



香港申訴專員公署  
OFFICE OF THE OMBUDSMAN, HONG KONG

# OMBUDS NEWS 申報



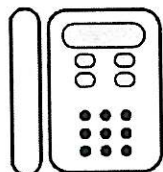
*Issue No. 3 of Reporting Year 2007/2008  
(13 March 2008)*

*Office of The Ombudsman, Hong Kong*



***Direct Investigation on Alleged Overcharging of Water Bills  
by the Water Supplies Department***

The executive summary of the investigation report is at **Annex A**.



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**Office of The Ombudsman, Hong Kong**

**13 March 2008**

*Issue No. 3 of 2007/08*

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## EXECUTIVE SUMMARY

### Direct Investigation on Alleged Overcharging of Water Bills

#### Background

Complaints against the Water Supplies Department (“WSD”) about overcharging have continued to surface over the years. Some water bills involve huge sums and WSD is criticised for not handling complaints satisfactorily.

2. Concerned that this might be indicative of systemic problems in the procedures for issuing bills and handling complaints about water charges, The Ombudsman declared a direct investigation under section 7(1)(a)(ii) of The Ombudsman Ordinance, Cap. 397 to examine:

- (a) causes for overcharging;
- (b) procedures and practices for handling complaints about excessive water charges;
- (c) resolution of such disputes and follow-up action; and
- (d) remedial measures.

#### Billing Mechanism

3. In full operation since January 2005, the Customer Care and Billing System (“CCBS”) is an integrated computer system servicing 2.68 million water accounts. CCBS coordinates all WSD functions relating to customer servicing including billing. The billing process comprises the following steps:

- (a) **Consumption Determination.** WSD conducts meter reading in a four-month revolving cycle. Where actual reading is unobtainable due to inaccessible, defective or missing meter, consumption will be estimated. Under some circumstances, new accounts and terminated accounts may also be billed by estimation.
- (b) **Charge Calculation.** Domestic accounts are charged according to a four-tier tariff system that links an incremental charge scale to consumption levels to encourage frugal use. Non-domestic accounts

are charged a flat rate, but construction and ocean going shipping customers are subject to higher rates.

- (c)(i) **First Level Fault Checking: Consumption Ceiling for Meter Readings.** WSD checks a reading against an acceptable maximum consumption value based on past consumption pattern and trade type (for non-domestic accounts). Staff will intervene usually by conducting special readings for anomalous cases detected.
- (c)(ii) **Second Level Fault Checking: Value Ceiling for Water Charges.** WSD checks each water charge calculated based on an accepted reading against a set charge ceiling. Staff will follow up as in c(i).
- (d) **Bill Issue:** WSD issues bills over a four-month revolving cycle.

### Cases of Overcharging

4. From 1 April 2005 to 31 October 2007, WSD received 85,666 complaints about suspected overcharging, 32,945 of which were subsequently confirmed and rectified. These confirmed cases with excessive charges totalling \$38.07 million had resulted from the causes set out below.

**Table 1. Causes of Confirmed Cases of Overcharging (1.4.2005 – 31.10.2007)**

Cause	No. of Cases	Percentage
Incorrect meter reading	2,554	7.75%
Defective meter	3,037	9.22%
Inaccurate estimation	18,218	55.30%
Wrong meter arrangement <sup>1</sup>	460	1.40%
Leakage of inside service	92	0.28%
Cannot be ascertained by WSD <sup>2</sup>	8,584	26.05%
Total	32,945	100%

<sup>1</sup> This normally happens when water users carry out plumbing works without notifying WSD, and inadvertently mix up their own water meter with other meters in the process.

<sup>2</sup> Cases where: (a) billing was based on actual meter reads, (b) the meter has been tested to be accurate and (c) there is no sign of leakage. In such cases, adjustment of the bills is a result of negotiation based on acceptable justification from complainants.

## Sample Cases

5. We have examined 20 of the cases incurring the biggest amounts of overcharging in 2005/06 and 2006/07. The degree of excessive charging ranges from 18% to 3,697 times of the actual amount. We have summarised four cases for illustration.

**Case 1:** Excessive estimated charge upon termination of non-domestic account.

**Facts:** The user vacated the premises in April 2005 without notifying WSD. When WSD realised this on 14 July 2005, it terminated the account and estimated the final bill for April to July 2005, charging \$146,447.40. The user disputed, providing a photo of the water meter taken on 23 July 2005. WSD revised the charge to \$39.60.

