Regional Conference on Energy Efficiency and Labelling

Bangkok, Thailand

29-31 May 2001

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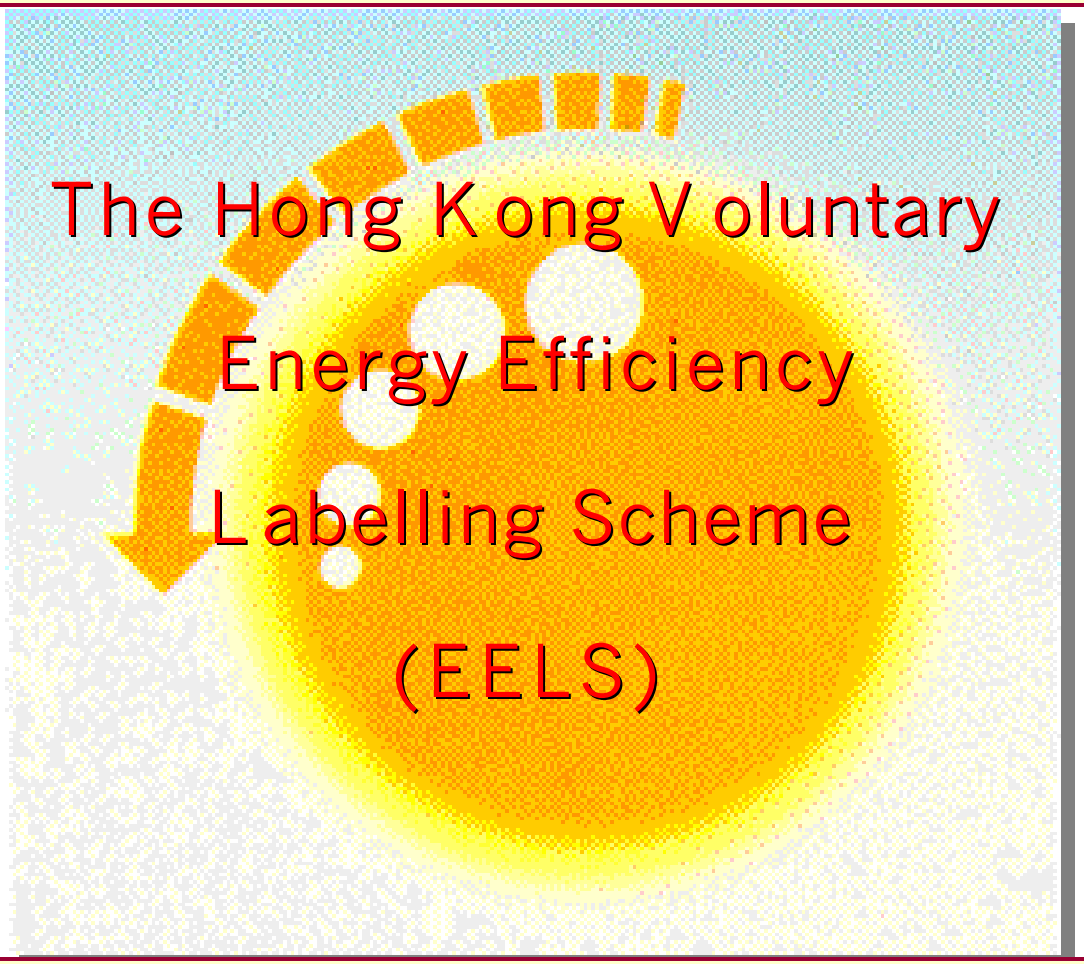
Energy Efficiency Office
Electrical & Mechanical Services Department
Government of the Hong Kong
Special Administrative Region

機電工程署 EMSD

The Hong Kong Voluntary Energy Efficiency Labelling Scheme (EELS)



