthorized labels, suitable form of inspection on those unregistered appliances will also be required.

Scope

- 13.2 The scope of inspection includes sample **checking** and **testing** the following items:-
- a) whether energy label is in fact placed on the registered appliance;
 - b) whether energy label on the registered appliance is in a prominent position;
 - c) whether energy label being displayed is of correct format in accordance with Section 9;
 - d) whether the information on energy label accords with record;
 - e) whether the registered appliance complies with the energy consumption and performance requirements;
 - f) whether the data submitted by the participants are correct by random re-testing; and
 - g) whether unregistered appliances display unauthorized energy labels.
- 13.3 The participants will be requested to take immediate remedial action and report the follow-up action taken if non-compliance is found on their appliances.
- 13.4 For a registered appliance which is found giving wrong energy performance data on the label during random checking, the Authority may request the participant to conduct separate energy consumption test at his own cost, in accordance with the test methodology as stated in Section 7 in one of the testing laboratories agreed by the Authority. In case the energy grading is found lower than the declared energy grading in 2 levels different or more, the test should be carried out further on at least three similar appliances. The energy grading from the average of these three appliances should be the same as the declared grading level. Otherwise, the Authority will require the participant to take appropriate remedial action including replacing a label with correct value for the registered appliance.
- 13.5 If a registered appliance carrying correct information energy label but found not meeting the performance test specified in accordance with the performance tests stipulated in the agreed standards as stated in Section 7, the participant will also be requested to repeat the performance tests by an agreed testing laboratory. If significant sub-standard performance is found on the appliance and this cannot be readily rectified, the Authority may order it be de-registered from the scheme. Failure to remove labels from the de-registered appliances after the Director has withheld his authorization for using such labels may contravene the relevant ordinances.

Inspecting Officers

- 13.6 The Authority will authorize inspecting officers to carry out appliances compliance monitoring and inspection. The officers will carry proper identification cards which will be produced on request during their inspection operations. However, the officer will not inform the participants in advance of their intended inspection operation.
- 13.7 It is the participants' duty to allow the inspecting officers to gain access to their premises to carry out inspection.

Mode of Inspection

- 13.8 Inspections will be carried out on registered appliances on random basis. Based on the record of the registration, random inspection programmes will be developed. Initially, at least one specimen of each type of registered appliance will be randomly checked or tested once every year depending on availability of resource and the number of registered appliances.
- 13.9 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 Section 13.2.
- 13.10 Inspections will normally be carried out at the retail outlets and appliances showrooms. Where necessary, inspection will also be done at warehouses.
- 13.11 The inspection results will be properly recorded for future analysis as well as on evaluation of the effectiveness of the scheme.

14. Complaints and Appeal

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

Complaints Handling Procedure

14.2 The Director shall ensure that complaints are properly recorded and handled without undue delay.

14.3 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.

14.4 The Authority shall inform the complainant of the results or decisions made on the complaint.

Appeal Procedure

14.5 A participant who is aggrieved by a decision or action taken by the Authority may appeal to the Director in writing stating the reason for the appeal.

14.6 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.

14.7 The Director may by notice to the appellant require the appellant to attend before him or his representatives and provide documents and give evidence relevant to the appeal.

14.8 The Director shall notify the appellant of his decision and reasons for it. The decision will be final and binding.

15. Maintenance of Scheme

15.1 To ensure that the scheme can continue to operate effectively and efficiently after its introduction, a proper system of maintenance is needed.

15.2 The maintenance system consists essentially of:

-
- a) Continuous updating of the lists of participants in the scheme as follows:
 - i) Registered appliances with details 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) Registered importers, manufacturers, local agents etc. in the distribution network with details such as address, date of registration or de-registration if it occurs, etc.
 - b) Periodic review of the test methodology, and procedures for application 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.

