

For Information

**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS**

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

PURPOSE

This paper updates Members on the progress of implementing the producer responsibility scheme on glass beverage containers (GPRS)¹ and the specific operational details for the full implementation of the GPRS.

BACKGROUND

2. In 2020, waste glass containers constituted about 1.4% of the daily municipal solid waste disposal (about 156 tonnes daily or about 57 000 tonnes annually) in Hong Kong. The introduction of the GPRS enables the concerned parties (including product manufacturers, importers, retailers and consumers) to take up the eco-responsibility for proper collection and treatment of waste glass beverage containers, turning the waste into resources for better utilisation as well as alleviating the pressure on landfills. This is also conducive to the development of circular economy locally.

3. The Promotion of Recycling and Proper Disposal (Product Container) (Amendment) Ordinance 2016 (Amendment Ordinance), which amends the Product Eco-responsibility Ordinance (Cap. 603) (PERO) and the Waste Disposal Ordinance (Cap. 354), was enacted by the Legislative Council (LegCo) in June 2016 to provide for the statutory regulatory framework for the implementation of the GPRS. Since then, the Government has been making arrangement to put in place the GPRS progressively. On 19 July

¹ The GPRS aims to put in place a system for the proper management and recycling of waste glass containers generated in Hong Kong, and applies first to beverages that are carried in glass containers.

2018, we briefed the Panel on Environmental Affairs of the LegCo on the preparatory work for implementation of the GPRS (see Annex), among others, the appointment of glass management contractors (GMCs) for providing regional collection and treatment services for waste glass containers across the territory (see paragraph 14 below), and the matters to be prescribed under the subsidiary legislation, namely the Regulated Articles Regulation (RAR), on the operational details for the implementation of the GPRS.

4. The RAR was originally scheduled for submission to the LegCo for scrutiny after consulting the Advisory Council on the Environment in April 2019. However, due to the social events in 2019, we had temporarily suspended the waste glass container recycling services to safeguard the public safety. With the outbreak of COVID-19 pandemic since 2020, having considered the impact of the social distancing measures on the catering sector, the legislative proposal has been put on hold. Noting that the fifth wave of the epidemic has stabilized and the economic activities have been gradually recovering in an orderly manner, we consider it a suitable juncture to pick up the work again for the full implementation of the GPRS as soon as possible.

PROGRESS

The RAR

5. The Environmental Protection Department (EPD) has completed the drafting of the RAR. There is no change to the framework and operation arrangement of the GPRS, being featured in the RAR, since the last briefing given to the Panel in July 2018. The key requirements of the draft RAR are highlighted in the ensuing paragraphs.

Obligations of Registered Suppliers

6. According to the Amendment Ordinance, beverage suppliers are required to register with EPD as registered suppliers before distributing beverages that are pre-packaged in sealed glass containers (hereinafter referred to as “regulated articles” (RAs)) in Hong Kong. We propose that there should be two types of registration, namely ordinary registration and short-term registration. An ordinary registration will be perpetual unless

cancelled by EPD, whilst a short-term registration will last for 30 days and is intended for suppliers who may operate business of distributing RAs in Hong Kong occasionally for a short period of time and in limited scale (e.g. expo exhibitors from other places). The application for registration is free of charge.

7. For an ordinary registration, a registered supplier is required to submit quarterly returns to EPD within 28 days after the end of each quarter. Each return should contain relevant information of the RAs that were distributed or consumed by the registered supplier in Hong Kong during the reporting period for determining the amount of container recycling levy payable by the registered supplier. Given that a short-term registration will only last for 30 days, a short-term registered supplier will only be required to submit a return within 28 days after the expiry date of the registration, covering the entire term of registration.

8. Having determined the amount of container recycling levy to be payable by a registered supplier, EPD will serve on that registered supplier a payment notice. The registered supplier is required to pay the container recycling levy within 30 days after the service of the payment notice. The registered supplier is required to keep the records and documents relating to a return for five years after the year of the submission of the return. Such records and documents should include invoices, receipts, delivery notes, inventory records or any other documents that contain sufficient details to enable EPD to readily verify the information reported in the return.

9. In addition, a registered supplier is also required to arrange annual audit on the return(s) submitted and submit an audit report² to EPD within 3 months after the end of each audit year for an ordinary registration or the expiry date of the registration for a short-term registration. The audit report has to be prepared by an independent certified public accountant who has to state his/her opinion on whether the returns have been compiled in accordance with the PERO and the RAR.

² A registered supplier may apply to EPD in writing for exemption from submitting an audit report for a particular audit year (for ordinary registration) or for a short-term registration. However, EPD must be satisfied that the aggregate amount of container recycling levies payable for that audit year (for ordinary registration) or for all short-term registrations approved for the same calendar year (for short-term registration) does not exceed \$20,000.

Container Recycling Levy for RAs

10. In line with the “polluter pays” principle, the container recycling levy for RAs should be set at a level adequate to recover the full costs³ of operating the GPRS and providing the services in this association. Having regard to the cost estimation for recycling glass beverage containers, the proposed charging level is around \$1 per litre-volume⁴ of RAs to be prescribed in the RAR.

