

香港特別行政區
立法會環境事務委員會

「減廢、回收、妥善處理廢物」：
廢物管理策略各項主要措施的最新進展

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The Need of IWMEF

Government figures indicate currently about 18000 tones of MSW is generated daily. HK's MSW recycling rate has reached a respectful figure of 52% (Germany : 65%*). But the amount of MSW requiring disposal at HK's landfills is still about 9000 t/d.

*Note : *Germany has implemented a number of policy measures, including waste charging and producers responsibility schemes to achieve such a high waste recycling rate*

Fact 1: HK landfills will be full soon and Hong Kong cannot afford to build more landfills.

Fact 2: Even if HK's MSW recycling rate can be on par with Germany (about 65%), we still need to dispose of 6300 t MSW per day.

Using thermal technologies which can substantially reduce the volume (about 90% reduction) is inevitably necessary in Hong Kong.

Choice of Technology

The Advisory Group on Waste Management (of which I was a member) after examination in details about 60 submissions by vendors/suppliers recommended Hong Kong should use incineration as the core technology. This is based on comparing the reliability, robustness, economics, and environmental impact of the different technologies.

In particular, I am aware that recently there are discussion over the choice of using the moving grate mass-burn technology and the plasma gasification technology.

Based on my personal experience and information gathered from published sources, I would like to summarize the pros and cons of the two technologies as follows. I hope this would help to clarify some of the issues.

	Moving Grate Incineration	Plasma Gasification
Level of technology	Proven, with over 900 plants built around the world. The biggest plant is in Singapore : 4300 t/d. One of the recent plants is a 2000t/d facility in Italy.	Emerging, with only 4 very small pilot plants (25 to 220 t/d capacity) built so far.
Reliability	Proven to be reliable	Reports of operational troubles with the pilot plants.
Robustness (flexibility)	Proven suitable for mass burn, (i.e. can treat almost all MSW, waste does not require pre-treatment)	Sorting, crushing/grinding (pulverization) of waste to small pieces are normally needed to ensure good thermal process; mainly used for specialized waste types
Environmental performance	Able to meet the most stringent EU air emission standard (including dioxin). Bottom ash and fly ash disposal is a concern, but this can be addressed.	Generally better, in particular less ash, less air emission, but lack long term performance data.
Economics	Established market, >10 suppliers	Few suppliers. Cost very uncertain, but expected to be higher.
Recommendation	Recommended for the 1 st plant in Hong Kong	Has potential but needs time for demonstration; can be considered when the technology has become more mature and if a 2 nd plant is needed in the future.