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ACE Paper 6/2015
For discussion on 11 May 2015

Municipal Solid Waste Charging: Latest Development

PURPOSE

The Council for Sustainable Development (“SDC”) published a report on 16 December 2014 setting out its recommendations on how to implement quantity-based municipal solid waste (“MSW”) charging in Hong Kong. This paper updates the Advisory Council on the Environment (“ACE”) on the latest development.

BACKGROUND

2. Quantity-based charging can create financial incentive to drive behavioural changes in waste generation thus reducing the overall amount of waste required for disposal. In 2012, we conducted an extensive public consultation to collect views from the public on whether MSW charging should be introduced in Hong Kong and, on the basis of majority support obtained, affirmed the introduction of quantity-based MSW charging in Hong Kong, which is also featured as one of the major waste reduction initiatives under *Hong Kong: Blueprint for Sustainable Use of Resources 2013-2022* (“*The Blueprint*”) published in May 2013. Notwithstanding the majority support, views collected during the 2012 public consultation were fairly mixed about the charging mechanism particularly in the case of household waste charging. Amongst other things, the multi-storey and multi-tenant building setting in Hong Kong has posed a lot of operational challenges. Therefore, in December 2012, we invited the SDC to conduct a second-stage public engagement on the implementation framework of the MSW charging scheme.

THE SDC'S RECOMMENDATIONS

3. The SDC's engagement covered four key issues including (i) charging mechanism; (ii) coverage of charging scheme; (iii) charging level; and (iv) recycling, and accordingly launched the public engagement. The public involvement stage of the SDC's engagement ended in January 2014. After further deliberation, the SDC published its report on 16 December 2014. First the SDC recommended that for equity and in line with the principle of "polluter pays", MSW charging should be implemented across the board for all sectors in one go. Secondly, regarding the charging mechanism, the SDC considered that it should be built upon the existing MSW collection and disposal system (as summarized at Annex A) so as to minimize adverse impacts on environmental hygiene.

4. In addition, the SDC recommended that the level of charges should be directly related to the quantity of waste disposed of by MSW producers. As a reference, the SDC noted that during the public engagement process, most respondents chose the lowest charging level option, i.e. HK\$400 to \$499 per tonne for commercial and industrial ("C&I") waste and HK\$30 to \$44 per household per month for domestic waste (based on a three-person household). The SDC has also put up suggestions on how to enhance recycling support so as to facilitate waste reduction in line with the objective of "Waste Less, Pay Less".

5. As for the charging mechanism, in summary, the SDC has recommended the following framework –

- (a) for MSW disposal through the direct collection service provided by the Food and Environmental Hygiene Department ("FEHD"), the ultimate goal is to implement charging "by household using pre-paid designated garbage bags";
- (b) Notwithstanding (a), some residential buildings using FEHD's direct collection service may require time for residents to reach a consensus on the implementation details of waste charging. A transitional period should be established to allow these residential buildings to adopt a charging mechanism on the basis of "by volume of waste disposed by the building". On the other hand, residential buildings that are ready to implement "by household by bag" charging may do so without going through the transition period;
- (c) for MSW disposal at FEHD's refuse collection points ("RCPs"), residents must use pre-paid designated garbage bags for disposing waste at RCPs by themselves or through their hired cleaners. Waste in non-designated garbage bags shall be rejected for disposal at RCPs; and

- (d) for MSW disposal through private waste collectors at landfills or refuse transfer stations (“RTSs”) operated by the Environmental Protection Department (“EPD”), a “gate fee” will apply such that charging will be based on the weight of waste disposed of. Individual private waste collectors would work out with their clients on how the latter would pay for the MSW charges on the basis of their waste load.

THE GOVERNMENT’S RESPONSE

6. The Government notes that of the various recommendations of the SDC, it will be most challenging to put in place a full system for charging all MSW producers in one go. This charging system must be broadly compatible with the collection and disposal system which is highly complex and is heavily loaded. The necessary preparatory work will involve complex operational issues that cut across the responsibilities of Bureaux and Departments. In addition, continuing public education is critical to shape behavioral change in the community to promote compliance. In broad terms, there are four key areas of preparatory work –

- (a) formulation of effective implementation plans to give effect to the charging mechanism at the various types of MSW reception points;
- (b) development of relevant complementary systems;
- (c) stepping up of public education and community involvement programmes; and
- (d) drafting of the enabling legislation to provide the legal basis for implementation of the MSW charging system.

7. At this stage, a Working Group has been convened by EPD comprising senior representatives of EPD, FEHD, the Housing Department and Home Affairs Department to steer and co-ordinate the preparatory work. Where necessary, representatives from other relevant departments may also be co-opted. The Working Group will give due consideration to the interface issues between the proposed mandatory MSW charging and other public services such as efficiency of waste disposal/collection for environmental hygiene, public housing management, and balancing effective enforcement of the charging scheme with privacy considerations and compliance costs. We will closely engage the relevant stakeholders at different stages and will from time to time report progress to the ACE.

