

**SME Development Fund  
Final Report of Approved Project**

Project Title : Development of an ecodesign tool box and the conformity  
(Reference No.) assessment methodologies for the CE marking requirement  
(2005/32/EC) of the Energy Using Products (EuPs) export to  
EU market  
(D09 003 002)

Period covered : From 01/11/2010 to 30/09/2012  
(dd/mm/yy) (dd/mm/yy)

## 1. Project Details

Please mark with "\*" if any of the following project details is different from that in the project proposal appended to the project agreement.

### Project Reference and Title

Development of an ecodesign tool box and the conformity assessment methodologies for the CE marking requirement (2005/32/EC) of the Energy Using Products (EuPs) export to EU market

### Project Summary (in not more than 150 words)

The amount of export of the electrical and electronic equipment (EEE) to EU in Hong Kong continues to grow and recorded HKD 79,000 million in 2008. Nearly 50 % of this amount, HKD 38,600 million in 2008, is audio video (AV) equipment. Before placing an EuP on the EU market, the manufacturer must ensure that an assessment of the EuP's conformity with all the relevant requirements of the applicable implementing measure (IM) is carried out, as required by EuP Directive (2005/32/EC). The export to EU is regulated by the EuP directive (2005/32/EC) once its implementing measure (IM) is finalized. The first IM is published in late 2008 and full enforcement one year after its publication, i.e. late 2009.

### Project Objective(s) (in not more than 80 words)

The objectives of this project are to :

1. Develop conformity assessment procedures of Energy-using Products (EuPs) for the compliance with the European Union (EU) Environmental Regulation (EuP Directive 2005/32/EC) leading to the CE marking certification;
2. Develop ecodesign tool box for SMEs;
3. Implement the developed tool box using set top box and vacuum cleaner as show-cases; and
4. Develop step by step procedures and implementation guidelines for SMEs on product Eco-design.

### Recipient/Collaborating/Implementation Organisation

Recipient Organisation : The Hong Kong Polytechnic University

Collaborating Organisation(s) : Hong Kong Electrical Appliances Manufacturers Association (HKEAMA)  
The Hong Kong Electronic Industries Association (HKEIA)

Implementation Agent(s) : N.A.

### Key Personnel

	<u>Name</u>	<u>Company/Organisation</u>	<u>Tel No. &amp; Fax No.</u>
Project Co-ordinator	: Winco Kam-Chuen, YUNG	The Hong Kong Polytechnic University	Tel: 27666599 Fax: 23625267
Deputy Project Co-ordinator	: Yanta, LAM	The Hong Kong Polytechnic University	Tel: 27665480 Fax: 27745067

**Project Period**

	<u>Commencement Date</u> (day/month/year)	<u>Completion Date</u> (day/month/year)	<u>Project Duration</u> (No. of months)
As stated in project agreement	<u>01/11/2010</u>	<u>30/04/2012</u>	<u>18</u>
Revised (if applicable)	<u>01/11/2010</u>	<u>30/09/2012</u>	<u>23</u>

**Methodology Employed**

1. Analysis of the current international ecodesign methods
2. Development of specific elements of the generic ecodesign tool box
3. Identifying the requirements of the EuP conformity assessment procedures
4. Developing the EuP conformity assessment procedures
5. Applying the ecodesign tool box to two different EuPs (e.g. set top box and vacuum cleaner)
6. Applying the conformity assessment procedure to the two different EuPs
7. Forming an environmental help desk for SMEs
8. Delivering training seminar(s)/exhibition(s) to SMEs

**Sources of Funding (HK\$)**

		<u>% of Total Project Expenditure</u>
Amount of SDF grant:	: 952,200	(90 %)
Contribution from recipient organisation and sponsorship from other sources	: 105,800	(10 %)



## 2. Summary of Project Results

### Project Deliverables

Please list out the targeted project deliverables as stated in the project proposal appended to the project agreement and provide details of actual result achieved, including beneficiaries, for each of them.

