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**Panel on Environmental Affairs**

**Special meeting on 5 January 2007**

**Background brief on sewage service charging scheme**

**Introduction**

In line with the polluter-pays principle, the Administration introduced a sewage service charging scheme on 1 April 1995 so that those who are connected to the public sewerage and who use sewage services should pay for the services they use. At present, about half of the recurrent cost for the provision of sewage services is recovered under the Scheme while capital investment in sewerage infrastructure is funded from general public revenue.

**Sewage service charging scheme**

2. A water consumer whose premises are connected to a public sewer has to pay a sewage charge (SC) on the basis of the volume of water supplied to his premises (other than water supplied specifically for flushing purposes). SC applies to all dischargers at the uniform rate of \$1.2 per cubic metre. As certain trades and industries discharge effluent at a strength higher than that of domestic sewage, a trade effluent surcharge (TES) is levied on top of SC to reflect the additional costs incurred in maintaining sewers and providing treatment.

Trade Effluent Surcharge Scheme

3. At present, TES is levied on 30 trades and industries which produce strong effluent. A list of the specified trades and industries is in **Appendix I**. The charging rate for TES is based on the volume and strength of effluent discharged. The strength of effluent is measured by the Chemical Oxygen Demand (COD) readings of wastewater. The higher the COD value, the higher the treatment cost and hence the higher the TES rate. To reduce the administrative cost of measuring the discharge at each premises, the 30 prescribed trades and industries liable to pay TES are each assigned a set of generic COD values to represent the average strength of

wastewater discharged by their particular types of operation. These generic values were developed from samples taken in 1991 to 1992. The volume of effluent discharged is based on the volume of water supplied to a trader. As some of the water supplied to certain trades and industries will be consumed, used in products or lost via evaporation instead of being discharged to sewers, a system of discharge factors is employed to allow for such losses. Eight trades, including the restaurant trade, are charged for only 80% of their water consumption.

4. While generic values are assigned to each trade and industry, any individual operator who considers that his business is discharging effluent which is less polluting than the generic values assigned can appeal for a lower TES rate. In lodging an appeal, the operator has to arrange for the collection and testing of trade effluent by an approved laboratory at his own cost and submit the results to the Drainage Services Department (DSD). Where DSD is satisfied that the COD value of the trade effluent is less than the assigned generic value, the TES rate will be reduced accordingly. The reduced rate is valid for one year. Details of the COD reassessment procedures are in **Appendix II**.

#### *Concerns of the trades*

5. According to an assessment carried out in 1996, the existing SC and TES account for less than 0.3% of the operating costs of most manufacturing establishments. However, in the case of heavy users of water, SC and TES account for 0.6% to 1.8% of their operating costs respectively. Some trades, in particular the restaurant trade, state that the COD value of the effluent that they discharge is lower than the generic COD value assigned to them. Certain trades have pointed out that the procedures for COD reassessment are complicated and costly, particularly when they have to appeal on an annual basis since the reassessed COD values would only stand for a year. They claim that the cost of appeal is greater than that of TES they have to pay. This has created a disincentive to appeal. There are also questions on the propriety of using a generic COD value to represent the average strength of wastewater discharged by a particular type of operation which may vary according to the scale of operation.

#### *The consultancy review*

6. In October 1996, the Government commissioned a consultancy to review the structure and operation of the TES scheme. The TES Final Report released in April 1997 generally endorsed the basic features of the TES scheme, including the use of COD as the pollution parameter, application of the existing generic COD values to all trades, use of volume and quality of effluent as the technical basis for charging, and determination of the volume of effluent discharged on the basis of fresh water supplied. The review also recommended measures to address traders' concerns about the cost of COD reassessment by simplifying and streamlining the methods and procedures for reassessment. Legislative amendments to the Sewage Services Ordinance (Cap. 463), the TES Regulation and the Technical Memorandum issued under the Ordinance were

required for implementing the revised COD reassessment proposals. These amendments included –

- (a) To revise procedures for reassessment of COD value, so that the simpler and less costly "grab sampling method" would be applied to replace the "flow-proportional composite sampling";
- (b) To entrust DSD with the responsibility of carrying out the sample-taking and testing work instead of private laboratories to ensure the statistical reliability of the samples, with full costs being recovered from applicants;
- (c) To extend the validity of COD values determined upon reassessment from one year to three years;
- (d) To allow DSD to charge consumers with "mixed TES accounts" on the basis of the estimated amount of water consumed by each of the TES payable trade;
- (e) To require a consumer to notify DSD if he changes his business to a TES chargeable account;
- (f) To allow chain group business to apply for "group assessment"; and
- (g) To enable DSD to initiate refund of SC or TES to consumers.

