

For information
on 22 February 2010

**THE LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS**

**A New Producer Responsibility Scheme for
Waste Electrical and Electronic Equipment**

In following up the deliberations at the Panel meeting of 25 January 2010, this paper sets out supplementary information relating to the proposed producer responsibility scheme for waste electrical and electronic equipment (“WEEE”) for Members’ information.

Coverage of the WEEE Scheme

WEEE from Commercial Sources

2. There is no standard definition of WEEE internationally. This is evident from Annex B to the Consultation Document in which we have set out the experience in selected overseas jurisdictions for comparison purposes. Yet most overseas schemes cover (a) television sets; (b) washing machines; (c) refrigerators; (d) air conditioners; and (e) computer products including desktops, laptops, printers, scanners and monitors. Such products form the majority source (about 86%) of WEEE generated in Hong Kong.

3. The generic products at (a) to (e) above are proposed to be covered under the WEEE Scheme (cf. paragraphs 4.2 to 4.4 of the Consultation Document). It would be practically difficult to differentiate if they are bought for domestic uses or exclusively for commercial purposes. As such, we have not proposed to exclude such household products even if they are procured for commercial use. That is to say the relevant products sold e.g. at electrical appliances shops will be subject to the fee regardless of the status of the buyer, similar to practices in overseas jurisdictions. Nevertheless, it is our proposal that the WEEE Scheme would not cover products designed specifically for commercial or industrial uses, e.g. custom-made refrigerating equipment or super-computers. They differ significantly from products designed for household uses and for reasons such as physical size or technological

sophistication are subject to different collection and treatment requirements when being discarded. Indeed, many of such products carry residual value in the second-hand market and could be sold for reuse. There are also existing recyclers in the market which have the necessary capacity to take care of the waste generated from such products.

Flow Management of WEEE

Amount of Regulated WEEE to be Collected

4. At present, households in Hong Kong generate about 10 kg of WEEE per person per year. Making reference to the experience of the European Union (EU) of 4 kg per person per year of regulated WEEE requiring processing, we expect some 30,000 tonnes of WEEE to be processed in Hong Kong each year in future. Of the WEEE collected, about 80% of the components, materials and substances thus collected could be reused or recycled, again drawing reference from the EU.

5. We propose to appoint, by open tender, a WEEE Management Contractor (“WMC”)¹ to process WEEE obtained from the enhanced collection network. It would be required to establish an efficient system for collecting the regulated WEEE from the various collection outlets; provide licensed recycling facilities; develop an education/publicity programme to promote the re-use and refurbishment of WEEE; and meet the terms and conditions set forth by the Government (including the aforesaid collection and recycling targets).

Waste Reduction under the WEEE Scheme

6. The primary objective of the WEEE Scheme is to provide for the proper management of WEEE and to boost local recycling industry; it is expected to reduce excessive consumption of regulated products in the long run. Under the WEEE Scheme, regulated products are affixed with the specified labels, representing contributions to the costs of the scheme. The specified labels will help enhance public awareness in the waste management problem associated with the regulated products. In parallel, we would also continue with our public education on 3R (i.e. Reduce, Reuse and Recycle).

¹ While the appointed WMC is referred to in the singular, there is an option of appointing multiple contractors in the open tender to jointly undertake WMC functions should this prove to be more cost effective.

7. Separately, subject to the public consultation, regulated WEEE would be banned from disposal as ordinary trash under the WEEE Scheme and would be collected separately for recycling. While the majority of regulated WEEE is currently recycled rather than dumped, this would ensure that regulated WEEE does not end up in landfills as far as reasonably practicable. At the same time, with the enhancements to the present system now proposed under the WEEE Scheme, some non-regulated WEEE may be channeled into our collection network for processing by the appointed WMC, thus reducing the pressure on landfills.

Take-back by Retailers

8. When a consumer purchases a regulated product, the retailer would be required (as proposed under the Consultation Document) to take back the used equipment that is being replaced (if any), irrespective of whether it was originally purchased from that same retailer. Consumers have a choice to keep their old equipment for continued use or dispose of it through alternative means. In such cases, the retailer's take-back obligation would be deemed discharged.

9. The experience overseas has been for take-back to be arranged at the time of delivery or installation of new items where retailers provide this service (mostly for bulky items). In Hong Kong where delivery and installation are often serviced separately and outsourced, retailers might consider outsourcing also the take-back services. Apart from logistics companies, the appointed WMC might also be interested in collaborating with retailers for properly carrying out the take-back services.

Proper Treatment of WEEE

Land and Technological Support from the Government

10. The proper treatment and recycling of WEEE involves various dismantling, detoxification and recovery processes. Currently, there are two pilot recycling programmes for computers and electrical equipment operated by Caritas and St. James Settlement, that are funded by the Government since 2003. Similarly, a voluntary trade-based Computer Recycling Programme was launched with the support of some 20 computer equipment manufacturers and suppliers in January 2008. Another recycling scheme with an annual capacity of 250 tonnes of

WEEE is also being taken forward at the EcoPark with funding support from the Environment and Conservation Fund.

