

Asian Network Workshop 2017

Managing WEEE through Producer Responsibility - The Hong Kong Solution

Gary Tam
Environmental Protection Department
Hong Kong SAR Government

WEEE - an environmental problem

- * WEEE – Waste Electrical and Electronic Equipment
- * Hong Kong generates some 70 000 tonnes of WEEE annually, most of which are exported for reuse or recovery of valuable materials; yet the reliance on export may not be sustainable in the long run
- * WEEE from other places may be traded through Hong Kong as second-hand goods or waste

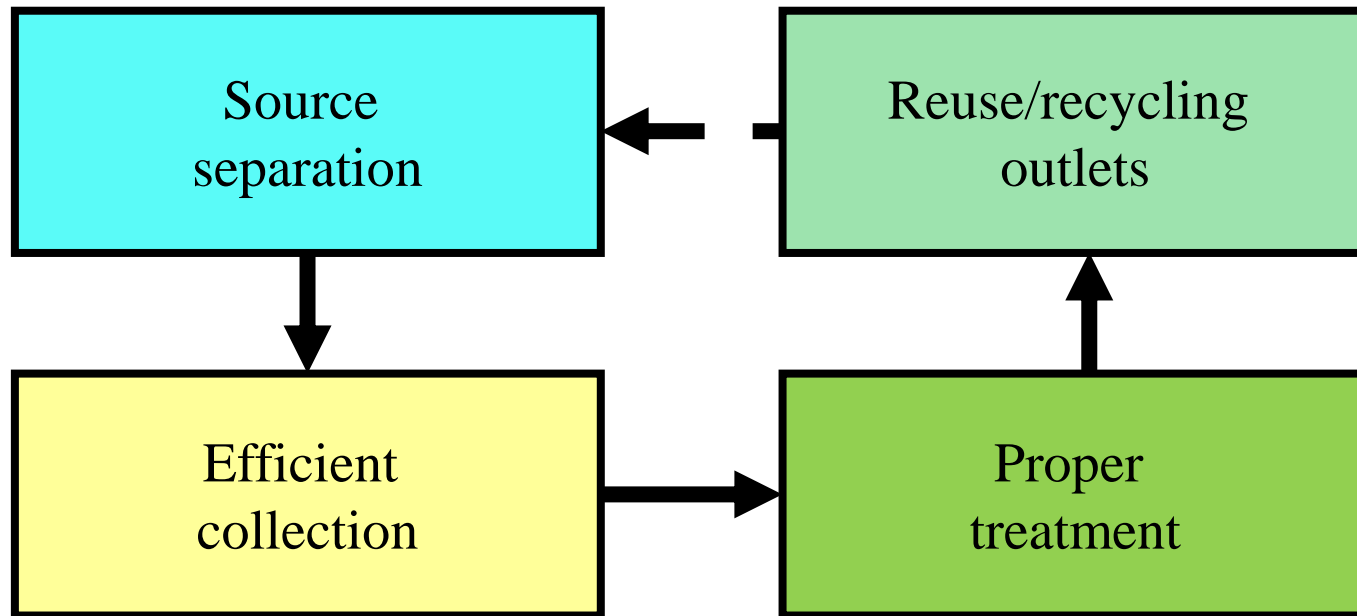
To facilitate the proper recycling of WEEE, the Hong Kong Government is implementing in phases a producer responsibility scheme on WEEE or in short “WPRS”



Objectives of the Producer Responsibility Scheme (PRS)

- * Bring Hong Kong in line with the developments overseas (particularly in the neighbouring region) on WEEE management
- * Facilitate a circular economy, in line with the “polluter pays” principle, for promotion of recycling and proper disposal
- * Ensure proper treatment of WEEE and reduce landfill burden

Circular Economy is Requisite to Effective Recycling



- All aspects require coherent development
- PRS transform waste into resources to form a circular economy

Overall Framework of the PRS

New Products



In line with the “polluter pays” principle, a recycling levy is levied on new products to help finance the PRS.