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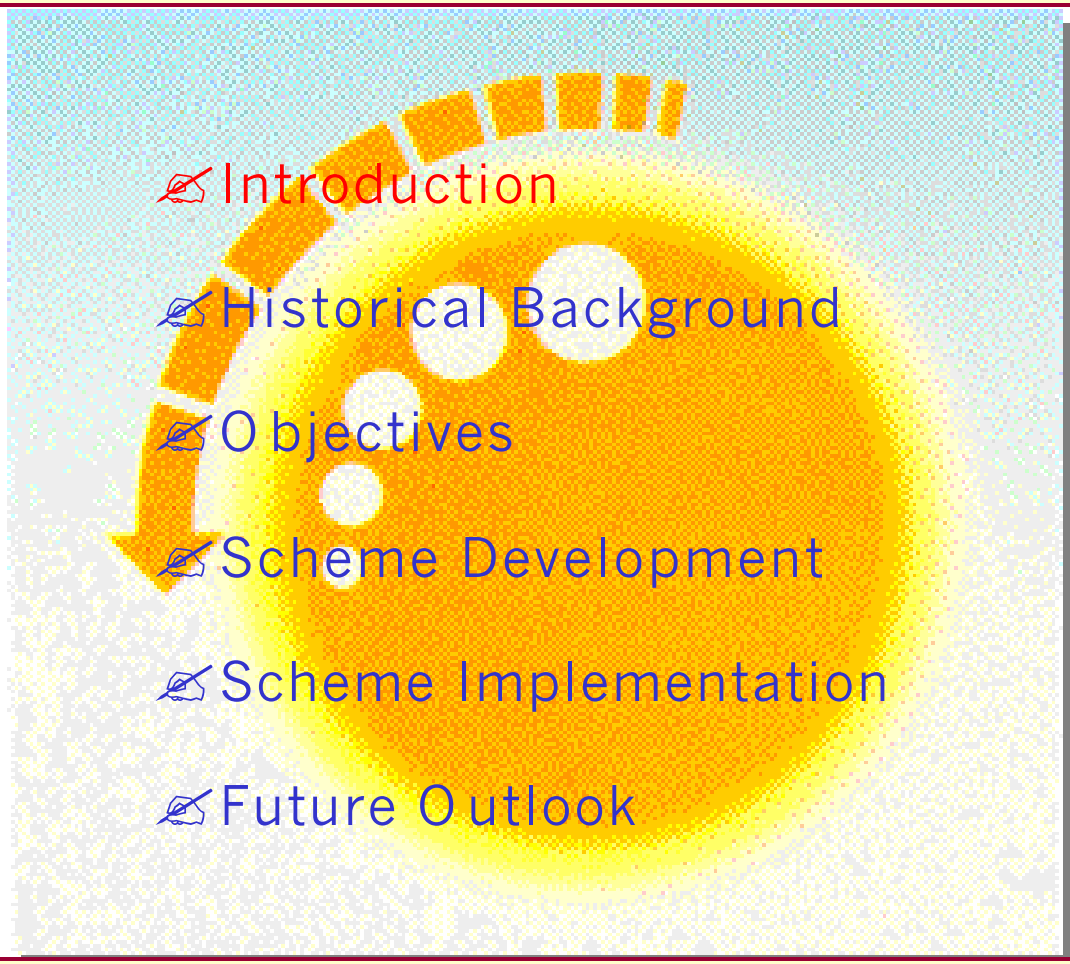
Introduction
Historical Background
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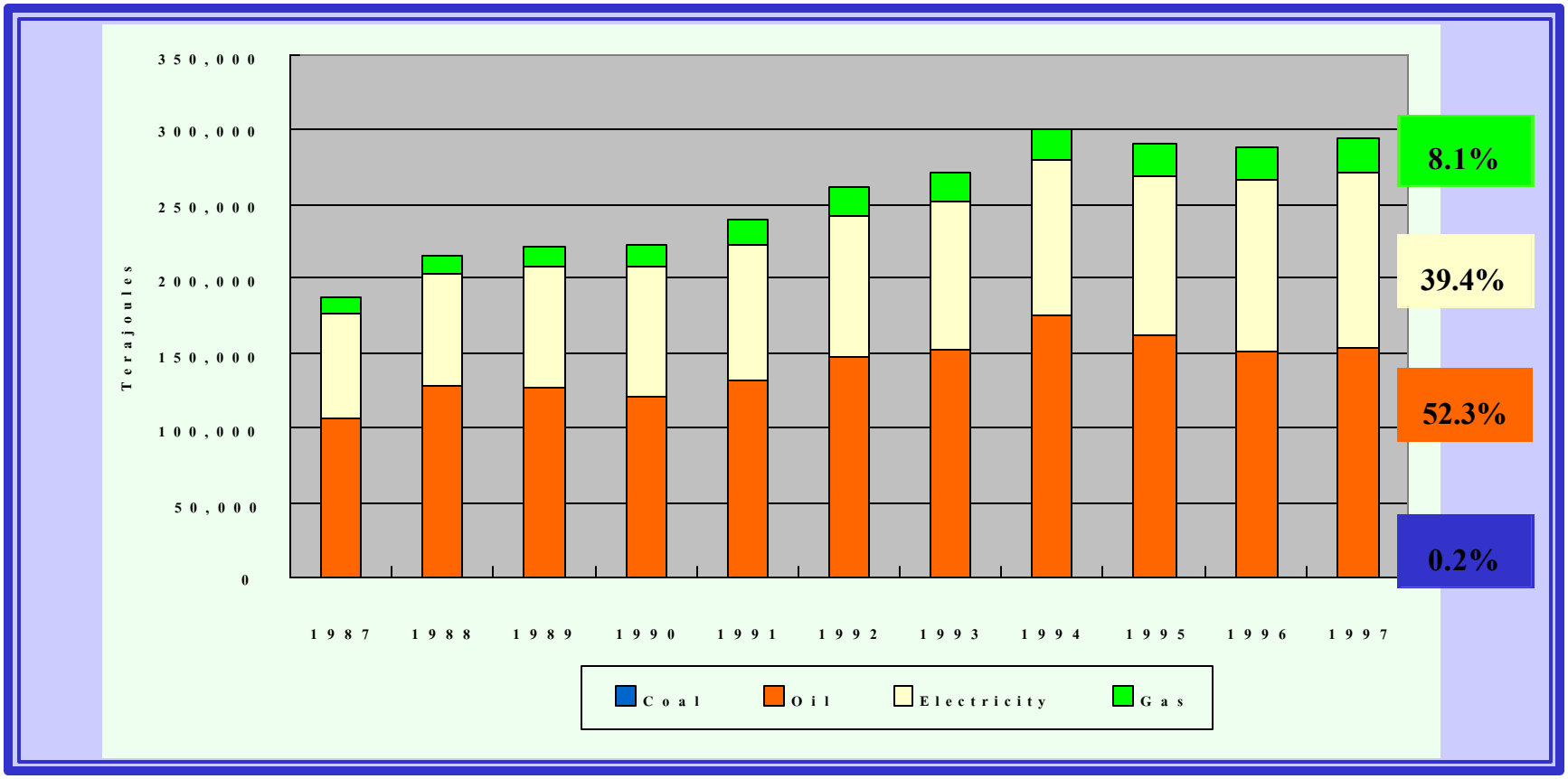
Importance of Energy Saving

- Fossil fuels reserves are limited
- Fuel burning leads to air pollution and damages the environment
- CO_2 emission causes global warming
- Save on your energy bills

