



To:
Clerk to Panel on Environmental Affairs
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BY POST & EMAIL

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Environmental Infrastructure Projects

The Swedish Chamber of Commerce in Hong Kong (“SwedCham”) is pleased to present its views to the Legislative Council in relation to a series of infrastructure projects proposed by the government, i.e. extensions of three existing landfills (Northeast New Territories, Southeast New Territories, and West New Territories) (the “**Landfill Extensions**”) and the so called Integrated Waste Management Facilities Phase 1 (“**IWMF**”).

1. Background

SwedCham’s objective is to promote, study, extend, advance and protect business relations, investments and interests of Swedish and other organizations in Hong Kong.

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With a membership body of 160 plus corporate members, 46 individual members, and around 100 “Young Professional” members, SwedCham represents a wide range of Swedish and Swedish-related businesses and professionals in Hong Kong.

SwedCham has for many years sought to promote a number of environmental issues in Hong Kong. These have ranged from a diversified approach to slope protection (less reliance on “shotcreting”), to a broad range of measures taken in support of cleaner air. In recent years, we have taken an increased interest in the challenges Hong Kong is facing within waste management. Our Environmental Committee has led an information effort that has included both seminars and more “hands-on” activities like clean-up days on beaches around Hong Kong and a “WEEE” (Waste Electrical and Electronic Equipment) recycling campaign. In 2013, we organized a well-attended study visit to the Northeast New Territories landfill.

2. Action Blueprint

We have studied the “Hong Kong Blueprint for Sustainable Use of Resources 2013-2022” released by the Environment Bureau (the “**Action Blueprint**”).

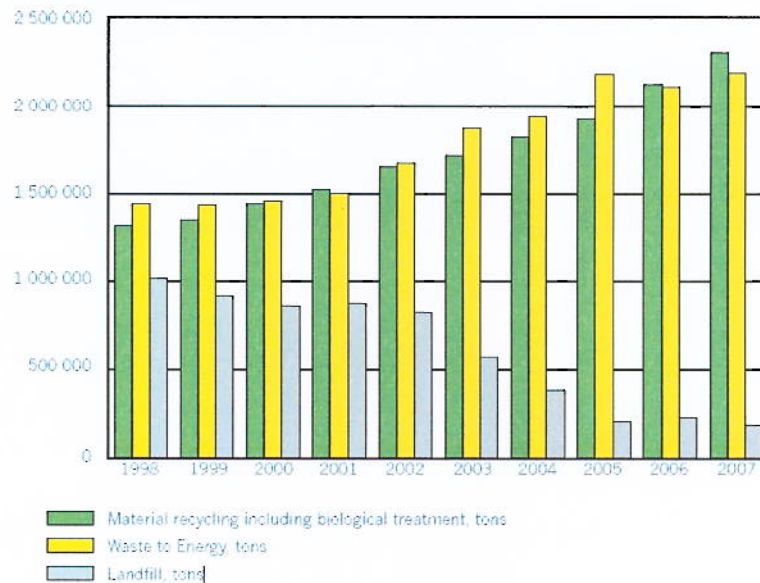
In principle we support the government’s vision of a 40% reduction of municipal solid waste by 2022. We also support the target outcome of 55% of waste being recycled and 23% incinerated in 2022, leaving only 22% for landfills (compared to the 52% of waste that goes to landfills today).

If Hong Kong is successful in reaching both its waste reduction target and the increased recycling and incineration rates, based on Sweden’s experience Hong Kong could expect a resulting drop in the need for landfills. In Sweden, by way of comparison, the need for landfills has been almost eliminated (only around 1% of waste ends up in landfills). Instead, most waste ends up recycled (49%) or incinerated (49%).

The table below demonstrates Sweden’s experience that the combined implementation of material recycling and a waste to energy facility, results in a significantly reduced need for landfills.



