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Panel on Environmental Affairs

Meeting on 18 December 2012

**Background brief on "Municipal solid waste charging in Hong Kong"
prepared by the Legislative Council Secretariat**

Purpose

This paper sets out the background to the introduction of municipal solid waste ("MSW") charging in Hong Kong, and gives a brief account of the discussions by Members on the subject.

Background

2. MSW comprises solid waste from households, commercial and industrial ("C&I") sources. This excludes construction and demolition waste, chemical waste and other special waste. Hong Kong currently relies principally on landfills to treat its waste. At present, about 13 800 tonnes of waste are disposed of at landfills every day, of which the main trunk are 9 100 tonnes of MSW. MSW is collected, transferred and disposed of at the three strategic landfills, namely, the South-East New Territories Landfill in Tseung Kwan O, the North-East New Territories Landfill at Ta Kwu Ling, and the West New Territories Landfill at Nim Wan. These three strategic landfills take up in total 270 hectares of land, cost \$6 billion to construct and more than \$400 million to run annually. The remaining capacities of the three landfills will be exhausted in 2014, 2016 and 2018 respectively.

Policy Framework for the Management of Municipal Solid Waste (2005-2014)

3. The Administration published the Policy Framework for the Management of Municipal Solid Waste (2005-2014) ("the Policy Framework") in December 2005 which set out the strategy and measures to reduce the generation of waste and promote waste recovery, reuse and recycling. The main vein of the strategy was to implement the "polluter pays" principle through MSW charging and producer responsibility schemes.

4. To reduce the bulk size of MSW substantially and to recover useful resources as far as possible, the Policy Framework also proposed an integrated

waste management facilities solution, i.e. developing integrated waste management facilities with advanced incineration as the core technology, and organic waste treatment facilities to treat source-separated biodegradable waste.

Introduction of municipal solid waste charging in Hong Kong

5. In January 2011, the Administration announced an action plan to tackle the imminent waste problem in Hong Kong. Under the theme of "Reduce, Recycle and Proper Waste Management", the action plan set out a series of initiatives relating to waste reduction at source, introduction of advanced waste treatment facilities as well as timely extension of the strategic landfills.

6. According to the Administration, MSW charging is a policy tool to encourage waste reduction at source, and has been adopted in many international cities. On environmental grounds, there is a strong case for the Administration to actively explore the feasibility of MSW charging in line with the "polluter pays" principle as a useful economic means to encourage waste reduction and recycling. Experience from selected international cities (in particular Taipei City and Seoul where quantity-based charging has been put in place) suggests that MSW charging could be an effective economic incentive that changes behaviour and leads people to cut down on waste generation, particularly if there is a direct linkage between the waste charge and the quantity of waste being generated.

7. The Administration conducted a three-month trial scheme in 2007 to examine the logistical requirements for introducing a viable rate charge scheme under different domestic housing settings. The findings of the trial have identified a number of practical issues, including possible flytipping and enforcement problems and the need for complementary measures such as provision of source separation facilities to encourage compliance and waste recovery. Drawing reference from overseas experience, the Administration notes that a key prerequisite for a successful variable rate scheme is the readiness to trace MSW to its source. Given Hong Kong's multi-storey multi-tenant household setting and the prevailing waste collection arrangements, a variable rate charging scheme would likely be subject to implementation difficulties in terms of ascertaining the amount and sources of MSW on individual household basis. It would be necessary to examine alternative means of charging, such as a fixed charge or flat rate system while building in appropriate incentives to encourage waste reduction and recycling.

8. A territory-wide baseline study to collect key information on waste generation and management in different C&I establishments was also completed in 2010.

Public consultation on municipal solid waste charging

9. In January 2012, the Administration published a consultation document entitled "Strengthening Waste Reduction: Is Waste Charging an Option?" ("the Consultation Document") to consult the public on the introduction of MSW charging as a direct economic disincentive to reduce waste at source in Hong Kong. Drawing on international experience, the Administration has generalized the following four broad charging approaches –

- (a) ***Quantity-based system*** – it establishes a direct link between the charge and the quantity of waste (which can be determined by volume, weight or other mechanisms) requiring treatment or disposal. The waste charge could be imposed through means such as mandatory use of pre-paid garage bags and by weight at the disposal facilities (also known as "gate fee");
- (b) ***Proxy system*** – it links the waste charge to an indirect indicator of waste generation which reflects the level of human activity in a household such as water consumption. Charges are levied regardless of the quantity of waste actually generated;
- (c) ***Fixed charge system*** – each waste producer within the same category (e.g. residents of the same district) pays an identical rate regardless of how much waste they produce; and
- (d) ***Partial charging system*** – only applicable to a defined group of waste producers who will be required to pay a gate fee assessed with reference to the weight of waste when the waste is delivered to the disposal facilities.