Hong Kong's Final Energy Demand 1987-1997



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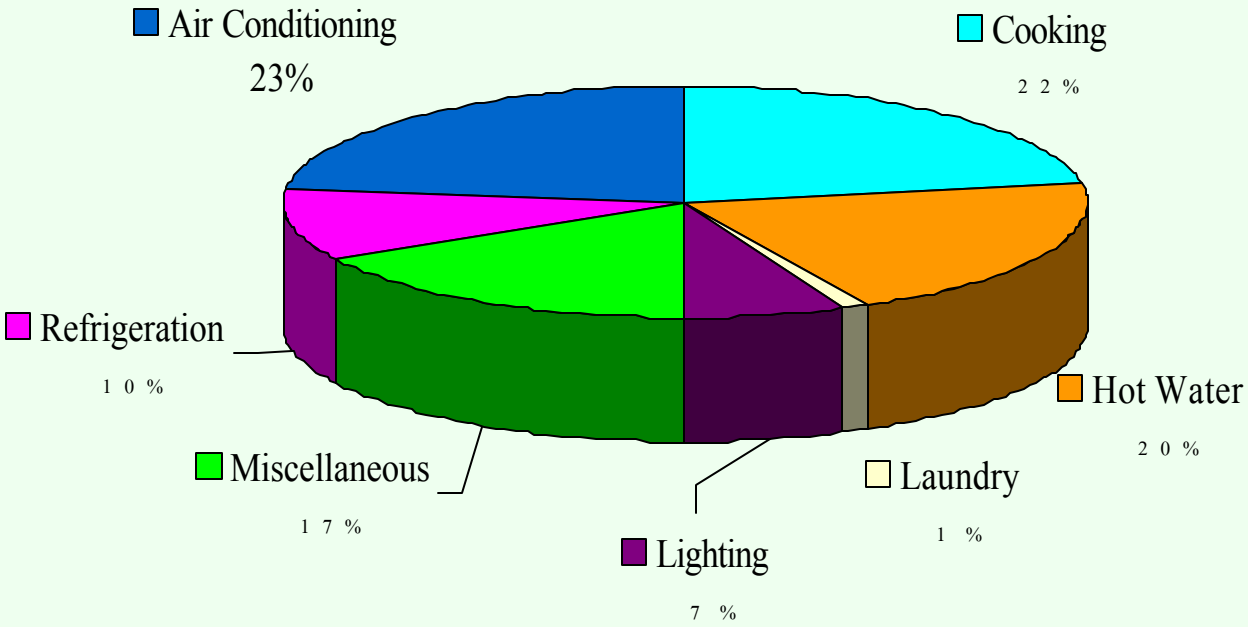
Residential Sector End-use Energy 1997



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- Historical Background
- Objectives
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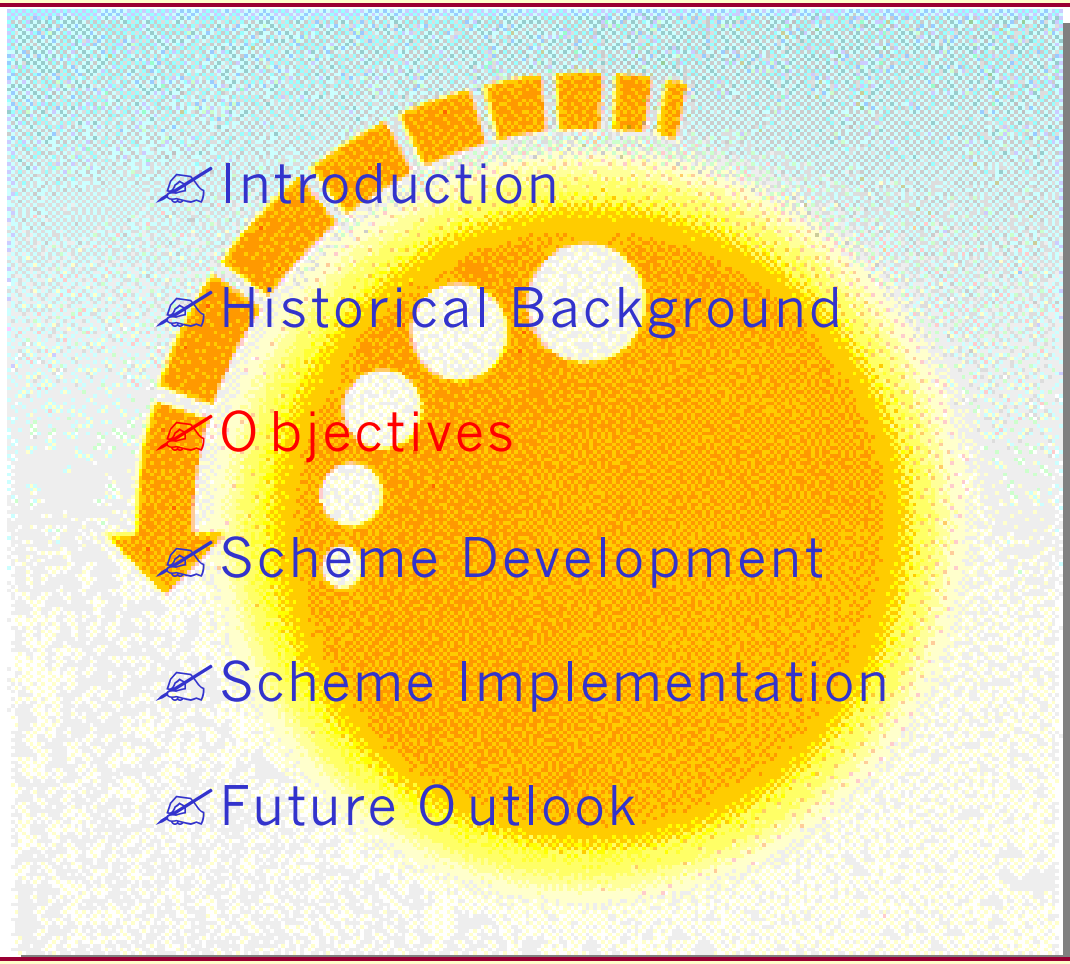
Historical Background