REDUCING WASTE THROUGH MSW CHARGING: KEYS TO SUCCESS

Public Education and Community Involvement

8. The SDC's recommendation for MSW charging to be implemented in all sectors in one go will directly impact on over 2.2 million domestic households in all kinds of residential settings, a wide range of different C&I establishments and other institutions or community service units. We need to adequately inform them of the new initiative and prepare them for the expected behavioural change in response to charging. Throughout the preparation period, we will also need to extensively engage relevant stakeholders such as general members of the public (as domestic MSW producers), chambers of commerce, professional bodies, private waste collectors, cleansing contractors and property management etc..

Pilot Schemes of MSW Charging

9. Organizing pilot trial is one possible way to achieve enhanced public education. So far two pilot schemes have been completed in seven residential housing estates which have hired property management companies ("PMCs") and two rural villages to help collect further public opinions and accumulate experience for the future implementation of MSW charging. We may launch new phases of similar trial schemes and where feasible and appropriate, extend the coverage of trial to new sectors, such as C&I establishments as well as institutions and community service units.

10. In parallel, with the support of FEHD and the Electrical and Mechanical Services Department, a pilot scheme will be launched in July 2015 to test out the mechanism of MSW charging on the basis of "by volume of waste disposed by the building". Under the pilot scheme, a small number of refuse collection vehicles ("RCVs") will be retrofitted to install automated bin-counting systems with which we may test out the technical feasibility and other operational issues involved in this charging mechanism. The pilot scheme will also facilitate relevant stakeholders to appreciate the pros and cons for the purpose of a more informed choice between this interim option and the ultimate mechanism of charging "by household by bag".

Stakeholder Forums

11. In addition, we are preparing for the establishment of a platform (tentatively known as "stakeholder forums") for stakeholders to be engaged in the development of MSW charging on an on-going basis. We are inclined to organize relevant parties into four to five stakeholder forums, each of which will focus at the implementation of MSW charging in/for (i) PMC-managed residential buildings, (ii) residential buildings without proper building

management, (iii) rural or less densely populated areas, (iv) businesses and (v) institutions and community service units.

12. For early preparation, starting from March 2015, we have been organizing briefing sessions for different stakeholder groups to update them on the SDC recommendations and the Government's response as well as work plans. Amongst others, four "town hall" sessions targeting at general public (as residents and building management in different housing settings) will be held in June 2015. We will convene the stakeholder forums afterwards. These stakeholder forums will be interactive and participatory by nature. They are expected to contribute to the Government's preparatory work by (i) reflecting views from within the stakeholder groups on relevant operational issues, (ii) sharing examples of best practices and contributing to the development of practicable guidelines for wider promulgation in the stakeholder groups and (iii) mobilizing the stakeholder groups in the engagement of the wider community for conducting trials to prepare for the full implementation of MSW charging.

Enhanced Recycling Support

13. The SDC has rightly noted that following the implementation of MSW charging, the public will have a higher incentive to recycle and separate recyclables at source. Indeed, taking into account Hong Kong's challenges, opportunities and lessons from other cities, we have committed to a wide range of initiatives under *The Blueprint* that will help prevent, reduce, reuse and recycle waste. Progressive implementation of these initiatives will help strengthen the recycling system in Hong Kong and garner public support for MSW charging.

Mandatory Producer Responsibility Schemes ("PRS")

14. As pledged in *The Blueprint*, the Government is progressively putting in place various PRSs to promote waste reduction and recycling. Plastic shopping bag ("PSB") charging has been extended to cover the entire retail sector in Hong Kong starting from 1 April 2015. More specifically, all retailers in Hong Kong, irrespective of scale of operation and business nature, will have to charge customers not less than 50 cents for each PSB provided in retail sales of goods, save for situations where there is exemption. The PSB charge, to be retained by the retailers, is expected to create economic incentive to reduce the excessive use of PSBs and further deepen the Bring Your Own Bag shopping culture in Hong Kong.

15. Since the publication of the SDC's report, the Government obtained funding approval from the Legislative Council ("LegCo") in February 2015 for the development of the waste electrical and electronic equipment ("WEEE") treatment and recycling facility ("WEEETRF") in the EcoPark which will provide the necessary treatment capacity to underpin the territory-wide PRS on

WEEE. We subsequently introduced into the LegCo in March 2015 the legislative proposals for the regulatory framework of the PRS on WEEE. Subject to the LegCo's approval of the legislative proposals and the timely completion of the other preparatory work (including the development of the WEEETRF), we envisage that the PRS on WEEE can be implemented by 2017 to provide a territory-wide local solution for the proper management of WEEE. As a result, it will facilitate the fostering of a circular economy for the relevant electrical and electronic equipment, promote technological upgrade in local WEEE recycling, and create job opportunities.

16. Looking further ahead, as we have briefed the LegCo in April 2015, we are actively preparing another PRS targeting at glass beverage bottles. An increasing amount of glass bottles has been collected in past years as we are expanding the glass bottle collection network. As at March 2015, there are a total of 1 200 collection points in residential estates, equivalent to an approximate population coverage of 69% ^[1], and some 500 collection points in other premises and public places. After implementation of the mandatory PRS, we estimate that 50 000 tonnes of waste glass bottles per annum could be collected and all be gainfully reused in the production of construction materials (such as eco-pavers) or as fill materials in reclamation and other earthworks.

