The Hong Kong Voluntary Energy Efficiency Labelling Scheme for

Printers
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Energy Efficiency EMSD

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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 Printers (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 appliances/ 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 appliances/ gas appliances and office equipment. Amongst them, 13 types are household 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 printers who are interested to or have participated in the Scheme.

3.2 The Scheme commenced on 30 December 2002. It is further revised on 1 January 2024. The existing and newly registered labels will remain valid till 31 December 2026. By then, renew of the application may be required subject to the review of the Scheme.

Remarks: The scheme will be under review with respect to the latest international/ national standards.

3.3 Unless the Director provides otherwise, the Scheme applies to products which are defined and specified below.

a) all electrically operated black-and-white (B&W) or colour printers that are capable of receiving information from single-user or networked computers and serve as hard copy output devices for production of A4-sized copies; and

b) printers designed to handle multi-sized papers including A4-sized paper can also be qualified under this scheme provided that they can comply with the energy efficiency requirements for A4-sized paper.

3.4 The scope of the Scheme covers all new printers which are to be sold, 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 use, under trans-shipment or manufactured for export, etc.

3.5 The Scheme is operated as a **'Recognition Type'** labelling system. All participating printers will be recognised and registered under this Scheme provided that they have met the energy efficiency and performance requirements as stipulated in the Scheme.

4. Definitions

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

A4-sized paper	means paper measured 210 mm x 297 mm in dimensions.
accessory	means a piece of additional equipment that is not necessary for the standard operation of the base unit, but that may be added before or after shipment in order to enhance or change the printer's performance. Any accessories fitted to the printer shall not impede the normal operation of energy saving features such as "Sleep" mode, etc.
"Active" mode	means the power state in which the product is connected to a power source and is actively producing output, as well as performing any of its other primary functions.
Authority	means the Electrical & Mechanical Services Department (EMSD), the Government of the HKSAR.
automatic duplexing	means the capability of a printer to automatically produce images on both sides of an output sheet (paper), without manual manipulation of output as an intermediate step. Examples of this are one-sided to two-sided copying and two-sided to two-sided copying. A product is considered to have automatic duplexing capability only if the model includes all accessories needed to satisfy the above conditions
base unit	means the most basic version of a printer for a given product speed that is actually sold as a fully operational model. The base unit can be designed and shipped in a single piece or as a combination of functionally integrated components. The base unit does not include any external power- consuming accessories that may be sold separately.
default time	means the time period set by the manufacturer prior to shipping that determines when the printer will enter a low-power modes (e.g. the "Sleep" mode and "Off" mode) following completion of its primary function.
digital front-end (DFE)	means a functionally-integrated server that hosts other computers and applications and acts as an interface to the printer. A DFE provides greater functionality to the printer. A DFE will be defined as either:

Type 1 DFE: A DFE that draws its DC power from its own AC power supply (internal or external) which is separate from the power supply that powers the printer. This DFE may draw its AC power directly from a wall outlet, or it may draw it from the AC power associated with the printer's internal power supply.

Type 2 DFE: A DFE that draws its DC power from the same power supply as the printer with which it operates. Type 2 DFEs must have a board or assembly with a separate processing unit that is capable of initiating activity over the network and can be physically removed, isolated, or disabled using common engineering practices to allow power measurements to be made.

A DFE also offer at least three of the following advanced features:

(a) Network connectivity in various environments;

(b) Mailbox functionality;

(c) Job queue management;

(d) Machine management (e.g. waking the imaging equipment from a reduced power state);

(e) Advanced graphic user-interface;

(f) Ability to initiate communication with other host servers and client computers (e.g. scanning to email, polling remote mailboxes for jobs); or

(g) Ability to post-process pages (e.g. reformatting pages prior to printing).

Director — means the Director of Electrical & Mechanical Services Department.

direct thermal (DT) — means a marking technology that transfers an image by burning dots onto coated media as it passes over a heated print head. DT products do not use ribbons.

dye sublimation (DS) — means a marking technology where images are formed by depositing (subliming) dye onto the print media based upon the amount of energy delivered by the heating elements.

electro–photography (EP)	means a marking technology characterized by illumination of a photoconductor in a pattern representing the desired hard copy image via a light source, development of the image with particles of toner using the latent image on the photoconductor to define the presence or absence of toner at a given location, transfer of the toner to the final hard copy medium, and fusing to cause the desired hard copy to become durable. Types of EP include Laser, LED, and LCD. Colour EP is distinguished from monochrome EP in that toners of at least three different colours are available in a given product at one time. Two types of colour EP technology are: a. Parallel Colour EP – A marking technology that uses multiple light sources and multiple photoconductors to increase the maximum colour printing speed. b. Serial Colour EP – A marking technology that uses a single photoconductor in a serial fashion and one or multiple light sources to achieve the multi-colour hard copy output.
Government	means the Government of the HKSAR.
high performance ink jet (IJ)	means the use of an IJ marking technology in high – performance business applications usually occupied by EP marking technology. This difference between the conventional IJ product and the High Performance IJ product is denoted by the presence of nozzle arrays that span the width of a page and/or the ability to dry the ink on the media through additional media heating mechanisms.
IEC	means International Electrotechnical Commission.
impact	means a marking technology characterized by formation of the desired hard copy image by transferring colorant from "ribbon" to media via an impact process. Two types of impact technology are DOT Formed Impact and Fully-formed Impact.