- In April 1991, Energy Efficiency Advisory Committee (EEAC) set up
- In March 1992, Government accepted EEAC'S recommendation
  - Introduction of Energy Labelling for Household Electrical Appliances
- EELS Working Sub-Group formed to develop schemes
- In August 1994, Energy Efficiency Office of EMSD established
- In June 1995, the first EEL S was launched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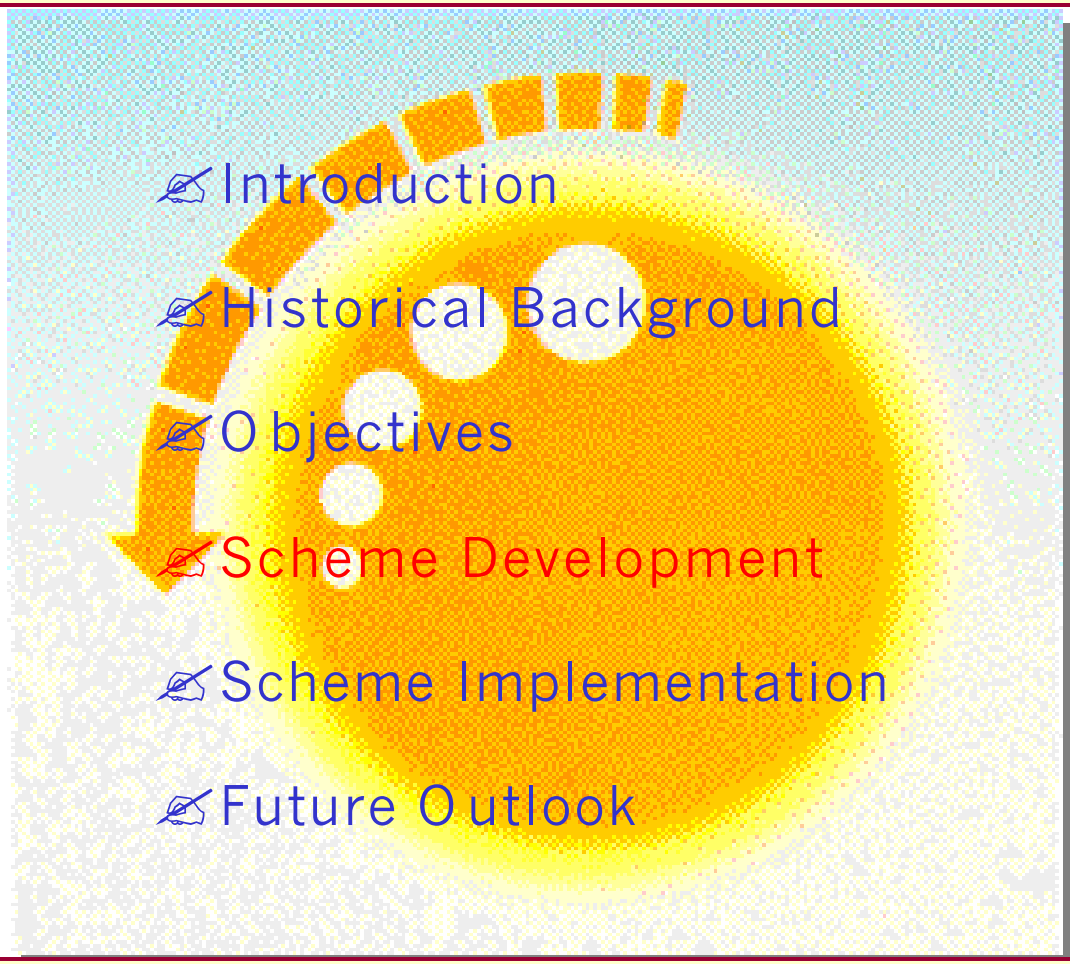
Objectives

- **Purchase Information -- Consumers have pre-purchase information on energy consumption and efficiency data to select more energy efficient product.**
- **Environmental Awareness -- Greater public awareness of energy conservation & environmental issues.**
- **More energy efficient products -- Stimulate manufactures/market to phase out less energy efficient models.**
- **Energy saving -- Achieve energy saving and environmental improvement etc.**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EELS Development Process

- Selection of electrical appliances
- Establish testing methodology based on international standards
- Establish energy efficiency grading criteria
- Accreditation of testing facilities
- Prepare scheme document for consultation
- Incorporate comments to finalize the scheme document
- Scheme launching

Selection of Electrical Appliance Types

The appliance groups selected for EELS should have

- **Significant sales**
- **Effective energy saving options**
- **Recognized international testing standards for energy consumption and performance**

Test Standards & Methodology

- The relevant international standards are used for measurement of the energy consumption and performance requirements specified by each Scheme.

- Material and workmanship shall comply with the Electrical Products (Safety) Regulation and relevant IEC Safety Standards (mainly IEC60335 series).

