

For information

**LEGISLATIVE COUNCIL  
PANEL ON ENVIRONMENTAL AFFAIRS**

**Producer Responsibility Scheme on  
Waste Electrical and Electronic Equipment:**

**Cost Sharing Mechanism**

**Introduction**

Having consolidated the comments received during the public consultation, we reported the Government's proposed way forward for the mandatory producer responsibility scheme ("PRS") on waste electrical and electronic equipment ("WEEE") to the LegCo Panel on Environmental Affairs at its meeting on 28 November 2011. Members discussed, amongst other things, the mechanism for collecting a pre-paid recycling fee on new electrical and electronic ("E&E") products to cover the cost of the PRS. To this, our proposal is to collect the pre-paid recycling fee at retail level, having regard to relevant factors including adhering to the polluter pays principle and ensuring a cost effective approach in the administration of the PRS. Members requested for an information note on overseas practice. This note now presents the information and sets out the comparison between the options of imposing the pre-paid recycling fee at the point of import and at the point of retail in the context of our local circumstances.

**Relevant Overseas Experience**

2. As we have explained during the public consultation in 2010, the majority of jurisdictions implementing a mandatory PRS on WEEE adopt a pre-paid fee imposed on new equipment, which could either be a visible, separate payment or an invisible, "inclusive" component already incorporated into the retail price. The only exception is in Japan where an end-of-life fee, which is paid at the time of disposal of used equipment, is adopted. Please refer to [Annex A](#) in which overseas experience in selected jurisdictions has been set out.

3. Amongst the jurisdictions which impose a pre-paid recycling fee

for specified E&E products in accordance with their respective mandatory PRS, the mainstream practices are either to collect the fee at the point of retail or the point of import depending on the economic and business features of the jurisdictions concerned. Under the former arrangement, retailers<sup>1</sup> are required to pay the recycling fee when a sales transaction for new E&E products is completed. The fees could be recovered, wholly or partially, from consumers or other stakeholders in the supply chain, say the importers. As regards the latter arrangement, the importers (or brand agents or distributors as the case may be; hereinafter for the sake of simplicity, an importer also means a brand agent or a distributor unless the context otherwise requires) would first pay the fee when new E&E products are imported for local sale. The fee could ultimately be recovered along the supply chain, wholly or partially, from retailers and/or consumers.

### **Impact Analysis on Imposing Fees at Point of Import or Retail**

4. From the environmental considerations, the imposition of a recycling fee would help internalize the environmental costs in the life-cycle of E&E products and underline the “polluter pays” principle. In this regard, a visible recycling fee imposed at the retail level could arguably better remind consumers of the environmental costs concerned. On the other hand, there has been argument that collecting the recycling fee at the point of import could better facilitate different stakeholders including the importers, distributors, and retailers along the supply chain to share out the fee. In the ensuing paragraphs, we would set out our assessment from the cost sharing angle, and on this basis, recommend the most cost effective option while upholding the environmental considerations.

#### Sharing out the Recycling Fee along the Supply Chain

5. From an economics point of view, all parties along the supply chain (including importers and retailers) as well as consumers would have to “share out” the recycling fee<sup>2</sup> in some way. Whether and how the fee-collecting agent (as a selling party, be him an importer or retailer) would seek to recover the recycling fee along the supply chain, wholly or

---

<sup>1</sup> In the case of Hong Kong, according to the Business Impact Assessment (“BIA”) study conducted in 2010, some importers, brand agents and distributors are engaged in the sale of new E&E products to ultimate users. In that case, they have to perform the same duties as a retailer.

<sup>2</sup> Except when the demand or the supply is perfectly elastic or perfectly inelastic.

partially, would depend primarily on the *relative elasticity* of supply and demand whose meaning is illustrated as follows –

- (a) When consumers as buyers of E&E products are highly price-sensitive, they would respond to price rise by significantly reducing the quantity of E&E products demanded. In this case, the demand is highly elastic and hence very sensitive to price change; the fee is likely to be borne more by the seller side given the latter's incentive to minimise the loss in sales revenue.
- (b) On the contrary, when the buying party is not highly price-sensitive, the demand is inelastic relative to supply; the fee is likely to be borne more by the buyer side than the seller side.