Supply Chain stakeholders

Consumers

PRS Contractor

Government

Collection Agents

PRS contractor appointed by the Government to coordinate collection of spent products from consumers for proper treatment by competent recyclers.



Spent Products

Progress so far

- Following public consultation, the enabling legislation was submitted to the Legislature for scrutiny in 2015, and passed in 2016
- Subsidiary legislation on detailed operational measures passed the Legislature in 2017
- Construction of Government-funded WEEE Treatment and Recycling Facility (WEEETRF) started in early 2016, and the facility is expected to commence full operation shortly
- Statutory measures to commence in phases within 2018

Product coverage: 8 types of household equipment

Air conditioners	Washing Machines	Refrigerators	Televisions
Computers	Printers	Scanners	Monitors

- * Collectively as **Regulated Electrical Equipment** (or “**REE**”)
- * Accounts for 85% of all WEEE generated in Hong Kong

“Upstream” Measures (1)

- * **Suppliers** (i.e. manufacturers and importers) of REE must be registered and pay a recycling levy on REE that they distribute in the Hong Kong market

televisions, refrigerators	HK\$165 per item
washing machines, air conditioners	HK\$125 per item
monitors	HK\$45 per item
computers, printers, scanners	HK\$15 per item

The recycling levy helps finance the operation of the WPRS



“Upstream” Measures (2)

- * **Sellers** of REE must arrange removal service free of charge if so requested by consumers so that the old item is collected for delivery to competent recyclers for proper recycling

The removal service helps channel abandoned REE from consumers to recyclers for proper recycling



“Downstream” Measures

- * Licensing control over the storage, treatment, reprocessing or recycling of abandoned REE
- * Import and export permit control for abandoned REE
- * Landfill ban

These measures ensure environmentally sound treatment of abandoned REE locally, guard against unauthorised export of locally generated waste or international dumping into Hong Kong

WEEE Treatment and Recycling Facility ("WEEETF")

- *Government-funded facility through a Design, Build and Operate ("DBO") contractual arrangement
- *Construction substantially completed and full operation is expected to commence shortly

The WEEETF signifies Hong Kong Government's commitment towards sustainable use of resources and provides an essential piece of infrastructure in support of the WPRS

WEEE Treatment and Recycling Facility (“WEEETRF”)

