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## **ACE Paper 2/2017**

*For discussion on 13 February 2017*

# **Implementation of the Producer Responsibility Scheme on Waste Electrical and Electronic Equipment**

## **PURPOSE**

This paper provides an update to Members of the Advisory Council on the Environment (“ACE”) on the preparatory work for the implementation of the producer responsibility scheme (“PRS”) on waste electrical and electronic equipment (referred hereunder as “WEEE”) or in short “WPRS”.

## **BACKGROUND**

2. Every year, about 70 000 tonnes of WEEE are generated locally in Hong Kong, most of which are exported for reuse or recovery of valuable materials. The reliance on export in handling locally generated WEEE may not be sustainable in the long run because demand for such second-hand products in markets outside Hong Kong may decline over time with progressive economic development and tightening of import control over WEEE in other jurisdictions. On the basis of the community’s feedback received during a public consultation conducted in 2010<sup>1</sup>, the Government has been preparing for the introduction of a PRS to facilitate the proper treatment of WEEE in Hong Kong, as committed under *Hong Kong:*

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<sup>1</sup> ACE was consulted in February 2010 during the public consultation and was subsequently briefed in November 2011 on the outcome of consultation as well as the proposed way forward.

3. The WPRS will initially cover certain regulated electrical equipment (hereinafter referred to as “REE”), including air-conditioners, refrigerators, washing machines, televisions, computers, printers, scanners and monitors. We aim to put in place a closed-loop recycling system by which we may turn abandoned REE (hereinafter referred to as “regulated e-waste”) into resources through proper treatment processes. Enhanced control under the Waste Disposal Ordinance (Cap. 354) (“WDO”) will also be introduced for the disposal and import/export of regulated e-waste. As part of our efforts to introduce the WPRS, we secured the necessary funding approval from the LegCo in February 2015<sup>2</sup> for the development of a WEEE treatment and recycling facility (“WEEETRF”) at the EcoPark in Tuen Mun through a Design, Build and Operate (“DBO”) contractual arrangement. The facility will provide the requisite treatment capacity to underpin the WPRS.

4. To provide for the statutory regulatory framework for the WPRS, the LegCo approved in March 2016 the Promotion of Recycling and Proper Disposal (Electrical Equipment and Electronic Equipment) (Amendment) Ordinance 2016 (“Amendment Ordinance”) to amend the Product Eco-responsibility Ordinance (“Cap. 603”) (“PERO”) and the WDO. Its key features are as follows –

- (a) as noted above, the WPRS will initially cover air-conditioners, refrigerators, washing machines, televisions, computers, printers, scanners and monitors, which accounts for about 85% of all WEEE generated in Hong Kong;
- (b) manufacturers and importers of REE will be required to register as registered suppliers with the Environmental Protection Department (“EPD”) and pay a recycling levy for REE distributed in Hong Kong in the course of their doing business. For the purpose of the WPRS, a supplier<sup>3</sup> does not include a person who only provides service for transporting the REE into Hong Kong.

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<sup>2</sup> The capital cost is estimated to be \$548.6 million in money-of-the-day prices, and the estimated annual recurrent expenditure is about \$200 million.

<sup>3</sup> As defined under the Amendment Ordinance, a supplier means (a) a person who manufactures REE in Hong Kong in the course of the person’s business; or (b) a person who, in the course of the person’s business, imports REE into Hong Kong for distribution, but does not include a person who only provides service for transporting the equipment that does not belong to the person into Hong Kong for another person.

REE not distributed in Hong Kong by a supplier (for instance re-exported after import or imported by an individual for non-business or personal use) is not subject to the recycling levy;

- (c) after distribution of REE and upon request, an REE seller must arrange free removal services for consumers to deliver the old REE to a licensed recycler in accordance with a removal service plan endorsed by EPD. Under the removal service plan, the seller must specify the collector and the licensed recycler concerned. The specified collector and recycler have to make undertakings to the seller in writing to provide the relevant collection, treatment, reprocessing or recycling services amongst other applicable requirements;
- (d) any person who is engaged in the storage, treatment, reprocessing or recycling of regulated e-waste must obtain a waste disposal licence, save for certain exclusions<sup>4</sup>. A recycler will be licensed only if his/her treatment facility and its operation satisfy the relevant terms and conditions;
- (e) a permit will be required for the import and export of regulated e-waste; and
- (f) regulated e-waste will no longer be accepted for disposal at landfills.