ink jet (IJ)	means a marking technology where images are formed by depositing colorant in small drops directly to the print media in a matrix manner. Colour IJ is distinguished from monochrome IJ in that more than one colorant is available in a product at any one time. Typical types of IJ include Piezo-electric (PE) IJ, IJ Sublimation, and Thermal IJ.
inspecting officer	means the officer authorized by the Director to carry out inspection on printers under this Scheme.
ISO	means the International Organization for Standardization
label	means the energy label as described in Section 7 of this document.
mains electricity	means the electricity that is supplied in Hong Kong at a voltage of 380/220V with a frequency of 50 Hz
media format	Large Format : Products designed for A2 media and larger, including those designed to accommodate continuous-form media greater than or equal to 406 mm wide. Large-format products may also be capable of printing on standard-size or small-format media. Standard Format : Products designed for standard-sized media (e.g., Letter, Legal, Ledger, A3, A4, B4), including those designed to accommodate continuous-form media between 210 mm and 406 mm wide. Standard-size products may also be capable of printing on small-format media. Small Format : Products designed for media sizes smaller than those defined as Standard (e.g., A6, 4"x6", microfilm), including those designed to accommodate continuous-form media less than 210 mm wide.
model	means the commercial description of the make, type, and if available and appropriate, variant and version of a printer.
"Off" Mode	means the power state that the product enters when it has been manually or automatically switched off but is still plugged in and connected to the mains. This mode is exited when stimulated by an input, such as a manual

	power switch or clock timer to bring the unit into "Ready" Mode. When this state is resultant from a manual intervention by a user, it is often referred to as Manual Off, and when it is resultant from an automatic or predetermined stimulus (e.g., a delay time or clock), it is often referred to as Auto-off
participants	means the manufacturers, importers or the retailers of printers who are participating in the Scheme.
printer	means an imaging equipment that serves as a hard copy output device and is capable of receiving information from single-user or networked computers, or other input devices (e.g. digital cameras). The unit must be capable of being powered from a wall outlet or from a data or network connection.
product speed	means, standard-sized products (a single A4 or 8.5"x11" sheet) printed/copied/scanned on one side in a minute is equal to one image-per-minute (ipm). If the maximum claimed speeds differ when producing images on a single A4 or 8.5"x11" paper, the higher speed shall be used. ◆ For Small-format products, a single A6 of 4"x6" sheet printed/copied/scanned on one side in a minute is equal to 0.25 ipm. ◆ For Large-format products, a single A2 is equivalent to 4 ipm and one A0 sheet is equivalent to 16 ipm. ◆ For continuous-form products categorized as Small-format, Large-format, or Standard-size, print speed in ipm should be obtained from the product's maximum marketed imaging speed in meters per minute according to conversion below: *X ipm = 16 x [Maximum media width(meters) x Maximum imaging speed (length, meters/minute)]* In all cases, the converted speed in ipm should be rounded to nearest integer.

rated frequency	means the frequency marked on the nameplate or declared as such by the participants for the MFDs.
rated voltage	means the voltage marked on the nameplate or declared as such by the participants for the MFDs.
"Ready" mode	means the condition that exists when the product is not producing output, has reached operating conditions, has not yet entered into any lower-power modes, and can enter "Active" mode with minimal delay. All product features can be enabled in this mode, and the product must be able to return to "Active" mode by responding to any potential input options designed into the product. Potential inputs include external electrical stimulus (e.g., network stimulus, fax call, or remote control) and direct physical intervention (e.g., activating a physical switch or button).
recognized laboratory	means a laboratory that complies with the requirements as stated in Section 8 of this document and is acceptable to the Authority for carrying out tests and issuing test reports for printers.
"Sleep" mode	means the reduced power state that the product enters automatically after a period of inactivity. In addition to entering "Sleep" mode automatically, the product may also enter this mode – 1) at a user set time-of-day, 2) immediately in response to user manual action, without actually turning off, or 3) through other,

automatically-achieved ways that are related to user behaviour. All product features can be enabled in this mode and the product must be able to enter "Active" Mode by responding to any potential input options designed into the product; however, there may be a delay. Potential inputs include external electrical stimulus (e.g., network stimulus, fax call, remote control) and direct physical intervention (e.g., activating a physical switch or button). The product must maintain network connectivity while in "Sleep" mode, waking up only as necessary.

solid Ink (SI)	means a marking technology where the ink is solid at room temperature and liquid when heated to the jetting temperature. Transfer to the media can be direct, but is most often made to an intermediate drum or belt and then offset printed to the media.
"Standby" mode	means the lowest power consumption mode which cannot be switched off (influenced) by the user and that may persist for an indefinite time when the product is connected to the main electricity supply and used in accordance with the manufacturer's instructions (Reference is drawn to IEC62301:2005 for measurement of standby power.). "Standby" mode is the product's minimum power mode.
stencil	means a marking technology that transfers images onto the print media from a stencil that is fitted around an ink drum.
test image	means a test image is Test Pattern A from ISO/IEC standard 10156:1999. It should be rendered in 10 point size in a fixed-width Courier font (or nearest equivalent); German-specific characters need not to be reproduced if the product is incapable of doing so. The image shall be rendered on A4 or 8.5" x 11" sheet of paper. For printers that can interpret a page description language (PDL), images shall be sent to the product in PDL.

the/this Scheme	means the Hong Kong Voluntary Energy Efficiency Labelling Scheme for Printers.
thermal transfer (TT)	means a marking technology where the desired hard copy image is formed by depositing small drops colorant (usually colour waxes) in a melted/fluid state directly to the print media in a matrix manner. TT is distinguished from IJ in that the ink is solid at room temperature and is made fluid by heat.
typical electricity consumption (TEC)	means a method of testing and comparing the energy performance of imaging equipment products, which focuses on the typical electricity consumed by a product while in normal operation during a representative period of time. The key criteria of the TEC approach for imaging equipment is a value for typical weekly electricity consumption, measured in kilowatt-hours (kWh).