TREATMENT METHODS FOR HOUSEHOLD WASTE 1998-2007



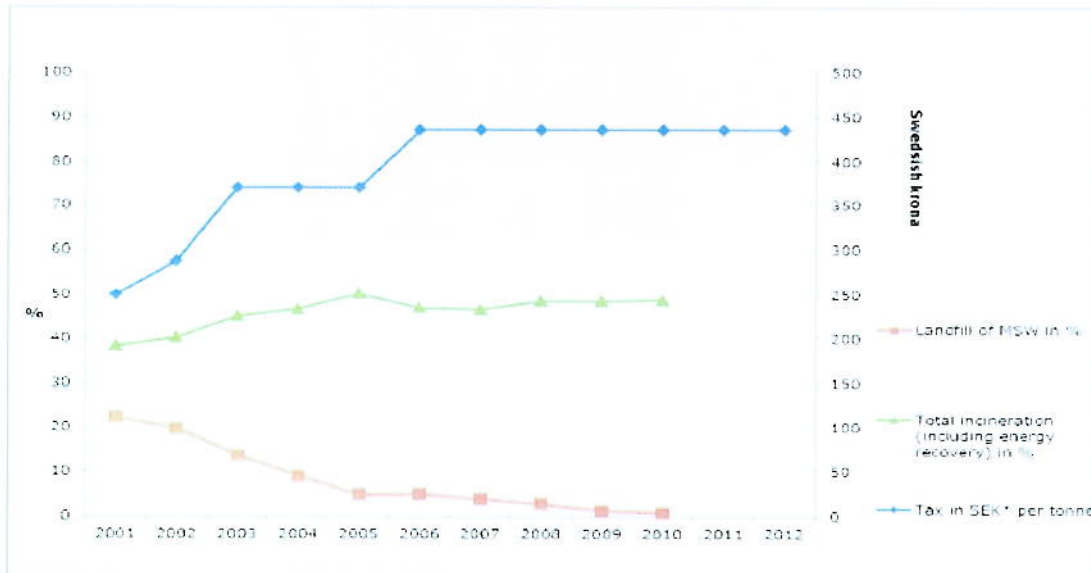
Source: Avfall Sverige AB

If anything, SwedCham would therefore support the setting of even more ambitious targets by the government. The example of Sweden, as well as those of Asian cities like Taipei and Seoul quoted in the Action Blueprint, show that very substantial progress is possible in relatively short time spans once workable policies are launched.

Sweden is keen to share what we have learned with the organizations responsible for waste management in Hong Kong. Sweden's journey to almost zero landfill was not a simple exercise. The process involved a combination of:

- a. new technologies to enable the re-use of waste materials and the generation of energy;
- b. taxes to motivate and drive behaviour and investment in new technologies and systems; and,
- c. on-going communication with the public throughout Sweden in order to achieve their cooperation.

The table below illustrates the dramatic fall in the portion of municipal solid waste ("MSW") going into landfills during the period 2001-2010. This development occurred in parallel with an increase in the amount of tax charged on MSW.



Source: ETC/SCP, 2012 and Eurostat, 2012.

Note: * EUR 1 = SEK 9.03 (2011 annual average currency exchange rate)

3. Landfill Extensions

In Hong Kong we recognize that Landfill Extensions are necessary in order to “buy time” while new waste management policies are launched and implemented. But SwedCham only views the Landfill Extensions as a short-term policy, to ensure waste disposal, while Hong Kong builds both waste recycling and energy infrastructures to manage waste, and conserve valuable resources. SwedCham would not support any landfill extensions as a longer term solution.

We are of the view that Hong Kong should look much harder at capturing methane gas at the landfills for use towards energy generation. Even if the Action Blueprint targets are met, it would appear that the future volumes of landfill waste still represent a substantial energy asset in our otherwise resource deprived territory! There are certainly Swedish corporations that would be interested to share the opportunities that the capture of landfill gas provides, in order that the Hong Kong government might be able to better articulate how opportunities like landfill gas will be used to reduce the need for resources and to cut the costs of energy production.

4. IWMF

We know from the Swedish experience that incineration can play an important role as part of a comprehensive waste management plan, and that modern incineration technologies only have a minor emissions impact on their surroundings. We are therefore generally supportive of the government’s efforts in this area.

As with the Landfill Extensions, we see IWMF as a major energy resource. By way of comparison, in the period 1985-2006, incineration capacity in Sweden trebled with a resulting five-fold increase in energy generation. Energy production from incineration



exceeded 12 million MWh in 2007. While incineration increased multi-fold, emissions at the same time on average fell by almost 99%.

