

Energy Efficiency (Labelling of Products) Bill

The Administration's Response to Questions 1 to 3 raised at the Bills Committee meeting on 20 September 2007

Market size of compact fluorescent lamps and incandescent lamps

Current

According to the market survey commissioned by the Electrical and Mechanical Services Department (EMSD), the sale of compact fluorescent lamps (CFLs) was around 3.5 million units in 2006. As for incandescent lamps, according to the data from the Census and Statistics Department, the net import quantity for incandescent lamps in 2006 was about 34.5 million units, which was equivalent to around 16 million installations. A rough estimate is that about half of which (i.e. about 8 million) can be directly replaced by CFLs.

Forecast

2. After the commencement of the mandatory labelling scheme and with our plan to step up publicity, we expect more and more people will switch to use CFLs. According to the market survey commissioned by the EMSD, it is estimated that about 2.6 million installations of incandescent lamps would be replaced by CFLs.

Chemical Waste Treatment Centre (CWTC)

Capacity

3. The treatment capacity of the mercury waste treatment facility of the Chemical Waste Treatment Centre (CWTC) varies depending upon the quantity of compact fluorescent lamps (CFLs), fluorescent tubes and other types of waste containing mercury received. Based on the quantity of CFLs and fluorescent tubes received in the previous years, its capacity could reach up to 850,000 lamps per year. The capacity of the treatment facility could be increased with additional distillers and crushers for

lamps to cope with the increase in used CFLs for treatment after the implementation of the mandatory labelling scheme.

Current usage

4. In 2006, more than 435,000 units (or 58.11 tonnes in weight) of CFLs and fluorescent tubes were collected and treated at the CWTC, of which 42.63 tonnes and 15.48 tonnes were from government departments and other organizations respectively. As the vast majority of the lamps treated at the CWTC are fluorescent tubes, the percentage of used CFLs treated at the facility is very low, drawing reference from the annual sales of 3.5 million units of CFLs in 2006.

5. The Environmental Protection Department (EPD) has contacted 23 public and private organizations to arrange setting up of voluntary collection schemes, including 6 public organizations, 3 tertiary institutions and 14 private organizations. 8 of the public and private organizations invited have then sent CFLs and fluorescent tubes to the CWTC for treatment. There are another 11 private organizations which have sent CFLs and fluorescent tubes to the CWTC for treatment. A list of Government departments and public and private organizations that have sent CFLs or fluorescent tubes to the CWTC for treatment in 2006 is at Annex 1.

Disposal fee

6. Waste producers using the CWTC for treatment and disposal of CFLs and fluorescent tubes are subject to a charge of HK\$1,027 per tonne as specified under the Waste Disposal (Charges for Disposal of Chemical Waste) Regulation (Cap. 354J). The Government is exempted from payment of the charge under s36(7) of the Waste Disposal Ordinance (Cap. 354). The disposal fee collected in 2006 for treatment of CFLs and fluorescent tubes is \$15,897.

7. The average lamp life of CFLs in residential sector and commercial sector are 4 years and 2 years respectively. Assuming that all used CFLs are to be sent to the CWTC for treatment and disposal, a maximum of 6.1 million units (current market size of 3.5 million units

and the expected increase of 2.6 million units (see paragraphs 1 and 2 above)) will be sent to the CWTC for treatment and disposal in one year and the maximum total charge involved in that year would be around \$600,000. While it is not an overly large amount, we consider that the payment is consistent with the polluter-pays principle. In this connection, the EPD has also started discussion with the trade for the setting up of voluntary collection arrangement by them. To facilitate property management companies in setting up voluntary collection scheme, the EPD will also provide the necessary technical assistance and promotion materials.

Disposal of used CFLs at landfills

8. The design of leachate collection and treatment system in the landfills has taken into account the amount of chemical wastes to be disposed of at the landfills. Considering that the quantity of total waste received at the three landfills is around 5.5 million tonnes in 2006 and in the scenario where all the CFLs were disposed of at landfills, assumed to be the aforementioned maximum of 6.1 million units in one year, the total maximum quantity of mercury from CFLs is about 24.4 kilogrammes or 0.024 tonnes in that year. The quantity of CFLs being disposed of and the ratio of mercury is very small when compared to the large amount of solid waste in the landfills (1/225 million). On a daily basis, this is equivalent to about 0.067 kilogrammes of mercury disposed of at the 3 landfills each day, hence its impact to the leachate produced would be very small.

Publicity

9. The EPD will step up publicity to remind the public of the need to properly dispose of used CFLs from the environmental and safety perspectives. Moreover, the department will consider uploading onto its website the names of the organization that have set up a voluntary collection scheme for used CFLs/fluorescent tubes when more organizations have joined the voluntary scheme.

Environment Bureau
October 2007

Organisations that have sent CFLs and fluorescent tubes to the CWTC for treatment in 2006

Government Departments

Departments	Quantity(nos)
Housing Department	140,435
Electrial and Mechanical Services Department	126,955
Highways Department	58,621
Other Departments	10,885

Other Organisations/private Sectors

1. Airport Authority Hong Kong (Light vehicle work-shop)
2. Analogue Technical Agencies Ltd
3. C & K Recycle Co Ltd
4. C.F.L. Enterprise Ltd
5. Cathy Pacific Airways Ltd
6. Cathy Pacific Catering Services (HK) Ltd
7. City University of Hong Kong
8. Compass Technology Co Ltd
9. Festival Walk Holding Ltd.
10. General Account for Marpol Waste
11. Hong Kong Air Cargo Terminal Ltd
12. Hong Kong International Theme Parks Ltd.
13. Hong Kong Land (property management) Ltd
14. The Kowloon Motor Bus Company (1933) Ltd
15. Possehl Best Electronic Hong Kong Ltd
16. Swire Coca-cola HK Ltd
17. Ushio Hong Kong Ltd
18. Wai Wah Engineering Ltd
19. Westwood Ltd.