According to the Administration, the proposed procedures would significantly reduce the cost of reassessing COD values and minimize the disturbance caused to the traders' business during the collection of samples.

7. The Panel on Environmental Affairs was briefed on the proposals on 20 December 1999. Members shared the trades' concerns about the unfairness of the Scheme which had posed immense difficulties to the trades, in particular the restaurant trade. They urged the Administration to provide necessary assistance to the affected trades in complying with the Scheme.

8. The trades and industries were consulted on the proposals in September 2000. According to the Administration, the trades were generally in support of the proposed "group reassessment" and extension of the validity period from one to three years. Some however suggested that the validity period of the reassessment results should be longer than three years. While traders generally had no strong views on the "random grab sampling" method, some major chain restaurant groups objected to the new sampling method as they would have to bear extra cost in sample-collection which was currently performed by their own technical staff without additional operation cost. The trades also generally objected to allowing DSD to perform the effluent sampling and testing work lest DSD would be biased in the effluent sampling process. Besides,

the cost for effluent sampling and testing may not be reasonable without competition. The Administration agreed to consider ways to revise the proposals in the light of the views collected during the public consultation exercise.

9. Following the incident where a caterer set himself on fire to express his strong dissatisfaction over the imposition of TES scheme, the Panel held a meeting on 3 April 2001 to discuss the subject. Members called for a review of the generic COD values and requested for further improvements to the appeal mechanism to make it fairer and more equitable. They opined that the Administration should adopt a partnering approach with the trades in dealing with the pollution problem. In light of the comments received at Panel meetings and the concerns raised by the trades, the Administration would be putting forward proposals on the scheme.

*Reduction of TES as part of economic relief package*

10. As part of the overall special economic relief package in the 2002-03 Budget, the Financial Secretary introduced the Revenue (Variation and Reduction of Fees and Charges) Order 2002 (the Order) in March 2002 to provide for concessions in certain government fees and charges. These included, among others, waiver of water and sewage charges for non-domestic consumers for one year, subject to maximum amounts set at \$3,200 and \$800 respectively and the reduction of TES, payable by 30 designated trades and industries, by a flat rate of 30% for one year. After being scrutinized by a subcommittee set up for the purpose, the Order came into operation on 1 April 2002 to tie in with the 2002-03 financial year. Consequent to the Order, 83% of the non-domestic accounts (about 180 000) were exempted from water or SC for one year while there was an average reduction of \$4,000 per account for the 15 000 TES accounts.

11. As one of the relief and economic revival measures to help the community to tide over the economic difficulties following the outbreak of the Severe Acute Respiratory Syndrome, the Waterworks (Reduction of Water Charge) Regulation 2003 and the Sewage Services (Reduction of Sewage Charge and Trade Effluent Surcharge) Regulation 2003 were introduced in May 2003 to reduce the water charge, SC and TES for a four-month period from August to November 2003.

12. At the Council meeting on 8 December 2004, Mr Tommy CHEUNG Yu-yan moved the following motion, which was amended by Mr Martin LEE Chu-ming and carried at the Council meeting –

“That this Council urges the Environment, Transport and Works Bureau to expeditiously conduct a comprehensive review of the basis for charging the trade effluent surcharge and its appeal mechanism with a view to ensuring that the charging scheme is fair and reasonable, and that the polluter pays principle is put into effect; furthermore, the Government should also assist the affected persons and businesses in adopting various means including new and high technologies to further conserve water and reduce the discharge of effluent.”