## **LATEST DEVELOPMENTS**

### The REE Regulation

5. EPD has been consulting the relevant trades on the operational details under the WPRS. The LegCo Panel on the Environmental Affairs was also briefed at its meeting on 23 January 2017 and was generally in support of the

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<sup>4</sup> Exclusions are applied to (a) the disposal of regulated e-waste (that is not chemical waste) on land or premises with an area of not more than 100 m<sup>2</sup>; and (b) the storage of regulated e-waste on premises located inside a multi-storey building or with a total volume of not more than 50 m<sup>3</sup>.

proposal. After consulting with the ACE, we will complete the drafting work and aim to introduce the REE Regulation into the LegCo for scrutiny by the second quarter of 2017. Matters to be prescribed under the REE Regulation are set out at **Annex A** and highlighted in the ensuing paragraphs.

*Removal Services by Sellers of REE*

6. Sellers of REE will be required to arrange for removal services. For every piece of REE distributed to a consumer, one piece of old REE (of the equivalent type), regardless of whether any recycling levy has been paid in respect of that old REE, can be removed from the premises designated by the consumer for proper disposal at no charge to the consumer. While the sellers do not have to operate the collection and treatment services on their own, each seller must formulate a removal service plan specifying the collector(s) and the licensed recycler(s) who have undertaken to operate such services and make necessary arrangements in individual cases. Under the REE Regulation to be introduced, we will propose that –

- (a) sellers are free to choose suitable collectors and licensed recyclers available in the market for formulating their removal service plans, provided that the collectors and licensed recyclers have met the relevant requirements<sup>5</sup> and the removal service plan is practicable. The specified collector and licensed recycler can be the WEEETRF operator, who is obliged to provide collection and treatment services to a seller free of charge as required under the DBO contract<sup>6</sup>; and
- (b) notwithstanding the statutory removal service as described in the above, a consumer can also choose to retain the old REE or dispose of it through other proper channels.

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<sup>5</sup> The removal service plan should specify a “default collector” whom the seller will first approach for arrangement of removal service. The default collector has to be able to provide collection service for all types of REE that the seller distributes and provide territory-wide service coverage. The collector must also hand over the collected REE item to the licensed recycler specified in the seller’s removal service plan within a reasonable time. On the other hand, the recycler specified in the removal service plan must have been licensed under the WDO for the disposal of the regulated e-waste concerned.

<sup>6</sup> As required under the DBO contract, the WEEETRF operator will proactively source and collect regulated e-waste for proper treatment. Upon request by sellers of REE, the WEEETRF operator will also provide removal services to collect old REE from consumers’ premises while the full costs for collection, treatment and administration will be recovered from the Government.

*Recycling Levy for REE and the Charging Mechanism*

7. In line with the “polluter pays” principle, the recycling levy for REE should be set at such a level to recover the full costs, including the estimated capital cost and recurrent expenditure under the DBO contract for the WEEETRF, and other related expenses in the administration of the WPRS.

8. We will prescribe the recycling levy in the REE Regulation for the LegCo’s approval. Having regard to the latest cost estimation for recycling the different types of regulated e-waste regardless of their sizes, the proposed charging levels are as follows –

- (a) \$165 per item for televisions and refrigerators;
- (b) \$125 per item for washing machines and air conditioners;
- (c) \$45 per item for monitors; and
- (d) \$15 per item for computers, printers and scanners.

We envisage that the WPRS would be able to achieve full cost-recovery by setting the recycling levy at the aforesaid levels, which are lower than the indicative range published during the public consultation stage<sup>7</sup>. Upon implementation of the WPRS, we will conduct fees and charges review in accordance with the Government’s established policy and propose adjustments as and when appropriate. During the reviews, we will take into account various factors that may affect the level of recycling levy e.g. inflation rate, participation rate in the recycling of REE, and fluctuations in the sales volume of REE.

9. As for the charging mechanism, a registered supplier would be required to pay the recycling levy on a quarterly basis and to submit a quarterly return<sup>8</sup> to EPD.

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<sup>7</sup> During the public consultation stage, an indicative range of recycling levies, based on overseas experience, was around \$100 for a smaller item of REE and around \$200 to \$250 for a bulky item; the recycling levy for a computer product was expected to be lower.

<sup>8</sup> In reality, certain suppliers may only operate on a transient basis and/or may distribute only a small quantity of REE. Examples may include overseas manufacturers who participate in a local trade fair. Subject to further consultation with the trades, we will also consider providing suitable relaxations to cater for their practical circumstances.

Under the REE Regulation to be introduced, the return should be submitted by the end of each quarter and include (i) information on the number of REE distributed or used for the purpose of determining the recycling levy payable; and (ii) the number of recycling labels (see paragraphs 10 to 12) disseminated or kept in stock. A registered supplier must also arrange annual audit on the quarterly returns and keep records. The audit report should be prepared by a certified public accountant who should give his/her opinion on whether the returns have been compiled in accordance with the relevant statutory requirements.

