

# ASIA ECO-DESIGN ELECTRONICS (AEDE) PROJECT

## Drivers

- Forthcoming legislation e.g. WEEE, RoHS, EuP, REACH, Chinese RoHS
- Existing legislation e.g. National WEEE, HARL, GPL, LPEUR
- Standards and codes e.g. ISO, BSI
- Customers e.g. B2B+, B2R, B2G
- Investors e.g. AsRIA, F&C (ISIS)
- NGOs e.g. SVTC, CAFOD, Christian Aid

## **Key issues**

- Environment and social
- Early warning systems
- Access to accurate information
- National networks
- Building knowledge and competence
- Cooperation

## **Study: Implications**

- Higher standards (social + environmental)
  - Competitive necessity
  - Market entry
  - Global trends e.g. EU, Japan

## Study: Implications

- RoHS is the priority
  - RoHS + Japan 'RoHS' is no. 1
  - WEEE information requirements
  - Future: EuP + REACH
  - Energy efficiency
  - Public procurement
  - CSR e.g. ISO, EICC

## Study: Implications

- Investment (on-going not one-off)
  - Product re-design
  - Re-tooling
  - New materials
  - New processes
  - Product testing facilities
  - Training
  - Management time (consultants + advisors)
  - Potential write-off of redundant products + materials
  - Investment in integrated management systems

## Study: Implications

- Marginalisation
  - Monitor the agenda
  - Proactive v reactive
  - Retailer pressure e.g. Walmart going *green*
  - TNCs + Japanese
  - SMEs: risks of being unprepared?
  - SMEs: marginalised due to other factors e.g. ISO9000

## **Study: Implications**

- Uncertainty of impacts (on SMEs) depends on:
  - Preparedness + investment
  - No. supplying to EU and/or Japan
  - No. affected by RoHS (and needing to make investment)
  - No. that will lose contracts



## Study: Implications

- WEEE + RoHS implementation
  - Lack of awareness and confusion
    - Poor communication channels
    - No central point of communications
    - Lack of understanding e.g. RoHS
    - Protracted implementation process
    - Disparate approaches e.g. WEEE
  - Learning effect? e.g. EuP

## **Study: Potential social, economic and competitiveness implications**

- For SMEs
  - Negative in short-term
  - Supplier switches e.g lead-free
  - Required investment reducing competitiveness and viability?
  - Export dependant e.g. win or lose (liquidations)
  - Broader quality issue
  - Reduce no. of SMEs?
  - Increase concentration of TNC subsidiaries and contract manufacturers?

## **Study: Potential social, economic and competitiveness implications**

- For employees, dependants and communities
  - Ability to respond
  - Ability to find new jobs e.g. those laid-off
  - Adaptability e.g. new skills
  - SME clusters e.g. closures
  - Gender impacts e.g. women on shop floor
  - Cultural dimensions e.g. discrimination
  - Migrant labour force e.g. nationals and internationals

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## **Study: Potential social, economic and competitiveness implications**

- For industry, trade associations and government
  - National, regional, local
  - Foreign earnings e.g. GNP
  - Employment
  - Policy development and support e.g. demand and supply-side

## **Study: Gaps and Future Needs**

- Management
- Technical

## **Study: Gaps and Future Needs**

- Management (Systems)
  - Level of sophistication e.g. ZBIA
  - ISO 9001 and ISO 14001

## **Study: Gaps and Future Needs**

- Management (Information)
  - Monitoring systems
  - Compliance control
  - Internal communication + information systems
  - External communication
  - Subscription services
  - Advisory services

## **Study: Gaps and Future Needs**

- Management (Planning)
  - Developing and implementing 'phase out'
  - Investment strategies
  - Developing and implementing re-design of products + processes
  - Market data e.g. national WEEE registration
  - New trends e.g. Corporate Social Responsibility (CSR)



## **Study: Gaps and Future Needs**

- Management (Organisation)
  - Structures
  - Resources
  - Training
  - Quality
  - Process integration e.g. eco-design

## **Study: Gaps and Future Needs**

- Technical (Awareness)
  - Legislation
  - Planning for and managing change
  - Eco-design management
  - Use of design tools
  - Collection and communication of life cycle information e.g. EuP

## **Study: Gaps and Future Needs**

- Technical (Technology)
  - Hazardous material substitution
  - Testing and analysis methods
  - Training programmes
  - Information systems
  - Good quality data e.g. EuP