16. Future Development

- 16.1 It is hoped that following implementation, the market will phase out models of low efficiency and public awareness of using energy efficient products and energy conservation will be much improved.
- 16.2 To further facilitate the public in choosing energy efficient appliances and raise public awareness on energy saving, the Government has introduced a mandatory Energy Efficiency Labelling Scheme (EELS) through the Energy Efficiency (Labelling of Products) Ordinance which was gazetted on 9 May 2008.
- 16.3 Under the mandatory EELS, energy labels are required to be shown on prescribed products for supply in Hong Kong to inform consumers of their energy efficiency performance. Three types of prescribed products covered in the first phase of the mandatory EELS are room air conditioners, refrigerating appliances and compact fluorescent lamps.

Test Guidelines

For Clothes Dryers:

Condensed Test Requirements
in relation to the IEC 61121 Standard

- Note -

This annex serves to act as brief and quick reference to allow the reader to grasp - in the context of energy labelling test requirements - the essence of the IEC standard. It focuses on the measurement of energy consumption and other related performance aspects. The reader should be able to obtain from the text a good appreciation of the test requirements. On the other hand, the original Standard is much more comprehensive and detailed and contains exact definitions. Due to condensed size, this document cannot replace the original Standard nor is there any intention to do so. In case of doubt, the original Standard should always be consulted.

Section I of this annex gives an outline of the measurement conditions and test requirements. Energy consumption measurement and other performance aspects as prescribed in the proposed energy labelling scheme are elaborated in Section II.

Section I - Measurement Conditions and Test Requirements

General Conditions for Measurements

A.1 General

- A.1.1 The measurements shall be carried out on a clothes dryer installed and used in accordance with the manufacturer's instructions.
- A.1.2 Where the clothes dryer is intended for use without a duct (i.e. the clothes dryer is intended to be vented into the room), the clothes dryer shall be tested as supplied without a duct.
- A.1.3 Where the clothes dryer is intended for use with a duct and the duct is supplied with the clothes dryer (i.e. not as a separate accessory), the clothes dryer is tested with this duct, placed in the most onerous installation suggested by the manufacturer's instructions.
- A.1.4 Where the clothes dryer is intended for use with a duct and the duct is not supplied with the clothes dryer, the clothes dryer shall be tested with the IEC duct specified in Annex A of the IEC 61121 standard.
- A.1.5 Where a manufacturer gives the option to use the clothes dryer both with and without a duct, the preferred option is tested. If there is no preferred option stated, the clothes dryer is tested without a duct.
- A.1.6 The test report shall clearly state which duct configuration, if any, is used in each test.
- A.1.7 All tests shall be started with the clothes dryer at (20 ± 5) °C, measured on the inside of the drum. Alternatively subsequent tests may be started if a period of at least 2 hours has elapsed.

A.2 Electrical Supply

- A.2.1 The supply voltage shall be maintained at 220 Volt ± 2 % throughout the test.
- A.2.2 The supply frequency shall be maintained at 50Hz ± 1 % throughout the test.

A.3 Water supply

- A.3.1 A water hardness of (2.5 ± 0.2) mmol/l shall be used for all programmes. If water hardness needs to be adjusted, it shall be prepared according to IEC 60734 - Method B.
- A.3.2 The temperature of the cold water supply shall be (15 ± 2) °C.
- A.3.3 The measured water temperature for each operation shall be recorded.
- A.3.4 The dynamic pressure of the water supply at each water inlet shall be maintained at (240 ± 50) kPa throughout the test. The measured water pressure shall be recorded

A.4 Ambient temperature

A.4.1. The ambient temperature of the room shall be maintained at (20 ± 2) °C throughout the test. The measured ambient temperature shall be recorded.

A.5 Ambient humidity

A.5.1 The ambient humidity of the room shall be maintained at (65 ± 5) % throughout the test. The measured ambient humidity shall be recorded.

A.6 Rated Capacity

A.6.1 Maximum mass of dry textiles which the manufacturer declares can be treated in a specific programme.

A.6.2 If the rated capacity is not declared by the manufacturer, the rated capacity shall be deduced from the volume of the drum according to the following ratios:

- (a) for cotton textiles: 1 kg / 24 l;
- (b) for easy-care textiles: 1 kg /60 l.