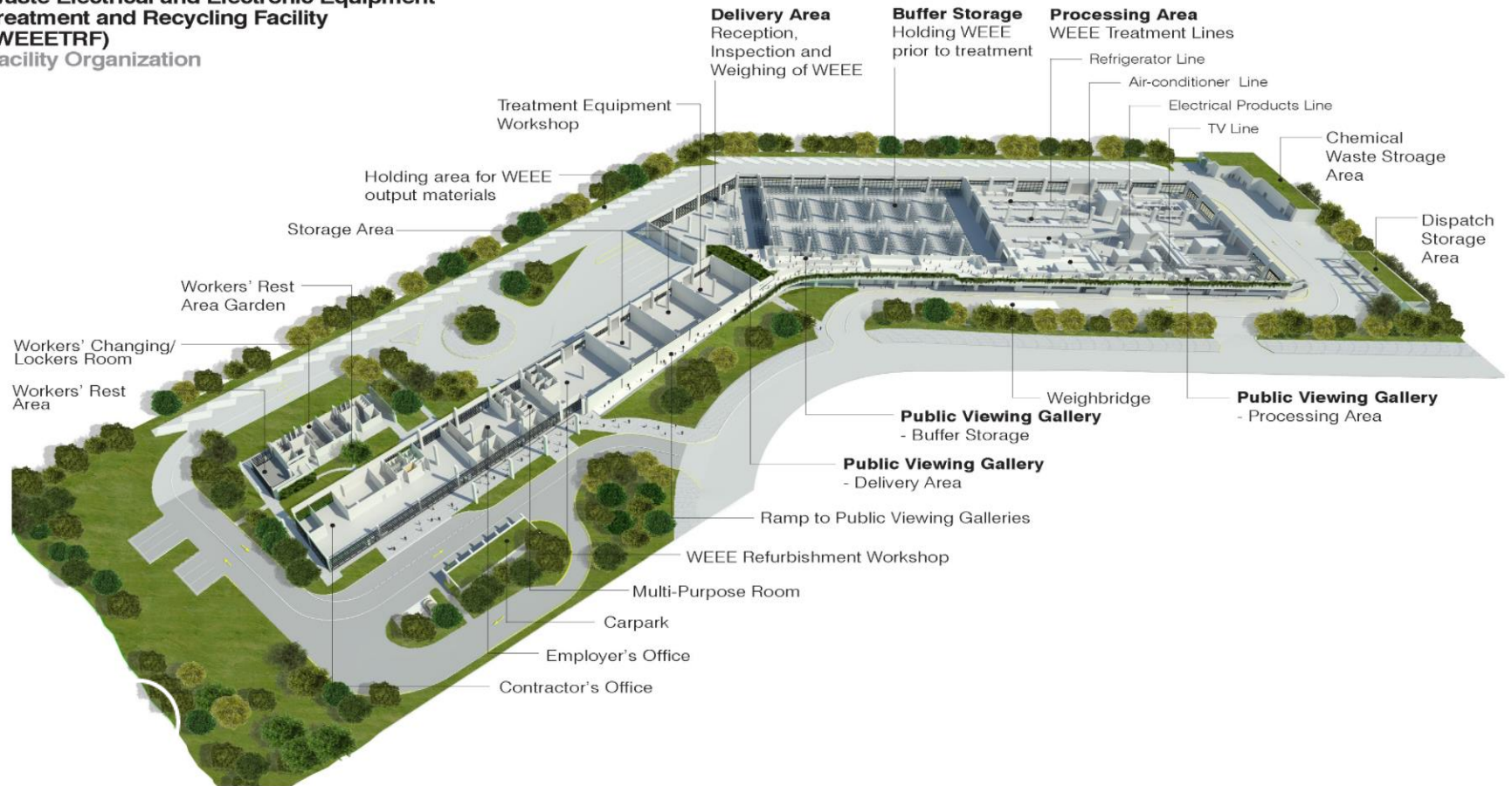
- * Design capacity of 30 000 tonnes per year
- * Facility contractor to –
 - * provide collection services
 - * make use of relevant technologies in the detoxification, dismantling and recycling processes, and turn waste into different kinds of reusable materials such as plastic and metals

WEEETRF – Overall Site Model



WEEETRF – General Layout

Waste Electrical and Electronic Equipment Treatment and Recycling Facility (WEEETRF) Facility Organization



Process line 1: extraction of refrigerant & lubricating oil from refrigerators



Process line 1: PUR foam degassing from insulation materials



Process line 2: extraction of refrigerant and lubricating oil from air-conditioners



Process line 3: disassembling, shredding and separation of mixed electronic waste into various kinds of metal & plastics



Process line 4(A) : disassembly and detoxification of CRT



Process line 4(B) : disassembly and detoxification of flat screen TVs and monitors



Apart from WEEE....

- * Hong Kong's **first** PRS started with plastic shopping bag (PSB)
- * Requires charging of HKD 50 cents for each PSB at the consumer end in certain major chain stores in 2009, and expanded to cover the entire retail sector in 2015



Apart from WEEE....

- * Annual generation of 100 000 tonnes of waste glass containers, mostly landfilled
- * Glass is recyclable but collection cost is high, hence cannot rely on market force alone to promote recycling
- * Borrowing some elements from the WPRS, we will soon implement a PRS on **glass beverage containers**



PRS on Glass Beverage Containers

Upstream Measures

- *Beverage held in glass containers as “regulated article”
- *Registration of suppliers and payment of recycling levy for “regulated article” distributed in Hong Kong
- *Levy exemption provided for suppliers’ re-bottling arrangement

Downstream Measures

- *Licensing control over storage, treatment, reprocessing and recycling of waste glass containers
- *Import and export permit control over waste glass containers

Thank you



Environmental Protection Department
The Government of the Hong Kong
Special Administrative Region