

Guangdong-Hong Kong Technology Cooperation Funding Scheme 2015

Textiles and Clothing (Sustainability)

Topic / Theme

The objective is to develop enabling technologies in green manufacturing processes, novel sustainable materials and sustainable enterprise practices to achieve a sustainable textile and clothing industry.

Background

2. Sustainability is a long term development strategy.
3. In October 2010, the Communist Party of China's Central Committee approved the guiding principles of China's 12th Five-Year Plan (FYP) for National Economic and Social Development (2011-2015). The 12th FYP's guiding principles will promote the government's focus on "inclusive growth," which means ensuring the benefits of economic growth are spread to a greater proportion of Chinese citizens. The plan's key themes are rebalancing the economy, reducing social inequality and protecting the environment. In the past few years, China, based on its international status of being industrialized and urbanized economy, has enhanced the implementation of sustainable development, and achieved steady and rapid economic development and some progress in environmental protection. As part of China, Hong Kong Government also incorporated sustainability as one of its strategic development.
4. In order to support our Chinese and Hong Kong Governments in their initiatives towards sustainability, applied research in textile and apparel technologies can facilitate the development of new & innovative textile materials/chemical and green production technology with the focus on non-toxic & harmless textile material/chemical, energy saving, and environmental-friendly production process so as to achieve sustainable development in industry. In this respect, it is considered that the collaboration effort between Guangdong Province and Hong Kong would help to boost the achievement of sustainability in industrial environment by protecting the environment while keeping the economic and social development in order to benefit the Pearl River Delta (PRD) area industry and environment.

Scope

5. The research theme of sustainability is to develop new technologies on green manufacturing process by the means of cleaner production on low energy/water/material consumption, reduction of pollution, reutilization / recycling of fibers and environmental-friendly use of non-toxic and harmless chemicals.
6. The technology should be developed in a prototype form and reasonably demonstrated in Hong Kong or in the Pearl River Delta (PRD) area to prove its viability.
7. In order to spearhead and support research and development for sustainability, the ITF is seeking proposals on the following:

(a) Cleaner Production Technology in Textile and Clothing Industry

To develop cleaner production technology to achieve energy saving, less water consumption, as well as better control on air and effluent pollution. The development should focus on the:

- (i) The development of reduction in the energy / material consumption in the production process in order to the production cost ; or
- (ii) The development of reduction and control in the effluent discharge and air pollutant emission so as to fulfill the requirement of the national regulation; or
- (iii) The development of reduction in the water consumption in the production process such as waterless dyeing/finishing technology.

(b) Non-toxic & Harmless Natural Fibres

To develop environmental-friendly natural fibres without the utilization of toxins chemicals during the manufacturing process. The technologies developed should:

- (i) Exploit chemicals used in cropping, scouring, spinning and dyeing would be metal-free and harmless to human and environment; and
- (ii) Develop high quality textile fibres and retain adherent properties in addition of favorable functionalities, such as soft hand, light weight, crease resistance for cellulosic fibre, etc.

(c) Degradable / Recycled Regenerated or Synthetic Fibres

To develop new regenerated or synthetic fibres by the means of using the environmental-friendly manufacturing process. The technologies developed in this area should:

- (i) Optimize and upgrade the manufacturing process to be more environmental-friendly by using green chemicals, chemical recycling as well as low energy consumption; and
- (ii) Retain original properties in addition of other favorable functionalities, e.g. easy care, soft hand etc; or
- (iii) Extract the useful material (e.g. Lactic Acid) in wastage such as food waste or used clothing to regenerate new fiber which can retain original properties.

(d) Environmental-friendly Chemicals in Production 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, dyeing, printing and 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 textile and clothing industry to sustain and enhance its competitive edge in global marketplace, in the development of the fore front “Sustainability” to demonstrate Hong Kong’s research and development capability.

Target Beneficiaries and Benefits

9. The beneficiaries of the project results are textile and clothing companies and also the industrialists. It is envisaged that the results could enhance the competitiveness of manufacturers through creating a new green technology based industry to enhance competitiveness, reduce energy consumption, eliminate waste and minimize harm to the environment.

Extra Merit

10. Extra merit will be given to those applications which could leverage the PRD’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 2nd quarter of 2016 for a maximum 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.

13. For regulations and submission requirements specific to the Centre, please visit its the website at www.hkrita.com or approach the contact persons listed below.

Deadline for Application

14. The deadline for application is on 30th September 2015, 5:00 pm (Hong Kong Time).

Contact Person

15. Dr. Kai-chiu HO, tel: 2627 8188, fax: 2364 2727, e-mail: kcho@hkrita.com .