

**Eighth Meeting of
the Business Facilitation Advisory Committee**

***Agenda Item 4 : Trade Effluent Surcharge Scheme –
Reassessment of generic chemical
oxygen demand values***

Purpose

This paper sets out the restaurant trade's concerns about the reassessment mechanism of Trade Effluent Surcharge (TES) and the Administration's response on the issue.

Background

2. The TES is a charge introduced in 1995 by the Administration to recover from 30 trades the additional cost incurred in treating effluents stronger than the domestic sewage. The TES is calculated based on the average strength of effluent, expressed in terms of generic chemical oxygen demand¹ (COD) values, discharged by the specified trades having regard to their particular operations. Individual operators of the restaurant trade are liable to pay a TES based on the generic COD values specified in the Sewage Services (Trade Effluent Surcharge) Regulation according to the volume of water consumption.

3. The Administration has recently proposed to review the generic COD and TES rates under the TES Scheme after carrying out a trade-specific effluent survey. When the proposal was discussed at the meeting of the Legislative Council Panel on Environmental Affairs on 18 March 2008, the restaurant trade expressed their concerns about the reassessment mechanism of the TES. Noting that the restaurant trade had been protesting against the TES rates since the introduction of the TES Scheme, Hon Emily Lau sought the trade's views on whether the reassessment mechanism on effluent quality was fair and transparent. As the Deputy Chairman of the Business Facilitation Advisory Committee (BFAC), she enquired if the restaurant trade

¹ COD measures the amount of oxygen required to decompose organic matter chemically and is hence a measure of polluting load. The higher the level in wastewater, the greater the cost of treating it.

would like to raise its concern with the BFAC in an attempt to facilitate the conduct of business, and asked if there was adequate consultation between the Administration and the trade. The restaurant trade considers it helpful to bring their concerns to the attention of the BFAC as suggested by Hon Lau.

Restaurant trade's concerns

4. In general, the restaurant trade welcomes the proposed reduction of TES rates but considers that the rates should be further adjusted downwards. A clear and transparent mechanism in deriving the generic COD value should also be put in place. They consider that the COD value they discharge is lower than the generic COD value assigned to them. They find the procedures for COD reassessment complicated, non-transparent and costly. They claim that the cost of reassessment is greater than that of the TES they have to pay, creating a disincentive to carry out the reassessment. They consider that the Administration should award the cost of reassessment to the successful appellants.

Administration's response

5. The Administration has provided a note outlining the relevant background information and its response on the issue at **Annex** to facilitate discussion. Representatives of the Environmental Protection Department and Drainage Services Department will attend the meeting to brief members on the issue.

Way Forward

6. Members are invited to comment on the issue and suggest the way forward.

Trade Effluent Surcharge Scheme
Reassessment of generic chemical oxygen demand values

Background

As part of the Sewage Services Charging Scheme, a Trade Effluent Surcharge (TES) scheme was introduced in Hong Kong in 1995 based on the premises of the "polluter-pays" principle. The TES scheme has been implemented through the operation of the Sewage Services Ordinance (Cap 463) ("Ordinance") and the Sewage Services (Trade Effluent Surcharge) Regulation (Cap 463 Sub Leg B) ("Regulation").

Trade Effluent Surcharge Scheme

2. The TES is a surcharge aimed at recovering the additional cost of treating effluents of strength stronger than domestic sewage. It is applied to trades specified in the Regulation on top of the sewage charge levied under the Sewage Services (Sewage Charge) Regulation (Cap 463 Sub Leg A). In line with the spirit of the "polluter-pays" principle, the policy goal for the TES scheme has been to achieve full recovery of the attributable operating costs.

3. The TES is calculated based on the average strength of effluent, expressed in terms of generic chemical oxygen demand¹ (COD) values, discharged by the specified trades having regard to their particular operations. Each trade is assumed to be discharging effluent at a strength set out in Schedule 2 to the Regulation. A list of the specified trades and their current respective TES rates and generic COD values is at Attachment A.

4. The presently prescribed generic COD values were determined in 1995 when the Sewage Services Charging Scheme was introduced. The appropriate portion of the operating cost allotted to the trades under the TES scheme is determined according to the total pollution load of the TES trades in excess of the domestic sewage pollution level. The set of COD values for

¹ COD measures the amount of oxygen required to decompose organic matter chemically and is hence a measure of polluting load. The higher the level in wastewater, the greater the cost of treating it.

the trades was based on information on the nature of effluents discharged and actual measured values. In view of the lapse of time since the introduction of the TES scheme, and noting in particular the efforts made by the trades to control pollution, we carried out a trade-specific survey of effluent strength in order to collect the latest information with a view to updating the set of COD values.