5. Test Methodology and Technical Standard

General

5.1 All test methods, standards and specifications specified in this document are only related to checking compliance with the average power rating and default time requirements of the printers. 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 obtain Certificates of Safety Compliance for his printers.

Test Standards - Safety Requirements

5.2 The testing standard for checking compliance with the safety requirements of the printers are based on the international standard IEC 60950, Information Technology Equipment – Safety or equivalent standard. For detailed requirements and procedural descriptions one should refer to the respective standards.

5.3 To the extent that definitions in the IEC standards do not conflict with the definitions of this document, the definitions in the aforesaid standards shall be included.

Test Conditions

5.4 For all printers, the test conditions shall be as follows –

(a)	Electrical supply	220V ± 5%;
(b)	Frequency	50Hz ± 1%;
(c)	Line impedance	< 0.25 ohm;
(d)	Total harmonic distortion	< 2% (voltage);
(e)	Test room temperature	23 °C ± 5 °C;
(f)	Test room relative humidity	10% to 80%;
(g)	Test Paper	A4, 80g/m^2

Test Equipment

5.5 A power meter (or energy analyser) shall be used to measure the energy consumption of the printer under test. The power meter shall be capable of reading the energy drawn by the printer without disrupting the electrical power supply.

5.6 The power meter should have a frequency response of at least 3 kHz and should provide resolution for corresponding measurement values listed in Table 1 with an accuracy of ± 5% (For measurements of 0.5 W or less, the required accuracy is 0.02W). In addition, the meter should be capable of reading the current drawn by the printer without causing internal peak distortion (i.e. clipping off the top of the current wave). As such, it is preferable to use a power meter with higher crest factors and more current range selections.

Table 1 : Minimum Resolution for power meter

Measurement Values	Minimum Resolution
< 10 W	0.01W
10W ≤ x <100W	0.1W
100W ≤ x <1.5kW	1W
> 1.5kW	10W

Note : x = Measurement Values

5.7 Time measurements may be performed with an ordinary stopwatch with resolution of at least 1 second.

Applicability

5.8 The test requirements are dependent upon the feature set of the product under evaluation. Table 2 shall be used to determine the applicability of each section of this Scheme.

Table 2 : Test Procedure Applicability

Media Format	Marking Technology	Evaluation Method
Small	DT, DS, EP, Impact, IJ, SI, TT	OM
Standard	High Performance IJ, DT, DS, EP, SI, TT	TEC
	Impact, IJ	OM
Large	DT, DS, EP, Impact,IJ, SI, TT	OM

Testing Procedure of TEC

5.9 For details please refer to Annex 1.

Testing Procedure of OM

5.10 For details please refer to Annex 2.

6. Energy Efficiency and Performance Requirements

Typical Electricity Consumption (TEC) Requirements

6.1 The power rating of a printer model (or base unit) at various printer speeds for TEC shall qualify according to the corresponding specifications as shown in Table 3.

Table 3 : Maximum Allowable TEC Rating for Printers

Category	Product Speed (ipm)	Maximum TEC (kWh/week)
Colour Printers	≤ 32	(0.10 kWh/ipm)x + 2.8 kWh
	$32 < x \leq 58$	(0.35 kWh/ipm)x – 5.2 kWh
	> 58	(0.70 kWh/ipm)x – 26.0 kWh
Monochrome Printers	≤ 15	1.0 kWh
	$15 < x \leq 40$	(0.10 kWh/ipm)x – 0.5 kWh
	$40 < x$ 82	(0.35 kWh/ipm)x – 10.3 kWh
	> 82	(0.70 kWh/ipm)x – 39.0 kWh

Note: x = Monochrome Product Speed (ipm).

6.2 For printer with a Type 2 DFE, the energy consumption of the DFE should be excluded when comparing the product's measured TEC value to the criteria listed in Table 3. The DFE must not interfere with the ability of the printer to enter or exit its lower-power modes. In order to take advantage of this exclusion, the DFE must meet with the definition in section 4 and be a separate processing unit that is capable of initiating activity over the network.

Operation Mode (OM) Requirements

6.3 For printer with a functionally-integrated DFE that relies on the imaging product for its power, the power consumption of the DFE should be excluded when comparing the product's measured "Sleep" mode power to the combined marking-engine and functional-adder criteria limits below and when comparing the measured "Standby" mode power to the standby criteria limits below. The DFE must not interfere with the ability of the imaging product to enter or exit its lower-power modes. In order to take advantage of this exclusion, the DFE must meet the definition in section 4 and be a separate processing unit that is capable of initiating activity over the network.

Operation Mode (OM) Default Time Requirement

6.4 The default time to "Sleep" mode of a printer model (or base unit) at various speeds shall qualify according to the corresponding specifications as shown in Table 4.

Table 4 : Maximum Allowable Default Time to "Sleep" mode

Media Format	Monochrome Product Speed (ipm)	Sleep Mode Default Time (minutes)
Small or Standard	ipm ≤ 10	15
	10 < ipm ≤ 20	30
	ipm >20	60
Large	ipm ≤ 30	30
	ipm > 30	60

6.5 All printers must be shipped with a maximum default time less than or equal to 4 hours, which is only adjustable by the manufacturer. This maximum machine delay time cannot be influenced by the user and typically cannot be modified without internal, invasive product manipulation. The default time settings provided in Table 4 may be user adjustable

6.6 When reporting data and qualifying products that can enter "Sleep" mode in multiple ways, manufacturers should reference a "Sleep" level that can be reached automatically. If the product is capable of automatically entering multiple, successive "Sleep" levels, it is at the manufacturer's discretion which of these levels is used for qualification purposes; however, the default-delay time provided must correspond with whichever level is used.

