



FAIR TRADING COMMISSION

BARBADOS

FTCUR/REVFCA-2013-01

FAIR TRADING COMMISSION

IN THE MATTER of the Fair Trading Commission Act, Cap. 326B of the Laws of Barbados;

AND IN THE MATTER of the Utilities Regulation Act, Cap. 282 of the Laws of Barbados;

AND IN THE MATTER of the Utilities Regulation (Procedural) Rules, 2003 and the Utilities Regulation (Procedural) (Amendment) Rules, 2009;

AND IN THE MATTER of the Motion to Review the Fuel Clause Adjustment pursuant to Section 16 of the Utilities Regulation Act, CAP.282 of the Laws of Barbados.

BEFORE:

Sir Neville Nicholls
Mr. Gregory Hazzard
Mr. Andrew Brathwaite
Mr. Andrew Willoughby
Dr. Philmore Alleyne

Chairman
Commissioner
Commissioner
Commissioner
Commissioner

DECISION

PART ONE - EXECUTIVE SUMMARY

1. The Fair Trading Commission (Commission) has completed its review and analysis of the Motion to Review the Fuel Clause Adjustment (FCA).
2. On May 29, 2013, the Commission gave Notice that it was commencing a Motion to Review and vary the principle (formula) which is used by the Barbados Light & Power Company Limited (BL&P) to calculate the FCA. The Motion to Review the FCA was initiated in accordance with Section 16 of the Utilities Regulation Act, CAP 282 (URA) and Section 36 of the Fair Trading Commission Act, CAP 326B (FTCA) of the Laws of Barbados.
3. The Motion focused on two actions. The first action requires the BL&P to switch to the use of historic fuel costs as opposed to projected fuel costs, which is presently employed in calculating the FCA. The second action determines that the BL&P can minimise the variation of the FCA through the use of smoothing.
4. Four interested persons, through the submission of letters of intervention, met the criteria to participate in the Motion. They were the BL&P, Mr. Anthony Gibbs, Mr. Erskine Durant and CARITEL. All of the parties participated fully in the FCA Motion and their Written Submissions were considered during the Commission's decision making process.
5. The Commission, after review of the written submissions in this matter, determines that the FCA should be calculated by taking the fuel cost that was incurred in the preceding month and dividing this figure by the energy generated in the previous month adjusted for the estimated system losses incurred and the auxiliary consumption which represents the previous month's energy sales.
6. Auxiliary consumption is the amount of energy consumed by auxiliary equipment, such as feed pumps and air fans of generating units, expressed as a

percentage of gross energy generated. Net energy generated is the energy produced by the power plant less the auxiliary consumption. System losses are estimated from the difference between the net energy generated and the energy billed to end-customers. The Commission is of the view that the BL&P should use a 12 month running average of monthly losses because in practice it is very difficult to measure losses over a single meter reading period as not all meters are read simultaneously. Losses should not vary greatly on a monthly basis.

7. This proposed formula for calculating the FCA is reflected as follows:-

$$FCA_n = \frac{FuelCost_{n-1}}{EnergyGeneration_{n-1} \cdot (1 - Aux_{n-1}) \cdot (1 - losses)} \left[\frac{BD\$}{kWh} \right]$$

8. Fuel cost_{n-1} will include adjustments for any cumulative over/under recovery from the previous months. It is possible that the fuel revenue recovered from the FCA may be different from the actual fuel cost of the previous month. This will occur due to monthly variations in electricity sales which will affect the revenue recovered from the FCA. It is for this reason that the Commission determines that the fuel cost_{n-1} in the new formula for calculating the FCA will include adjustments for any cumulative under/over recovery from the previous month, (i.e. the balance carried forward).
9. In instances where the BL&P considers that the month-to-month change in the FCA is significant, the BL&P engages in a process of smoothing to avoid rate shock to consumers. In other words, if the calculated December FCA is much greater than the FCA in November, the BL&P may apply an FCA in December that is less than that calculated from the formula. This shortfall will then be recovered in the following month.