A.6.3 Where the manufacturer gives a range for the rated capacity, for example 4.5 kg - 5 kg, maximum value shall be used.

A.6.4 The volume of the drum is determined as the inside volume of the drum, in litres, in which the textiles are placed, after subtraction of ribs or other inward protrusions, etc.

Base Load

A.7 Cotton base load

A.7.1 The cotton base load shall consist of sheets, pillowcases and hand-towels conforming to the following specifications. The values below are for new (unwashed) textiles.

A.7.2 Sheets and pillowcases:

- (a) Bleached cotton 1/1 plain weave
- (b) Mass per unit area (185 ± 10) g/m² (of finished fabric)
- (c) Warp (23 ± 1) threads/cm of (36 ± 1) tex
- (d) Weft (23 ± 1) threads/cm of (36 ± 1) tex
- (e) Sheet size $(1\ 500\ \text{mm} \times 2\ 600\ \text{mm}) \pm 2\ \%$

A.7.3 Pillowcase size Pieces of $(1\ 600\ \text{mm} \times 800\ \text{mm}) \pm 2\ \%$ folded in half and sewn along the three open edges thus forming double thickness (finished size of 800 mm x 800 mm, approximately).

A.7.4 Hand-towels:

- (a) Bleached cotton weave-huckaback

- (b) Mass per unit area: (230 ± 12) g/m² (of finished fabric)
- (c) Warp: (19 ± 1) threads/cm of (36 ± 1) tex
- (d) Weft: (13 ± 1) threads/cm of (90 ± 1) tex
- (e) Size: $(1\,000\text{ mm} \times 460\text{ mm}) \pm 2\%$

A.7.5 The number of sheets, pillowcases and hand-towels in the cotton base load for various rated capacities is given in table A1.

Table A1 - Number of items of cotton base load for various rated capacities

Rated capacity kg	Number of sheet	Number of pillowcases	Number of hand-towels
2	1	2	Number required to make up rated capacity
2.5	1	3	
3	1	4	
3.5	2	3	
4	2	4	
4.5	2	6	
5	2	6	
5.5	2	8	
6	2	8	
6.5	2	10	
7	2	12	
7.5	3	12	
8	3	14	
8.5	3	16	
9	3	18	
9.5	3	20	
10	3	22	

A.7.6 An item shall not be used more than 80 drying cycles. To minimize the influence of aging of the textiles, half the base load shall consist of items used less than 40 times and the remainder used more than 40 times.

Preparation of the Base Load

A.8 Preparation of textiles

A.8.1 New base load items shall be pre-treated to avoid a rapid change of weight during a test series. Prior to their first use, items shall be normalized five times according to section A.9 followed by conditioning according to section A.10.

A.8.2 After every 10 test cycles, the base load shall be normalized once according to section A.9 followed by conditioning according to section A.10.

A.9 Normalization of Textiles

A.9.1 Wash the textiles in a household washing machine with 30 g/kg of the reference detergent A in IEC 60456.

A.9.2 For cotton textiles, use a 60°C cotton programme without prewash but including rinsing and spinning and then dry to a final moisture content of about 0 % in a clothes dryer.

A.10 Conditioning of Textiles

A.10.1 The textiles are left for 24 hours, exposed to an ambient temperature and humidity as specified in section A.4 and section A.5, or subjected to the bone-dry method of Annex B of the IEC 61121 standard.

A.10.2 If the bone-dry method is used, it shall be reported.

A.11 Instrumentation and accuracy

A.11.1 Instruments fulfilling the following requirements shall be used for tests.

A.12 Mass

A.12.1 Measurements shall be accurate to ± 0.1 %.

A.13 Water and air temperature

A.13.1 Measurements shall be accurate to ± 1 K.

A.14 Water volume

A.14.1 Measurements shall be accurate to ± 1 %.

