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For information

Study on Planning of Future Environmental Infrastructure Facilities for Waste Treatment and Transfer in Hong Kong

Purpose

This paper updates Members on commissioning of the "Study on Planning of Future Environmental Infrastructure Facilities for Waste Treatment and Transfer in Hong Kong – Feasibility Study" (the Study).

Background

2. In 2013, the average quantity of solid waste disposed of at landfills was 14,311 tonnes per day, comprising 9,547 tonnes municipal solid waste (MSW), 3,591 tonnes construction waste and 1,173 tonnes special waste.[1] To address the waste management problem in Hong Kong, the Environment Bureau (ENB) promulgated the "Hong Kong Blueprint for Sustainable Use of Resources 2013 – 2022" (Action Blueprint) in May 2013 and the "A Food Waste & Yard Waste Plan for Hong Kong 2014 – 2022" (Food Waste Plan) in February 2014 to map out a comprehensive waste and resource management strategy with targets, policies and action plans for the coming years up to 2022.

3. Even upon the implementation of all waste reduction at source/reuse/recycling measures as set out in the Action Blueprint and Food Waste Plan, there would still be a considerable amount of residual solid waste requiring disposal of at landfills. As the existing and currently planned waste management facilities, including Integrated Waste Management Facilities phase 1, organic waste treatment facilities and landfills extensions, would not be able to deal with all the waste sustainably in future, there is a need to carry out a study to identify additional strategic and regional waste treatment and bulk waste transfer facilities for the management of solid waste to reduce

[1] Please refer to Appendix 1 of the report "Monitoring of Solid Waste in Hong Kong" for classification of solid waste.

reliance on landfills for waste disposal and to meet Hong Kong's longer term requirements.

Objectives of the Study

4. The main objective of the Study is to formulate, develop and produce a territory-wide plan and strategy on the provision of waste treatment and bulk waste transfer facilities for handling solid waste in an environmentally acceptable, sustainable and cost-effective manner to meet Hong Kong's needs up to 2041. The time horizon is to tie in with the planning horizon adopted in "Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030" such that the various planning data including population and socio-economic projections can be shared and compatible. The Study will cover MSW and construction waste which account for around 90% of the total quantity of wastes disposed of at landfills.

5. The Study shall identify additional strategic and regional waste facilities required for bulk transfer and treatment of MSW and construction waste in line with smart city and circular economy concepts, draw up an outline action programme and develop the relevant planning guidelines for the identified waste facilities. It shall be built on the current policies, strategies, targets and programmes as set out in the Action Blueprint and Food Waste Plan, and any other relevant waste policies promulgated by the Environment Bureau during the Study. The Study will form the basis for detailed feasibility studies and much more detailed site selection exercises for the identified waste facilities to be conducted at a later stage.

6. The additional waste facilities to be determined shall be in accordance with the following broad objectives :-

(a) maximize resources recovery from waste to make the best use of waste as resources by recovering materials and energy from them as much as practicable and cost-effective in order to reduce loss of resources, reliance on the use of primary raw materials and waste generation arising from the production of primary raw materials;

(b) minimize disposal of untreated MSW and unsorted construction waste at landfills as much as practicable and cost-effective to reduce reliance on the landfills for waste disposal;

(c) minimize the need of vehicular traffic for transportation of waste by bulk transfer of MSW and construction waste in order to minimize the nuisance including odour, noise, pollutants/carbon emissions and traffic volume arising from the journeys and to maximize cost-effectiveness; and

(d) optimize synergy of waste management technologies and land use through the consideration of co-locating different types of waste facilities or co-treatment of MSW or construction waste with other types of waste such as co-digestion of sewage sludge with food waste at sewage treatment works, so as to capitalize the synergistic effect to achieve better operational efficiency and cost-effectiveness in waste management, improve the quality and quantity of the materials and energy recovered, and optimize the use of scarce land resources for accommodating waste management facilities.

Scope of the Study

7. The Study shall cover the following major tasks :–

(a) carry out analysis and projections of types, quantities, characteristics and distribution of solid waste arisings up to 2041, supplemented with surveys where necessary;

(b) identify and recommend the directions of the types, technology choices, optimal scales and spatial distribution of additional strategic and regional waste treatment and bulk waste transfer facilities to be required to meet Hong Kong's waste management needs up to 2041;

(c) prepare planning guidelines covering the types and requirements, spatial distribution, optimal scales, technology choices, siting principles, site requirements, selection criteria and potential broad

geographical areas of the recommended additional waste treatment and bulk waste transfer facilities;

(d) conduct environmental appraisal and sustainability analysis for the overall package of recommended strategic and regional waste treatment and bulk waste transfer facilities as well as for each of the recommended waste facilities with a view to setting out the appropriate planning guidelines for achieving sustainable treatment and bulk transfer of MSW and construction waste in an environmentally acceptable and cost-effective manner;

(e) study and evaluate the pros and cons of various potential procurement options for the different recommended waste treatment and bulk waste transfer facilities;

(f) produce a tentative territory-wide plan covering the recommended waste treatment and bulk waste transfer facilities and estimate the lead time for development and indicative timing for provision of the individual facilities;

(g) formulate public engagement strategy and programme; plan and conduct engagement with the public, relevant stakeholders and statutory bodies for the tentative territory-wide plan and strategy; and

(h) present a recommended plan and strategy with appropriate planning guidelines for individual facilities as well as an outline action programme for meeting the identified facilities over time in order to meet the projected demands for additional waste treatment and bulk waste transfer facilities. In addition, the recommended strategy shall contain a review mechanism for adaptive management of the action programme in the light of the updated developments in all relevant aspects including but not limited to waste disposal and technology development.

Study Programme

8. The consultants selection process was completed in August 2015 and the Study is scheduled for commencement in September/October 2015. The Study will last for about 19 months.

Study Management

9. A high level inter-departmental Study Steering Committee (SSC) to be chaired by the Secretary for the Environment will be set up to guide and steer the Study, including the consultation/engagement process. A Working Group (WG) to be chaired by the Assistant Director will also be set up to provide general and technical guidance to the Consultant and to facilitate the exchange of information among departments. We will set up the SSC and WG after the commencement of the Study.

Way Forward

10. Members are invited to note the status and the action timetable of the Study.

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Environmental Protection Department
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