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For discussion on 20 January 2020

Pilot Scheme on Collection of Food Waste

PURPOSE

This paper briefs Members on the findings of the consultancy study on food waste collection and delivery, as well as the progress of the pilot scheme on collection of food waste.

BACKGROUND

2. The Environment Bureau unveiled “A Food Waste and Yard Waste Plan for Hong Kong 2014-2022” (the “Plan”) in February 2014, which maps out four strategies to tackle food waste, namely reduction at source, reuse and donation, recyclable collection and turning food waste to energy. While the Government is working tirelessly to increase the local food waste recycling capacity by pressing ahead with the construction of Organic Resources Recovery Centres (ORRCs) as well as adopting the “food waste/sewage sludge anaerobic co-digestion” technology at the existing and planned sewage treatment works (STWs), we are also committed to examining the appropriate means, mechanism and mode of collection and delivery of source separated food waste generated from both the commercial and industrial (C&I) and domestic sources. The consultancy study, entitled “Organic Waste Collection and Delivery to Organic Waste Treatment Facilities – Feasibility Study” (the “Consultancy Study”), was completed in 2019.

3. Besides, the Chief Executive announced in her 2018 Policy Agenda that a pilot scheme would be introduced to examine the feasibility of implementing government-run food waste collection services in the long run.

THE CONSULTANCY STUDY

4. The key findings and recommendations of the Consultancy Study are summarized as follows:-

- (i) having regard to hygiene and odour concerns, proper means would be needed to contain food waste for disposal. It will be necessary for the pilot programmes to test the use of different means such as semi-transparent/transparent plastic bags or reusable containers to help choose the options that would best serve the different needs/situations in HK;
- (ii) the households or tenants from domestic and C&I buildings can bring their food waste to the central refuse room, where property management companies (PMCs) can arrange collection service by food waste collectors;
- (iii) smart collection bins should be considered for use to facilitate food waste collection. With IT technologies such as Global Positioning System (GPS) and Radio Frequency Identification (RFID) embedded, smart bins may help trace contaminated organic waste, track participation rate, arrange on-time collection services, and minimize odour and hygiene problems;
- (iv) food waste should be collected daily and at non-peak hours;
- (v) direct haul to food waste recycling facilities is recommended, rather than transferring food waste to interim transfer stations for compressing into containers since food waste in general decomposes quickly and this could avoid odour and hygiene problems;
- (vi) tanker trucks are preferred to tail-lift vehicles for food waste collection because of higher payload, prevention of spillage of leachate and better efficiency during the unloading operation at food waste recycling facilities;
- (vii) voluntary approach to implement food waste collection by phases is recommended, with waste generators producing food waste of large quantities and low level of contamination which is relatively easier to collect, as the initial targets; and

- (viii) free collection service is recommended to provide sufficient incentive to encourage food waste generators to join the service.

PILOT SCHEME ON FOOD WASTE COLLECTION

5. In July 2018, the EPD launched a pilot scheme on food waste collection, focusing on food waste generated from the public sector engaged in C&I activities, with an aim to identifying and ascertaining the major operation and logistic arrangements for the collection and delivery of food waste to the O·PARK1 which commenced operation in the same month. Under the pilot scheme, food waste generated from 40 public markets and cooked food venues managed by the Food and Environmental Hygiene Department (FEHD) as well as from 9 shopping centres and wet markets managed by the Hong Kong Housing Authority (HA), has been source-separated, collected and delivered to O·PARK1 for recycling.

6. Participation in the scheme is voluntary. To promote recycling of food waste and enhance the quality of food waste collected, the EPD has arranged a contractor to provide suitable guidance and training for operators of public market stalls, cooked food venues and shopping centres on how to practise source separation, collection and delivery of food waste. As at end 2019, the food waste collected from the above venues was about 8 tonnes per day (tpd).

7. Since April 2019, the EPD has also provided free food waste collection service for all primary and secondary schools through school lunch suppliers. A total of 10 school lunch suppliers have been collecting the food waste generated from school meals in primary and secondary schools to which these lunch suppliers are providing service. The amount of food waste thus collected is about 3 tpd which is used to produce biogas and compost at the O·PARK1.

Second Phase of the Pilot Scheme

8. Under the second phase of the pilot scheme, the EPD plans to invite tenders for vehicle fleet for a larger scale collection of food waste. While the initial focus of the second phase of the pilot scheme remains to be food waste generated from the C&I sector, a portion of the prevailing food waste recycling capacity (about 50 tpd of the total current recycling capacity of 250 tpd) will be set aside for food waste generated from domestic sources. The service of the food waste collection fleet, which is to be rolled out by about end 2020 tentatively, will first cover Hong Kong Island and Lantau. In the light of the experience of the Hong Kong Island and

Lantau, we would consider how it could be extended to Kowloon and the New Territories at later stages.

9. We have sounded out different stakeholders on their interest to join the second phase of the pilot scheme. As at end of 2019, about 100 public markets under FEHD and LINK, 2 wholesale markets under Agriculture, Fisheries and Conservation Department, 25 public hospitals, around 20 shopping centres under HA, around 50 NGOs and about 20 private and public housing estates with previous food waste source separation experience, have expressed their interest in joining the scheme.

10. The collection service under the second phase of the pilot scheme will adopt the recommendations of the Consultancy Study mentioned in paragraph 4 above where appropriate to enhance the collection efficiency and minimise hygiene and odour nuisance. The EPD's contractor for the second phase of the pilot scheme will closely liaise with the waste generators to work out the food waste collection arrangements (including the collection points) which best suit the needs of the service users or residents, while flexibility will be allowed on the choice of collection vehicles to cope with specific constraints of individual venues.

11. Various smart collection bin systems have emerged in the local market that claim to be able to support measurement of food waste quality and quantity as well as tracking the movement of collection fleets. To date, one large private housing estate in Sha Tin has been supported under Recycling Fund to, among other things, install smart collection bins to facilitate source separation of recyclables including beverage cartons, plastic bottles and food waste produced by the domestic households. Smart food waste collection bins will be used in the second phase of the pilot scheme where situation permits. We will continue to keep in view the development and adoption of smart waste collection bins worldwide, as well as the practical experience of the above-mentioned Recycling Fund project and the second phase of the pilot scheme, with a view to identifying smart collection systems that best suit the local circumstances and food waste collection mode in Hong Kong.

THE WAY FORWARD

12. The implementation schedule of the Government-run free food waste collection services will largely depend on the completion timeframe of the food waste recycling facilities. Meanwhile, having regard to the findings and recommendations of the Consultancy Study, the EPD will start rolling out pilot schemes on free

collection of food waste generated from the C&I and domestic sectors in phases by about end 2020, with a view to accumulating experience and knowledge on the different parameters of a territorial-wide food waste collection system that best suits the needs of Hong Kong.

ADVICE SOUGHT

13. Members are invited to note the content of the paper and give comments on the pilot scheme on collection of food waste.

Environmental Protection Department
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