"Operation" mode / "Sleep" mode Power Consumption

6.7 Measured "Sleep" mode power consumption shall be less than or equal to the maximum "Sleep" mode power consumption requirement as shown in Table 5.

Table 5 : Sleep Mode Power Allowance for Printers

Media Format	Maximum Sleep Mode Power Allowance (Watts)	Marking Technology
Small	9	DS, DT, IJ, Impact, TT, EP, SI
Standard	4.6	Impact
	1.4	Ink Jet
Large	15	
	14	Non-Ink Jet

"Operation" mode (OM) / "Standby" mode Requirements

6.8 "Standby" mode power, which is the lesser of the "Ready" mode power, "Sleep" mode power, and "Off" mode power, shall be less than or equal to the maximum "Standby" mode power requirement, 1 W.

General Performance Requirements

6.9 Printers which use EP, SI, and High Performance IJ marking technologies must meet the duplexing requirements, based on product speed as shown in Table 6.

Table 6 : Specification of Duplexing for Printers

Category	Product Speed	Duplexing Requirement
Colour Printers	≦ 19 ipm	N/A
	20 – 39 ipm	Automatic duplexing must be offered as a standard feature or optional accessory at the time of purchase.
	≧40 ipm	Automatic duplexing is required as a standard feature at the time of purchase.

Category	Product Speed	Duplexing Requirement
Monochrome Printers	≦ 24 ipm	N/A
	25 – 44 ipm	Automatic duplexing must be offered as a standard feature or optional accessory at the time of purchase.
	≧45 ipm	Automatic duplexing is required as a standard feature at the time of purchase

Safety Requirements

6.10 All materials and workmanship of the printers are also needed to comply with IEC 60950, Information Technology Equipment – Safety" requirements and/or the Electrical Products (Safety) Regulation of the HKSAR, where applicable.

7. Energy Label

7.1 The specification of the energy label for printers is shown in Annex 3. 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 of the listed model showing the information in strict accordance with the requirements in Annex 3.

7.2 (a) Subject to clause 7.2(c), the energy label is to be attached or affixed to a prominent position of the printer and is to be clearly visible. The participant should ensure that the label appears on every registered printer on display, sale or hire.

(b) For the avoidance of doubt, if only part of the printer 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 printer or its packaging in a manner specified by the Director where the Director has approved its being so attached.

7.3 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 3 or otherwise approved by the Director. A trim or die cut margin of up to 2 mm around the energy label is acceptable.

7.4 The paper used for the energy label shall be durable with good wear and tear characteristics.

7.5 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.

8. Testing Facilities, Laboratories & Accreditation Bodies

8.1 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 fulfils one of the following criteria as specified in clauses 8.2, 8.3 or 8.4.

8.2 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 HOKLAS 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.

8.3 The laboratory is accredited to GB25956-2010 "Minimum allowable values of energy efficiency and energy grade for printers and fax machines" or IEC 62301 (First Edition 2005-06) 1.0 "Household Electrical Appliances – Measurement of Standby Power" or U.S. Environmental Protection Agency "Energy Star Laboratory for Imaging Equipment".

8.4 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 successful in carrying out tests on office equipment and where these tests had been evaluated and certified by third party internationally independent recognised certification organisations.

8.5 The internationally recognized independent certification organizations mentioned in clause 8.4 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.

9. Registration and Participation

Registration Procedures

9.1 All manufacturers, importers and the other parties involved in the printers business 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.

9.2 The proforma letter of invitation is shown in Annex 4.

9.3 Applicant should submit formal application to

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

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 5 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

9.4 Each make and model of a printer product participating in the Scheme should be provided with a test report issued by a recognized laboratory. The test report should contain energy efficiency test and performance test results.

9.5 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, etc.

c) The parties that will be responsible for making and fixing the Energy Labels;

d) Commencement date to affix energy label on printer packaging

Year_____, Month_____

e) Detailed test reports shall provide at least the following relevant technical data on the printer:

- Automatic Duplexing Capability (if applicable);
- Monochrome Product Speed;
- Typical Electricity Consumption (if applicable);
- Default Delay Time to Sleep (if applicable);
- Sleep Mode Power Allowance (if applicable);
- Maximum Standby Power (if applicable).

f) supporting technical information and calculation documents

g) manufacturer declared maximum speed of product:

- Monochrome / Colour Print Speed (if applicable);

g) 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 6, Information to be submitted to Energy Efficiency Office.

9.6 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

9.7 On receipt of the application, the Authority will process the application and verify whether the printer meets the energy efficiency and performance requirements based on the submitted data. The accuracy of the submitted data, their inconsistencies and non-compliance will be dealt with in accordance with clause 11.2.

9.8 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 energy label onto the 'registered' printer packaging. Both manufacturer and importer of the registered printer should ensure that the energy labels are correctly printed and affixed on the printer packaging in accordance with section 7. The proforma letter of acceptance is shown in Annex 7.

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

9.10 The flow chart for registration is shown in Annex 9

Participant's Duties, Responsibilities and Obligations

9.11 The participant is obliged to:-

a) submit application and information including test results in accordance with format & procedures set out in clauses 9.3 to 9.6;

b) conduct tests via recognized laboratories and to comply with the specified test methodology and classification;

c) produce and affix energy labels at his own costs;

d) fully inform other sales agents in his distribution network once the particular make and model of a printer is registered under the Scheme;

e) allow random/ad-hoc inspection to be conducted by persons authorized by

the Authority on registered printer at his premises;

f) conduct re-test(s) at his own costs at some recognized laboratories, if non-compliance is found on the printer. 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 the registered printer fails to perform in accordance with the required standard performance as given in Section 6 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 printer immediately.