Standard Specifications

EELS Appliance	Standard Specifications
Refrigeration Appliances	ISO 8187; ISO 8561; ISO 7371; ISO 5155
Room Coolers	ISO 5151:1994 (E)
Washing Machines	IEC 456:1994 (horizontal drum type); JIS C 9606:1997 (impeller or agitator type)
CFLs	IEC 60969:1988; IEC 60901:1996; CIE 84:1989
Electric Clothes Dryers	IEC 61121:1997
Electric Storage Water Heaters	IEC 60379:1987
Photocopiers	Generally in line with U.S. Energy Star Programme for office equipment

Accreditation of Testing Facilities

- Laboratories should be accredited by the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or a scheme with which HOKLAS has a mutual recognition arrangement.
- Self-certification by original manufacturers with laboratories satisfying ISO/IEC 17025 and the accreditation requirements of relevant international testing standards.
- Self-declaration by original manufacturers with laboratories satisfying ISO/IEC 17025, operating according to a recognised international quality system, and the test results have been evaluated and certified by an internationally recognised third party.

Product Coverage

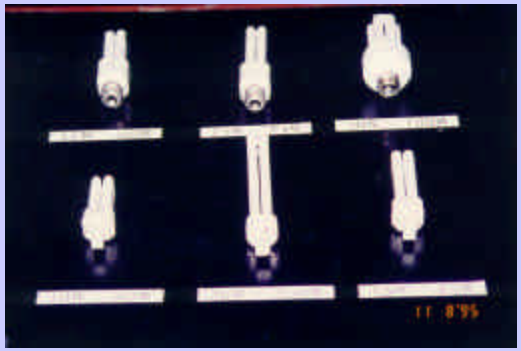
Since 1995, the following seven EELS have been launched:

- Household Refrigeration Appliances – June 1995
- Room Coolers – June 1996
- Washing Machines – December 1997
- Compact Fluorescent Lamps – December 1998
- Electric Clothes Dryers – December 1999
- Photocopiers & Household Electric Storage Water Heaters – December 2000

EELS Appliances

Photocopier

Refrigerator



CFL

Room Cooler

EELS Appliances

Electric Clothes Dryer

Electric Storage Water Heater

Washing Machine

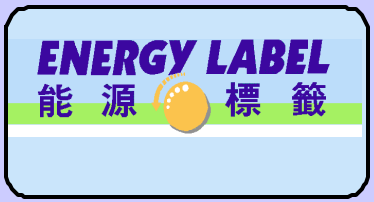
EELS Labelling Information

Appliance	Labelling System
• Refrigerators • Room Coolers • Washing Machines • Electric Clothes Dryers • Electric Storage Water Heaters	Grading Type Label 1,2,3,4,5 (Grade 1 being the most energy efficient and Grade 5 the least energy efficient)
• CFLs • Photocopiers	Recognition Type Label only

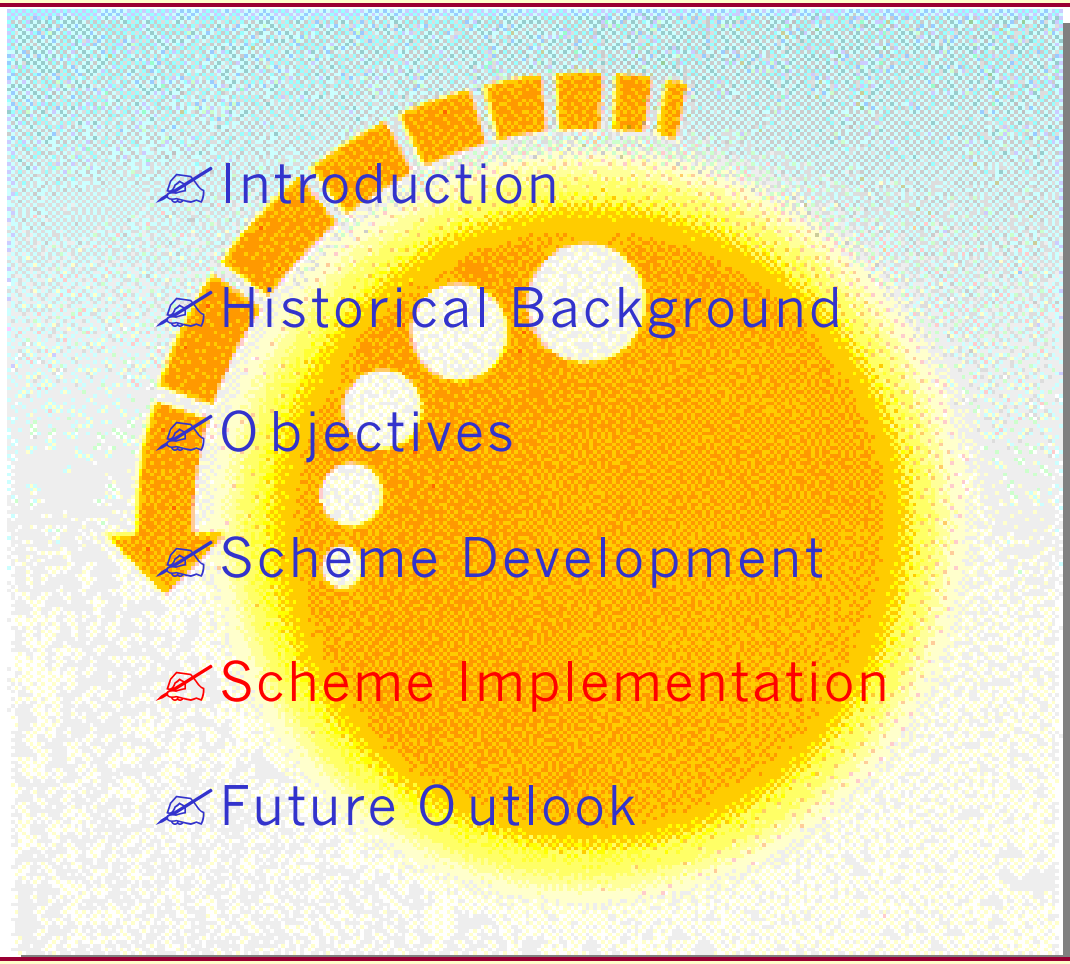
Graded Labelling System

- This is a "Grading Type" Energy Label
- All applied products will be graded and registered provided they are tested and have met the energy consumption and efficiency data specified by the Scheme
- The label contains
  - Annual energy consumption data
  - Energy efficiency grading
  - Other relevant data such as capacity or performance