11. Under these programmes, any equipment that can be refurbished is donated to the needy or put up for charitable sale; anything beyond repair is properly dismantled to recover useful parts and materials. Plastics and metals are sent overseas for reuse as raw materials. Operation of the WEEE treatment facilities under the WEEE Scheme in future would be similar, though in a much larger scale and possibly with more sophisticated technology.

12. There are also WEEE recyclers in the private sector in Hong Kong. At present, they largely deal with corporations to collect and treat their WEEE and are commercially run. Their capacity is now limited but the technology and know-how to deal with WEEE are largely available.

13. At this stage, we have the options of appointing one or multiple contractors in the open tender to jointly undertake WMC functions. For example, specialization could be taken into account, with one contractor focusing on treating computer products and another on other regulated products. Alternatively, the procurement of services from a network of existing operators is also an option that could be considered further. The specific land requirement could vary under these options. As an example, if there were available services to procure from the market, the need of land support would not arise.

14. We will monitor whether, in the light of the mandatory scheme, private investments would be forthcoming to fund and operate local WEEE treatment plants on a commercial basis. Where necessary, expression of interest would be invited in due course to ascertain the market reaction as the consultation evolves. Views from the trade on whether other facilitating measures to kickstart the development of competent local WEEE processing capacity is necessary (whether the support is the provision of land and how much) are specifically sought in the context of this consultation. As a matter of principle, the WEEE Scheme should be self-financing in the long term. We will further consider the issue of government support taking into account the outcome of the consultation and other relevant factors.

15. As regards the technological support for the WEEE Scheme, the Government has facilitated the adoption of appropriate technology under the existing voluntary programmes which could be either developed

locally or sourced from overseas. For example, we engaged the Hong Kong Polytechnic University to design and install the CRT recycling facility at the Kowloon Bay WEEE Recycling Centre. Available information also shows that mature technologies are available internationally². These facilities usually adopt manual disassembly to separate the toxic parts for detoxification and mechanical separation methods to recover the recyclable materials. An illustration of the treatment processes is attached at Annex for reference.

Siting of the WEEE Treatment Plants

16. When considering the siting of future WEEE treatment plants, we will ensure that the possible environmental and traffic impacts associated with the operation of the plants are in strict compliance with the relevant legislation. But at the same time, the treatment plants might offer employment opportunities which should be welcome by the relevant districts in which the plants are eventually sited. In any event, the appointed WMC and the operation of the treatment plants are subject to the statutory requirements under the Environmental Impact Assessment Ordinance and other relevant environmental legislation.

Sharing Cost under the WEEE Scheme

17 In line with the spirit of eco-responsibility, we expect consumers, retailers, etc to share the cost of the WEEE Scheme. For instance, retailers are proposed to offer a mandatory take-back service as mentioned in paragraphs 8 and 9 above.

Determining the Fee Level

18. Making reference to the fees charged in some overseas jurisdictions, fees could be around \$100 for a small WEEE (such as a small television) and around \$200 to \$250 for a bulky one (such as a large television, refrigerator and washing machine). Fees for computer products would be expected to be lower. The exact level of the fee would be subject to the detailed design of the WEEE scheme in Hong Kong.

19. As explained in paragraph 7.6 of the Consultation Document, we would determine the level of the fee under the WEEE Scheme after the

² As an example, please refer to <http://www.environcom.co.uk/services/refrigeration-plant.aspx>.

tendering process for the appointed WMC. The following guiding principles apply in the process –

- (a) adherence to “polluter pays”: the aggregate fees collected should in principle be able to cover the full costs of the WEEE Scheme;
- (b) differential rates would apply: products requiring more complicated treatment processes would be charged a higher fee; and
- (c) the charging system, including the fee collection mechanism, would be simple and easy to understand.

Similar to the case of the environmental levy scheme for plastic shopping bags, the WEEE Scheme does not carry the objective of raising government revenues. Yet for reason explained in (a) above, the fees would be determined at such a level that is sufficient to recover the costs for waste collection, recycling processes and other management and administrative matters under the WEEE Scheme.

Others

Job Creation

20. As explained above, we expect some 30,000 tonnes of regulated WEEE will require processing in Hong Kong each year. This would require a sizable expansion of the current scale of operations to facilitate a circular economy, promote technological upgrades in local WEEE recycling, and create job opportunities.

21. The number of jobs to be created under the WEEE Scheme could be more reliably estimated after the appointed WMC is selected because the bulk of new job opportunities would likely be created in the WEEE treatment plants. At present, Caritas and St James have a staff of about 40 members for its WEEE operation which has a total throughput of 700 tonnes annually. This could serve as a rough indication though one should caution that a larger operation could enable automation by which the total job creation under the WEEE Scheme could not be deduced simply by extrapolation from Caritas and St James’ experience.

Legislative Amendments

22. At this stage, we envisage that putting in place the various features of the WEEE Scheme as outlined in the Consultation Document would require amendments to the Product Eco-responsibility Ordinance with new Part(s) to be added and new subsidiary legislation on the operational details of the WEEE Scheme. There may be consequential amendments to other ordinances such as Waste Disposal Ordinance, Import and Export Ordinance, etc. We would draw up detailed legislative proposals at a later stage taking into account the outcome of the public consultation.

Environmental Protection Department
February 2010

Illustration of Typical WEEE Treatment Process