#### 1. Conformity assessment procedures booklet of the EuPs leading to the CE marking:

- The EuP conformity assessment procedure booklet was developed. It is a detailed manual which has 27 pages describing the step-by-step procedures in order to lead SMEs implementing ecodesign without expert help from outside. 1500 conformity assessment procedures booklet in Chinese (1000 copies by MEDC as in-kind sponsorship) and 1500 conformity assessment procedures booklet in English (1000 copies by MEDC as in-kind sponsorship) were produced and distributed to SMEs through seminars and exhibitions.

#### 2. Ecodesign tool box booklet for the design and development of the EuP:

- The Ecodesign tool box booklet was developed and printed in 88 pages. SMEs can use the 13 tools provided in Ecodesign tool box booklet to access and improve their EuPs. 100 copies of Chinese ecodesign toolbox booklet and 100 copies of English ecodesign tool box booklet were produced and distributed.

#### 3. Case study results of set top box and vacuum cleaner in the form of a technical report:

- The Case study results of simple set top box, complex set top box and vacuum cleaner were attached in the Ecodesign tool box booklet (Item 2 above). SMEs can reference those case study results to conduct ecodesign to their own products.

#### 4. Step by step procedures chart to lead SMEs implementing Eco-design without expert help from outside:

- The step by step procedures was developed and printed in A1 size as a chart. SMEs can follow the steps to conduct ecodesign and also comply the requirements of EuP directive. 600 English chart and 600 Chinese chart were produced and distributed to SMEs through seminars and exhibitions.

#### 5. An environmental help desk to respond queries from local SMEs via the phone, email or web Pages:

- The environmental help desk has been setup for SMEs to enquire environmental issues of their product. SMEs can browse the website([http://www.pctech.ise.polyu.edu.hk/ecodesign\\_eup/](http://www.pctech.ise.polyu.edu.hk/ecodesign_eup/)), send mail and make phone call to obtain information of product ecodesign.

#### 6. Delivering training seminars/exhibitions to SMEs:

- Two seminars were held on 24 Feb 2011 ( with 130 participants) and 7 Feb 2012 (with 111 participants) in PolyU to disseminate project details to local SMEs.
- Two exhibitions were held on 3-6 Nov 2010 and 26-29 Oct 2011 in AsiaWorld-Expo Hong Kong.

### Actual Benefits to SMEs

Please indicate in clear, specific, tangible and quantifiable terms the benefits of the project and its contribution to enhancing the competitiveness of Hong Kong's SMEs in general or SMEs in specific sectors, in not more than 400 words.

The expected benefits to the Hong Kong EuP industry resulting from the output (deliverables) of this project

can be classified into two categories, benefits from the perspective of the economic and environmental aspects.

**i. Economic aspects**

- Entry barrier to the EU market, in particular by SMEs, is expected to be reduced due to the compliance with the requirements of the EuP Directive IM.
- Competitive advantage of the product increases because of the reduction of resources consumption and environmental emissions of a product resulting from ecodesign.
- Complying with the EU environmental regulations and implementing ecodesign, will improve the recyclability of waste EEE and prevent the use of hazardous substances from the product as such the treatment cost of waste EEE is expected to decrease.
- Implementation of the ecodesign in the Hong Kong EuP industries using the ecodesign tool box developed in this project will be conducive to shifting the industry towards environmentally friendly one. The result of the shift will lead to the creation of new opportunity in the ever expanding eco-products market and technology innovation.

**ii. Environmental aspects**

- Greenhouse gas emissions as well as electricity consumption and carbon footprint will decrease through the energy efficiency improvement of EuP mandated by the EuP directive.
- Overall environmental impacts resulting from the EuP in its entire life cycle stages will decrease.

**Milestones (in chronological order)**

# Please indicate if the milestone is completed (C), deferred (D) or not achieved (N). If it is deferred, please indicate the revised completion date. For those milestones which are deferred or not achieved, please also provide the reasons under item 2.4.