5. We have proposed revisions to the applicable generic COD values and TES rates through introducing the Sewage Services (Trade Effluent Surcharge) (Amendment) Regulation 2008, which is being scrutinised by the Legislative Council. The proposed revised COD values and TES rates are at Attachment B for information. Under our proposal, 13 trades will see their TES rates reduced as a result of the revision of the generic COD values, representing 92% of all TES accounts. The restaurant trade, which accounts for three-quarters of all TES accounts, in particular would enjoy a 19% reduction in the TES rates they have to pay.

Reassessment of applicable COD values

6. While generic COD values are assigned to each TES trade, any individual operator who considers that his business is discharging effluent which is less polluting than the generic values assigned, may apply for a review of the applicable TES rate at his own cost. This is consistent with the "polluter-pays" principle.

7. The detailed procedure for the reassessment is set out in a "Technical Memorandum on procedures and methods for sampling and analysis of trade effluents" ("TM"), issued pursuant to section 13 of the Ordinance. The TM can be viewed through the website of the Drainage Services Department ("DSD"). Customer enquiry services are also available to facilitate operators' applications for reassessment.

8. Upon receipt of a request for a COD reassessment, the operator will be given a checklist, at Attachment C, setting out key steps and information required for taking the reassessment process forward. Such key steps and information include the submission of drainage layout plans, the appointment of a laboratory accredited under the Hong Kong Laboratory Accreditation scheme ("HOKLAS"), and preparation of proposals regarding sampling method, tools, devices and procedure. A list of HOKLAS accredited laboratories will be made available upon request. Customer enquiry services are also available in writing, by phone and in person.

9. Upon receipt of all necessary information, DSD will conduct a site inspection to confirm the sampling arrangements as well as to verify the information submitted by the applicant. DSD will also agree on the sampling dates with the operator and the laboratory. The above-mentioned steps will usually take about three weeks to complete.

10. Depending on an estimated daily COD load expressed in terms of kilogrammes per day (kg / day), two to six sampling days will be assigned throughout a period no more than eight weeks. To ensure the fairness and integrity of the reassessment process, the two-month sampling period is necessary to ensure samples collected will be representative of the effluent of the applicant's operation. The specified number of sampling days may be varied subsequently depending on the actual daily COD load of effluent samples collected on previous sampling day(s). Samples would be taken at 15-minute intervals throughout the working hours of the establishment on each sampling day. After completion of the sampling course, all individual samples collected on the same day would be combined on a proportional basis according to the respective hourly water consumption to produce a composite sample. The composite sample prepared will be analysed by the appointed HOKLAS laboratory and a formal test report will be submitted to DSD subsequently.

11. During the course of sampling, DSD may visit the establishment at any time to ensure that the agreed sampling protocol is being complied with and the trade activities and practices are strictly adhered to, including all pollution control measures adopted by the applicant as part of his operating routine which may affect the effluent quality. Subsequent to the receipt of a final test report and before a determination is made, DSD may conduct surprise inspections of the establishment or on-site sampling to verify the representativeness of the submitted COD values, as well as the pollution control measures adopted by the applicant are effective and being applied under normal routine operating conditions all the time.

12. Where the Drainage Authority ("DA") is satisfied that the COD reassessment results are representative, the reassessed COD values will be approved for the purpose of calculating applicable the TES rate for that particular establishment. If the approved COD values are lower than the generic values, a new TES rate will be derived according to the charging matrices in Schedule 4 to the Regulation. The reassessed COD value and revised TES rate are valid for two years.

13. An applicant is not charged a fee by the Government for applying and processing an application for reassessment. The only cost would be incurred by an applicant directly related to the application is engaging a HOKLAS laboratory to collect and analyse effluent samples. There are some seven laboratories currently running the service and different laboratories charge at different levels according to the market conditions. We understand that such cost ranges from \$3,000 to \$3,500 per day. The estimated cost for conducting a reassessment ranges from \$6,000 to \$21,000 depending on number of sampling days. An applicant may withdraw the application at any stage during the process.

Review of discharge factor

14. Recognising some of the water consumed by certain trades during the production process will go into the products or be evaporated instead of being discharged to the sewers, the Ordinance provides for a discharge factor ("DF") by which some trades are entitled to a discount on the TES which would otherwise be charged. According to the Regulation, the restaurant trade is one of the eight trades for which an 80% DF is prescribed (i.e. representing a 20% discount). As such, the TES applicable to, *inter alia*, the restaurant trade is 80% of the volume of water supplied multiplied by the applicable TES rate.

15. Under section 5 of the Regulation, an operator of a relevant trade may request the DA to review the DF if its volume of discharge is not more than 85% of the volume of water on which the trade effluent surcharge is based. Therefore, if an operator of a relevant trade considers its discharge volume is less than 68% (=80% x 85%) of water volume consumed, the operator can apply for such a review.