A.14.2 Devices using viscosity should be calibrated at the actual nominal temperature ± 5 K, and the nominal flow rate.

A.15 Water pressure

A.15.1 Measurements shall be accurate to ± 5 %.

A.16 Water hardness

A.16.1. Measurements shall be accurate to ± 0.1 mmol/l.

A.17 Electrical energy

A.17.1 Measurements shall be made with instrumentation having less than 10 W zero point inaccuracy, and provide less than 2 % inaccuracy of the highest nominal value according to rated input power data specified by the manufacturer.

A.18 Time

A.18.1 Measurements shall be accurate to ± 5 s.

A.19 Ambient humidity

A.19.1 Measurements of relative humidity shall be accurate to within ± 3 %, over the temperature range (15 - 25) °C.

Section II - Energy Consumption Measurement and Other Performance Measurements

List of Symbols

μ_f	actual final moisture content of the base load (%)
μ_{fo}	nominal final moisture content (%) given in table A3, without tolerances
μ_{fi}	actual final moisture content of the base load after the i:th cycle (%)
μ_{fj}	actual final moisture content of the j:th individual piece of textile in a cycle (%)
μ_i	actual initial moisture content (%)
μ_{io}	nominal initial moisture content (%) given in table A2, without tolerances
μ	arithmetical average of μ_f for all i cycles
C	condensation efficiency (%)
E_m	measured energy consumption kWh
E	nominal energy consumption kWh (corrected from the measured value)
L_m	measured water consumption (l)
L	nominal water consumption (l) (corrected from the measured value)
S_b	standard deviation as a measure of the reliability between cycles in one test series
S_{wr}	standard deviation for the evenness of drying within a load
W	rated capacity for the programme (g)
W_o	conditioned mass of the base load (g)
W_f	mass of the base load after drying, "the final mass"
W_i	mass of the base load after wetting (but before drying), "the initial mass"
W_w	mass of the condensed water
t_m	measured programme time

Testing Procedure

A.20 Drying Programmes

A.20.1 Two different programmes are tested:

- (a) Dry cotton programme (dried down to conditioned mass), with cotton base load;
- (b) Iron-dry cotton programme (dried ready for ironing) with cotton base load;

A.20.2 Before every test, the base load shall be conditioned in accordance with section A.10. Before conditioning, where necessary, the base load shall also be prepared or normalized in accordance with section A.8 or section A.9.

A.20.3 The base load shall be made up of conditioned items whose mass is as close as possible to W -- this mass is recorded as W_o . After wetting and spinning, the base load is taken out and weighed. The moisture content of the wet base load μ_i is calculated as $100 \times (W_i - W_o) / W_o$. Water is then added (by means of a fine spray) or removed (by further spinning), as necessary, so that the initial moisture content of the base load lies within the allowable range specified in table A2. This initial wet mass is recorded as W_i .

Table A2 - Specifications for initial moisture content of the base load

Programme	Nominal initial moisture content μ_{i0}	Allowable range for content initial moisture content μ_{i0}
Dry cotton	70	69 to 71
Iron dry cotton	70	69 to 71

A.20.4 Standing time for the prepared base load before a drying test shall not exceed 30 min.

A.20.5 The base load is put into the clothes dryer.

A.20.6 For automatic clothes dryers the programme under test is selected and the clothes dryer is started. For non-automatic clothes dryers the aim is to obtain the same final moisture values given in table A3. The time required for this is determined by monitoring the drying process. This can be done by either having the clothes dryer placed on a platform scale or by pre-testing.

Table A3 - Specification for final moisture content of the base load after drying

Programme	Nominal final moisture content (μ_{f0})	Allowable range for final moisture content (μ_{f0})
Dry cotton	0	-3 to +3
Iron dry cotton	+12	+8 to +16

A.20.7 The nominal amount of water to evaporate for the programmes tested is derived from the rated capacity and the initial and nominal final moisture content according to tables A2 and A3, without tolerances.

