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**Office of Utilities Regulation**

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**Enquiry into Billing System Practices of the  
Jamaica Public Service Company Ltd.**

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**Decision**

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**OFFICE OF UTILITIES REGULATION**

February 22, 2005

Enquiry into Billing System Practices of Jamaica Public Service Company Ltd.  
Decision  
Document No. Ele 2005/01

**DOCUMENT TITLE AND APPROVAL PAGE**

**DOCUMENT NUMBER:** Ele 2005/01

**DOCUMENT TITLE:** Enquiry into Billing System Practices of the Jamaica Public Service Company Limited

**1. PURPOSE OF DOCUMENT**

This Determination Notice sets out the Office's findings and decisions regarding its enquiry into the billing practices of the Jamaica Public Service Company Limited. Arising out of a sharp spike in the number complaints alleging excessive billing in the aftermath of Hurricane Ivan, the Office undertook an investigation into the Company's billing practices. This document sets out the Office's findings and specific directives issued to the Company in regard to its billing practices.

**RECORD OF REVISIONS**

Revision Number	Description	Date

**APPROVAL**

This Determination is approved by the Office of Utilities Regulation and becomes effective on 22<sup>nd</sup> February 2005.

By Order of the Office:

  
.....  
J. Paul Morgan  
Director General

February 22, 2005

**OFFICE OF  
UTILITIES REGULATION**

20-2356

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## OFFICE DECISION

### ENQUIRY INTO BILLING SYSTEM PRACTICES OF THE JAMAICA PUBLIC SERVICE COMPANY LTD.

#### 1. INTRODUCTION

Since the passage of Hurricane Ivan in September 2004, the OUR (Office) recorded a significant increase in contacts<sup>1</sup> regarding Jamaica Public Service Company Limited (JPS or the Company), especially relating to billing. Significantly, the OUR processed 1,294 contacts during the three month period October to December 2004 in comparison to 1,073 for the nine (9) month period, January to September 2004. The number of contacts peaked during the months of November and December and was primarily about the bills for which meter readings were taken in November 2004.

As a consequence, on 8<sup>th</sup> December 2004, the Office requested JPS to conduct an investigation into the high electricity bills that were being received by consumers. Subsequently, the Office submitted a sample of 32 accounts/cases to JPS for specific investigation into the seemingly anomalous consumption levels that were rendered by the Company in respect of these accounts during the November/December period. JPS submitted its report on the 32 accounts/cases on 23<sup>rd</sup> December 2004. In addition, a general report on the investigation into the November 2004 billing was submitted to the Office on 11<sup>th</sup> January 2005.

Although the circumstances are different, it is noteworthy that on 20<sup>th</sup> January 2003 (23 months earlier) the Office directed JPS to conduct an investigation into the extent and causes of the abnormally high level of complaints regarding unusually high bills and the receipt of bills in rapid succession by consumers. This was precipitated by the introduction by JPS of a new Customer Information System (CIS) in September 2002. The Company submitted the final report on its investigation on 3<sup>rd</sup> February 2003. The Office, on 11<sup>th</sup> March 2003 issued a Memorandum under section 9 of the OUR Act which sets out its conclusions and contained a number of decisions setting out specific measures to be undertaken by the Company all of which were intended to secure improvements and confidence in its customer billing process. Aspects of the decisions contained in the Memorandum are relevant to this enquiry and specific reference is made in Sections 2.1.2 and 2.2.1 below.

In its 8<sup>th</sup> December 2004 letter, the Office specifically requested JPS to respond to the following:

- *What has been the number of complaints per month concerning excessive bills between July and November 2004*

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<sup>1</sup> Contacts are defined as those consumers who report problems against the service providers to the OUR and includes those instances where they OUR do not conduct an investigation, but refers the customer to a senior representative of the service provider to have the matter addressed.

- *What factors (billing error, fuel charges, exchange rates, increased consumption, correction of estimation etc) account for such complaints and their respective weightings;*
- *What has been the average monthly consumption per rate category between April and November 2004 and the figures for the corresponding period in the previous year;*
- *Whether JPS has seen an increase in the number of complaints alleging overcharges and if so the steps taken to date to investigate such complaints*

Arising out of its review of the information provided by JPS, its own investigations and analyses of the many complaints received, the Office has formed a number of conclusions which has informed a series of decisions, implementation of which it considers will help to restore confidence in the Company's billing processes. These decisions which are set out below, are also being issued in the form of a directive to the Company under Section 4 (2) of the OUR Act as amended.

