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**Progress Update on the Implementation of
the Producer Responsibility Scheme on
Glass Beverage Containers**

PURPOSE

This paper updates the Members of the Waste Management Subcommittee of the Advisory Council on the Environment (ACE) on the progress of the implementation of the producer responsibility scheme (PRS) on glass beverage containers (GPRS), and consults them on the matters to be prescribed in the relevant subsidiary legislation to provide for the operational details of the scheme.

BACKGROUND

2. Glass containers are widely used in our everyday life. Due to their low residual commercial value, in the past waste glass containers generated in Hong Kong were mostly disposed of at landfills and only some were reused or recycled. In 2017, they constituted about 2.1% of the daily municipal solid waste disposal (about 220 tonnes daily or about 80 000 tonnes annually), including about 137 tonnes per day (tpd) of glass beverage containers, around 57 tpd of glass food/sauce containers and some 26 tpd of other glass containers. However, waste glass containers can be recycled and reused, and after treatment they can be turned into building, paving and fill materials, in place of river sand and other natural resources.

3. The Government conducted a public consultation in 2013 and in view of the positive response, affirmed the direction of introducing a mandatory PRS that will first target glass beverage containers, which may be extended in future to cover other types of product containers.

4. To provide for the statutory regulatory framework for the GPRS, the Legislative Council (LegCo) passed in May 2016 the Promotion of Recycling and Proper Disposal (Product Container) (Amendment) Ordinance 2016 (Amendment Ordinance), which amends the Product Eco-responsibility Ordinance (Cap. 603) and the Waste Disposal Ordinance (Cap. 354) (WDO). Key features of the Amendment Ordinance are as follows –

- (a) defining the scope of regulation to specify its coverage of beverages carried in glass containers at this stage, including both alcoholic and non-alcoholic (collectively referred as “regulated articles”);
- (b) requiring suppliers (including importers and manufacturers) that supply the local market with beverages carried in glass containers to register with the Environmental Protection Department (EPD) as “registered suppliers”, who will have to pay a container recycling levy for the regulated articles that they “distribute” or “consume” in Hong Kong;
- (c) requiring registered suppliers to submit periodic returns to EPD for calculating the amount of container recycling levy payable, and engage independent auditors for conducting annual audits to ensure accuracy of the returns submitted;
- (d) enabling registered suppliers with recovery and reuse arrangements for glass containers to apply for exemptions from paying the levy, and granting such exemptions if the environmental performance of such arrangements meet certain criteria;
- (e) imposing licence control on the operation of waste disposal facilities for handling waste glass containers to ensure compliance with relevant environmental and safety requirements; and
- (f) imposing permit control on the import and export of waste glass containers to ensure proper recycling and treatment of the waste glass containers, whether imported and exported, in an environmentally sound manner.

5. Upon enactment of the Amendment Ordinance, the Government has been actively preparing for the implementation of the GPRS. Our efforts include the appointment of glass management contractors (GMCs) through open tender to provide convenient and efficient regional collection and treatment services for waste glass containers across the territory, and the drafting of the Regulated Articles Regulation (RAR) to provide for the operational details of the GPRS.

DETAILS

Appointment of GMCs

6. The Government launched open tender exercises in early 2017 for appointing suitable GMCs to provide convenient and efficient regional collection and treatment services for waste glass containers, covering the three catchment regions of Hong Kong Island (including Islands District), Kowloon and the New Territories respectively¹. After completing the assessment process for the open tender exercises, the Government announced in early November 2017 the tender results in respect of the two glass management contracts for the catchment regions of Hong Kong Island (including Islands District) and the New Territories, which were both awarded to Baguio Waste Management & Recycling Limited. As regards the contract for the Kowloon catchment region, it was later awarded in late April 2018 to Hong Kong Glass Reborn Limited. The term for each contract is five years.

7. Under the contracts, the major task of the GMCs is to establish within their catchment regions a network of collection points to facilitate glass container collection from commercial and industrial premises such as pubs and catering services. The GMCs also have to coordinate with the Community Green Stations, if applicable, in the respective districts to provide glass container collection services for residential buildings and estates as required. The GMCs are also required under the contracts to arrange proper recovery for gainful reuse and recycling of waste glass containers, including turning them into reusable materials such as construction materials or for re-bottling.

¹ While the tender exercises for the three contracts were conducted concurrently, they were separate contracts and were processed individually according to the terms set out in the respective tender documents.