A.20.8 The programme time, which is the actual time of operation for an automatic or non-automatic clothes dryer, shall be reported, including the cool down period. If the clothes dryer has no cool down period, it shall be reported.

A.20.9 When the programme has terminated and the clothes dryer has stopped, the base load is then removed within 5 min and immediately weighed. The base load weight is recorded as W_f . The amount of evaporated water in the test is $W_i - W_f$.

A.20.10 The actual moisture content is calculated as $\mu_f = \frac{W_f - W_o}{W_o} \times 100$

A.20.11 If μ_f is within the allowable range specified in table A3, the test cycle is valid and the data can be used for further evaluations. If μ_f is not within the limits, the data shall not be used for evaluation. Such a test cycle can be considered to be a trial or pre-testing cycle.

A.20.12 The minimum number of valid cycles for each test programme shall be **five**.

Measurement of Energy Consumption

A.21 The objective of this measurement is to determine the electrical energy consumed by the clothes dryer during the dry cotton programme (dried down to conditioned mass), with cotton base load. The energy consumption in kWh is measured for each test cycle, and the arithmetic mean of the values measured is calculated.

A.22 The electrical energy consumption measured in section A.20 is corrected by the following formula to give the nominal energy consumption corresponding to the nominal final moisture content, μ_{fo} .

$$E = E_m \frac{(\mu_{io} - \mu_{fo})W}{(\mu_i - \mu_f)W_o}$$

If the measured values of the final moisture content are below the lower limit of the allowable values defined in table A3, no correction is made.

Other Performance Measurements

A.23 Condensation Efficiency

A.23.1 The condensation efficiency for a **condenser clothes dryer** shall be measured using the **dry cotton programme**.

A.23.2 The mass of the empty condensation box and base load are measured immediately before and after the test cycle. Efficiency of condensation is the mean value of a minimum of 10 valid cycles. During the time between two cycles the door of the clothes dryer shall be closed.

A.23.3 It is also possible to weigh the total clothes dryer if it is placed on a scale platform. The mass of the clothes dryer without base load is measured immediately before and after the test cycle. Because this way of testing eliminates several influences of accuracy it is possible to determine efficiency of condensation as mean value with a minimum of five valid cycles.

A.23.4 The mass W_w of the condensed water is determined from the initial and final weight of the condensation box. Efficiency of condensation, C , is the percentage of the ratio between the water found in the condensation box or clothes dryer without a load relative to the mass of water evaporated from the base load.

$$C = \frac{W_w}{W_i - W_f} \times 100 \text{ is calculated.}$$

A.23.5 The C-values for all test cycles are then averaged to give the mean C-value. However the first cycle of each day shall be discarded. During the period between test cycles the door of the clothes dryer shall remain closed.

A.24 Drying Evenness

A.24.1 The drying evenness shall be tested using the **iron-dry cotton programme**.

A.24.2 Each individual piece is weighed before and after drying to determine its moisture content.

A.24.3 When drying evenness is to be tested, each individual piece of the base load is marked. The individual weight of each piece is measured and recorded.

A.24.4 For each individual piece the weights corresponding to W_f and W_o are used to calculate individual values of μ_f for each individual piece. The standard deviation S_{wr} between these values is calculated as a measure for the evenness of drying of the base load.

$$S_{wr} = \sqrt{\frac{1}{k} \sum_{j=1}^k (\mu_{fj} - \bar{\mu}_{fj})^2}$$

where

$$\bar{\mu}_{fj} = \frac{1}{k} \sum_{j=1}^k \mu_{fj}$$

A.24.5 The value μ_f is the average final moisture content of the whole base load, not the average final moisture content readings for the individual items.

A.24.6 The drying evenness S_w is defined as the mean of the values of S_{wr} for each of the cycles performed.

A.25 Programme Time

A.25.1 The programme time measured in section A.20.8 for each cycle of each test programme is corrected by the following formula to give the nominal programme time corresponding to the nominal final moisture content, μ_{fo} .

$$t = t_m \frac{(\mu_{io} - \bar{\mu}_{fo})W}{(\mu_i - \mu_f)W_o}$$

A.25.2 For each programme, those nominal programme times are then averaged to give the mean programme time.