To this, as we note from the BIA study, there is overseas research<sup>3</sup> suggesting that the demand for E&E products is generally inelastic. In other words, when the price for such products increases, the buying party might not necessarily buy less at least in the short run<sup>4</sup> and he is more likely to absorb a larger part of the higher price. This holds true irrespective of whether the recycling fee is imposed at the retail or import point. Thus collecting the recycling fee at the point of import would not necessarily facilitate different stakeholders along the supply chain to share out the fee. We are not aware of any jurisdictions arguing that imposing recycling fees at the manufacturers' or importers' end will help sharing of environmental costs amongst the stakeholders as a policy consideration in determining where to impose the recycling fees.

6. Second, from the perspective of individual businesses, whether the selling party is to “share out” or to “pass on” the additional cost arising from the recycling fee (wholly or partially) is a matter of his bargaining power in the market as well as his pricing strategy which are driven by a basket of different factors such as cost, competition, market condition etc. Accordingly, pricing decisions are dynamic instead of following any finite pattern. In actual practice, some premium products could be priced at a considerable premium whereas certain products might be sold below the operating margin (i.e. at a loss). According to

---

<sup>3</sup> Source: Economische effecten verwijderingsbijdrage wit- en bruingoed (Den Haag 1995), KPMG.

<sup>4</sup> In the longer run, both parties would adjust to the change. For instance, the buying party could over time adjust its consumption pattern and behaviour.

the findings of the BIA study, retailers do engage in price competition particularly for products involving niche technology and those with a short shelf-life and it is up to the buying and selling parties to negotiate on how to share out the recycling fee. That is to say, price negotiations would happen irrespective of the point at which the recycling fee is collected. In other words, it is desirable to allow flexibility in the statutory mechanism of the PRS on waste E&E products to allow such price negotiations as part of the operation of the market forces.

### Cost Effectiveness

7. Having regard to the conclusion arrived in paragraph 5 above, we consider that the key factor in determining whether to impose a pre-paid recycling fee at the point of import or retail should be cost effectiveness of the compliance system. Under the proposed WEEE PRS, the compliance system would likely require registration of the fee-collecting agents, regular submissions of their fee record and remittance of the relevant fee incomes to the Government, and keeping records for inspection. There is normally an established inventory control for E&E products within the trade even for the SME operators at the retail and import levels. However comparing the two options, we note that if the recycling fee is collected at the point of import, there will be extra compliance costs due to the following reasons –

#### *Extra Demand on Working Capital*

8. It would generally take importers a longer lead time to recover the recycling fee (from payment of fee until recovery of fee) than in the case of retailers and that would give rise to the need of extra working capital. Our assessment is that the impact could be significant because –

- (a) According to our ballpark estimate, the aggregate recycling fee is likely to be in the region of \$280 million per annum<sup>5</sup>. Available information shows that the total retail sales value of the E&E products amounts to about \$13 billion per annum. While we do not have information on how much this retail sales value is attributable to the revenues of importers and retailers respectively, the BIA study reveals that the profit margin of the importers is roughly 3%. It is hence possible that charging the fee at the point of import would lock up

---

<sup>5</sup> Based on the indicative recycling fees mentioned in the Consultation Document published in January 2010 and the estimated sales quantity of new E&E products.

considerable working capital, which may undermine the importers' viability.

- (b) According to the trade statistics compiled by the Census and Statistics Department, re-exports could make up over 70% of the corresponding total imports (in terms of value). Our BIA study also reveals that the re-exports of individual types of new E&E products could well exceed 50% (in terms of unit). A high percentage of imported E&E goods being re-exported could aggravate the problem by holding up even more working capital for advance payment of recycling fee (even if subsequent refund could be arranged with proof of re-exports).

