

Enclosure

**Legislative Council
Panel on Environmental Affairs**

**Views from the Hong Kong Institution of Engineers on
“Reduce, Recycle and Proper Waste Management”:
Progress of the Key Initiatives under the Waste Management Strategy**

In response to the invitation from the captioned panel, the Hong Kong Institution of Engineers (HKIE) is pleased to provide our views on the subject as set out below for consideration.

2. The HKIE views that the cornerstone of the long-term development of Hong Kong lies on our strategic management of the potential threats to our society and economy, and believes that proactive responses would help us to steer through internal and external challenges. In fact, we recognise that climate change and diminishing energy resources have been two major challenges both Hong Kong and the global society at large have been facing. In this light, the Institution strongly advocates and supports the Administration to adopt comprehensive strategies in conserving our environment and resources. Hence, we welcome any constructive initiatives of the Administration for devising effective green strategy and waste management plan.

3. The HKIE concerns the exacerbating waste increment in modern society. Waste, generally classified as solid and liquid types, which are produced in the human and economic activities, not just alarm us that our environment is being harmfully affected but that our invaluable natural resources are being depleted. To ensure the public in our community to have a safe and healthy environment to live and work, we agree that every endeavour should be made to provide us with clean air, safe water and comfortable living land.

4. In the aspect of liquid waste, while the modern sewage treatment technologies have already enabled us to detoxicate it as much as possible, we believe that further initiatives that encourage water saving and minimise unnecessary water consumption would be imperative for us to control liquid waste creation and water pollution. Moreover, we suggest the Administration to promote measures for buildings to adopt, where practicable, proper collection and use of rainwater.

5. In the aspect of solid waste, it is well understood that the impact to the people are even more complicated, not just on the negative effect of the solid waste to health and environment but the space occupied for proper collection and disposal of it. Hence, we agree that sustainable waste management should be a paramount way to improve the situation. The HKIE recommends Hong Kong to adopt an integrated waste management strategy that not only protects our environment and the well-being of the people in the community, but also actively transforms the social and economic costs of waste to possible benefits to our economy.

6. Although various development and production activities in our daily lives would produce some undesirable by-products that people will regard as waste, we stress the importance of constructively converting them as usable resources by smart reusing and recovering. In this sense, we strongly support the Administration to further promote the spirit and habit of reusing and recycling. We think this can be done in two levels. First, the Administration should closely coordinate with the public sectors and the private practitioners to facilitate the territory to have more convenient and efficient collection, sorting and recycling facilities, so as to facilitate the community to reuse and recycle the unwanted but usable resources. Second, on top of these practical measures, the Administration should also promote the community acceptance of reusing and recycling, and enable the general public to see the tangible and intangible benefits of such, that would lead to corresponding behavioural change to actively pursue waste reduction. Noting that considerable proportion of our solid waste comes from food scraps and residues, the HKIE strongly supports initiatives that could educate both households and business owners for saving and prudent handling.

7. However, the Institution agrees that principally it could be even more effective by managing the sources of waste creation. In this light, we advocate to adopt a life cycle approach towards the human activities and production. It is only through a comprehensive review of the series of processes involved would we be able to suitably identify the multiple sources of waste creation and devise solutions accordingly. With careful process design, suitable adjustment and mitigation measures in place, unwanted by-products during the production process could be minimised, or failing that, be converted to other usable resources before they really become waste that taxes us in disposal handling.

8. To take a step forward, we suggest that waste management requirements and specifications should be built in, where practicable, over every production process. Certainly, educating the potential waste producers, be they the manufacturers, the workers or even consumers and users, would be essential. Proactive control of waste creation in the whole cycle, from product/service design, manufacturing, delivery, consumption, and disposal, would be essential to an effective waste management strategy.

9. However, even knowing that “reduce” and “recycle” should be core of a sustainable waste management strategy, we understand that Hong Kong would still need to adopt a sensible mixture of various waste management options in order to meet the social, economic and environmental conditions and the short- and long-term needs to effectively handle the imminent waste that is inevitably produced and not suitable for further reuse or recycle.

10. We, while being aware that disposal of waste would be a less preferred way of waste management, agree the Administration to develop state-of-the-art Integrated Waste Management Facilities (IWMF) with incineration as the core technology for final waste treatment. To meet the challenge of solid waste disposal in a sustainable manner, the Administration may consider the initiatives proposed in the *Policy Framework for the*

Management of Municipal Solid Waste (2005-2014), in particular the waste charging and producer responsibility schemes.

11. We recommend the Administration to enhance publicity to advocate the development of IWMF as one of the possible important measures to tackle the waste problem apart from reduction at sources and recycling, through highlighting the financial and social advantages as well as overall benefits of adopting thermal treatment technologies as compared to landfills. Unlike other countries, land is one of the valuable resources in Hong Kong. In this connection, it would not be a beneficial option for Hong Kong to just rely solely on landfills for disposal of the waste. As such, IWMF could be regarded as an alternative for sustainable waste management, as being a last resort.

12. During the public consultation of Hong Kong's Climate Change Strategy and Action Agenda in 2010, it was mentioned that thermal treatment technology had been playing a key role in waste treatment in developed countries. According to the consultation paper, the percentage of municipal solid waste handled by thermal treatment technologies for Germany and Japan were 34% and 67% respectively, whereas none in Hong Kong. Apart from renewable energy (RE) such as wind and solar resources, electricity generated from thermal treatment technologies is considered as a means of RE. According to the abovementioned consultation document, the fuel mix in Hong Kong would be revamped and the waste to energy would be able to meet about 2% of the total demand of electricity. This could be regarded as an important milestone for the start of the journey of thermal treatment technology.

13. The HKIE opines that comprehensive public consultations should be conducted for the purpose of engaging all stakeholders in the community to reach consensus on developing IWMF, in regard to the location of the facilities as well as the combustion and emission control technology to be deployed. The HKIE recommends setting up a liaison group comprising various parties including green groups, engineers, academics and other community representatives at the initial stage to collect views and suggestions with regular meetings. This two-way communication could be regarded as part of social impact assessments. Creative ideas and constructive suggestions raised could be implemented where practicable and appropriate.

14. The HKIE would be pleased to provide professional views for the Administration in developing the waste management strategy in Hong Kong. We expect that the professional experience and expertise of the Institution would continue to contribute for the community as a whole to identify advanced technologies, such as emission control and waste incineration process etc, to ensure that the initiatives are with minimal negative impact and maximum benefits to the community and the environment.