Deliberations by the Panel on Environmental Affairs

10. When the subject of MWS charging was discussed in the context of the progress of the Policy Framework at the meeting of the Panel on Environmental Affairs ("the Panel") on 24 January 2011, some members raised concern about double levy since part of the government rates was used for waste treatment. They considered that concessionary arrangement should be worked out to reduce the impact of MSW charging on low-income families. Some other members considered that MSW charging should be revenue neutral in that the levy collected should be ploughed back to assist the development of waste recycling industries. Given that waste from C&I establishments was increasing as a result of increased economic activities while waste from residential developments was decreasing because of increased public awareness on waste reduction and recovery, there might be a need to apply a phased approach and/or a separate MSW charging arrangement to cater for the two different scenarios.

11. The Consultation Document was discussed at the Panel meeting on 19 January 2012. Some Panel members were disappointed that the Consultation Document failed to provide certain requisite information, inter alia, the level of MSW charge. These members pointed out that political parties as well as the community would not support MSW charging unless the level of charge was known. Given that the charges for waste collection had already been included in the rates, consideration should be given to offsetting MSW charging by a corresponding reduction in rates (or rents in the case of public rental housing) if MSW charging was not meant to raise revenue. The Administration should conduct a second round of public consultation on the modus operandi (including implementation details) of the charging mechanism. Some other members considered that the Consultation Document should include measures and supporting infrastructure required to improve the collection, segregation and recycling of MSW. In parallel with MSW charging, incentive schemes should be put in place to promote waste reduction and recycling. A waste reduction target should also be set as part of the waste management strategy.

12. On the choice of option for MSW charging, some members supported the quantity-based system which was in line with the "polluter pays" principle, while others supported a gradual approach starting with options which were easier to implement, such as the partial charging system. Noting that different options might give rise to different operational problems (e.g. the need to withdraw public litter bins from the streets under the quantity-based system to prevent illegal dumping, and the problem of mixed waste in the event of partial charging given the prevalence of composite buildings where both domestic and commercial premises were located within the same neighbourhood), some other members suggested that the Administration should look into the feasibility of adopting a mixed approach. They also considered that efforts should be made to educate the public on the measures to reduce MSW, followed by legislation to mandate separation of waste at source and to ban unauthorized disposal of MSW.

Council question

13. Hon Vincent FANG asked a question on MSW charging at the Council meeting on 21 March 2012. Details of the Council question are hyperlinked in the **Appendix** for ease of reference.

Relevant papers

14. A list of relevant papers is in the **Appendix**.

Municipal Solid Waste Charging in Hong Kong

List of relevant papers

Council/ Committee	Date of meeting	Paper
Panel on Environmental Affairs ("EA Panel")	24 February 2003	<p>Information paper on "Measures to Promote the Prevention and Recovery of Municipal Solid Waste in Hong Kong" provided by the Administration (LC Paper No. CB(1)958/02-03(03)) http://www.legco.gov.hk/yr02-03/english/panels/ea/papers/ea0224cb1-958-3-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1201/02-03) http://www.legco.gov.hk/yr02-03/english/panels/ea/minutes/ea030224.pdf</p>
EA Panel	23 February 2004	<p>Information paper on "Measures to Promote the Prevention and Recovery of Municipal Solid Waste in Hong Kong" provided by the Administration (LC Paper No. CB(1)1031/03-04(03)) http://www.legco.gov.hk/yr03-04/english/panels/ea/papers/ea0223cb1-1031-3-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1213/03-04) http://www.legco.gov.hk/yr03-04/english/panels/ea/minutes/ea040223.pdf</p>
EA Panel	28 February 2005	<p>Information paper on "Management of Municipal Solid Waste in Hong Kong" provided by the Administration (LC Paper No. CB(1)960/04-05(07)) http://www.legco.gov.hk/yr04-05/english/panels/ea/papers/ea0228cb1-960-7-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1132/04-05) http://www.legco.gov.hk/yr04-05/english/panels/ea/minutes/ea050228.pdf</p>

Council/ Committee	Date of meeting	Paper
EA Panel	23 May 2005	<p>Information paper on "Technical Aspects of the Management of Municipal Solid Waste" provided by the Administration (LC Paper No. CB(1)1544/04-05(15)) http://www.legco.gov.hk/yr04-05/english/panels/ea/papers/ea0523cb1-1544-15-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1824/04-05) http://www.legco.gov.hk/yr04-05/english/panels/ea/minutes/ea050523.pdf</p>
EA Panel	15 December 2005	<p>Information paper on "A Policy Framework for the Management of Municipal Solid Waste in Hong Kong" provided by the Administration (LC Paper No. CB(1)486/05-06(04)) http://www.legco.gov.hk/yr05-06/english/panels/ea/papers/ea1215cb1-486-4-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)723/05-06) http://www.legco.gov.hk/yr05-06/english/panels/ea/minutes/ea051215.pdf</p>
EA Panel	19 January 2006	<p>Information paper on "A Policy Framework for the Management of Municipal Solid Waste in Hong Kong" provided by the Administration (LC Paper No. CB(1)486/05-06(04)) http://www.legco.gov.hk/yr05-06/english/panels/ea/papers/ea1215cb1-486-4-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1120/05-06) http://www.legco.gov.hk/yr05-06/english/panels/ea/minutes/ea060119.pdf</p>