## **2. ISSUES AND CONCLUSIONS**

### **2.1. High Billing**

#### *2.1.1. Estimation of electricity consumption*

The Company in its report of 11<sup>th</sup> January 2005 concluded:

*“the actions taken in the wake of the hurricane (Ivan) were the major drivers of the spate of elevated complaints re high billing observed between November and December 2004. The inability to read meters in September coupled with the 25 percent reduction in estimated usage resulted in significant under-estimation of usage prior to November readings. This is supported by the fact that the bulk of complaints (as much as 80%) came from the cycles (01-21) that would have normally been read in September and therefore had three consecutively estimated bills prior to November.”*

The Office finds that the reason given by JPS for the elevated level of customer complaints of high billing in November is questionable. In its report, JPS stated that it read 98.2% of all customer meters in May and June 2004 in the lead up to the implementation of the new tariff. In this regard, the Company should then have had a good basis for estimating July, August's and September's consumption. While it is recognized that individual customers may see some elevation in consumption during the summer months, the Company has not provided a credible assessment or explanation to justify the numbers of accounts that recorded consumption outside the +/-80% band.

Additionally, based on the fact that in any given month, the Company reads the meters for approximately half its customers, then one could assume that

approximately 275,000 would have been scheduled for reading in September 2004. The Company states that:

*“a total of 124,686 meters from Cycles 01-07 were read up to September 9<sup>th</sup>, before the Company shifted to storm emergency mode.”*

This means that approximately 45% of the accounts from the affected cycles would not have received three consecutive estimates but rather bills based on actual readings.

### **Conclusion 1**

The Office was aware that the Company had decided to adjust estimated bills downward by 25% of the normal estimation in an attempt to compensate for the impact of the power outages on consumption in the immediate post hurricane period. However, the Office concludes that while two or even three consecutive months of estimation might have played a role in the resulting over/under estimations there is no evidence that the impact would have been as significant as the Company suggests.

#### *2.1.2. Meter Reading*

It is instructive that the data from the 2003 investigation led the Office to conclude that there were weaknesses in the meter reading process. The Office in its Memorandum of 11<sup>th</sup> March 2003 stated:

*“There is some indication that the problem may be related to incorrect meter readings”.*

Of the 37 accounts investigated by JPS at that time, 8 accounts or 22% contained meter reading errors.

From the current investigation the information suggests that not only have these shortcomings become entrenched, they appear to have worsened. Specifically:

- in the sample of the 32 accounts that were sent to JPS, the Company deemed readings to be “suspect” in 20 of these;
- JPS’ own “random” sample of 60 cases yielded 20 or one third with “suspect” readings; and
- in November 2004, JPS’ exceptions processing identified 1,100 accounts to “have suspect data”. The Company reports that subsequent investigations revealed that “meter reading errors” were responsible for 32% of these exceptions.

### **Conclusion 2**

Based on the above, the Office finds this level of “suspect” meter reading untenable and must conclude that the high bills resulting from the November 2004 readings were mainly due to poor practices in the meter reading component of the billing process. Moreover, whilst it cannot specifically cite the point at which the

meter readings become suspicious, it is clear that the quality control processes are deficient.

### *2.1.3. October and November Billing*

It should be noted that, in its report, JPS affirmed that, in preparation for the introduction of the new tariff, the Company read 98.2% of all customer meters in May/June 2004. Additionally, the Company stated that "just over 21,000 accounts were flagged" as high by the exceptions processing in November 2004.

Following from conclusion 2 above, it is the view of the Office that these accounts might have been affected by actual readings prior to November 2004 being incorrect. Those accounts would be billed in November or December for electricity consumption that might have been consumed in periods prior to that listed on the November bills. In other words, the consumption of a customer whose account was misread in July 2004 and then estimated for August, September and October would be affected by the amounts under or over billed by the faulty July reading. The impact of past consumption then becomes more acute if the meter reading errors have occurred over a prolonged period. It therefore means that a November bill could conceivably be reflecting consumption incurred from January 2004 and before.

The Company itself appreciates the fact that customers are suspicious of the estimation processes adopted by the Company. This is borne out by its own decision to include provisions in its last tariff application for the introduction of monthly meter readings. While the customer may have doubts about estimation there is acceptance that bills that are based on meter readings are generally correct. This is supported by the many instances of public comment calling for meters to be read. It is unreasonable to expect customers who, in good faith, have accepted and paid JPS for bills based on "actual" readings to be now informed that these readings were incorrect and as such they will be billed retroactively going back to an extended period. There are circumstances where it can be reasonably argued that accounts be adjusted retroactively and these have been addressed in an agreement with the Company that was finalized on August 8, 2002. While these agreements have not yet been gazetted, the principles are currently applicable. At that time it was not conceived that the integrity of the meter reading process would be challenged. The procedure does allow "*where JPS is required to back bill as a result of any circumstances not covered ..., JPS shall act in a manner reasonable to all concerned and reasonable in all circumstances of the case*". In the instant case, the Office will have to determine what is reasonable as it cannot condone a situation where the Company seeks to penalize its customers for its own inefficiency, particularly in circumstances where the Company is in absolute control of the processes involved. The Company exercises absolute control from the stage of meter installation to meter reading, to bill preparation and dispatch. It also has the facility, which it can rightfully exercise, to disconnect for non payment.

