



Room 2006, 20th floor, Murray Building, Garden Road, Central, Hong Kong  
Tel: 848 2551 Fax: 845 3489  
香港中環花園道美利大廈20樓2006室 • 電話: 848 2551 傳真機: 845 3489

**(ACE 46/95)**  
**for information**

## **SUPPORT TO INDUSTRY IN MEETING ENVIRONMENTAL STANDARDS**

### **PURPOSE**

This paper outlines the support provided under the Industrial Support Fund to local industries in meeting environmental standards.

### **BACKGROUND**

2. The Industrial Support Fund (ISF) makes available grants or loans to programmes or projects which are beneficial to the industrial and technology development of Hong Kong. It was set up in April 1994 and is administered by the Industry Department, upon the advice of the Industry and Technology Development Council (ITDC). Organisations undertaking projects with funding from ISF mainly fall into four categories :

Industry support bodies (such as Hong Kong Productivity Council);

Trade and industry associations (like the Hong Kong Electronics Association);

Higher education institutions; and

Professional bodies and research institutes (like the Hong Kong Institute of Biotechnology).

3. Of the 134 projects now funded under ISF, 18 are concerned with environmental support. These include the projects commissioned by the Industry Department to support industry on environmental matters, and those proposed by tertiary institutions and industry support organisations. The total financial commitment for these projects amounts to \$53.04 million. A list of these projects is at Annex. Broadly speaking, these projects can be divided into the following groups according to their objectives:

Annex

- (a) information dissemination and technical advice;
- (b) technology development; and
- (c) business support.

#### INFORMATION DISSEMINATION AND TECHNICAL ADVICE

4. Funding has been granted to the following organisations to undertake relevant projects :

## **Centre of Environmental Technology (CET)**

### **(i) Environmental Hotline**

This has been put into operation by CET since 1 October 1994, providing information in Cantonese, Putonghua and English on environmental legislations, standards, controls and changes, and how compliance can be achieved and where technical assistance can be obtained. To publicise the hotline service, CET has distributed promotional leaflets, arranged meetings with trade and industrial associations as well as placed TV and newspaper advertisements. The Industry Department has circulated information on the service to 7,000 manufacturers and trade and industrial associations. For the 10-month period up to 31 July 1995, a total of 231 calls were received.

### **(ii) Guide to Environmental Technology & Services Available in Hong Kong**

This is a directory of agencies providing pollution control services in Hong Kong. It gives manufacturers details on the range of products and services that are available. It was published by CET in March 1995 and is available at HKPC and bookshops at HK\$250 each.

## **Hong Kong Productivity Council (HKPC)**

### **(iii) Factory Seminars and Visits and the Taking of Effluent Samples**

This is a technical outreach programme operated by HKPC since September 1994. It is designed to disseminate technical advice on environmental compliance directly to factory operators.

The programme has so far conducted :

- seven seminars and five workshops, mainly for small and medium sized enterprises in the bleaching and dyeing, electroplating and printed circuit board (PCB) manufacturing sectors.
- 205 factory visits, of which 63 are textile bleaching and dyeing factories, 130 electroplating factories and 12 PCB manufacturing factories, offering expert advice on the spot.

### **(iv) Design and Eco-audit Manuals**

The design manual aims to advise and guide industrialists in the three target sectors on how to design their production processes to minimise pollution. The eco-audit will guide them to assess how well they have achieved. These publications were produced in May 1995 by HKPC and are available at a price of HK\$25 each. A video is also available at a price of HK\$70 a copy.

(v) **Hong Kong University of Science and Technology's (HKUST)  
Environmental Management Advice Service**

This service is part of a project entitled "Advanced Technologies for Environmental Management in Hong Kong Industries" and is being run by HKUST. The project includes a comprehensive advisory service on waste minimisation and optimal energy utilisation in key manufacturing industries in Hong Kong. This will involve project staff visiting factories in the target industries to identify areas where waste can be reduced and energy saved. Comprehensive guidelines and techniques on how this can be achieved will be put in to a database accessible to all users, including SME's.

(vi) **Awareness Campaign**

This is a proposed media campaign to increase environmental control awareness and what can be done to comply with them among factory operators and workers. The Industry Department plans to launch the campaign in the earlier part of 1996.

**TECHNOLOGY DEVELOPMENT**

5. Environmental technical support projects funded include :

**(a) Development of space-saving waste treatment technologies**

**(i) Calcium Stripping of Heavy Metals  
from Industrial Wastewater**

This HKUST project will develop a simple space-saving and patentable metal stripping technology for the removal of heavy metals. This is particularly useful to the electroplating and PCB manufacturers. This project is expected to be completed by June 1997.