### *Potential Changes in Mode of Operation*

9. If recycling fees are to be collected at the point of import, compliance requirements similar to that for dutiable goods should apply on grounds of protection of public revenue. In other words, there would be fundamental changes to the existing mode of operation of the import of E&E products including those on storage and movement within Hong Kong after import. More specifically, according to the Customs and Excise Department ("C&ED"), the current arrangement for dutiable goods include –

- (a) all dutiable goods should be stored in a bonded warehouse until and unless the full duty is paid; and
- (b) once paid, the duty could only be refunded to the party who has paid the duty and under limited circumstances as specified in the Dutiable Commodities Regulations (Cap. 109A)<sup>6</sup>.

Adapting from such a mechanism, all new E&E products would have to be stored in designated bonded warehouses and could not be sent to the private warehouses unless the recycling fee is paid. As found out in the BIA study, the physical movement of E&E products follows a complex pattern involving multiple stakeholders and their subcontractors (see

---

<sup>6</sup> Circumstances will include: the duty-paid goods are exported from Hong Kong with the consent of the Commissioner, or it is shown to the satisfaction of the Commissioner that the description, quality, state or condition of the goods is not in accordance with the contract of sale and that the goods, with the consent of the Commissioner, have been destroyed unused or returned to the supplier outside Hong Kong.

**Annex B**) whose work flow would have to be revamped correspondingly. There would also be additional cost for hiring accommodation in the designated bonded warehouses.

#### *Additional Mechanism to Arrange Refunds for Re-export*

10. Arguably, in order to preserve the existing work flow of the stakeholders, a new mechanism could be developed such that importers who have paid the recycling fee in advance could be refunded on the basis of proof of re-export. Yet the existing manifest requirements<sup>7</sup> are devised with a business-friendly motive and could not adequately serve the purpose of a fee-charging (or refund) mechanism which requires a sophisticated level of accuracy and specificity in order to protect the public fund. There are two possibilities –

- (a) The relevant stakeholders should jointly develop a comprehensive database so as to facilitate the tracing of new E&E products from the point of import all the way to the point of re-export. The complexity of **Annex B** suggests that this database would be very costly to develop and maintain.
- (b) Importers should accept that in the event of incomplete information, the Government would not be able to legally entertain their refund requests.

#### *Importers to Pay after Retail Transactions*

11. Noting that the “refund” approach could be complex, some stakeholders suggested that we consider requiring the importers (instead of the retailers) to pay the recycling fee not at the point of import but when transactions are completed for new E&E products at the point of retail; the retailers could then recover the fee wholly or partially from other stakeholders. Under such an arrangement, the liability to pay would only arise when it could be evidently proved that a specific E&E product sold at the point of retail was imported into Hong Kong by a particular importer. An equally complex database would be required as in the case of a “refund” approach. The PRS would be exposed to substantial risks of default due to incomplete information. The overall

---

<sup>7</sup> For instance, details of E&E products such as model and serial numbers are currently not required to be reported in cargo manifests, but might be required as the basis of refund application.

cost of the PRS would also go up accordingly.

## **Summary**

12. PRSs should be implemented in line with the “polluter pays” principle. Whereas our analysis from different approaches in the above jointly suggests that collecting the recycling fee at the point of import could require a higher PRS cost, the choice of this arrangement would expose stakeholders to pressure for a higher recycling fee. This is against the interest of the stakeholders including consumers. We should also be mindful that new compliance requirements at the point of import could have implications on Hong Kong’s status as a trading hub. At the very least, additional paper work (e.g. for licencing or reporting) would add to the turnaround time of cargos and the operating cost of trading businesses which are critical to Hong Kong’s competitive edge vis-à-vis other emerging ports in the neighbouring region.

13. In summary, our analysis suggests that how the recycling fee would in practice be shared out by different stakeholders along the supply chain is determined by market operation rather than the choice of whether a pre-paid fee is collected at the point of import or retail. Our recommendation of collecting the fee at retail level is premised primarily on cost effectiveness considerations and would best serve the interest of different stakeholders who have to share out the PRS costs under the “polluter pays” principle. Furthermore, there would be sufficient flexibility for market forces to operate because it is open to the retailers or importers to offer rebate or discount to share the recycling fee wholly or partially should they intend to do so for marketing or other reasons.