**Observation:** WSD could have handled this case more prudently by first contacting the former user or conducting a special meter reading. The latter could be arranged by WSD within 14 days. The fact that the reading ultimately adopted was taken by the former user nine days after account termination shows that despite WSD's standard requirement for 14-day advance notification, calculating the final bill with a reading taken days after account termination is an acceptable alternative.

**Case 2:** Excessive estimated charge for new non-domestic account.

**Facts:** The account was opened on 13 October 2005 and the first meter reading was scheduled for early March 2006. WSD issued the first bill on 14 February 2006 by estimation, charging \$277,320.50. The user disputed it with photos of the water meters concerned taken on 23 February 2006. WSD revised the charge to \$35,008.10.

**Observation:** WSD had four months to arrange a special meter reading before issuing the bill on 14 February 2006. Alternatively, WSD could have waited until early March 2006 for a reading. Furthermore, WSD could have asked the user to report the

reading, given that the reading ultimately adopted was in any case taken by the user.

**Case 3:** Domestic overcharging caused by a combination of human error and manpower constraint.

**Facts:** WSD found the meter defective on 10 May 2005 and replaced it with a new one on 20 May 2005. Subsequently, WSD issued a bill for the period of 10 May 2005 to 6 September 2005. While the actual consumption between 20 May and 6 September 2005 was recorded by the new meter to be 54 cubic metres, the consumption from 10 to 20 May 2005 should have been estimated but instead, through human error, the incorrect reading of 10,933 cubic meters taken at the time of meter replacement was used. Although the bill was temporarily withheld by the first and second level fault checks, it was not followed up according to procedures because of manpower constraint. CCBS hence resumed bill processing and a bill of \$117,918.40 was issued. After the user disputed, it was revised to \$288.50.

**Observation:** Manpower constraint rendered the checking mechanism ineffective in this case. This highlights the importance of backing up the mechanism with adequate follow-up manpower.

**Case 4:** Incorrect meter reading for domestic account.

**Facts:** The meter registered a reading of 3,419 (from 3,401, i.e. consumption of 18 cubic metres). However, the meter reader misread it as 342<sup>3</sup>, i.e. 10,342 or consumption of 6,941 cubic metres. Although the reading and, consequently, charge errors were detected by the two fault checks, they were not followed up as required because of manpower constraint. Hence, CCBS reactivated the case and issued a late payment bill for 74,998.70. The user disputed and a revised bill of \$466.6 was issued.

**Observation:** Similar to Case 3, this case illustrates that, notwithstanding the computer mechanism for gate-keeping in CCBS, human back-up

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<sup>3</sup> The meter has four digits and a reading “back” to 342 would indicate an actual reading of 10,342.

remains an essential element the adequacy of which needs to be assured.

## **Observations and Opinions**

6. Although the established cases of inaccurate charging represent a minute fraction of over eight million water bills issued each year, they dent WSD's reputation and professional credibility in the eyes of the community. Moreover, the full extent of overcharging is not clear as cases unnoticed by water users will never come to light. The numerous cases that did get detected incurred remedial costs in terms of extra man-hours for processing complaints and rectifying errors, not to mention the anxiety of the affected users and their grievance against Government. These costs may be less visible, but are nonetheless real and not to be underestimated.

7. The classification of these established cases is also a matter for concern. By attributing overcharging to only five causes, WSD's classification appears unduly simplistic and inadequate. **Case 3** is classified as "defective meter", but was in fact caused by a human error in using a reading known to be wrong. **Case 4** is attributed to "incorrect meter reading", but in fact failure by WSD staff to follow up the detected bill promptly was the main cause for the blunder.

8. The established cases are the best tool for WSD to understand the overcharging problem and to work out preventive measures. To ensure effective analysis and remedy, accurate case classification is essential.

9. **Consumption Determination.** Defective meters were responsible for 9.22% of the overcharging cases (see **Table 1**). Meters have an optimum life expectancy of 12 years, but as at April 2006, about 1.2 million meters were over 12 years old and 20-year-old meters are still in use. In this connection, WSD is implementing a programme to replace all meters over 12 years old by March 2011. Some 400,000 water meters have been replaced so far.