Recognition Labelling System



- This is a "Recognition Type" Energy Label
- All applied products will be registered provided they are tested and have met the minimum energy consumption and performance requirements specified by the Scheme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Application

- All manufacturers and importers involved in the relevant appliance distribution network are welcomed.
- One application for each make and model.
- Submission of reports on energy efficiency and performance tests.
- Response promised within 20 working days upon receipt of all necessary information.

Technical Assessment of Application

- To ensure the testing laboratory meets the EELS requirements and is properly accredited
- To ensure the testing standards meet the EELS requirements and the testing procedures are properly carried out
- To assess the accuracy of the testing results shown in the laboratory test reports

Registration

- To approve the Energy Label registration application
- To issue Certificate of Registration and acceptance letter to the Energy Label applicant
- To update Registration Records of EEL S in the EMSD Homepage (www.emsd.gov.hk) for public and related parties for information

EELS Certificate of Registration

Electrical & Mechanical Services Department
The Government of the Hong Kong Special Administrative Region

The Hong Kong Energy Efficiency Labelling Scheme
for Compact Fluorescent Lamps

Certificate of Registration

This is to certify that

Energy Efficiency Office

has participated in this scheme

Details of registered appliance model this registration are
CFL99-0001 are listed as follows:

Brand: EMSD
機電署

Model: EMSD-EEO

Date of Issue:
29 December 1998

(L. T. LEE)
for Director of Electrical & Mechanical Services

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Participant's Duties, Responsibilities & Obligations

- Produce and affix labels at his own cost
- Publicise to his distribution network information on registered model
- Allow Random/Ad-hoc inspection at his premises by the Authority
- Conduct re-test(s), if requested by the Authority, at his own cost
- Inform the Authority of any change in the technical information and data of the registered appliance
- If de-registered, remove all labels from retail outlets within three months

Compliance Monitoring & Inspection

- By sample checking and testing :-
  - Energy label is placed on the registered appliance in a prominent position
  - Energy label is the correct format and gives correct information
  - The original data submitted by the participants are verified by random re-testing of the appliance
  - Any unauthorized use of energy labels
- Enforce re-testing and de-registration

Compliance Inspection

Retailer Shop Inspection

Legal Provisions

- False information on labels contravene the Trade Descriptions Ordinance.
- Unauthorised use of labels constitute an infringement of copyright under the Copyright Ordinance.

Complaints

- The Director shall ensure that complaints are properly recorded and handled without undue delay
- The Authority shall carry out preliminary investigation on complaints and reply to the complainants within a reasonable time
- The Authority shall inform the complainant of the results or decisions made on the complaint

Appeals

- Appeal to the Director in writing.
- The Director may suspend the decision or action given by the Authority from the day the appeal is made
- The Director may require the appellant to attend before him to provide documents and to give evidence relevant to the appeal.
- The Director shall notify the appellant of his decision and reasons for it.

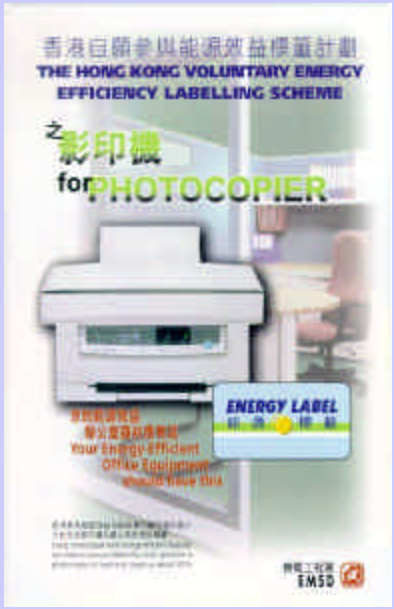
Maintenance of Scheme

- Continuous updating of the lists of participants and products in the scheme
- Periodic review of the test methodology, and administrative procedures for application registration and compliance monitoring, etc., to bring them in line with the latest needs of the manufacturers, importers and retailers, etc.
- Continuous evaluation of the effectiveness of the scheme and assessment what changes are necessary
- Carrying out scheme promotion activities

EELS Promotion

- Scheme Documents (available for free)
- Leaflets (available for free)
- EMSD Homepage – www.emsd.gov.hk
- Roadshows
- Promotion Talks/Seminars
- Testing laboratories inspection (free of charge)