16. Details of the DF review are not specified in the Regulation and the method for it is usually case-specific. Both direct and indirect methodologies are acceptable. The former requires installation of flow-measuring device(s) at the discharge point(s) of the trader and directly determines the volume discharged by the trader over a reasonable period. The latter entails an indirect estimation of the volume of water consumed by the trader that is not discharged (i.e. water content in trade products or water evaporation).

Measures to streamline the reassessment process

17. In order to encourage operators with good pollution control practices to seek reassessment of applicable TES rates, we introduced the *Sewage Services (Trade Effluent Surcharge) (Amendment) Regulation 2007* in April 2007, which was approved by the Legislative Council, to extend the period during which a re-assessed TES rate is effective from one year to two years. We also amended the TM to reduce the number of specified sampling days for establishments whose COD load is less than 50 kg / day from three to two. Both these measures should help reduce the reassessment costs and encourage more operators to implement good pollution control practices and apply for reassessment.

18. EPD and DSD will actively engage stakeholders and trades concerned in order to develop methods to streamline the process and make the system more user-friendly, including the following possible measures -

- (a) making available best practices for applicants' reference;
- (b) reducing the number of documents required for an application; and
- (c) publishing detailed guidance notes for applicants' reference.

Facilitating the trades to adopt pollution control measures

19. We believe it is the collective responsibility of every individual of the community to reduce the pollution of our living environment. Hence we have introduced the TES scheme on the basis of the “polluter-pays” principle. We will continue to encourage and facilitate the TES trades to adopt good pollution control measures by arranging workshops or other activities to promote the adoption of pollution control measures. We will also encourage trade associations to organise activities promoting pollution control with funding support from, for example, the Environment and Conservation Fund.

Attachment A

Rates of trade effluent surcharge and generic chemical oxygen demand values currently prescribed under the Sewage Services (Trade Effluent Surcharge) Regulation

	Trade, Business or Manufacture	TES rates		Generic COD values	
		HK\$ / cu m		grammes / cu m	
		Within a water control zone ²	Outside a water control zone	COD _{total}	COD _{settled}
1	Yarn sizing	3.78	10.67	5,160	4,436
2	Washing new garments, excluding laundries	0.82	0.82	660	330
3	Bleaching and dyeing of garments	0.64	0.64	730	635
4	Bleaching & dyeing of knitted fabric	1.01	1.01	980	837
5	Bleaching & dyeing of woven fabric	1.73	1.73	1,290	1,090
6	Textile stencilling and printing	1.32	1.32	890	404
7	Knit outerwear	1.01	1.01	1,051	935
8	Wearing apparel other than knit outerwear	1.80	1.80	990	476
9	Spinning cotton	0.34	0.34	570	541
10	Laundries	0.60	0.60	725	425
11	Soap & cleaning preparations, perfumes, cosmetics	3.78	16.05	7,805	7,453
12	Medicines	3.78	4.98	2,910	2,482
13	Paints, varnishes and lacquers	1.16	1.16	1,000	619
14	Basic industrial chemicals	3.78	4.02	2,500	2,262
15	Tanneries & leather finishing	2.56	2.56	1,755	1,436
16	Pulp, paper and paperboard	4.09	4.09	1,870	947
17	Soft drinks & carbonated water industries	1.49	1.49	1,200	914
18	Breweries & manufacture of malt liquors	3.29	3.29	1,780	1,304
19	Distilling, rectifying & blending spirits	0.11	0.11	580	485
20	Cocoa, chocolate and sugar confectionery	3.78	4.26	2,500	2,214
21	Vermicelli, noodles & similar farinaceous products	3.29	5.16	2,500	1,548
22	Bakery products	3.29	5.16	2,500	1,548
23	Grain mill products	5.98	9.54	2,860	680
24	Vegetable oil, peanut oil, peppermint oil and aniseed oil	3.78	19.55	7,600	5,315
25	Canning & preserving and processing of fish & crustaceans	1.73	1.73	1,495	1,257
26	Canning & preserving fruit & vegetables	3.63	3.63	1,990	1,628
27	Dairy products	3.78	9.15	3,960	3,084
28	Slaughtering, preparing & preserving meat	3.78	9.01	3,870	2,823
29	Soy & other sauces	3.78	8.38	3,900	3,243
30	Restaurants	3.78	9.12	3,600	2,315

² For discharges in water control zones rates were calculated based on an assumed maximum COD value for effluents of 2,000 g / cu m, which would be the maximum strength of effluent most operators may be licensed to discharge into the sewerage under the licensing scheme of the Water Pollution Control Ordinance (Cap 358). At the time of promulgation of the scheme there were discharges outside water control zones and therefore not subject to the WPCO, hence the need for two sets of TES rates.