10. From April 2005 to October 2007, WSD recorded 2,554 cases of overcharging because of incorrect meter reading (see **Table 1**). With over eight million readings taken a year, this may be regarded as an impressive accuracy of 99.97% overall. That said, incorrect meter reading still accounted for 7.75% of the cases of overcharging (see **Table 1**) and the margin, or magnitude, of error could be outrageous (see **Case 4**).

11. **Charging by Estimation.** Where water charges are over-estimated, the magnitude of the excessive sums is, in some cases, staggering (exceeding the adjusted charge by over \$146,000 or 3,697 times in **Case 1** and by over \$242,000 or 6.9 times in **Case 2**). In fact, "Inaccurate charge

estimation” is the predominant cause for overcharging, responsible for 55.3% of the overcharging cases (see **Table 1**).

12. Estimation in **Cases 1 and 2** was unnecessary and exposed WSD’s inclination to do what is convenient to itself with little regard for users’ rights or concern. It seems to us that when a special reading cannot be (or simply is not) arranged, WSD prefers estimating to accepting a user’s own reading. The tendency towards expedience must be discouraged and should be abandoned.

13. We accept that WSD priority is to protect public revenue and does need to charge by estimation in some circumstances. Nevertheless, it should do so only on need and with caution and common sense. Where estimation can practicably be replaced with proactive customer services, the latter should take precedence.

14. **Fault Checking.** The fault checking problem in **Cases 3 and 4** shows that technology aside, vigilant monitoring and proactive human back-up are equally essential elements of effective problem detection and prevention. Both seem to have been deficient at WSD.

15. **Manpower Constraint.** **Cases 3 and 4** highlight the manpower constraint that rendered CCBS’s checking mechanism ineffective. They occurred respectively nine and 14 months after CCBS launch. Given WSD’s explanation that the manpower constraint arose from an upsurge in workload and teething problems at the initial stage of CCBS operation, its continuation raises legitimate questions about WSD’s manpower planning and staff training and orientation for CCBS launch.

16. **Handling Enquiries and Complaints.** WSD’s enquiries and complaints service encountered serious problems at the inception of CCBS in early 2005. The situation has improved since mid-2005, but WSD should regularly review and where warranted, upgrade its capacity for providing prompt response to public enquiries and complaints.

## **Recommendations**

17. It is to the credit of WSD that the Hong Kong community has consistently enjoyed safe and reliable water supply over the years. However, there is room for improvement in its service delivery. From our findings, The Ombudsman makes the following recommendations to the Director of Water Supplies:

## **General**

- (1) Promote staff awareness of the problem of inaccurate charging and enhance their vigilance to signs of problems.
- (2) Conduct a comparative study on resources incurred for handling overcharging cases *vis-à-vis* those for special readings for more economical and customer-friendly action.
- (3) Review established cases of overcharging to identify causes other than those outlined in Table 1 (such as human error and manpower constraint).
- (4) Review classification of established cases of overcharging to facilitate effective analysis and consequential management decisions and strategy.

## **Billing Mechanism**

### Consumption Determination and Charging by Estimation

- (5) Remind meter readers regularly of the importance of accurate meter reading and ensure effective monitoring of their performance.
- (6) Review the estimation mechanism, in particular with accounts without consumption pattern as basis for estimation, with a view to reducing the scope for excessive, disproportionate estimation.
- (7) Conduct actual meter reading, rather than estimating, wherever practicable.
- (8) Where practicable, ask users to report meter readings to minimise the need for estimating.
- (9) Where appropriate, contact users to better understand their usage pattern and special circumstances during the period (such as the premises being left vacant) to arrive for more accurate estimation.



### Fault Checking

- (10) Remind staff of the Customer Account Section of the importance of prompt follow-up action on cases detected by the fault checking procedures.

### **Manpower Constraint**

- (11) Review manpower required to follow up on cases caught by the fault checking procedures.

### **Handling Enquiries and Complaints**

- (12) Regularly review and where warranted, upgrade WSD's capacity for providing prompt response to public enquiries and complaint.
- (13) Take steps to enhance public awareness of water charge calculation and the channels for enquiries and complaints.

### **Comments from WSD**

18. WSD has generally accepted our recommendations and estimates that implementation will take one year.

### **Final Remarks**

19. The Ombudsman is grateful to the Director of Water Supplies and his colleagues for cooperation throughout the investigation. In particular, we appreciate the prompt and positive response to our findings.

20. We will monitor progress of implementation of our recommendations.

**Office of The Ombudsman**

**March 2008**