EELS Leaflets



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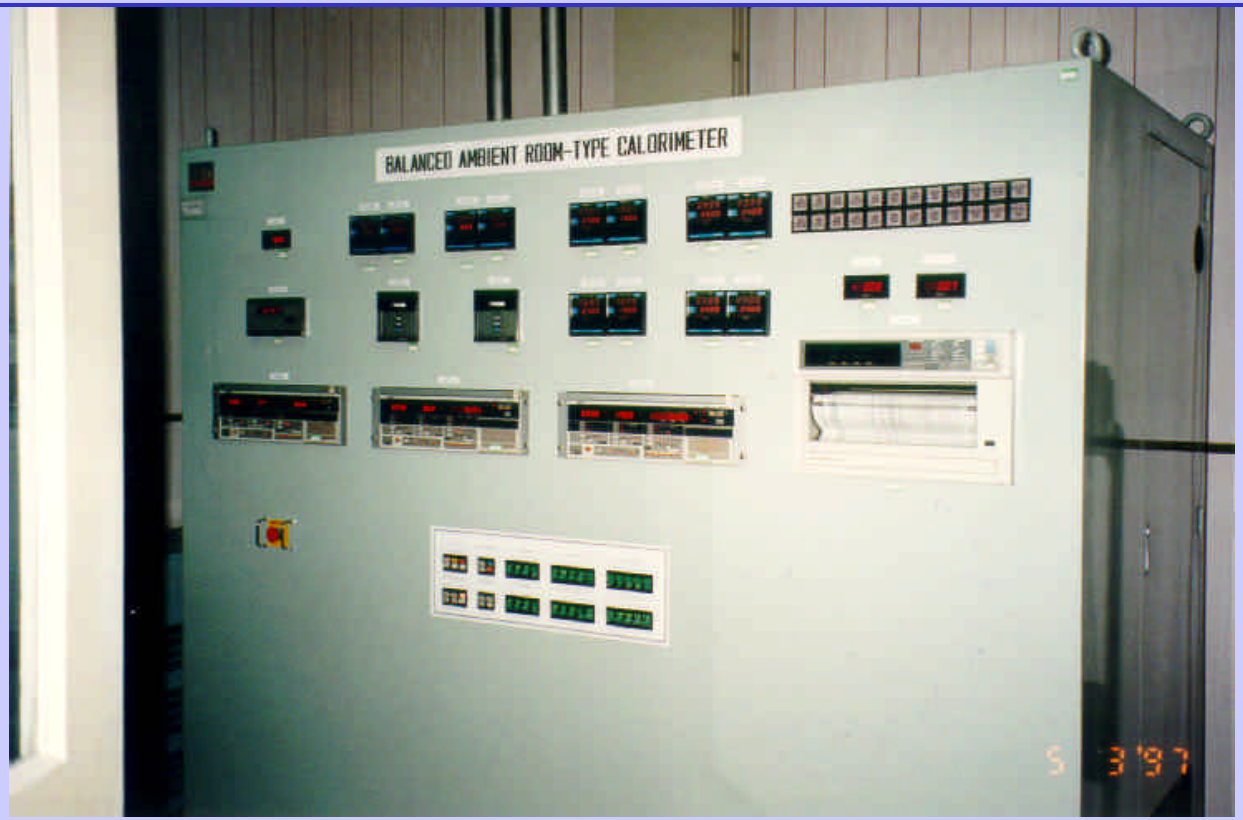
Roadshow