	<u>Milestone</u> (as set out in the project proposal appended to the project agreement)	<u>Original target completion date</u>	<u>Revised target completion date</u> (if applicable)	<u>Status</u> (C/D/N) #
(a)	Analysis of the current international ecodesign methods	30/11/2010	N.A.	C
(b)	Development of specific elements of the generic ecodesign tool box	31/05/2011	N.A.	C
(c)	Identifying the requirements of the EuPs conformity assessment procedures	31/01/2011	31/10/2011	D
(d)	Forming an environmental help desk for SMEs	30/04/2011	N.A.	C
(e)	Developing the EuPs conformity assessment procedures	30/06/2011	31/10/2011	D
(f)	Applying the ecodesign tool box to two different EuPs (e.g. set top box and vacuum cleaner)	31/01/2012	30/04/2012	D
(g)	Applying the conformity assessment procedures to the two different EuPs	31/01/2012	30/09/2012	D
(h)	Delivering training seminar(s)/ exhibition(s) to SMEs	30/04/2012	N.A.	C



## Reasons for Deferring or Not Achieving certain Milestones, if any.

### Item 2.3 (c) , (e) and (g)

According to the schedule from European Commission, the "Preparatory Study" of vacuum cleaners has been finalized in 2009 and it is expected that its formal "Implementing Measure" (IM) to be published in late 2010. However, the draft of IM for vacuum cleaners was published end of July 2011, and the formal IM has not yet been published (Normally, the formal IM will be published after the draft for one year. The formal IM is therefore expected to be published around July 2012). The unexpected delay in releasing IM of vacuum cleaners affects our project progress. The schedules in completing milestones (c), (e) and (g) in the proposal are therefore delayed.

### Item 2.3 (f) and (g)

When conducting data collection (e.g. bill of materials, design specifications, testing requirements, and environmental performance assessment results) of the set top boxes, the sponsor "Gold Best Limited" was unable to send the aforesaid information to us. The main reason is that "Gold Best Limited" is only the sole agent of the sponsored set top boxes. Product development and manufacturing of set top boxes are handled by a mainland company who was reluctant to share their products' information with us in the very beginning. Although this problem has been settled in June 2011, milestones (f) and (g) are delayed.

### Item 2.3 (f) and (g)

The post of Research Associate was not filled until 15 August 2011 and the post of Project Associate is vacant starting 5 January 2012 due to staff resignation. There is a lack of workforce the project execution. Milestones (f) and (g) are required to be re-scheduled.

## Marketing/Dissemination Activities (in chronological order)

Please provide details of all completed and on-going promotional and/or dissemination activities for each of the project deliverables. Such activities may include advertisements, seminars, workshops, etc.

<u>Date/ Period</u>	<u>Description</u>	<u>No. of beneficiaries</u> (Please specify whether they are SMEs or not)
3-6/11/2010	Exhibition with FHKI in Low-Carbon Enterprises Display Gallery in the Hong Kong Pavilion of Eco Expo Asia 2010	1500
24/2/2011	Seminar on "Ecodesign Requirement for Electrical and Electronic Products and the Impacts of EU Directives on Energy-using Products (EuPs) for SMEs"	130
26-29/10/ 2011	Eco Expo Asia 2011	4715 (From statistics data of HKTDC, total number of visitors is 4715. The no. of SME is estimated at 2500)
7/2/2012	Seminar on "Ecodesign Requirement for Electrical and Electronic Products and the Impacts of EU Directives on Energy-using Products (EuPs) for SMEs"	111
Total no. of beneficiaries - no. of SMEs		: 3541
no. of companies which are <u>not</u> SMEs		: 2915

## Future Plan for Promoting the Project Deliverables

The environmental help desk will be maintained by PolyU continuously and the ecodesign toolbox booklet, case study results of set top box and vacuum cleaner, conformity assessment procedures booklets and step by step procedures charts will be continuously distributed in future events.