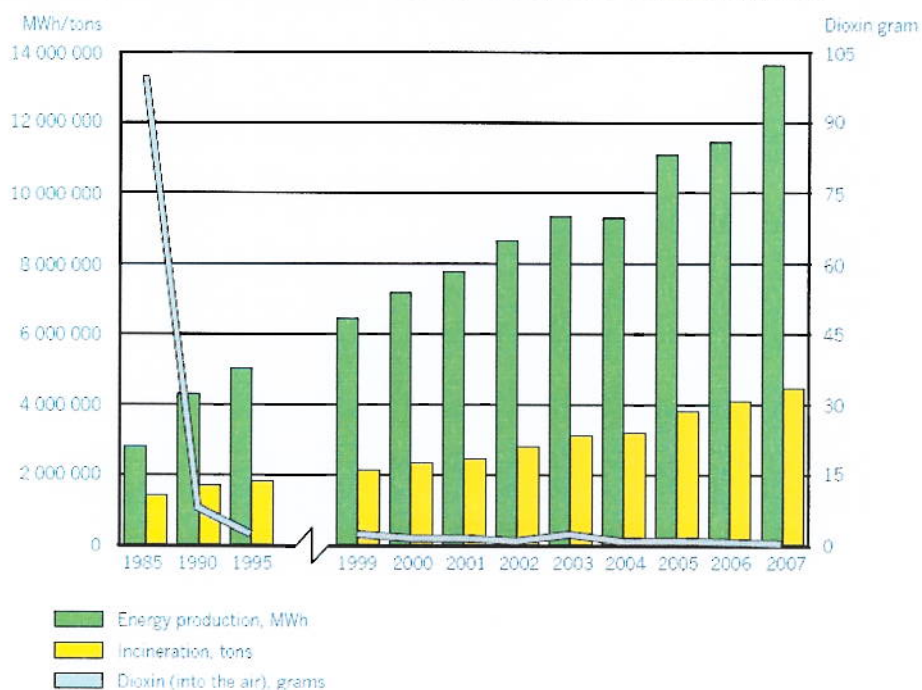
REDUCTION IN EMISSIONS

	1985	2007	Change
Dust (ton/year)	420	24	-94.3%
HCl (ton/year)	8,400	60	-99.3%
SO _x (ton/year)	3,400	196	-94.2%
NO _x (ton/year)	3,400	2,101	-38.2%
Hg (kg/year)	3,300	36	-98.9%
Cd (kg/year)	400	6	-98.5%
Pb (kg/year)	25,000	51	-99.8%
Energy production (MWh)	2,800,000	12,151,270	334.0%
Processed waste (ton)	1,432,100	4,470,690	212.2%

Source: Avfall Sverige AB

The table above demonstrates the decrease in emissions over a twenty-two year period. However, it is important to note that the increase of energy output, did not require an equivalent increase of the waste used as fuel. Sweden took advantage of newer technologies, with reduced emissions, and increased ability to generate more energy from the same amount of waste. This is demonstrated in the table below.

INCINERATION, ENERGY PRODUCTION AND DIOXIN INTO THE AIR FROM WASTE INCINERATION 1985-2006



Source: Avfall Sverige AB

We understand that Hong Kong requires the IWMF to be based on “proven technology”. Based on our understanding of current policy, this “proven technology” requirement means that the technology actually used in the IWMF has to have a 10-year track record.



While such a requirement in general probably serves a legitimate interest (that a major infrastructure project can be operated safely, efficiently, and reliably), we are concerned that within the rapidly developing space of environmental technology, a 10-year track record requirement may end up putting Hong Kong at a disadvantage compared to other locations that are able to use newer, more advanced, technologies.

SwedCham believes that the Swedish Government and Swedish waste management operators and technology providers have much to share with those responsible for waste management in Hong Kong. Sweden's journey to almost zero landfill, a reduction in greenhouse gas emissions and a decrease in the need to purchase fuel to generate electricity has taken nearly 30 years, but we would be delighted to share the lessons we have learned with the legislators, bureaucrats and people of Hong Kong.

Please do not hesitate to let us know how we can be of more assistance and if you have any questions or concerns.

Yours faithfully,

Swedish Chamber of Commerce in Hong Kong

On behalf of the board



Ulf Ohrling, Chairman



Kristian Odebjer, Vice Chairman & Head
Environmental Committee