11. In future, we will conduct fees and charges review in accordance with the Government’s established mechanism and propose adjustments as and when appropriate. During the reviews, we will take into account various factors that may affect the level of container recycling levy, e.g. inflation rate, target recovery quantity, fluctuations in the sales volume of RAs, etc.

Exemptions for Registered Suppliers

12. To encourage registered suppliers to make their own arrangement for the recovery and reuse of glass beverage containers, they may apply to EPD with submission of a container waste reduction plan (CWRP) for exemptions from certain obligations of registered suppliers under the PERO including payment of the container recycling levy and submissions of returns and audit reports. The CWRP shall detail the operational arrangements for the recovery, reuse and the final recycling of the glass beverage containers. EPD will assess if the CWRP submitted would be effective in achieving recovery, reuse and/or recycling of glass beverage containers⁵, and whether the arrangements are practicable and environmentally sound.

13. EPD, in granting exemption, may impose terms and conditions relating to the duration of the exemption, the implementation of the CWRP, auditing, reporting and record keeping, and any other matter EPD considers appropriate. For example, a supplier exempted should submit regular audit reports, demonstrating that the recovery and reuse arrangements have operated effectively, attained the specified recovery and reuse level, and

³ The full costs include the estimated expenditure on collection and treatment of waste glass beverage containers and other related expenses in the administration of the GPRS.

⁴ With reference to the experience of other places, in the public consultation document in 2013 we provided an indicative figure of the container recycling levy at around \$1 per litre-volume of beverage products.

⁵ The resulting waste reduction rate (WRR) shall be 80% or above which will be specified in the exemption if granted.

complied with the related environmental requirements. There may also be terms and conditions to specify that if the supplier is unable to attain the specified recovery and reuse level in a given year during the exemption period, the supplier has to pay the relevant container recycling levy calculated on the basis of the total volume of glass beverage containers unable to be recovered in that year⁶. On a breach of any terms and conditions attached to the exemption, EPD may revoke, vary or suspend the exemption taking into account the practical circumstances of the individual case.

Collection and Treatment Services

14. The Government has appointed GMCs through open tender to provide regional collection and treatment services for waste glass containers in three regions, namely Hong Kong Island (including Islands District), Kowloon and the New Territories. The GMC serving Hong Kong Island and the New Territories regions (Baguio Waste Management & Recycling Limited) and the GMC serving Kowloon region (Hong Kong Glass Reborn Limited) have started providing waste glass container collection services since January 2018 and July 2018 respectively. Since then, there are now around 3 000 glass container collection points set up by the GMCs across the territory. Also, with the rebranding of the Community Recycling Network GREEN@COMMUNITY by EPD since the third quarter of 2020, about 1 200 additional glass container collection points at residential buildings and housing estates are put under its management and the glass containers concerned would be passed to the GMCs for handling. The quantities of waste glass containers collected in 2018 and 2019 were about 13 000 tonnes and 21 000 tonnes respectively, representing an increase of over 60% and 150% respectively as compared with the total amount collected through relevant voluntary recycling programmes in 2017. As at the end of March 2022, over 68 000 tonnes waste glass containers have been collected by the GMCs through various means. In terms of recovery rate, before the launch of GMC services, the recovery rate of waste glass containers was around 12.1% in 2017, and the rate increased to 16.4% and 22.3% in 2018 and 2019 respectively with the GMC services in place. However, due to the COVID-19 pandemic, especially the social distancing measures implemented specifically for catering premises, the recovery rate of waste glass containers

⁶ For instance, if an exempted supplier can only recover and reuse 60% of the glass containers from a batch of regulated articles 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.

only maintained at the level of around 20% in 2020. With the passage of the pandemic, the economic activities would resume to normal orderly. It is expected that the waste glass container collection service will also catch up progressively with the progress as originally planned achieving the target of 50% recovery rate.

15. The GMCs are required under the contracts to properly treat the waste glass containers collected for subsequent reuse or recycling. As at the end of 2021, the two GMCs have turned about 58 300 tonnes of waste glass containers into recycled glass materials⁷, which were used as fill materials in different local public works projects (45%), used for producing eco-pavers (29%), exported for recycling (15%) and used for manufacturing cement (11%). Meanwhile, we have also encouraged the GMCs to proactively explore more outlets for recovered glass materials, such as using them as raw materials for producing eco-cement and decorative tiles.

16. EPD continues to step up the publicity efforts to raise public awareness of and participation in recycling of waste, including waste glass containers, through GREEN@COMMUNITY and Green Outreach. We also launched the Glass Container Recycling Charter in January 2019, inviting parties from different sectors to participate in and promote glass container recycling; as at the end of April 2022, over 1 280 organisations, including relevant trade associations, housing estates, shopping malls, hotels, club houses and food outlets and bars, have signed the charter and become our partners.