Community Green Stations (“CGS”)

17. As announced in the 2014 Policy Address, we are progressively developing CGSs in each of the 18 districts. These stations will be operated by non-profit-making organizations and the Government will provide funding for their operation. At this stage, we have confirmed the sites for 11 CGS projects after District Councils consultations. The first facility in Sha Tin District, to be operated by Christian Family Service Centre, has been completed and will commence operation very soon. The second in Eastern District, to be operated by Po Leung Kuk, will follow shortly afterwards. Apart from enhancing the logistics support for local recycling initiatives, progressive CGS development will also enhance our capacity in environmental education and community engagement in support of MSW charging and other waste reduction initiatives.

Support to the Recycling Industries

18. A Recycling Fund of \$1 billion has been proposed in the Chief Executive's 2014 Policy Address. The key objective of the Fund will be to facilitate the upgrading of the operational capabilities and efficiency of the recycling industry for sustainable development in order to achieve the policy

¹ As at end 2012, before the 2013 public consultation, a total of 270 collection points have been set up across the territory; over 120 public/private housing estates have participated, covering some 880 000 people (i.e. around 12% of the total Hong Kong population).

objectives of waste reduction as stated in *The Blueprint*. The Fund will target at two main groups of applicants, namely, individual enterprises and non-profit distributing organisations. The proposal is pending the funding approval by the LegCo Finance Committee.

Food Waste Management

19. Food waste comprises a significant portion of our daily MSW disposal. The SDC has recommended that we expedite the construction of organic waste treatment facilities (“OWTFs”), and explore feasible measures to support on-site source separation of food waste. To this end, the first OWTF is already under construction at Siu Ho Wan (North Lantau) and will cater for 200 tonnes per day (“tpd”) of food waste. A feasibility study on the second OWTF would be completed in 2015. In addition, we will examine the viability of utilizing the anaerobic digesters at existing sewage treatment works with secondary treatment for food waste-sewage sludge co-digestion. We plan to undertake a pilot trial in 2016 to confirm the feasibility and determine the technical requirements of food waste-sewage sludge co-digestion as one of the means to convert food waste to energy.

Development of Other Complementary Facilities

20. In parallel, actions are in hand to look into necessary complementary facilities to support the implementation of MSW charging. For example, we would take stock of the practical situation in all RCPs and review the scope of improvement for say facilitating enforcement and enhancing recycling support. To tie in with the implementation of MSW charging, FEHD will review the overall provision of litter bins placed in public places and the design of such litter bins. EPD will correspondingly review the need of enhanced provision of collection facilities for various types of recyclables in public places.

21. For the purpose of collecting an MSW gate fee at EPD’s landfills and RTSs (cf. paragraph 5(d)), all these facilities have already been equipped with weigh-bridges. However certain software and hardware upgrade will be needed for billing systems. In addition, we need to draw up the technical specifications for the designated garbage bags taking into account feedback received during past and future trials and develop an efficient system to manufacture these bags. We would also need a proper distribution network through which users (including households, PMCs, and C&I establishments and even cleansing workers) can procure these bags conveniently.

ADVICE SOUGHT

22. The Government welcomes the SDC’s recommendations. We are committed to adopting the proposed framework in mapping out the implementation detail, and will progressively carry out the preparatory work.

We welcome views from the ACE and invite Members to note the concurrent efforts in community engagement, and development of recycling support measures, which are considered to be very important in enhancing the effectiveness of MSW charging in reducing waste.

Environment Bureau/Environmental Protection Department
May 2015

The Existing MSW Collection and Disposal System

Mode A: Direct Collection by FEHD

- FEHD manages a collection fleet of refuse collection vehicles (“RCVs”) providing direct collection service to most residential buildings managed by the property management companies (“PMCs”) including the public housing estates and various institutional premises and collects some 3 700 tonnes per day (“tpd”) of MSW. In such premises, MSW is often collected centrally by the PMC concerned who acts as a service agent for handing the waste over to FEHD and the waste will then be conveyed by FEHD’s RCVs to either a landfill or a refuse transfer station (“RTS”).

Mode B: Collection at Refuse Collection Points

- FEHD’s direct collection service does not however cover residential buildings and village houses that are not readily accessible by RCVs (mainly single-block buildings in old districts or remote areas) and the rural sector. Households in these residential buildings and village houses are instead served by a network of refuse collection points (“RCPs”) which also handle street waste collected by street cleaners and other trade waste (usually from street level shops) subject to a 100-litre disposal limit with a total usage of about 1 600 tpd of MSW. These buildings do not normally hire property management services and some so-called “3-nil” buildings might not have even proper building management bodies.

Mode C: Direct Disposal at the Landfills or Refuse Transfer Stations

- At present, C&I establishments engage private waste collectors to collect their waste. Some residential buildings also hire private collection services. These private waste collectors deliver about 3 800 tpd of MSW to landfills or RTSs direct.