9.12 The details of the registered printer 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

9.13 Under circumstances of poor performance of the participant such as –

(a) (repeated) failure to fulfil the obligations set out under clause 9.11; 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 printer is contrary to the public interest,

the Authority may de-register the concerned printer from the Scheme with immediate effect by giving the participant a notice in writing. Once the printer is de-registered, energy label is not allowed to fix on it.

The concerned printer could be de-registered even when there is no legal action taken under either the Trade Description Ordinance (Cap. 362) or the Copyright Ordinance (Cap. 528).

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

10. Legal Provisions

10.1 The Scheme is a voluntary scheme. However, a participant who abuses the Scheme by giving false information may contravene provisions of the Trade Description Ordinance (Cap. 362).

10.2 No one could take advantage of the scheme by using the energy label on his printer without authorization of the Authority as that shall constitute an infringement of copyright under the Copyright Ordinance (Cap. 528).

11. Compliance, Monitoring and Inspection

Purpose

11.1 To uphold the credibility of the Scheme and to continue maintaining the confidence of the consumers, compliance check on energy labels on those printers 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 printers which have not been registered under the Scheme.

Scope

11.2 The scope of inspection includes sample checking and testing of the following items:-

(a) whether the energy label is affixed on the registered printer packaging;

(b) whether the energy label on the registered printer packaging is affixed to a prominent position in accordance with clause 7.2;

(c) whether the energy label being displayed is of correct format in accordance with section 7;

(d) whether the registered printer complies with the energy efficiency and the performance requirements;

(e) whether the data submitted by the participants are correct by random re-testing; and

(f) whether the unregistered printers display unauthorized energy labels.

11.3 The participants will be requested to take immediate remedial action and report of follow-up action taken if non-compliance is found on their printers.

11.4 For a registered printer carrying energy label but found not meeting the energy efficiency and performance requirements stipulated in section 6, the participant will be requested to repeat the performance tests specified in accordance with the test methodology and technical standards stipulated in section 5 by an accredited testing laboratory.

11.5 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 printer after the Director has withheld his authorization for using such labels may contravene the relevant ordinances.

Inspecting Officers

11.6 The Authority will authorize inspecting officers to carry out compliance monitoring and inspection on printer. 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.

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

Mode of Inspection

11.8 Inspections will be carried out on registered printer under the Scheme on random basis. Based on the record of the registration, random inspection programmes will be developed.

11.9 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 clause 11.2.

11.10 Inspections will normally be carried at the printer retail outlets and showrooms. Where necessary, inspection will also be done at warehouses.

11.11 The inspection results will be properly recorded for future analysis as well as on evaluation of the effectiveness of the Scheme.

12. Complaints and Appeal

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

Complaints Handling Procedures

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

12.3 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.

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

Appeal Procedures

12.5 A participant who feels aggrieved by the decision given or action taken by the Authority according to section 11 may appeal to the Director in writing stating the reason for the appeal.

12.6 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.

12.7 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.

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

13. Maintenance of Scheme

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

13.2 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 printer such as registration number, date of registration or de-registration if it occurs, energy efficiency data, performance data, make, model 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 occurs, 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.

14. Future Development

14.1 It is hoped that following the implementation of the Scheme, the market will phase out models of low efficiency products and public awareness of using energy efficient products will be much improved.

14.2 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 through the Energy Efficiency (Labelling of Products) Ordinance.

14.3 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. Eight types of prescribed products covered in the mandatory EELS are room air conditioners, refrigerating appliances, compact fluorescent lamps, washing machines, dehumidifiers, televisions, storage type electric water heaters and induction cookers.

Test Procedures of Typical Electricity Consumption (TEC) for Printers

Job Structure

A1.1 For the purposes of TEC test procedure, the speed of the product that is used to determine the job size for the test shall be the manufacturer's reported maximum claimed simplex speed for making monochrome images on standard-sized paper (A4 or 8.5"x11"), rounded to nearest integer.

A1.2 The number of images per job shall be calculated according to the following three steps:

(1) Calculate the number of jobs per day. The number of jobs per day varies with Product Speed:

- For units with a speed of 8 ipm or less, use 8 jobs per day.
- For units with a speed between 8 ipm and 32 ipm, the number of jobs per day is equal to the speed. For example, a 14 ipm unit shall use 14 jobs per day.
- For units with a speed of 32 ipm and above, use 32 ipm jobs per day.

(2) Calculate the nominal amount of images per day from Table A1. For example, a 14 ipm unit shall use $0.5 \times 14^2 = 98$ images per day.

Table A1 – Imaging Equipment Job Table

Product Type	Rating to use	Formula (images per day)
Monochrome	monochrome speed	$0.5 \times ipm^2$
Colour	monochrome speed	$0.5 \times ipm^2$

(3) Calculate the number of images per job by dividing the number of images per day by the number of jobs per day. Round down (truncate) to nearest integer.

Measurement procedures

A1.3 To measure time, an ordinary stopwatch and timing to a resolution of one second is sufficient. All energy figures are to be recorded as watt-hours (Wh). All time data is to be recorded in seconds or minutes. "Zero meter" references are to the "Wh" readout of the meter.

A1.4 Service/maintenance modes (including colour calibration) should generally not be included in TEC measurements. Any such modes that occur during the test shall be noted. If a service mode occurs during a job other than the first, that job may be dropped and a substitute job added to the test. In the case a substitute job is needed, do not record the energy values for the dropped job and add the substitute job immediately after Job 4. The 15-minute job interval shall be maintained at all times, including for the job that is dropped.