Attachment B

Proposed rates of trade effluent surcharge and generic chemical oxygen demand values

	Trade, Business or Manufacture	TES rates ¹ HK\$ / cu m		Generic COD values grammes / cu m	
		After 1st increment	After 2nd increment	COD _{total}	COD _{settled}
1	Yarn sizing	4.13	4.51	2,000	2,000
2	Washing new garments, excluding laundries	0.41	0.41	566	507
3	Bleaching and dyeing of garments	N/A	N/A	N/A	N/A
4	Bleaching & dyeing of knitted fabric	0.41	0.41	665	607
5	Bleaching & dyeing of woven fabric	1.20	1.20	1,053	981
6	Textile stencilling and printing	N/A	N/A	N/A	N/A
7	Knit outerwear	0.41	0.41	566	507
8	Wearing apparel other than knit outerwear	0.41	0.41	566	507
9	Spinning cotton	0.37	0.41	570	541
10	Laundries	N/A	N/A	N/A	N/A
11	Soap & cleaning preparations, perfumes, cosmetics	4.13	4.51	2,000	2,000
12	Medicines	4.13	4.51	2,000	2,000
13	Paints, varnishes and lacquers	1.27	1.38	1,000	619
14	Basic industrial chemicals	0.76	0.76	677	656
15	Tanneries & leather finishing	0.76	0.76	807	781
16	Pulp, paper and paperboard	4.47	4.88	1,870	947
17	Soft drinks & carbonated water industries	0.47	0.47	826	628
18	Breweries & manufacture of malt liquors	4.13	4.51	2,000	2,000
19	Distilling, rectifying & blending spirits	4.13	4.51	2,000	2,000
20	Cocoa, chocolate and sugar confectionery	4.13	4.51	2,000	2,000
21	Vermicelli, noodles & similar farinaceous products	4.13	4.51	2,000	2,000
22	Bakery products	3.59	3.92	2,000	1,506
23	Grain mill products	2.77	2.77	1,521	1,290
24	Vegetable oil, peanut oil, peppermint oil and aniseed oil	2.48	2.48	1,320	1,310
25	Canning & preserving and processing of fish & crustaceans	1.78	1.78	1,141	873
26	Canning & preserving fruit & vegetables	3.41	3.41	2,000	1,822
27	Dairy products	4.13	4.51	2,000	2,000
28	Slaughtering, preparing & preserving meat	1.74	1.74	1,129	769
29	Soy & other sauces	4.13	4.51	2,000	2,000
30	Restaurants	3.05	3.05	1,630	1,320

¹ In line with the existing approach within water control zones, rates are calculated based on an assumed maximum COD value for effluents of 2,000 g / cu m, which would be the maximum strength of effluent most operators may be licensed to discharge into the sewerage under the licensing scheme of the Water Pollution Control Ordinance (Cap 358). Generic COD values are hence also proposed to be capped at this level.

**Relevant information to be submitted with the application of variation of
Trade Effluent Surcharges (TES) rate**

1. Correct and active water account number(s) included in the application
2. Name, address, contact person(s) and contact telephone number(s) of the establishment in the application
3. Letter of authorization by registered consumer in appointing a laboratory accredited under the Hong Kong Laboratory Accreditation scheme (“HOKLAS”)
4. Letter of undertaking by the appointed laboratory accredited under HOKLAS in citing all qualified personnel to undertake sampling at the concerned establishment
5. Copy of either the business registration certificate or HKID card bearing the name of the registered consumer
6. Copy of one water bill issued within the last 4 months
7. Drainage layout (schematic) of discharges leading to sampling location(s)
8. Cross-section layout (schematic) of discharges from multi-storey building leading to sampling location(s)
9. Proposed sampling method, sampling tools, sampling device and their operating procedure (please provide photographs for illustration)
10. Proposed number of sampling days (please provide calculation in accordance to the Technical Memorandum associated with the Sewage Services Regulation)
11. Proposed apportionment in combining effluent samples (for cases with more than 1 sampling point)
12. Proposed procedures for on-site sample storage, preservation or mixing and measures in maintaining sample integrity if samples cannot be transported immediately back to the appointed laboratory accredited under HOKLAS at the end of the sampling day
13. Declaration of kitchen practice for restaurant and food factory (Form OS1), if applicable
14. If the establishment is equipped with a central grease trap, please provide copies of delivery records for disposal of grease trap waste (Form A) and invoices of central grease trap cleaning for the previous four months
15. If the establishment is dosing chemical/biological agent(s) in its wastewater treatment, please provide purchase invoices for the agent(s) from previous four months
16. Declaration for cleaning frequency and cleaning dates of central grease trap (Form OS14), if applicable
17. Number and location of sieves / sponge filters in discharge outlets (Forms OS17/OS5), if applicable