

## **Guangdong-Hong Kong Technology Cooperation Funding Scheme 2007**

### **Textiles and Clothing (Energy-saving and Environmental-friendly Production System and Material – Environmental-friendly Textile Dyestuff and Chemical)**

#### **Topic/Theme**

Environmental-friendly Textile Dyestuff and Chemical (ETDC). To develop enabling technology for ETDC that can be applied in the textiles and clothing industry.

#### **Background**

2. Due to the rapid industrial development in the Great Pearl River Delta Region (the Region), pollution in the region, which affects air, water and environment, is a major issue that both Hong Kong and Guangdong provincial government are dealing with. The price for remedial action for pollution results would be costly if the root of pollution can not be solved. Textile industry has long been considered to be a highly polluted industry, especially bleaching, dyeing, printing and finishing (BDPF) processes.

3. BDPF sector involves a large number of factories in the Region which consume tonnes of dyestuffs and chemicals which may pollute the Region unless exhausted gas and effluent have been properly treated. As a result, production cost is increased to cover the costly treatment expenses.

4. To achieve this end, applied researches in reduction, reuse and recycling of environmental-friendly dyestuff & chemical and minimal polluted processes have emerged to cope with this. The integration and convergence of the many diverse environmental materials and processes, would benefits to the industrialists of this areas. In particular, the swift adaptation of the new technology would give the textiles and clothing industry in the Region an early mover advantage to spawn new business and facilitate the technological upgrading of the industry.

#### **Scope**

5. The proposed ETDC is to facilitate the reduction, reutilization and recycling of chemicals, including dyestuff and chemical for textile bleaching, dyeing, printing and finishing. As a result, the degree of pollution and the disposal of harmful chemicals would be reduced and enable the environment to be less polluted.

6. The ETDC should be developed in a prototype form and reasonably demonstrated in Hong Kong or their major cities in the Guangdong Province to prove its viability.

7. In order to spearhead and support research and development of ETDC, the ITF is seeking proposals on the following:

**(a) Environmental-friendly Chemicals for Pre-treatment Process**

To develop green chemicals that are environmental-friendly and other harmless materials (for example: available organic halogen, etc.) which can be applied to yarn/fabric pre-treatment processes such as scouring, bleaching, mercerization with the condition that:

- (i) Low temperature and short processing time should be involved to save energy consumption; and
- (ii) Optimized utilization, reutilization and recycling of chemicals would be advantage.

**(b) Environmental-friendly Dyestuff for Dyeing/Printing Process**

To develop green dyestuffs that are environmental-friendly and other harmless chemicals (for example: azo-free, etc.) which can be applied to yarn/fabric dyeing and printing processes with the condition that:

- (i) Low temperature and short processing time would be involved to save energy consumption; and
- (ii) High dye exhaustion, less hydrolysis, etc. would be involved to minimize water consumption and less effluent treatment.

**(c) Environmental-friendly chemicals for Finishing Process**

To develop green chemicals that are environmental-friendly and other harmless chemicals (for example: formaldehyde-free, etc.) which can be applied to yarn/fabric finishing processes with the condition that:

- (i) Low temperature and short processing time should be involved to save energy consumption; and
- (ii) Optimized utilization, reutilization and recycling of chemicals would be advantage.

**Objectives**

8. This invitation aims to solicit applied research and development proposals for the textiles and clothing industry to sustain and enhance its competitive edge in global marketplace, in the development of the fore front “ETDC” to demonstrate Hong Kong’s research and development capability.

**Target Beneficiaries and Benefits**

9. The beneficiaries of the project results are textiles and clothing companies and also the industrialists showing interest in ETDC. It is envisaged that the results could enhance the competitiveness of manufacturers through the development of new product, technologies, process and design, in enhancing ETDC’s viability, performance, durability and quality.

### **Extra Merit**

10. Extra merit will be given to those applications, which could leverage on Guangdong's R & D capability in the implementation of the project proposals. We encourage collaboration among tertiary institutions and support organizations in both Guangdong and Hong Kong, so that their existing R & D facilities, resources and knowledge may be leveraged for maximum benefit.

### **Project Duration**

11. The project shall start in the first quarter of 2008 for a maximum of duration of two years.

### **Electronic Submission of Applications (Application Form)**

12. Proposals should be submitted to the Hong Kong Research Institute of Textiles and Apparel (HKRITA) through the ITC Funding Administrative System (ITCFAS). Applicant has to first register as project coordinator of the R&D Centre. To prepare a proposal, a registered project coordinator should select "ITSP - R&D Centre (R&D Projects)" under grant type and then "Guangdong-Hong Kong TCFS: Platform Research Scheme" or "Guangdong-Hong Kong TCFS: Collaborating Research Scheme" as appropriate. The ITCFAS can be accessed via the ITF website at [www.itf.gov.hk](http://www.itf.gov.hk).

13. For regulations and submission requirements specific to the Centre, please visit its the website at [www.hkrita.com](http://www.hkrita.com) or approach the contact persons listed below.

### **Deadline for Application**

14. The deadline for application is on 22 October 2007, 5:00pm (Hong Kong Time).

### **Contact Person**

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