Table A2 : The typical TEC measurement procedures for printers

Step	Initial State	Action	Record (at end of step)	Unit of Measure	Possible States Measured
1	Off	Connect the unit under test to the meter. Ensure the unit is powered and in "Off" Mode. Zero the meter; measure energy over 5 minutes or more. Record both energy and time.	Off energy	Watt-hour (Wh)	Off
			Testing Interval time	Hours (h)	
2	Off	Turn on unit. Wait until unit indicates it is in "Ready" mode.	N/A	N/A	N/A
3	Ready	Print a job of at least one output image but no more than a single job per Job Table. Record time to first sheet exiting unit. Wait until the meter shows that the unit has entered its final "Sleep" mode.	Active 0 time	Hours (h)	N/A
4	Sleep	Zero meter; measure energy and time over 1 hour. Record the energy and time.	Sleep Energy	Watt-hour (Wh)	Sleep
			Sleep Time	Hours (h)	
5	Sleep	Zero meter and timer. Measure energy and time. Record time to first sheet exiting unit. Measure energy over 15 minutes from job initiation. The job must finish within the 15 minutes.	Job1 energy	Watt-hour (Wh)	Recovery, Active, Ready, Sleep
			Active1 time	Hours (h)	
6	Ready	Repeat Step 5.	Job2 energy	Watt-hour (Wh)	Same as above
			Active2 time	Hours (h)	
7	Ready	Repeat Step 5 (without Active time measurement).	Job3 energy	Watt-hour (Wh)	Same as above
8	Ready	Repeat Step 6 (without Active time measurement).	Job4 energy	Watt-hour (Wh)	Same as above

Step	Initial State	Action	Record (at end of step)	Unit of Measure	Possible States Measured
9	Ready	Zero meter and timer. Measure energy and time until meter and/or units show that unit has entered "Sleep" Mode or the final "Sleep" Mode for units with multiple "Sleep" modes.	Final Energy	Watt-hour (Wh)	Ready, Sleep
			Final Time	Hours (h)	

Note 1 : Before beginning the above two tests, it is helpful to check the power management default-delay times to ensure they are as-shipped, and to confirm that there is plenty of paper in the device.

Note 2 : "Zero meter" references may be accomplished by recording the accumulated energy consumption at that time rather than literally zeroing the meter.

Figure 1 – Typical TEC measurement procedures for Printers

Figure 1 shows a graphic form of the measurement procedure. Note that products with short default-delay times may include periods of "Sleep" within the four job measurements, or Auto-off within the "Sleep" measurement in the Step 4. Also, print-capable products with just one "Sleep" mode will not have a "Sleep" mode in final period.

Calculation methods

A1.6 The calculations of TEC are based on imaging jobs being in two clusters each day with the unit going to its lowest power mode in between (as during a lunch break), as illustrated in Figure 2. It is assumed that weekends have no usage and no manual switching-off is done.

Figure 2 - A typical day TEC for Printers

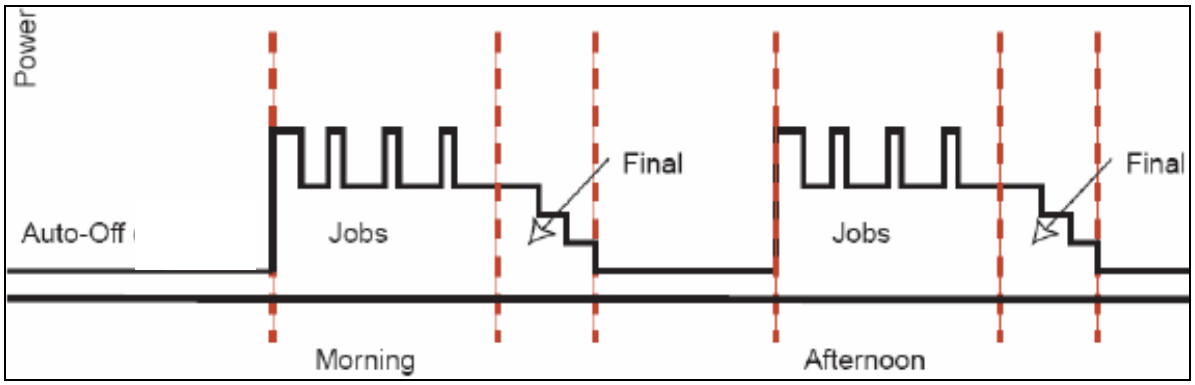


Figure 2 shows a schematic example of eight-ipm printer that performs four jobs in morning, four jobs in afternoon, has two "final" periods and an Auto-off mode for the remainder of the workday and all of the weekend. An assumed "lunchtime" period is implied but not explicit. The figure is not drawn to scale. As shown, jobs are always 15 minutes apart and in two clusters. There are always two full "final" periods regardless of the length of these periods.

A1.7 Final Time is the period of time from the last job being initiated to the start of the lowest power mode ("Sleep" mode) minus the 15-minute job interval time.

A1.8 The following two equations are used for all product types:

Average Job Energy = (Job2 + Job3 + Job4) / 3

Daily Job Energy = (Job1x2) + [(Jobs per day- 2) x Average Job Energy]

A1.9 The calculation method for MFDs also uses the following three equations:

Daily Sleep Energy = [24 hours–((Job per day/4)+(Final Time x 2))] x Sleep Power

Daily Energy = Daily Job Energy + (2 x Final Energy) + Daily Sleep Energy

TEC = (Daily Energy x 5) + (Sleep Power x 48)

A1.10 The specifications of the metering equipment and ranges used in each measurement shall be reported. Measurements must be conducted so as to result in a potential error of the TEC value of no more than 5%.