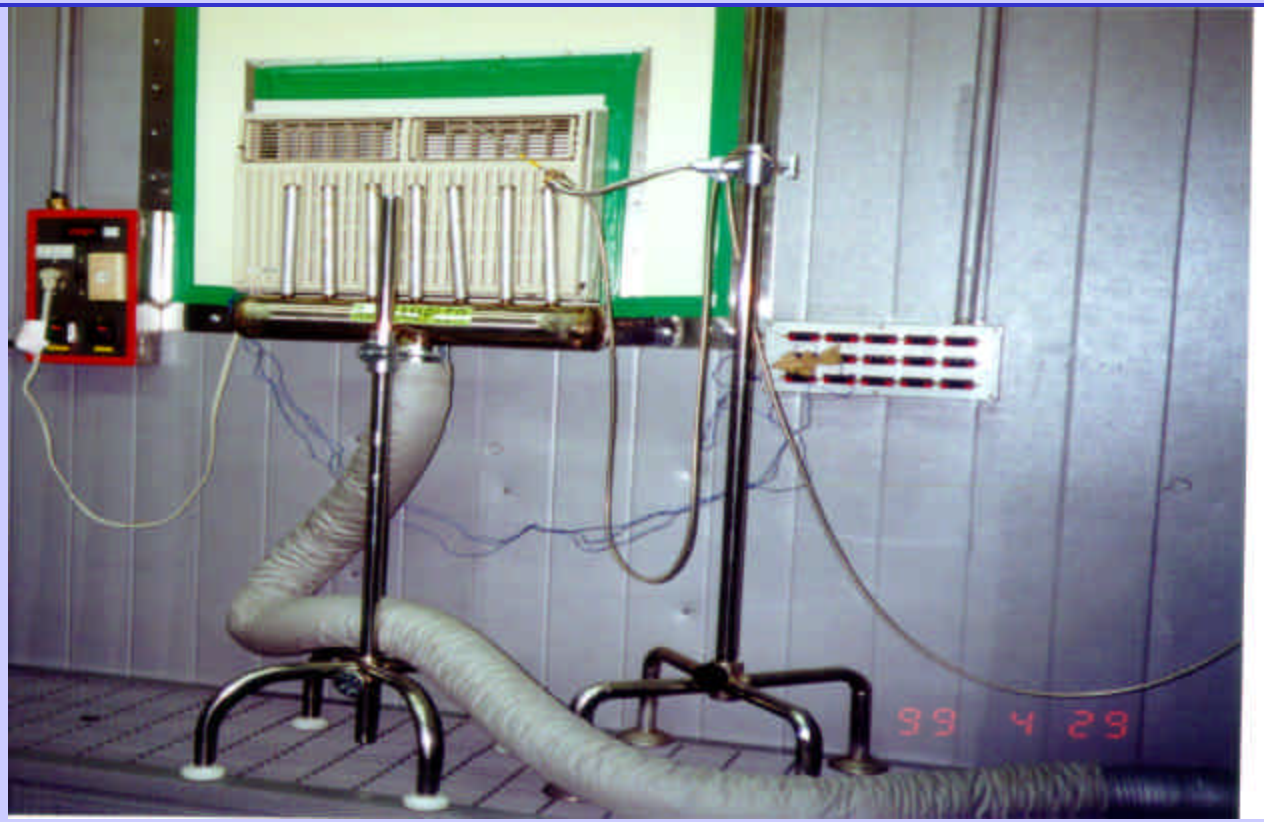
Room Cooler Testing

Balanced Type Calorimeter Control Panel



Room Cooler Testing

Balanced Type Calorimeter Indoor-side Setup



Room Cooler Testing

Balanced Type Calorimeter Outdoor-side Setup

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CFL Testing

Lumen

M easurement

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CFL Testing

Life Test

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Refrigerator Testing

Energy

Consumption

Test

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W ashing M achine Testing

Energy

C onsumption

T est

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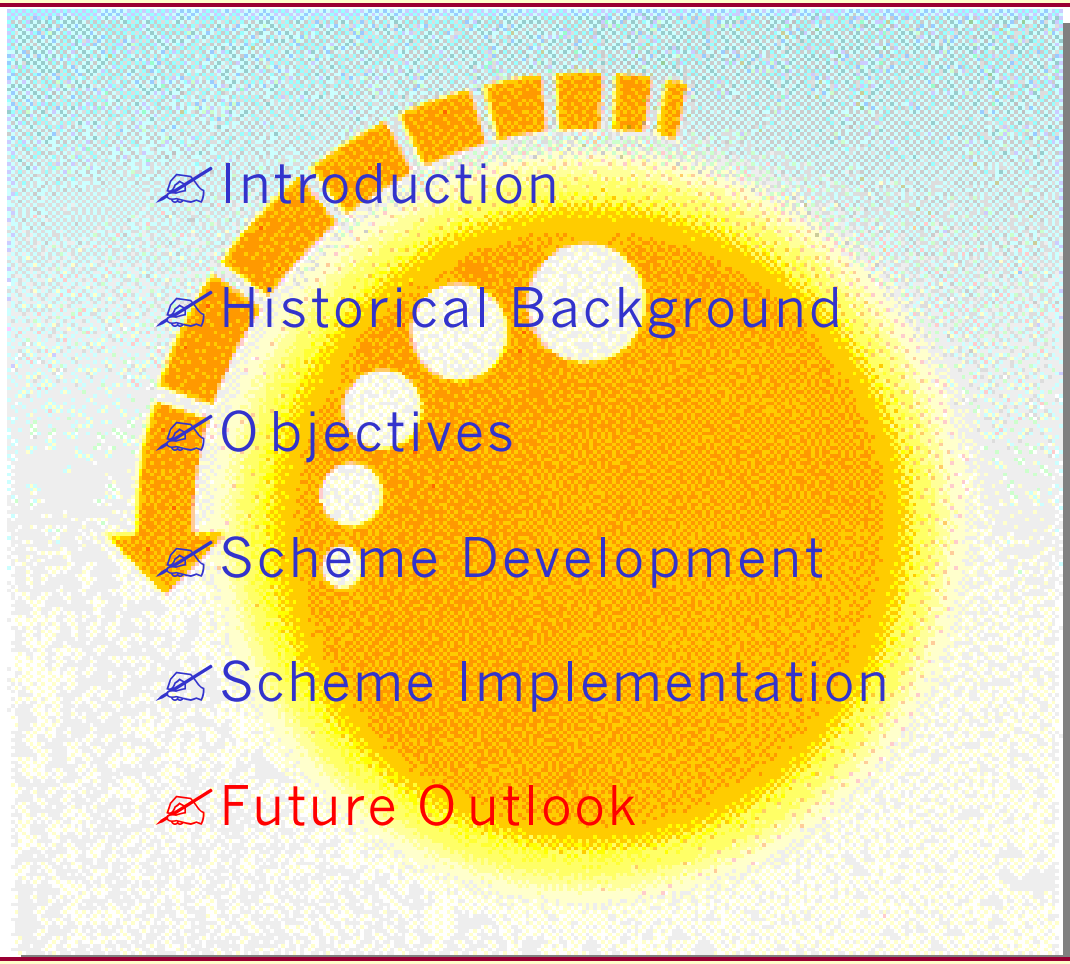
Current Status

Update on Summary of the EELS Registration Record (dated 7 May, 2001)

Appliance	Brand	Model	Application in Process		
			Total Brand	(New Brand out of the Total)	Model
CFL	17	494	3	(0)	47
Room Cooler	26	404	7	(3)	38
Refrigerator	18	162	3	(0)	6
Washing Machine	6	49	5	(3)	23

Difficulties Experienced by Trade

- General public's environmental awareness is still generally low and as a consequence consumer preference for energy-efficient products is still quite low
- High cost for the required energy testing as most tests are carried out in overseas accredited testing laboratories
- Limited market for energy-efficient products
- High administrative effort involved for the trade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Future Direction

- Future program coverage of new EELS may shift from household appliances to other areas such as office equipment and other equipment types (e.g. labelling scheme for passenger cars)

- Scheme improvement
  - More stringent testing requirement
  - Revision of the grading systems

New Schemes – Under Preparation & Consideration

- **Rice Cookers**
- **Multifunction Devices**

  (an integrated device with multifunction such as copying, printing, faxing etc.)
- **Passenger cars**

Strategic Changes

Short Term

- Encourage higher participation
- Promote energy saving and greater energy efficiency awareness

Long Term

- Assisted by Demand Side Management
- Mandatory Energy Labelling Scheme
- Minimum energy efficiency requirements

SUPPORT ENERGY EFFICIENCY AND CONSERVATION

SUPPORT SUSTAINABLE DEVELOPMENT

EELS can only be effective with your support

Thank You

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