## **Study: Capacity Building Plans**

- Short-term
- Medium-term
- Long-term

## **Study: Capacity Building Plans**

- Short-term
  - Information + communication e.g. internet
  - Senior management briefings (business + technical issue)
  - Training programmes (management + technical + specialist)
  - Training material e.g. CD-ROMs, etc
  - 'Train the trainers'
  - New knowledge for exporters e.g. WEEE compliance
  - Government regulation + voluntary agreements

## Study: Capacity Building Plans

- Medium-term
  - On-going support
  - Knowledge development e.g. ZBIA
  - Institutionalisation e.g. universities, professional training bodies, etc
- Long-term
  - Trends e.g. Europe, US and Japan
  - Eco-design + lifecycle data
  - CSR e.g. working conditions

## EuP: Who Will be Hit First?

- Products identified as having a high potential for cost-effective reduction of greenhouse gas emissions. These are:
  - *Heating and water heating equipment*
  - *Electric motor systems*
  - *Lighting*
  - *Domestic appliances*
  - *Office equipment*
  - *Consumer electronics*
  - *Heating ventilating air conditioning system (HVAC)*
- A separate *implementation measure reducing stand-by energy use* for a range of products not yet specified.

## EuP: Research 1

- EuP methodology study was published by VHK (November 2005)
- Studies have been commissioned by DG TREN & DG ENV (March 2006\*)
  - *Boliers and combi-boilers (gas/oil/electric) [21 months, 400k]*
  - *Water heaters (gas/oil/electric) [21 months, 400k]*
  - *Personal computers (desktops and laptops) and computer monitors [16 months, 250k]*
  - *Imaging equipment: copiers, faxes, printers, scanners, multifunctional devices [21 months, 350k]*
  - *Consumer electronics: televisions [16 months, 250k]*
  - *Standby and off-mode losses of EuPs [16 months, 300k]*
  - *Battery chargers and external power supplies [11 months, 150k]*
  - *Office lighting [16 months, 250k]*
  - *Public street lighting [11 months, 150k]*
  - *Residential room conditioning appliances (air conditioning and ventilation [21 months, 350k]*



## **EuP: Research 2**

- Studies have been commissioned by DG TREN & DG ENV (March 2006)- continued
  - Electric motors 1-150 KW, water pumps (commercial buildings, drinking water, food, agriculture), circulators in buildings, ventilation fans (non-residential) [21 months, 400k]
  - Commercial refrigerators and freezers, including chillers, display cabinets and vending machines [21 months, 350k]
  - Domestic refrigerators and freezers [16 months, 150k] \* April
  - Domestic dishwashers and washing machines [16 months, 250k] \* April

## **EuP: Category**

Street lighting

Battery chargers, etc

Personal computers, etc

Consumer electronics: TVs

Standby, etc

Office lighting

Domestic refrigerator, etc

Domestic dishwashers, etc

Imaging equipment, etc

Water heaters, etc

Boliers, etc

Residential room conditioning appliances

Electric motors, etc

Commercial refrigerators, etc

## **Timetable**

Jan 2007

Jan 2007

July 2007

July 2007

July 2007

July 2007

July/Aug 2007

July/Aug 2007

Dec 2007

Dec 2007

Dec 2007

Dec 2007

Dec 2007

Dec 2007

*Note: assumes projects started in March 2006*

## **AEDE Project: Partners**

- The Centre for Sustainable Design (UK)
- TERI-Europe (UK/India)
- Linkoping University (Sweden)
- ELCINA Electronic Industries Association of India (India)
- Rajiv Gandhi Foundation (India)
- Electrical and Electronics Institute (Thailand)
- Renmin University of China [RUC] (China)
- China Household Electrical Appliances Association [CHEAA]  
(China)\*

## AEDE Project: Outputs

- Reports (EC/Japan, Thailand, China, India)
- Website ([www.cfds.org.uk/aeede](http://www.cfds.org.uk/aeede))
- Conferences
  - Thailand: 10<sup>th</sup> April 2006 (102 delegates, 60 from business)
  - India: 29<sup>th</sup> June 2006
  - China: September 2006
  - Brussels: December 2006
- Tools
  - Eco-design (management + technical)
  - Components
  - Green procurement

The logo for aeede, featuring the lowercase letters 'aeede' in a green, sans-serif font. The letters are slightly overlapping and have a soft shadow effect. The background of the logo is a light green map of Asia.

asia eco - design electronics

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## Contact Details

Martin Charter

Director

The Centre for Sustainable Design

University College for the Creative Arts

Falkner Road

Farnham

Surrey

GU9 7DS

Tel: 01252 892772

Fax: 01252 892747

email: [mcharter@surrart.ac.uk](mailto:mcharter@surrart.ac.uk)

web: [www.cfsd.org.uk](http://www.cfsd.org.uk)