Test Procedure of Operation Mode (OM) for Printers

A2.1 Measurement of OM power and delay times shall be conducted according to the Table A3, subject to the following provisions:

a) All power figures shall be recorded in watts (W) in accordance with IEC 62301(First Edition 2005-06) 1.0, unless otherwise specified in this document.

b) The accuracy requirement for this OM test procedure is 2% for all measurements except for "Ready" power, where it is 5%.

c) To measure time, an ordinary stopwatch and timing to a resolution of one second is sufficient. All power figures are to be recorded in watts (W).

d) Service/maintenance modes (including colour calibration) generally should not be included in measurements. Any adaptation of the procedure needed to exclude such modes that occur during the test shall be noted.

Table A3 : Operation Mode (OM) Test Procedure of Printers

Step	Initial State	Action(s)	Record	Unit of Measure
1	Off	Plug the unit into meter. Turn on unit. Wait until unit indicates it is in "Ready" Mode.	N/A	N/A
2	Ready	Print, copy, or scan a single image.	N/A	N/A
3	Ready	Measure "Ready" power.	Ready power	Watts (W)
4	Ready	Wait and measure default delay-time to Sleep.	Sleep default delay time	Minutes (min)
5	Sleep	Measure "Sleep" power.	Sleep power	Watts (W)
6	Sleep	Wait and measure default delay time to "Auto-off". (Disregard if no "Auto-off" Mode)	Auto-off default delay time	Minutes (min)
7	Auto-off	Measure "Auto-off" power. (Disregard if no "Auto-off" Mode)	Auto-off power	Watts (W)
8	Auto-off	Manually turn device off and wait until unit is off. (If no manual on-off switch, note and wait for lowest-power "Sleep" state).	N/A	N/A
9	Off	Measure "Off" power. (If no manual on-off switch, note and measure "Sleep" Mode power).	Off power	Watts (W)

Notes :

Step 1 *If the unit has no "Ready" indicator, use the time at which the power consumption level stabilizes to the "Ready" level, and note this detail when reporting the product test data.*

Steps 4 & 5 *For products with more than one "Sleep" level, repeat these steps as many times as necessary to capture all successive "Sleep" levels and report this data. Two "Sleep" levels are typically used in large-format copiers and MFDs that use high-heat marking technologies. For products lacking this Mode, disregard Steps 4 and 5.*

Steps 4 & 6 *Default-delay time measurements are to be measured in parallel fashion, cumulative from the start of Step 4. For example, a product set to enter a Sleep level in 15 minutes and enter a second Sleep level 30 minutes after entering the first Sleep level will have a 15-minute default-delay time to the first level and a 45 minute default-delay time to the second level.*

A2.2 The eligibility criteria in **Table 5: "Sleep Mode Power Allowance for Printers"** address the marking engine of the product. Since products are expected to be shipped with one or more functions beyond a basic marking engine, the corresponding allowances below should be added to the marking engine criteria for "Sleep". The total value for the base product with applicable "functional adders" should be used to determine eligibility. Manufacturers may apply no more than three Primary functional adders to each product model, but may apply as many as Secondary adders as present (with Primary adders in excess of three included as Secondary adders).

Table A4 : Operation Mode (OM) Functional Adders for Printers

Type	Details	Functional Adder Allowances (W)	
		Primary	Secondary
Interface	A. Wired < 20 MHz A physical data or network-connection port present on the imaging product that is capable of a transfer rate < 20 MHz. Includes USB 1.x, IEEE488, IEEE 1284 / Parallel / Centronics, RS 232 and/or fax modem.	0.3	0.2

Type	Details	Functional Adder Allowances (W)	
		Primary	Secondary
Interface	B. Wired >= 20 MHz and < 500 MHz A physical data - or network-connection port present on the imaging product that is capable of a transfer rate >= 20 MHz and < 500 MHz. Includes USB 2.x, IEEE488, IEEE 1394 / Fire Wire / i.LINK and 100 MHz Ethernet.	0.5	0.2
	C. Wired >= 500 MHz A physical data - or network-connection port present on the imaging product that is capable of a transfer rate >= 500 MHz. Includes 1G Ethernet.	1.5	0.5
	D. Wireless A data - or network-connection interfaces present on the imaging product that is capable of a transfer data via radio-frequency wireless means. Includes Bluetooth and 802.11.	3.0	0.7
	E. Wired card / camera / storage A physical data - or network-connection port present on the imaging product that is designed to allow the connection of an external device, such as flash memory-card/smart-card readers and camera interfaces (including PictBridge).	0.5	0.1
	F. Infrared A data- or network-connection interface present on the imaging product that is designed to transfer data via infrared technology. Includes IrDA.	0.2	0.2
Other	A. Storage Internal storage drives present on the imaging product. Includes internal drives only (e.g. disk drives, DVD drives, Zip drives), and applies to each separate drive. This adder does not cover interfaces to external drives (e.g. SCSI) or internal memory.	N.A.	0.2