#### *Recycling Label for REE and Standard Receipt by Sellers*

10. To help consumers identify REE that is distributed under the WPRS, registered suppliers and sellers will be required under the PERO to provide recycling labels upon distribution of REE in Hong Kong. Taking into account previous suggestions by the trades, the design has incorporated security features to minimise the risk of counterfeiting of recycling labels. A latest draft design is at **Annex B** and we would seek further views from stakeholders on the draft.

11. By the time an item of REE is distributed to a consumer, the seller must ensure that the proper type of recycling label has been handed to the consumer. For that purpose, registered suppliers may apply to EPD for obtaining recycling labels free of charge for dissemination down the supply chain, but the actual levy payable by the suppliers will be calculated based on the number of REE distributed as set out in their quarterly returns to EPD.

12. Separately, to better inform consumers about the recycling levy payable in respect of an item of REE under the WPRS, sellers will be required to issue a receipt upon distribution of REE, to note that the item is REE and is subject to a recycling levy under the WPRS.

#### Development of the WEEETRF

13. The development of the WEEETRF is making good progress. By end December 2016, the superstructure of the processing building has been substantially completed; and installation of processing equipment is in progress. Once fully commissioned tentatively in mid-2017, the WEEETRF will carry out three major functions as outlined below –

- (a) *Proper treatment of regulated e-waste*: There will be four different

processing lines which make use of relevant technologies in the detoxification, dismantling and recycling processes to turn regulated e-waste into different kinds of reusable materials such as plastic and metals. On average, the facility will be able to recover over 80% (by weight) of the regulated e-waste being treated, and the residual materials, which comprise non-recyclable parts or components, will be properly disposed of;

- (b) *Efficient collection of regulated e-waste:* The WEEETRF operator will operate five regional collection centres (“RCCs”) and eight satellite centres across Hong Kong to form a convenient network for reception of regulated e-waste. Two RCCs have started operation in Sheung Shui and Kwun Tong respectively since July and December 2016 while the remaining ones will be put in place progressively. In addition, the WEEETRF operator has been operating a collection fleet to provide outreach collection service; and
- (c) *Publicity and public education:* The WEEETRF operator will assist in the Government’s publicity and public education efforts to encourage more people to participate in the proper recycling of REE. Amongst other things, the WEEETRF will provide an education area and viewing gallery for visitors to view the relevant recycling process from delivery to processing.

#### Enhanced Control under the WDO

14. At present, certain types of WEEE (or their parts) are classified as chemical waste<sup>9</sup>. Stringent control following a “cradle to grave” approach has been put in place for the relevant generation, possession, storage, collection, transport and disposal processes under the Chemical Waste Control Scheme<sup>10</sup>. Besides, import and export of such WEEE are subject to permit control under the WDO which has incorporated requirements under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

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<sup>9</sup> Examples include flat panel displays, computer monitors (being cathode ray tubes or LCD monitors) and waste printed circuit boards disassembled from electrical and electronic equipment or those in a broken state.

<sup>10</sup> Under section 16 of the WDO, a person shall not use any land or premises for the disposal of chemical waste without a licence. Other statutory requirements have been implemented through the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C).

15. Under the WPRS, the import/export and disposal of all regulated e-waste will be subject to the same control regardless of whether they are classified as chemical/hazardous waste as highlighted below –

- (a) a permit will be required for the import of regulated e-waste into Hong Kong. Such import permit control will help us guard against international dumping of regulated e-waste into Hong Kong and help minimise regulated e-waste intended for re-export ending up in Hong Kong;
- (b) a permit will be required for the export of regulated e-waste from Hong Kong. Such export permit control will help ensure that no regulated e-waste can be exported unless, amongst other things, the competent authorities of the state of import and of each state of transit have consented to the import or transit of such regulated e-waste, and it can be demonstrated to the satisfaction of EPD that the regulated e-waste can be genuinely reused or recycled in an environmentally sound manner; and
- (c) a waste disposal licence will be required for the storage, treatment, reprocessing or recycling of regulated e-waste. The new licensing control will help ensure that the relevant dismantling, detoxification and recovery operations will be conducted in an environmentally sound manner to turn regulated e-waste into reusable materials.

16. The terms and conditions that have to be met by an applicant for the relevant licences and permits would be set with reference to the current control over disposal of chemical waste and the import/export of hazardous waste. We will further consult the trades on the relevant details.

## **WAY FORWARD**

17. Subject to the progress in the drafting of the legislative amendments, we aim to introduce the REE Regulation to LegCo for scrutiny by the second quarter of 2017 and bring into operation the statutory removal services and levy charging mechanism in phases progressively starting from the third quarter of 2017. Subject to further consultation with the trades, we also plan to bring into operation

the enhanced WDO control governing the import, export and disposal of regulated e-waste by end 2017.