14. In the light of the above findings, we are working on the draft legislation on the implementation of the PRS along the proposed direction as reported to the LegCo Panel on Environmental Affairs in November 2011. We aim to introduce the amendments into the LegCo as soon as practicable in the new legislative session.

**Environmental Protection Department  
October 2012**

## Overseas Experience in Selected Jurisdictions: Cost Sharing Mechanism

### Part A

- ♦ Information in the table below has been presented in the Consultation Document published in January 2010 for reference by stakeholders and members of the public –

	<b>The Netherlands</b>	<b>Alberta, Canada</b>	<b>Japan</b>	<b>Taiwan</b>
<b>Commencement of statutory control</b>	<ul style="list-style-type: none"> <li>• August 2004</li> </ul>	<ul style="list-style-type: none"> <li>• October 2004</li> </ul>	<ul style="list-style-type: none"> <li>• April 2001 (under two separate schemes)</li> </ul>	<ul style="list-style-type: none"> <li>• July 2002 (on recycling and reuse)</li> </ul>
<b>Coverage</b>	<ul style="list-style-type: none"> <li>• Same as the coverage under the European Community Directive 2002/96/EC<sup>8</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Televisions</li> <li>• Computer products</li> <li>• Audio and video playback and recording systems</li> <li>• Telephones and fax machines</li> <li>• Cell phones and other wireless devices</li> <li>• Electronic game equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Televisions</li> <li>• Washing machines and dryers</li> <li>• Air-conditioners</li> <li>• Refrigerators and freezers</li> <li>• Computer products</li> </ul>	<ul style="list-style-type: none"> <li>• Major household appliances (including televisions, refrigerators, washing machines, air-conditioners and fans)</li> <li>• Computer products</li> <li>• Lighting equipment</li> </ul>

<sup>8</sup> Includes: (i) large household appliances; (ii) small household appliances; (iii) IT and telecommunications equipment; (iv) consumer equipment; (v) lighting equipment; (vi) electrical and electronic tools; (vii) toys, leisure and sports equipment; (viii) medical devices; (ix) monitoring and control instruments; and (x) automatic dispensers.



	<b>The Netherlands</b>	<b>Alberta, Canada</b>	<b>Japan</b>	<b>Taiwan</b>
<b>Cost recovery method</b>	<ul style="list-style-type: none"> <li>A visible, pre-paid recycling fee paid by consumers at retail points, ranging from EUR 3 to EUR 17 per item</li> </ul>	<ul style="list-style-type: none"> <li>A visible, pre-paid recycling fee paid by consumers at retail points, ranging from CAD 5 to CAD 45 per item</li> </ul>	<ul style="list-style-type: none"> <li>An end-of-life fee paid by consumers, ranging from JPY 1785 to JPY 5869 per item</li> </ul>	<ul style="list-style-type: none"> <li>An environmental fee paid by manufacturers and importers, ranging from TWD 247 to TWD 606 per item</li> </ul>

## Part B

- ♦ Listed below are the experience of some other jurisdictions whose experience has not been elaborated during the public consultation –
  - (a) California, United States: A pre-paid recycling fee (between USD 8 and USD 25 per item for a new monitor or television set) paid by consumers at the time of purchase, which is stated on the consumer's receipt.
  - (b) Belgium: A pre-paid recycling fee (e.g. EUR 8 for a refrigerator) paid by consumers at the time of purchase, which is stated separately on the invoice or the consumer's receipt.
  - (c) The United Kingdom: An environmental fee paid by manufacturers and importers according to their market share of E&E products.

Note: For general reference, the corresponding exchange rate of the relevant currencies as at 16 August 2012 is –

EUR 1	=	HKD 9.5192
CAD 1	=	HKD 7.8423
JPY 100	=	HKD 9.80
TWD 1	=	HKD 0.258585
USD 1	=	HKD 7.7567

### Physical Movement of E&E Products in Hong Kong