Type	Details	Functional Adder Allowances (W)	
		Primary	Secondary
Other	B. Scanners with CCFL lamps or non-CCFL lamps The presence of scanner that use Cold Cathode Fluorescent Lamp (CCFL) technology or a technology other than CCFL, such as Light-Emitting Diode (LED), Halogen, Hot-Cathode Fluorescent Tube (HCFT), Xenon, or Tubular Fluorescent (TL) technologies. This adder is applied only once, regardless of the lamp size or the number of lamps/bulbs employed.	N.A.	0.5
	C. PC-based system (cannot print/copy/scan without use of significant PC resources) This adder applies to imaging products that rely on an external computer for significant resources, such as memory and data processing, to perform basic functions commonly performed by imaging product independently, such as page rendering. This adder does not apply to products that simply use a computer as a source or destination for image data.	N.A.	- 0.5
	D. Cordless handset The capability of the imaging product to communicate with a cordless handset. This adder is applied only once, regardless of the number of cordless handsets the product is designed to handle. This adder does not address the power requirements of the cordless handset itself.	N.A.	0.8
	E. Memory The internal capacity available in the imaging product for storing data. This adder applies to all volumes of internal memory and should be scaled accordingly.	N.A.	1W per 1 GB
	F. Power-supply (PS) size, based on PS output rating (OR) *Note: This adders only applies to Standard-size/ Large-size, Colour/Mono Ink Jet/Impact Printers* The allowance is calculated from the internal or external power supply's rated DC output as specified by the power supply manufacturer. (It is not a measured quality)	N.A.	For PSOR > 10W, 0.02x (PSOR-10 W)

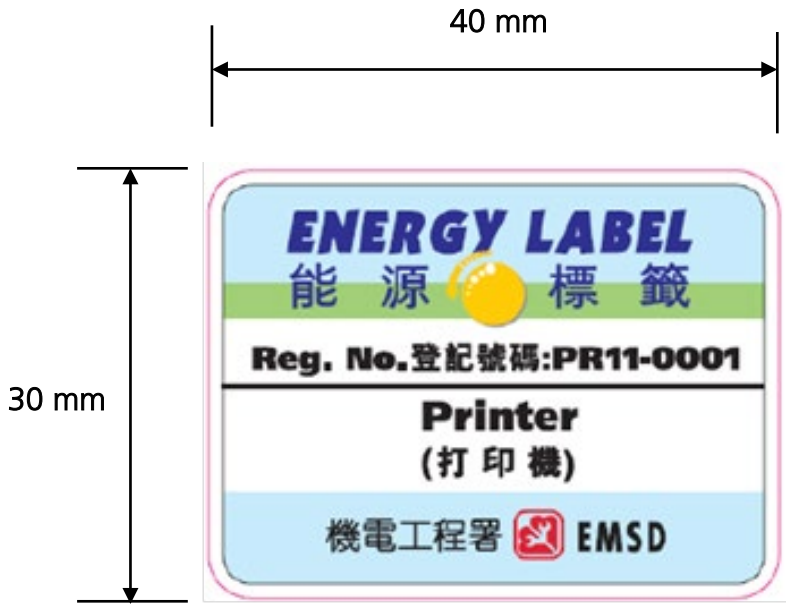
A2.3 For the adder allowances shown in Table A4, distinctions are made for "Primary" and "Secondary" types of adders. These designations refer to the state in which the interface is required to remain while the imaging product is in "Sleep". Connections that remain active during the OM test procedure while the imaging product is in "Sleep" are defined as Primary, while connections that can be inactive while the imaging product is in "Sleep" are defined as Secondary. Most functional adders typically are Secondary types

A2.4 Manufacturers should consider only the adder types that are available on a product in its as-shipped configuration. Options available to the consumer after the product is shipped or interfaces that are present on the product's externally-powered digital front-end (DFE) should not be considered when applying allowance to the imaging product.

A2.5 For products with multiple interfaces, these interfaces should be considered as unique and separate. However, interfaces that perform multiple functions should only be considered once.

The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Printers

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/24
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 Printers

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 printers to Hong Kong with effect from (_____). The details of the Scheme❶ have been finalized and I enclose herewith a guide of the Scheme for your reference.

Being one of the major printers' manufacturers / importers / agents❷ 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 5) and submit details including technical information in accordance with the attached Annex 6 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 printer is found to be non-compliant, we may consider deregistering the printer 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 : ❶ 'Scheme' means 'The Hong Kong Voluntary Energy Efficiency Labelling Scheme for Printers'
❷ delete as appropriate)

Proforma Letter of Application

Your ref. ( ) EMSD/EEO/LB/24
Our ref.

Tel.

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 Printers

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 printer 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 printer fails to perform in accordance with the required energy efficiency standards and performance as given in Section 6 and this cannot be readily rectified, the Authority may order it be de-registered from the Scheme.

The details of information of those printers which we intend to register with the Authority are shown in the attached document (Annex 6), 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, Email address, Contact person, Importer, Distributor, etc.

2. Product to apply for participating in the Scheme:

   Name of products, types, make, model references, countries of origin

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

4. Commencement date to affix Energy Labels on printer packaging

   Year _____, Month _____

5. Detailed test reports shall provide at least the following relevant technical data on the printer:
   - Automatic Duplexing Capability (if applicable)
   - Monochrome Product Speed;
   - Typical Electricity Consumption (if applicable);
   - Default Delay Time to Sleep (if applicable);
   - Sleep Mode Power Allowance (if applicable);
   - Maximum Standby Power (if applicable).

6. supporting technical information and calculations

7. manufacturer declared maximum speed of product:
   - Monochrome / Colour Print Speed (if applicable);

8. Certificate of Safety Compliance prescribed by the Electrical Products (Safety) Regulation of the Hong Kong Special Administrative Region for the concerned printer 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/24

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 Printers

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 printers registered. The registered printers are as follows:

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

You are allowed to affix a specified energy label onto each and every printer 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/24
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 Printers

With reference to your letter ref. _____ dated _____, we regret to inform you that your application for registration to participate 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 Printers

Flow Chart of Registration