Implementation Timetable

17. We target to introduce the RAR into the LegCo within this year with a view to implementing the GPRS fully in the first quarter of 2023 the earliest.

18. Since the enactment of the Amendment Ordinance, we have been keeping in touch with the relevant stakeholders in developing the compliance system and finalising the operational details under the RAR. Subject to the approval of the RAR by the LegCo, we will arrange a series of briefings to facilitate suppliers of glass-bottled beverages to better understand their statutory obligations, including explaining how to become registered

⁷ Some recycled glass materials are still temporarily stockpiled in the treatment facilities of the GMCs pending different recycling applications.

suppliers and apply for exemptions with CWRPs.

ADVICE SOUGHT

19. Members are invited to note the progress and timetable of the implementation of the GPRS.

Environmental Protection Department
May 2022

**For Discussion on
19 July 2018**

**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS**

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

PURPOSE

This paper provides an update to Members of the Panel on Environmental Affairs on the preparatory work for implementing the producer responsibility scheme (PRS) on glass beverage containers (GPRS).

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 2016, they constituted about 2.3% of the daily municipal solid waste disposal (about 243 tonnes daily or about 90 000 tonnes annually), including about 149 tonnes per day (tpd) of glass beverage containers, around 70 tpd of food/sauce containers and some 25 tpd of other glass containers. However, waste glass containers can be recycled and reused, and after treatment they can be turned into building materials, concrete and paving 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) approved in May 2016 the Promotion of Recycling and Proper Disposal (Product Container) (Amendment) Ordinance 2016 (Amendment Ordinance) to amend 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 audit reports 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 drafting of the Regulated Articles Regulation (RAR) to provide for the operational details of the GPRS, and 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.

LATEST PROGRESS

The Regulated Articles Regulation

6. 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

7. 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, as well as other related administrative expenses. Level of the levy will be prescribed in the RAR.

8. The Government has awarded the three glass management contracts through open tender. Based on the relevant contract values and the administrative expenses involved, our preliminary estimation of the levy would be at the level of around \$1 per litre-container volume, which

is comparable to the indicative figure¹ mentioned during the public consultation. The computation of the levy level is being reviewed carefully. We expect the relevant work to be completed in the 4th quarter of 2018 for submission to the LegCo for scrutiny and the final levy level will be confirmed then. Upon implementation of the GPRS, we will regularly review the levy according to the established policy 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.

9. 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 basis². 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 a 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.

¹ 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.

² 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.

Levy Exemption and Container Waste Reduction Plan

10. 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.

11. 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 containers³, 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 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.

12. EPD when approving applications for levy exemption may attach relevant 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 recovered⁴. Besides, if the supplier does not comply with the conditions attached to the exemption, EPD may consider

³ 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.

⁴ 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.

suspending, amending or cancelling the exemption taking into account the practical circumstances of the individual case.

13. We will later consult the Advisory Council on the Environment and finalise the drafting of the RAR with a view to submitting the RAR to the LegCo for scrutiny within 2018.

Appointment of GMCs

14. Separately, 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 respectively⁵. 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. As regards the contract for the Kowloon catchment region, it was awarded in late April 2018. The term for each contract is five years.

15. 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.

16. The GMC serving the catchment regions of Hong Kong Island (including Islands District) and the New Territories has from January 2018

⁵ 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.

started to provide regional waste glass container collection services to progressively take over the original voluntary glass container recycling programmes operating in the two regions and to further expand its recycling network. As at mid-June 2018, the GMC has established 506 and 645 glass container collection points in the catchment regions of Hong Kong Island (including Islands District) and the New Territories respectively, representing an increase of more than 50% as compared to the respective original numbers. During the period, the quantities of waste glass containers collected have gradually increased to about 530 tonnes per month and in total over 1 850 tonnes of have been collected for further processing. Meanwhile, the GMC serving the Kowloon catchment region is building up its glass container collection network. 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 to increase to 50 000 tonnes per year (or about 140 tonnes per day) after three years.

17. Currently, glass containers recovered locally are, after treatment, used for producing eco-pavers, exported for recycling or used as fill materials in local reclamation or site formation works. 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, such as using them as raw materials for producing eco-cement and decorative tiles.

Control over Container Waste under WDO

18. 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 in the first half of next year, 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.

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

Implementation Timetable

20. Subject to the progress of the drafting work, the Government plans to introduce the RAR into the LegCo for consideration and commence the provisions on container waste disposal licence to start accepting licence applications within 2018. And subject to the progress of the LegCo's scrutiny of the RAR, we hope to be able to fully implement the GPRS by mid-2019, including collection of container recycling levy for glass beverage containers, and the control over the import, export and disposal of container waste.

21. Meanwhile, we will continue to enhance the publicity and public education efforts, and disseminate the messages of recycling and proper recovery of glass containers in collaboration with the GMCs.

ADVICE SOUGHT

22. Members are invited to note the progress of the Government's preparations for implementing the GPRS, and comment on the arrangements and recommendations regarding the RAR.

Environmental Protection Department
July 2018

**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