**(ii) Development of a Hybrid Biological Reactor  
for Industrial Waste Treatment**

This project, which is also being undertaken by HKUST, will develop a new patentable biological process to improve waste treatment capacity with reduced space requirements and improved cost effectiveness. The project will be completed by June 1997.

**(b) Projects which reduce the polluting characteristics of chemicals**

**(i) Comparison and Evaluation of Dyes**

This Polytechnic University (HKPU) project evaluates the dyeing and fastness properties of dyes and the results will be input into an electronic database. Upon completion of the project by

September 1995, industrialists will be able to access the database to obtain information on dyes which have the best environmental characteristics.

(ii) Technological Development of Innovative Garment Washing

This project is being undertaken by the Institute of Textiles and Clothing, HKPU. The objective is to identify the optimum processing conditions for washing of commonly used materials in the clothing industry. This will include evaluation of various chemicals used in garment washing and the possibility of replacing the polluting chemicals with eco-friendly alternatives. The project is expected to be completed by November 1995.

(c) **Projects which include demonstration facilities**

(i) Development of Clean Technologies  
for Surface Finishing Applications

This HKPC project aims to develop technologies replacing the conventional paint spraying process which is highly polluting and to develop processes for electroplating which will cost-effectively prevent waste generation at source. The project is scheduled to be completed by May 1997.

An Electrophoretic Painting Demonstration Laboratory will be established at HKPC to encourage manufacturers to adopt the technology.

(ii) Development of Rinsing Water Recycling Systems for Electroplating Establishments in Hong Kong . . .

This project, proposed by the HK & Kowloon Electroplating Trade Merchants Association, aims to develop rinsing water recycling systems, and to transfer the technology to local manufacturers through training programmes and consultancy services.

A facility demonstrating the rinsing water recycling system will be set up at HKPC. The project is expected to be completed by May 1996. . . .

(iii) Advanced Technologies for Environmental Management in Hong Kong Industries (HKUST)

Please refer to para. 5(c) above. This project will also include a pilot plant facility to demonstrate waste minimisation techniques to the electroplating, PCB manufacturing, bleaching and dyeing and textile industries.



(iv) **Development of Clean Technologies (Recycling and Low Waste Operations) for Bleaching and Dyeing Industry**

This project is undertaken by HKPC. Its aims to identify and evaluate suitable clean technologies to suit the local bleaching and dyeing operations. Such clean technologies will include recycling/recovery processes, material and chemical control, equipment modification for low-waste processes and good house-keeping. Seminars and workshops will be held to provide practical training for users of clean technologies. The project will be completed by March 1997.

(d) **Communal Wastewater Treatment**

**Plan for the Establishment of an Electroplating complex in Hong Kong**

This project was proposed by the HK & Kowloon Electro-plating Trade Merchants Association Ltd. The aim is to develop a plan to establish a multi-tenanted building for electro-plating companies at Tseung Kwan O Industrial Estate. It will consider the organisational structure, management and financial aspects of such a facility. A communal waste water treatment plant will also be included in the complex.

The project will also seek to develop processes for electro-plating firms in multi-storey buildings to comply with environmental regulations. The project was completed in August 1995.

## BUSINESS SUPPORT

6. The following business support projects have been funded :

(a) **Database on Green Processes and Products in Textiles and Clothing Industries**

This HKPC project aims to set up a database providing information on the latest processing methods for 'green' textile products and the latest market trends and requirements for the textile industry. It will also provide information on the implementation of environmental management systems. The project is expected to be completed by September 1995.

(b) **Green Label Certification Programme**

This HKUST project aims to provide information to industry on the latest green requirements in overseas markets. It will investigate and analyse the various schemes existing in Hong Kong's major markets and make recommendations on a local Green Label Certification Programme. The project is expected to be completed by May 1996.

(c) **Preparation for the Impact of Pending International Regulations on Recyclable Requirement of Electronic and Electrical Products**

This project is undertaken by HKPC. It aims to collect information on the international trends/legislative developments in recyclable contents of

electronic and electrical products. Information collected such as new or substitute materials, processes, design rules and packaging technologies will be disseminated to the local industry. Seminars and study mission will be organised. The project will be completed by March 1997.

### MONITORING OF ENVIRONMENTAL PROJECTS

7. The secretariat of the Industry and Technology Development Council and its seven Committees are responsible for the overall monitoring and administration of projects funded under the ISF. Staff of the Secretariat and Members of the Committees will meet the project co-ordinator periodically to assess and exchange views on the progress of the projects. Upon completion of the projects, the recipient organisations are requested to disseminate the findings to the respective industry through seminars or workshops of which the secretariat staff will attend.

### MEMBERS' INFORMATION

8. Members are requested to note the review for information.

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