18. In parallel with the legislative work, we will step up the publicity and public education to promote the recycling and proper disposal of REE in conjunction with the WEEETRF operator. Having regard to the commencement timetable, suitable publicity measures and other trade facilitation initiatives will also be launched to prepare the general public and relevant trades for the implementation of the WPRS.

### **ADVICE SOUGHT**

19. Members are invited to note and comment on the progress of the preparatory work for the implementation of the WPRS and the operational details to be prescribed by the proposed REE Regulation.

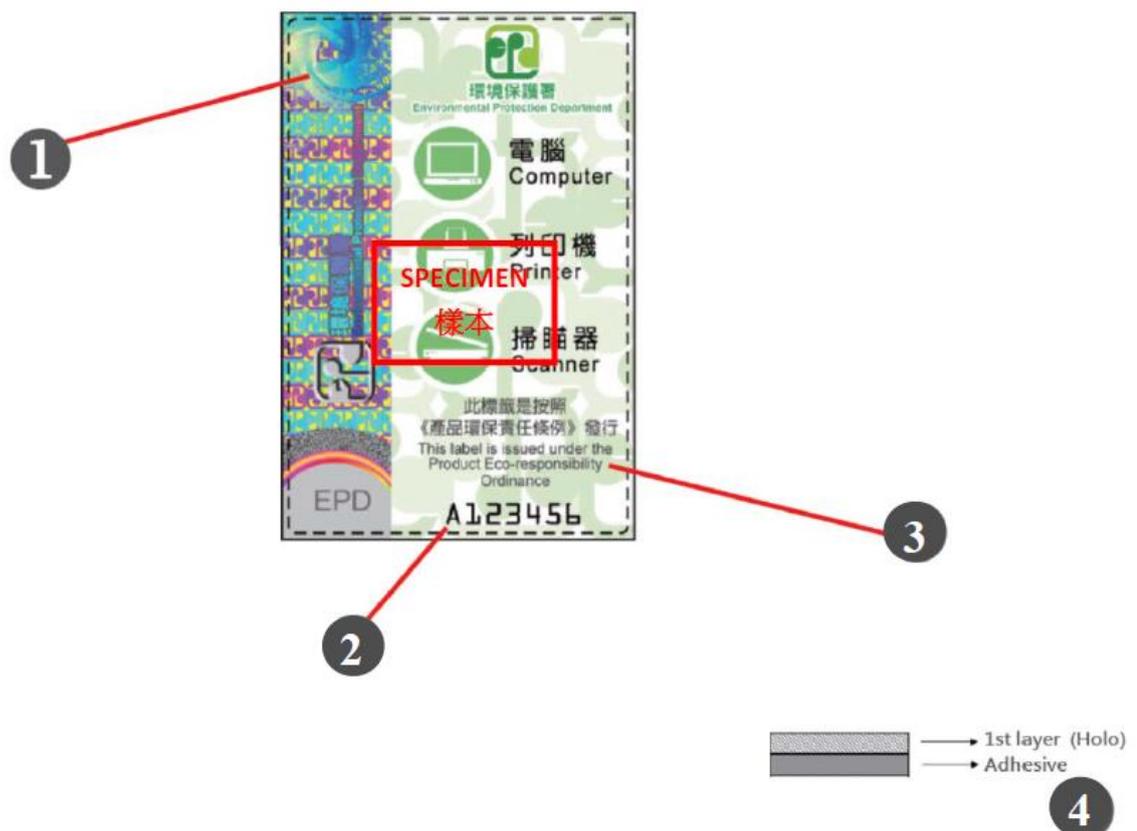
**Environmental Protection Department**  
**February 2017**

**Matters to be Prescribed under the Regulated Electrical Equipment  
("REE") Regulation**

- Procedures for a supplier to be registered as registered supplier and procedures for the Director of Environmental Protection ("DEP") to determine such application
- Procedures for a registered supplier to submit periodic returns, information to be contained in the returns as well as exemption
- Procedures for a registered supplier to submit audit reports, information to be contained in the audit reports, exemption as well as procedures for handling inconsistencies identified
- Procedures for a registered supplier to pay recycling levy to the Government as well as procedures for handling refund of overpayment
- Procedures for a registered supplier and a seller to provide recycling labels and information to be contained in receipts
- Procedures for a registered supplier to apply for endorsement of removal service plan and for the DEP to determine such application
- Procedures for an REE consumer to request for removal services and requirements for record keeping by an REE seller
- Level of recycling levy for each class of REE
- Records and documents to be kept by registered suppliers
- Other miscellaneous matters including matters subject to appeal, specified forms for the WPRS, etc.

## Draft Design of Recycling Labels

The draft design is subject to change after further consultation with stakeholders.



### Indicative Design Features

1. Holographic effect
2. Serial number
3. Textual information
4. Adhesive layer