At the same time the Office accepts that it is unreasonable to expect the Company to render bills based on actual readings where its representatives do not have access to the meter.

### **Conclusion 3.**

The Office has concluded that the Company should be limited to recovering charges only for consumption incurred for the period from the last actual reading to the November 2004 reading and is applicable only in respect of those accounts that were rejected as high by the company at the existing high/low variance. This would include accounts affected by consecutive estimates resulting from the passage of Hurricane Ivan. This recovery should be at the Fuel and IPP rates prevailing at the time.

In order to limit the recovery by JPS to those charges properly incurred for consumption between actual readings, those 21,000 accounts **must be specifically identified and flagged** for special analysis and adjustment on a basis to be agreed with the Office.

## **2.2. Quality Control and other Issues**

### *2.2.1. High/Low Rejection Criterion*

In the aftermath of its Memorandum of 11<sup>th</sup> March 2003, the Office required the Company to tighten the high/low rejection criterion to +/-70% by the end of August 2003 and later to +/- 65%. Additionally, the Office had an understanding with the Company that in mid October 2003, the Company would submit its impact assessment of the new criterion for the Office's consideration. Upon its review of the information provided, the Office would then agree on the timetable for the final implementation of the +/-65% target. The Company did not follow through on its commitment to submit an impact assessment and as it has now turned out, also failed to implement the directive to lower the high/low rejection criteria. The Office finds this regrettable as it raises serious questions about the Company's commitment to comply with regulatory directives without ongoing oversight and to improving the quality of service delivered to its customers.

### **Conclusion 4**

Having reviewed the situation the Office has come to the conclusion that the previously established high/low band of +/- 65% is now too wide as it provides a greater risk for incorrect bills to be rendered to customers. Furthermore, it is also apparent that it is necessary for the Office to insist on a specific implementation timetable and to monitor it closely to ensure compliance.

### *2.2.2. Exceptions processing*

The JPS report describes a process that is undertaken with the exceptions list that is generated by the existing quality control process. It however makes no mention

of whether or not these guidelines are codified and form part of practice and or policy. Additionally, the report states “*if the reading is deemed correct, the account is re-submitted for billing*”. The report is unclear as to circumstances under which readings are deemed correct and where this “*deeming*” authority rests. There are also questions about the level of supervisory oversight in this exceptions processing. In fairness, the Company has submitted (on February 21, to be exact) written copies of its quality control policy document which the Office is now reviewing.

### **Conclusion 5**

The Office has concluded based on the foregoing discussion that the existing quality control processes are inadequate and this leaves the Company’s billing system vulnerable to inaccuracies.

#### *2.2.3. Estimation Routines*

JPS has identified three estimation approaches, the Mass, the Base and the Manual Estimators. While the rationale for all three is understood the report was not clear as to whether the calculation logic in the Mass and Base Estimators are identical. Subsequent investigations, however, have revealed that they are different. The Mass estimator derives consumption based on the last two actual readings, while the Base estimator derives consumption based on the previous 24 months historical consumption.

In the application of the Manual Estimator, JPS uses 100kWh per 30 days for Residential customers and twice that amount over the same period for Commercial customers.

Given that the average consumption for Residential and Commercial is approximately 200 and 1,000 kWh per month respectively, the Office is of the view that the Manual Estimation procedure will have a tendency towards underestimation which may give rise to customer complaints when adjustments are made and that such differences contribute to inconsistencies in the Company’s estimated bills.

Additionally, the problem of underestimation was further compounded by suspect prior actual readings which if incorrect would compromise the routine of estimation which depends on two (2) prior actual readings. This would support the Office’s decision at the last tariff review to mandate that estimated bills be based on three (3) prior readings as these are likely to be more reflective of actual usage than those based on two (2), seasonal variances excepted. In other words, the risk of “*suspect*” readings would be spread if the company based its estimates on more actual readings.

### **Conclusion 6**

The Office concludes that the variance in the estimation routines may have contributed to some of the inconsistencies in estimated bills rendered to



customers. It also concludes that the inaccuracy of some meter readings over time will have contributed to and compounded the problem. It would seem therefore, that the company would be well advised to investigate and where feasible introduce appropriate technology as a means to reducing the opportunities for human error or manipulation.