13. Pursuant to the motion, the Secretary for the Environment, Transport and Works has undertaken to review the charging mechanism of TES and the appeal system with reference to the operational data collected in the past years, with a view to making the charging mechanism more equitable and simplifying the appeal system. The Administration will be analyzing the data collected and opinions received from different trades since the introduction of TES, including the number of appeal cases, the appeal success rate, and the factors applicable to successful appeals etc so as to review the appeal system. In light of the outcome of the analysis, the Administration will consider how to proceed with the review of the TES charging mechanism in accordance with the polluter-pays principle.

### **Latest development**

14. According to the paper provided by the Administration for the Panel meeting on 5 July 2005, the SC and TES unit rates, currently aiming to recover 50% of the SC-related operational costs and 100% of the TES-related costs, have never been adjusted since the implementation of the scheme in 1996. In 2003/04, the Government recovered from SC payers \$405 million, equivalent to a recurrent cost recovery rate of 44%. The revenue from TES amounted to \$173 million, representing a recovery rate of 69%. As it is the Government's objective to fully recover the operating costs of providing sewage services upon the commissioning of the Harbour Area Treatment Scheme Stage 2A in 20013/14, it is expected that the average household monthly SC bill would have to rise from \$11 now to about \$26 over the next eight years.

15. As regards TES, the Administration indicates that the existing policy target of recovering 100% of the costs of treating effluents of polluting trades is to be maintained. However, it intends to conduct a review of the operation of scheme to address the concerns of the trades, including whether the generic COD values are still appropriate now, and whether the procedure of reassessment can be simplified and the validity period lengthened. As the review may affect the quantum of charges to be recovered, it is not possible at this stage to project future increases in the rates of TES in the same way as SC. Nevertheless, since the recovery rate for TES is higher, the proportionate increase needed to achieve 100% recovery will not be as large as for SC.

### List of the 30 TES-prescribed trades

1. yarn sizing
2. washing new garments, excluding laundries
3. bleaching and dyeing of garments
4. bleaching and dyeing of knitted fabric
5. bleaching and dyeing of woven fabric
6. textile stencilling and printing
7. knit outerwear
8. wearing apparel other than knit outerwear
9. spinning cotton
10. laundries
11. soap and cleaning preparations, perfumes, cosmetics
12. medicines
13. paints, varnishes and lacquers
14. basic industrial chemicals
15. tanneries and leather finishing
16. pulp, paper and paperboard
17. soft drinks and carbonated waters industries
18. breweries and manufacture of malt liquor
19. distilling, rectifying and blending spirits
20. cocoa, chocolate and sugar confectionery
21. vermicelli, noodles, and similar farinaceous products
22. bakery products
23. grain mill products
24. vegetable oil, peanut oil, peppermint oil and aniseed oil
25. canning, preserving and processing of fish and crustaceans
26. canning and preserving fruit and vegetables
27. dairy products
28. slaughtering, preparing and preserving meat
29. soy and other sauces
30. restaurants

### Chemical Oxygen Demand Reassessment Procedures

The trader prepares and sends to Drainage Services Department (DSD) a written proposal describing the drainage layout, sampling arrangement and other details as required in the Technical Memorandum (TM) on the Procedures and Methods for Sampling and Analysis of Trade Effluents for the Trade Effluent Surcharge Scheme. The trader can appoint an approved laboratory to act on his/her behalf.

2. DSD will conduct site inspection to confirm the sampling arrangement. Sampling date will then be fixed and agreed amongst the trader, the sampler (who is usually an approved laboratory) and DSD.

3. The sampling which is conducted by the trader or his/her agent, will comprise 3 to 6 days of whole-day sample collection (depending on water consumption rates). The flow proportion composite sampling method will be adopted. Detailed procedures for sampling, testing and reporting are stipulated in the TM. When sampling is completed, the approved laboratory will carry out COD tests on the samples and submit a formal test report to DSD. DSD may conduct surprise 're-grab' to verify whether the COD values submitted are sufficiently representative.

4. If DSD considers that the COD reassessment results are adequately representative, the COD values will be approved. If the approved COD values are lower than the generic values, a new TES rate will be derived from the COD values and applied to the relevant TES account(s) for one year.

5. In accordance with the TM, all testing shall be performed by a laboratory accredited within the Hong Kong Laboratory Accreditation Scheme. The average cost for the reassessment payable by the trades to the laboratories is about \$25,000.