A.26 Water Consumption

A.26.1 If the clothes dryer is equipped with means for connections to mains water supply, the water consumption, if any, shall be measured during the tests specified in section A.20 and reported.

A.26.2 The water consumption measured for each cycle of each programme is corrected by the following formula to give the nominal water consumption corresponding to the nominal final moisture content, μ_{f0} .

$$L = L_m \frac{(\mu_{i0} - \mu_{f0})W}{(\mu_i - \mu_f)W_o}$$

A.26.3 For each programme, those nominal water consumption values are then averaged to give the mean value of water consumption.

Test Report

A.27 General Information

A.27.1 As a minimum, test report shall contain the following general information:-

- (a) date;
- (b) test institute;
- (c) test location;
- (d) test supervisor;
- (e) test objective;
- (f) test conditions;
- (g) test procedure;
- (h) reference to this International Standard.

A.28 Additional Information

A.28.1 The information given on the nameplate should be noted on the test report.

A.29 Test Results

A.29.1 The following data measurements for the clothes dryer and programmes tested shall be rounded and reported, as follows:-

- (a) rated capacity used for the measurements to the nearest 0.1 kg;
- (b) actual final moisture content to the nearest %;
- (c) nominal electric energy consumption in kWh, kWh per kilogram rated capacity and in kWh per nominal litre of evaporated water, to two decimal places;
- (d) nominal water consumption to the nearest litre for the rated capacity, and in litre per kilogram rated capacity and per nominal litre of evaporated water;
- (e) where applicable, condensation efficiency to the nearest %;
- (f) drying evenness to the nearest %;
- (g) nominal programme time to the nearest min, for the rated capacity, and in minutes per kilogram rated capacity and in minutes per nominal litre of evaporated water.

Example for Calculating the Energy Efficiency Grade

The given appliance is of Category 1 (i.e. Air-vented type tumble dryer with automatic stoppage function)

The following data are measured according to the recommended standard:

Rated drying capacity (C)	5 kg
Energy consumption (E)	3.5 kWh/cycle
Specific energy consumption (E_{sp}) = E / C	0.7 kWh/kg/cycle

The **Average Specific Energy Consumption** for Category 1 appliance as obtained from Table 2 in section 7 is 0.81 kWh/kg/cycle: -

$$E_{av} = 0.81 \text{ kWh/kg/cycle}$$

Energy Efficiency Index of the appliance $I \varepsilon = \frac{\text{Specific Energy Consumption}}{\text{Average Specific Energy Consumption}}$