### 3. DECISIONS

The Office now sets out specific measures and actions to be taken by the Company in order to secure the renewed confidence of customers in its billing processes. Notwithstanding the specific measures listed below, the Office also expects that the Company will be proactive in seeking to achieve improvements in the relationship with its customers, and especially those accounts identified by the exceptions processing system.

#### 3.1. Meter reading

JPS must undertake as a matter of priority, the complete overhaul of its meter reading regime to correct the deficiencies identified. This system overhaul should be completed by 30<sup>th</sup> June 2005 and must include provisions for:

- 1) the retraining of all meter readers
- 2) the implementation of an effective mechanism to facilitate the performance monitoring of meter readers regarding the quality of their readings. This mechanism must hold meter readers accountable for accurate readings.
- 3) the routine inspection and maintenance of hand held devices
- 4) notification to customers whose bills reflect consumption outside the high/low variance criterion
- 5) the manual re-entry of readings that are flagged by the hand held device as exceptions. The flagged/excepted readings should be rejected and a new reading taken by the meter reader which should be manually re-entered and not simply overridden in the field.
- 6) the removal of access to previous readings by the meter readers in the field.
- 7) an assessment of technology options and feasibility of introducing Automatic Meter Reading and Pre-paid Meters. This assessment is to be submitted to the Office by 30<sup>th</sup> September 2005.
- 8) Commencing end of March 2005, the Company must submit monthly progress reports on the status of the system overhaul to the Office until the activity is completed

Additionally, the Office strongly encourages the wider and more frequent rotation of the assigned areas to meter readers.

The Office urges the Company to intensify its effort at educating its customers about reading their meters and to develop a customer education program designed to restore confidence in the integrity of its billing system.

### **3.2. High/Low Rejection Criterion**

The rejection criterion is to be lowered to +/- 30% for Rate 10 customers by **3<sup>1st</sup> July 2005**. This should be confirmed as having been implemented by the company in writing. Commencing with the **March 2005** billing and until further notice the Company must submit its management reports to the Office that provide details of the exceptions generated by the hi/lo criteria.

The high/low rejection criterion for commercial accounts is to be lowered simultaneously to +/- 60 %.

With immediate effect, bills that reflect consumption outside the rejection criterion should not be dispatched to the customer. For those customers, a replacement bill should be generated based on an estimate of consumption as per the Guaranteed Standards. The customer should also be informed that this estimate is being rendered in light of the fact that their consumption has shown this significant variation and the Company is taking steps to confirm the readings. The Office will keep the rejection criterion under review.

### **3.3. Estimation Routines**

The Company shall immediately:

- effect the necessary changes to its systems to facilitate compliance with the Guaranteed Standards, that is, all estimates of consumption are to be based on the last three (3) actual readings (new accounts excepted).
- synchronize the Mass Estimator and the Base Estimator. There should be no difference in the algorithm used for the Mass and the Base Estimators.
- adjust the monthly consumption estimates used by the Manual Estimator to better reflect the class average consumption.

The Company is to assess the merit of using even longer periods than the stipulated last three (3) actual readings and to advise the Office of its findings and conclusions by **30<sup>th</sup> June 2005**.

### **3.4. November 2004 Billing**

The Company shall presents its proposals to the Office by **28<sup>th</sup> February 2005** for adjusting the 21,000 accounts being mindful that the Office will not agree to any measures which seek to recover sums which would in effect penalize customers for the Company's own inefficiencies. In the meantime, these 21,000 accounts identified are to be flagged, customers required to make current payments only while their account is investigated and there are to be no disconnections of these accounts for the "disputed" amounts. For the avoidance of doubt, these accounts should be disconnected only on the basis of arrears for amounts going forward from January 2005 billing.

### **3.5. Meter Maintenance and Testing**

The Office's enquiry into the JPS billing system has identified the major weaknesses as meter reading and quality control. While there is no indication of

massive meter malfunctions, the Office is of the view that customer confidence would be enhanced if the Company's meter testing program as required in their License incorporated an "independent" certification process. In this regard the Office encourages the Company to work with the Jamaica Bureau of Standards (JBS) to develop a meter testing program that will enhance the credibility of the Company's metering program. Conclusion of this exercise should go a long way towards improving customer confidence at least to the aspect of the accuracy of the metering devices. The Office is mindful of its duties under Section 4 of the OUR Act and will be moving immediately to conclude ongoing discussions between itself, JPS and the JBS with a view to bringing the matter to finality by 31<sup>st</sup> March 2005. It should be noted that prior to this enquiry, the Office has been engaged in dialogue with the Company and the JBS regarding meter testing.

