ASIA ECO-DESIGN ELECTRONICS (AEDE) COUNTRY REPORTS: EXECUTIVE SUMMARY

CHINA

Background

The electronics sector has been growing at 20% annually and China is now the world's largest exporter of information and communication technology (ICT) including personal computers (PCs), mobile phones, DVD players and digital cameras. The industry is largely concentrated in the southern coastal region with a dominance of foreign invested companies (including cooperatives, joint ventures and exclusively foreign owned companies), state owned enterprises and cooperative domestic enterprises.

Two thirds of Chinese electronic and electrical products exports are to developed countries and the main exporters are foreign invested companies. Exports have grown significantly in recent years, led by strong performance of foreign invested enterprises. Chinese exports of electronics and electrical products can be categorised into five main products: consumer electronics, electronic components, household appliances, automatic data processing equipment and telecommunication products. The export value of these five categories amounted to $84.3 billion in 2002, increasing to $113 billion in 2003 and $200billion in 2004. This strong growth continued in 2005.

The Chinese legislative framework governing electronics manufacturing is fairly detailed. Following are some key laws concerning the environment relevant to the sector:

- Administrative Measure on the Control of Pollution Caused by Electronic Information Products
- Bulletin Regarding Strengthening Environment Management of WEEE
- Administrative Statute on the Recycling of End-of-life and Used Home Appliances and Electronic Products (under legislation)
- Technical Policies for controlling Pollution of WEEE
- Technical Policies for controlling Pollution of Waste Batteries
- Administrative Measures Regarding the Environmental Administration of New Chemical Substances
- Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products (under consultation).

Implications of EU legislations on suppliers

- WEEE and RoHS (especially the latter) will force a number of small suppliers out of the supply chain on account of their inability to meet technical requirements and/or increased costs of compliance.
- It is estimated that production cost increases will range from between 5 to 20% on account of substitution of the restricted hazardous substances in some products.
- The testing and certification systems in China are rarely accepted by the developed countries, forcing suppliers to apply for foreign certification, contributing to higher costs.
- For most large enterprises, implementation of the EU Directives will increase the cost of production, lower profits and trade volumes, and increase redundancies. Small and medium sized enterprises that are marginalised will also add to unemployment. However this could be offset by new employment opportunities created in the recycling and disposal industry and local third party certification consultancies.
- Chinese electronics retain a competitive advantage over India and Thailand for a variety of reasons, including lower production costs and more progressive legislation in line with the EU Directives.

Gaps and needs for capacity building

To meet the requirements of WEEE, RoHS and national legislation, management and technical requirements pose challenges to the Chinese manufacturers.

- On the management side, an important consideration is to ensure that environment management systems are introduced early, in a manner that integrate eco-design, green procurement and supply chain management into a cohesive management system. This will

help companies to obtain ISO 14001 certification and encourage export-oriented corporations to acquire eco-labels in export markets.

- Collecting sorting and disseminating information on key requirements is crucial, especially for small and medium sized enterprises (SMEs). This would require a combined effort by the government and industry associations.
- The application of eco-design tools is still in its infancy and there is a need for targeted, practical training for suppliers.
- Technological solutions to guarantee products are free of restricted substances, and capacity building in technical innovation, are important to the whole industry.
- Establishment of e-waste call back, reuse and recycling systems will become a necessity once the legislations are fully enforced.

Capacity building measures

In the *short term*, capacity building should focus on providing training in the following areas:

- WTO multilateral trade agreements.
- Requirements on the electric and electronic products of ROHS, WEEE, EUP Directives in EU and HARL, LPEUR, GPL in Japan.
- Related laws, regulations and policies in China.
- Capacities and skills for eco-design.
- Impacts of the EU Directives on export of Chinese electric and electronic products, and SME marginalisation.
- Production processes and methods (PPMs).
- Substitution of the 6 kinds of hazardous substances restricted in RoHS.
- Analysis of methods and costs of recycling E-wastes.
- Relationship between WEEE, RoHs and EuP Directives.
- Possible ways for electronics enterprises to meet the requirements of the EU Directives.

In the *medium to long* term it is recommended that training centres be set up by government departments, professional associations, commercial associations and universities with a view to aligning the needs of enterprises with the training provided by different departments. It will also be important to raise the awareness levels of management and technical personnel in exporting companies about environmental issues more generally. They should be trained to implement advanced environmental management techniques such as eco-design and cleaner production, to satisfy the overseas environmental and health requirements.

For more information, see www.cfsd.org.uk/aede.

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