$$I \varepsilon = \frac{E_{sp}}{E_{av}}$$

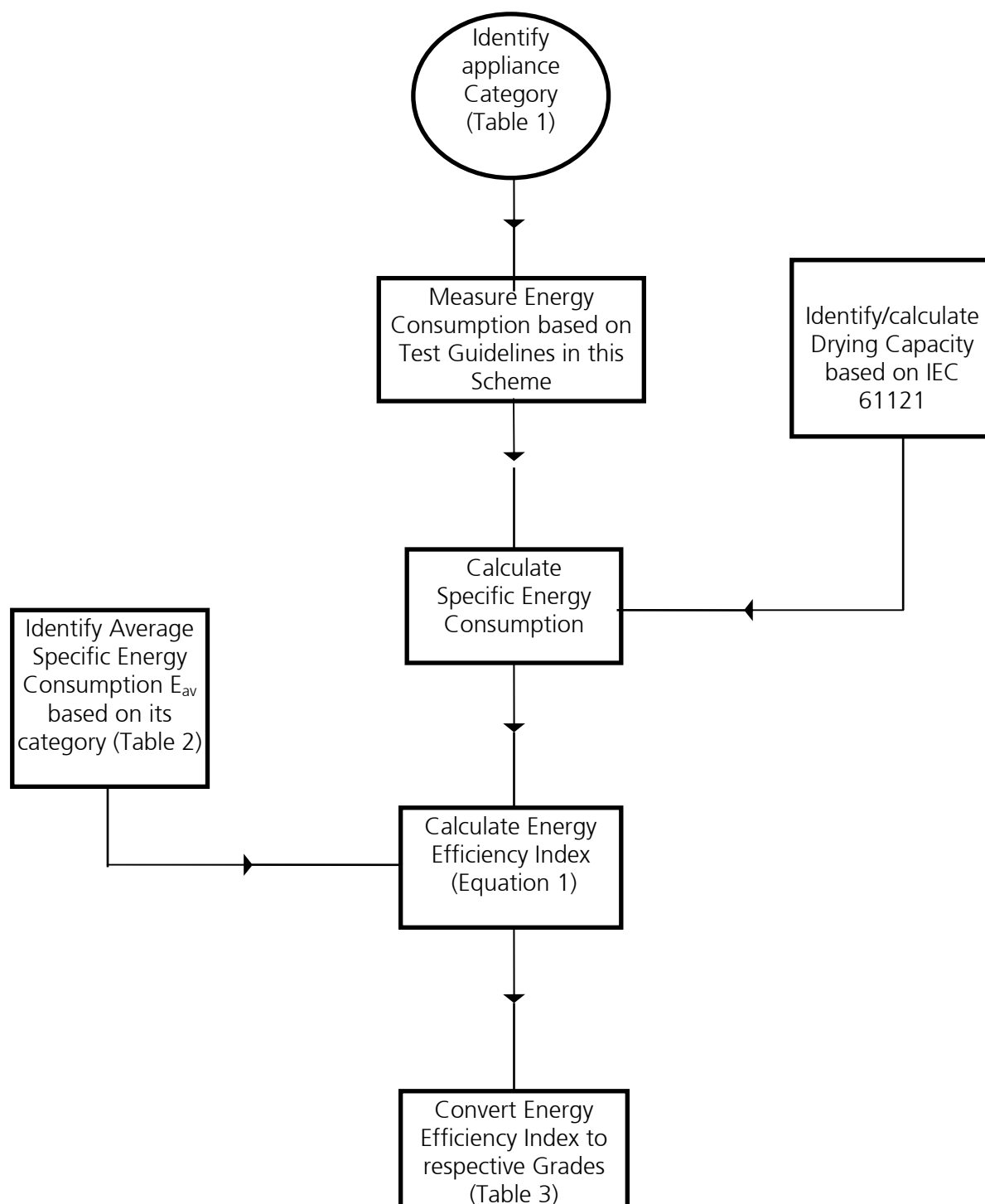
$$I \varepsilon = \frac{0.7}{0.81}$$

$$I \varepsilon = 86.4 \%$$

$$80\% < I \varepsilon \leq 95 \%$$

The value of energy efficiency index of the appliance is 86.4% which is higher than 80% but less than 95%. According to Table 3 in section 8, it should be rated as **Grade 2** appliance.

Flow Chart for Developing the Appliance Energy Efficiency Grade



Energy Label Format

100 mm

ENERGY LABEL

能源標籤

Brand 牌子	ABC
Model 型號	某某牌 HK1234
Annual Energy Consumption * kWh/yr 每年耗電量 每年耗小時 <small>Actual consumption depends on where the appliance is located and how it is used. Based on 260 drying cycles per year. 其耗電量視乎乾衣機的安裝地點及使用方式。現假設每年乾衣260次。</small>	1063
Energy Efficiency Grade* 能源效益級別 <small>Among the five grades, Grade 1 is the most energy efficient. 在五級別中，第一級最為省電。</small>	1
Clothes Dryer Category * 乾衣機類別	3
Drying Capacity (kg) 乾衣量 (公斤)	5
Water Consumption (litre) 耗水量 (公升)	10
EEL Registration Number 能源標籤登記號碼	D 99-0001

* The data are provided according to the Hong Kong Energy Efficiency Labelling Scheme for Electric Clothes Dryers administered by the Electrical and Mechanical Services Department (EMSD), Government of the Hong Kong Special Administrative Region. The registration record can be found at the EMSD website at www.emsd.gov.hk.