8. The GMC serving the catchment regions of Hong Kong Island (including Islands District) and the New Territories and the GMC serving the Kowloon catchment region have started providing regional waste glass container collection services since January 2018 and July 2018 respectively, and progressively taken over the original voluntary glass container recycling programmes operating in the territory. By early 2019, the GMCs have fully taken over the voluntary programmes, and further expanded their collection networks. Their treatment facilities are also in full operation, turning the waste glass containers collected into recycled glass materials for gainful reuse. Our target is to recover and treat a total of 15 000 tonnes of waste glass containers across the territory in the first year with the three glass management contracts in place (or about 40 tonnes per day), and eventually to 50 000 tonnes per year (or about 140 tonnes per day). It is estimated that Hong Kong generates about 100 000 tonnes of waste glass containers each year, about two-thirds of which are glass beverage containers (i.e. about 65,000 tonnes). Our target of 50 000 tonnes is set with the aim to recover 70% of the glass beverage containers generated, or half of the total amount of glass containers generated locally. In setting this target, we have made reference to the experience of other markets with similar mandatory producer responsibility scheme.

9. Overall, following commencement of the GMC services, a total of over 13 000 tonnes of waste glass containers were collected in 2018, representing an increase of over 60% as compared to that in 2017. In January 2019, the GMCs collected a total of over 1 700 tonnes of waste glass containers, which was more than doubled of the average monthly amount collected through the voluntary programmes in 2017. There has also been a significant growth in the total number of collection points set up across the territory. The number of collection points serving catering premises has nearly tripled, while the residential collection points have increased to over 1 500 locations.

10. In parallel, EPD continues to step up the publicity efforts to raise public awareness of and participation in glass container recycling. We have rolled out a new series of TV and radio announcement of public interests, placed advertisements at public transport stations and local newspaper outlets, and distributed information pamphlets and posters to housing estates and property management companies. In January 2019, we launched a Charter Scheme on Glass Container Recycling, inviting participation of all interested parties to partner with us in participating in and promoting glass container recycling. Up to mid-February, 11 related trade associations, 286 housing estates, 81 shopping malls, 10 hotels and 77 food outlets and bars have signed the charter, committing to actively participating in glass container recycling. EPD will continue with such efforts.

11. Currently, glass containers recovered locally are, after treatment, used for producing eco-cement and eco-pavers, or used as fill materials in local reclamation or site formation works. As at end January 2019, the two contractors have in total delivered over 6 300 tonnes of recycled glass materials to the local manufacturers of eco-cement and eco-pavers, and to the Government designated storage areas for gainful reuse. We envisage that glass materials locally recovered can be fully absorbed through these outlets. Meanwhile, we have also encouraged GMCs to proactively explore more outlets for recovered glass materials.

The Regulated Articles Regulation

12. Drafting of the RAR to provide for the operational details of the GPRS is underway, and EPD has been in close dialogue with the relevant trades for such purpose. Matters to be prescribed under the RAR are set out at the **Annex** and the key features are highlighted in the ensuing paragraphs.

Container Recycling Levy for Regulated Articles and Levy Collection Arrangement

13. In line with the “polluter pays” principle, the container recycling levy for regulated articles will be set at such a level to recover the full costs of running the GPRS, including the expenditure on collection and treatment of waste glass containers, as well as other related administrative expenses. Level of the levy will be prescribed in the RAR.

14. As mentioned above, the Government has awarded the three glass management contracts through open tender. Based on the relevant contract values and the administrative expenses involved, the levy is proposed to be at the level of around \$1 per litre-container volume, which is comparable to the indicative figure² mentioned during the public consultation. Upon implementation of the GPRS, we will regularly review the levy according to the established policy of the Government and will propose adjustment for consideration by the LegCo as and when appropriate. In conducting the review in future, the Government will take into account various factors that may affect the level of container recycling levy, including the inflation rate and the respective quantities of waste glass beverage containers locally generated and recovered.

² With reference to the experience of other places, in the public consultation document in 2013 we had provided an indicative figure of the levy at around \$1 per litre-container volume.

15. As regards the collection arrangement for the container recycling levy, the Amendment Ordinance stipulates that a registered supplier must submit to EPD quarterly returns on the regulated articles that the supplier “distributes” or “consumes” in Hong Kong and pay the container recycling levy on a quarterly basis³. Under the RAR being drafted, we propose to require a registered supplier to submit return for the past quarter within 28 days upon the end of each quarter. The return must contain information on the amount of regulated articles distributed or consumed for the purpose of determining the container recycling levy payable. A registered supplier should arrange an annual audit on the quarterly returns and keep the records concerned. The audit report has to be prepared by an independent certified public accountant who should state his/her opinion on whether the returns have been compiled in accordance with the relevant statutory requirements. A registered supplier is also required to pay the container recycling levy within 30 days upon receipt of a payment notice issued by EPD.

Levy Exemption and Container Waste Reduction Plan

16. At present, certain local beverage manufacturers have in place recovery arrangements under which glass containers of their products are collected for reuse after cleansing and sterilisation. These arrangements not only enable better management and utilisation of resources, but also reduce waste effectively and help alleviate the pressure on landfills.