Council/ Committee	Date of meeting	Paper
EA Panel	26 March 2007	<p>Information paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)"" provided by the Administration (LC Paper No. CB(1)1182/06-07(06)) http://www.legco.gov.hk/yr06-07/english/panels/ea/papers/ea0326cb1-1182-6-e.pdf</p> <p>Supplementary information paper on "Proposed Mandatory Provision of Refuse Storage and Material Recovery Room on Each Floor of New Residential Buildings" provided by the Administration (LC Paper No. CB(1)2210/06-07(01)) http://www.legco.gov.hk/yr06-07/english/panels/ea/papers/ea0326cb1-2210-1-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1372/06-07) http://www.legco.gov.hk/yr06-07/english/panels/ea/minutes/ea070326.pdf</p>
EA Panel	25 February 2008	<p>Information paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)" provided by the Administration (LC Paper No. CB(1)844/07-08(03)) http://www.legco.gov.hk/yr07-08/english/panels/ea/papers/ea0225cb1-844-3-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1215/07-08) http://www.legco.gov.hk/yr07-08/english/panels/ea/minutes/ea080225.pdf</p>
EA Panel	27 April 2009	<p>Information paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)"" provided by the Administration (LC Paper No. CB(1)1357/08-09(03)) http://www.legco.gov.hk/yr08-09/english/panels/ea/papers/ea0427cb1-1357-3-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1943/08-09) http://www.legco.gov.hk/yr08-09/english/panels/ea/minutes/ea20090427.pdf</p>

Council/ Committee	Date of meeting	Paper
EA Panel	29 March 2010	<p>Information paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)"" provided by the Administration (LC Paper No. CB(1)1443/09-10(04)) http://www.legco.gov.hk/yr09-10/english/panels/ea/papers/ea0329cb1-1443-4-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1922/09-10) http://www.legco.gov.hk/yr09-10/english/panels/ea/minutes/ea20100329.pdf</p>
EA Panel	24 January 2011	<p>Legislative Council Brief issued by the Environment Bureau/Environmental Protection Department on 4 January 2011 (EP 86/03/175A) http://www.legco.gov.hk/yr10-11/english/panels/ea/papers/ea-ep8603175a-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1509/10-11) http://www.legco.gov.hk/yr10-11/english/panels/ea/minutes/ea20110124.pdf</p>
EA Panel	19 January 2012	<p>Consultation Document on "Strengthening Waste Reduction: Is Waste Charging an Option?" provided by the Administration (LC Paper No. CB(1)819/11-12(01)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0119cb1-819-1-e.pdf</p> <p>Information paper on "Public Consultation on Municipal Solid Waste Charging" provided by the Administration (LC Paper No. CB(1)855/11-12(05)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0119cb1-855-5-e.pdf</p> <p>Paper on management of municipal solid waste in Hong Kong prepared by the Legislative Council Secretariat (updated background brief) (LC Paper No. CB(1)855/11-12(06)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0119cb1-855-6-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1219/11-12) http://www.legco.gov.hk/yr11-12/english/panels/ea/minutes/ea20120119.pdf</p>

Council/ Committee	Date of meeting	Paper
EA Panel	26 March 2012	<p>Information paper on "Reduce, Recycle and Proper Waste Management" provided by the Administration (LC Paper No. CB(1)1369/11-12(01)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0326cb1-1369-1-e.pdf</p> <p>Paper on management of municipal solid waste in Hong Kong prepared by the Legislative Council Secretariat (updated background brief) (LC Paper No. CB(1)1369/11-12(02)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0326cb1-1369-2-e.pdf</p> <p>Minutes of special meeting at 10:45 am (LC Paper No. CB(1)2555/11-12) http://www.legco.gov.hk/yr11-12/english/panels/ea/minutes/ea20120326a.pdf</p> <p>Minutes of meeting at 2:30 pm (LC Paper No. CB(1)2604/11-12) http://www.legco.gov.hk/yr11-12/english/panels/ea/minutes/ea20120326.pdf</p>
EA Panel	20 April 2012	<p>Information paper on "Reduce, Recycle and Proper Waste Management" provided by the Administration (LC Paper No. CB(1)1628/11-12(01)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0420cb1-1628-1-e.pdf</p> <p>Minutes of special meeting (LC Paper No. CB(1)2140/11-12) http://www.legco.gov.hk/yr11-12/english/panels/ea/minutes/ea20120420.pdf</p>

Hyperlink to relevant Council Question:

Date	Council Question
21 March 2012	<p>Council question raised by Hon Vincent FANG http://www.info.gov.hk/gia/general/201203/21/P201203210219.htm</p>