資料根據香港特別行政區政府機電工程署推行的香港電乾衣機能源效益標籤計劃的規定列出。有關註冊記錄可查閱網址 www.emsd.gov.hk。

機電工程署
EMSD

150 mm

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

Proforma letter of Invitation

Our ref. () in EEO/LB/14
Your ref.

Tel:
Fax.

Date
[Name and Address of
Manufacturers/Importers/Agents]

Dear Sir/Madam,

Invitation of application for registration to participate in Voluntary Energy Efficiency Labelling Scheme for Electric Clothes Dryers

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 electric clothes dryers to Hong Kong with effect from (_____). The details of the scheme^① have been finalized and I enclose herewith a guide of the scheme* for your reference.

Being one of the major electric clothes dryer 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 6) and submit details including technical information in accordance with the attached **Appendix to this letter** 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 electric clothes dryer is found to be non-compliant, we may consider deregistering the electric clothes dryer 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 Electric Clothes Dryer'
^② *delete as appropriate*)

Information to be submitted to Energy Efficiency Office

1. Information on the company
 - Name, Address, Telephone number, Fax, E-mail Address, Contact person, Importer, Distributor etc.

2. Product to apply for participating in the scheme:
 - Name of products, types, makes, models, countries of origin

3. Which parties will be responsible for making and fixing the Energy Label

4. Commencement date to affix label on appliance
 - Year____ , Month_____

5. Completion of the Information stated in the Energy Label for each product including the following:
 - Brand & Model
 - Countries of origin
 - Appliance category
 - Annual energy consumption
 - Energy efficiency grading
 - Drying capacity
 - Water consumption

6. Supporting Technical Information and Calculations:
 - Test reports : - Energy Consumption Test
 Performance Tests

[All test reports submitted to the office should be certified true copy by appropriate organization.]

(* For test reports which indicate the measured energy consumption is 10% more than the rated value, additional test reports for the same model may be required.)

 - Calculations: - Specific energy consumption
 Drying capacity, if by calculation
 Energy consumption index
 Energy efficiency grading

7. Miscellaneous Technical Information:
 - Product information catalogue
 - Information of driving motor and heater
 - Others

8. Certificate of Safety Compliance prescribed by the Electrical Products (Safety) Regulation.

Note: Company's name and chop should be stamped on the all documents provided.

Proforma Letter of Application

Your ref. () in EEO/LB/14
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 to Participate in Voluntary Energy Efficiency Labelling Scheme for Electric Clothes Dryers

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 appliance 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 of 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 appliance fails to perform in accordance with the required energy efficiency standards and performance as given in Section 7 and this cannot be readily rectified, the Authority may order it be de-registered from the scheme.

The details of information of those appliances which we intend to register with the Authority are shown in the attached document, (Appendix to Annex 5) and are submitted herewith for your vetting.

Yours faithfully,

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

* *delete as appropriate*

Proforma letter of Acceptance

Our ref. () in EEO/LB/14
Your ref.

Tel:
Fax:

Date

[Manufacturers/Importers/Agents

]

Dear Sir/Madam,

Acceptance of Application for Registration to Participate in Voluntary Energy Efficiency Labelling Scheme for Electric Clothes Dryers

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

I enclose herewith the registration certificates of appliances registered. The registered appliances are as follows:

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

You are allowed to affix a specified label onto each and every appliance registered under the scheme. The contents of the label should be based on the information that you have provided in the 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. () in EEO/LB/14
Your ref.

Tel:
Fax:

Date

[Manufacturers/Importers/Agents

]

Dear Sir/Madam,

Rejection of Application for Registration to Participate in Voluntary Energy Efficiency Labelling Scheme for Electric Clothes Dryers

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

1. _____, 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

Flow Chart for Registration