17. To enable registered suppliers to make arrangement for the recovery and reuse of glass containers, we propose to exempt these registered suppliers from paying the container recycling levy. The suppliers concerned have to apply to EPD and submit container waste reduction plans (CWRPs), detailing the operational arrangements for the recovery, reuse and eventually the recycling of their glass beverage containers. EPD will assess if the CWRPs submitted would be effective in achieving recovery and reuse of glass containers⁴, and whether the arrangements are practicable. Suppliers exempted do not have to pay the levy, nor do they need to submit periodic returns to EPD on the quantity of beverages carried in glass containers that they supply to the local market. But they have to submit annual audit report in accordance with the

³ Noting that there may be suppliers who operate only on a transient basis and/or distributing a small quantity of regulated articles (e.g. exhibitors from overseas participating in local trade fairs), we propose to provide for some allowances in terms of the compliance details to accommodate their practical circumstances.

⁴ The resulting waste reduction rate (WRR) must be 80% or above, which is roughly equivalent to the reuse of each glass container for at least five times.

conditions attached to the exemption, demonstrating that the recovery arrangements have operated effectively, attained the specified recovery and reuse level, and complied with the related environmental requirements.

18. EPD when approving applications for levy exemption may attach conditions, which will specify that if the supplier is unable to attain the specified recovery and reuse level, the supplier has to pay a container recycling levy calculated on the basis of the total volume of glass containers unable to be recovered⁵. Besides, if the supplier does not comply with the conditions attached to the exemption, EPD may consider suspending, amending or cancelling the exemption taking into account the practical circumstances of the individual case.

Control over Container Waste under WDO

19. Under the amended WDO, container waste means a glass container that has been abandoned. When the amendments come into effect, any person who stores, treats, reprocesses and recycles container waste will be required to obtain a waste disposal licence. The licence control seeks to ensure that the operation is consistent with the objective of the PRS, i.e. to create a circular economy by turning waste into reusable resources. As a matter of principle, the licence will be issued only if a recycler can demonstrate that the premises, facilities and the operational procedures of its plant comply with the relevant requirements in respect of environmental protection, land use and planning, building and fire safety. In addition, the recycled materials produced from the processing can satisfy the technical specifications for reuse in subsequent manufacturing processes. The GMCs appointed by the Government will be required to obtain the licence in due course. EPD is working on the arrangements for licence applications. To tie in with the full implementation of the GPRS, a commencement notice will be made later to specify the commencement date of the relevant provisions to enable the interested parties to make licence applications.

20. In addition, similar to the PRS on Waste Electrical and Electronic Equipment, the import and export of container waste will be subject to permit control under sections 20A and 20B of the amended WDO to ensure that the imported container waste is properly reused and recycled by licensed recyclers locally. As for export, we will have to ensure that the exported container waste will be properly reused or

⁵ For instance, if an exempted supplier can only recover and reuse 60% of the glass containers from a batch of glass-contained beverages that the supplier distributes or consumes in the local market, i.e. failing to attain the specified WRR of 80%, the supplier will have to pay the container recycling levy for the unrecovered glass containers (i.e. $100\% - 60\% = 40\%$) of the whole batch of beverages.

recycled through appropriate processes, which should be comparable to those conducted at a licensed waste treatment facility in Hong Kong.

Implementation Timetable

21. Subject to the advice of ACE on the matters to be prescribed in the RAR as set out in paragraphs 12-18 above, the Government plans to introduce the RAR into the LegCo for consideration by mid-2019 and commence the provisions on container waste disposal licence to start accepting licence applications within 2019. And subject to the progress of the LegCo's scrutiny of the RAR, we hope to be able to fully implement the GPRS by early 2020, including collection of container recycling levy for glass beverage containers, and the control over the import, export and disposal of container waste.

ADVICE SOUGHT

22. Members are invited to note the progress of the Government's efforts in implementing the GPRS, and to advise on the matters to be prescribed in the RAR.

Environmental Protection Department
March 2019

**Matters to be Prescribed under
the Regulated Articles Regulation**

- Procedures for a supplier to be registered as registered supplier and procedures for the Director of Environmental Protection to determine such an application
- Procedures for a registered supplier to submit periodic returns and the information to be contained in such returns, as well as the related exemption arrangements
- Records and documents to be kept by registered suppliers
- Procedures for a registered supplier to submit audit reports and the information to be contained in such reports, as well as the related exemption arrangements and procedures for handling any inconsistency identified
- Procedures for a registered supplier to pay the container recycling levy to the Government as well as procedures for handling refund of overpayment
- Level of the container recycling levy for regulated articles
- Procedures for a registered supplier to apply for exemption from paying the container recycling levy and the corresponding approval procedures
- Other miscellaneous matters relating to the producer responsibility scheme on glass beverage containers, such as matters subject to appeal and specified forms