10. The Commission further determines that the BL&P will continue to have discretion to smooth the FCA when warranted as it reduces the impact on customers of significant fluctuations in the FCA from one month to the next.
11. The Commission requires the BL&P to advise whether and to what extent the FCA was smoothed.
12. In light of the foregoing, the Commission orders that within two (2) calendar months of issuance of this Decision and Order the BL&P shall implement the new formula for calculating the FCA. Thereafter, the BL&P shall submit monthly reports on the FCA advising whether and to what extent the FCA was smoothed and including all the factors that were considered to derive the smoothed FCA.

PART TWO - BACKGROUND ON FUEL CLAUSE ADJUSTMENT

13. The cost of providing electricity service to customers is affected by the fluctuation of oil prices on the international market. Since the cost of fuel is one of the main inputs in establishing the cost of electricity, the volatility of oil prices can have the effect of creating considerable uncertainty over the electricity rates. In 1983, the Public Utilities Board (PUB) issued a Decision which permitted the BL&P to apply an FCA to all customers' electricity bills each month. The FCA eliminates the need to conduct a rate hearing every time there is a change in the cost of fuel. Through this mechanism, changes in the cost of the fuel are passed through to customers.

The Existing Fuel Clause Adjustment Methodology

14. The present FCA is calculated by dividing the projected fuel cost (taking into consideration any over/under recovery of fuel cost from previous months) by the projected sales. The BL&P prepares a forecast for both the cost of fuel and sales when calculating the FCA for any particular month.
15. For example if the BL&P is calculating the FCA for the month of December, then at the start of the month the BL&P will make a projection of both the fuel cost as well as the sales figures for December. If the fuel revenue collected in November was less than the projected fuel cost for November (that is, there is an under recovery), then the projected fuel cost for December is adjusted by adding this under recovery to the projected fuel cost for December. If however the fuel revenue collected in November was more than the projected fuel cost for November (that is, there is an over recovery), then the projected fuel cost for December is adjusted by subtracting this over recovery from the projected fuel cost for December.
16. This method of calculating the FCA relies heavily on projections which make the process less transparent than it should be. Moreover, the difference

between projected fuel cost and actual fuel cost may be significant because of the volatility of the fuel market. This volatility has in the past resulted in unexpected changes in the fuel market thereby making it more difficult to accurately predict fuel costs. The Commission is of the view that the use of fuel costs and electricity generated from the previous month, that is, a historic approach, would provide a formula that is easier to calculate as the necessary inputs have already been recorded. Based on the foregoing, the Commission is of the view that the existing FCA should be revised.

17. The FCA is presently computed using this existing formula:

$$\frac{\textit{Projected Cost of Fuel + or - previous month's under or over recovery}}{\textit{Projected sales kWh}}$$

PART THREE - LEGISLATIVE FRAMEWORK

18. The Commission is charged under Section 4 (3) (a) of the FTCA with the responsibility of establishing the principles for arriving at the rates to be charged by service providers. This function is reiterated under Section 3 (1) (a) of the URA which states:-

“The functions of the Commission under this Act are, in relation to service providers to:

(a) Establish principles for arriving at the rates to be charged.”

19. In accordance with Section 2 of the FTCA and the URA “principles” mean the formula, methodology or framework for determining a rate for a utility service.
20. By virtue of Section 16 of the URA where the Commission has not fixed a period of time in accordance with Section 15(1), the Commission may on its own initiative or upon an application by a service provider or consumer review the rates, principles and standards of service for the supply of a utility service.
21. Further, by virtue of Section 36 of the FTCA, the Commission may on application or on its own motion review and vary or rescind any Decision or Order made by the Commission and where under this Act a hearing is required before any decision or Order is made, such Decision or Order shall not be altered, suspended or revoked without a hearing.
22. The FCA was first approved in a 1983 Decision and Order of the PUB and later upheld in the Commission’s BL&P Rate Review Decision and Order dated January 28, 2010.
23. The FCA was approved by the Commission as a principle (formula) that the BL&P is permitted to use to pass through the cost of fuel used to generate electricity for use by its customers.

24. Following the Commission's review of the FCA which included the consultation conducted in April 2012 and the Findings Report issued on April 19, 2013, the Commission proposed that the FCA should be revised to provide greater transparency and to make the process more auditable.
25. The Commission therefore brought the Motion for review of the FCA in accordance with Section 16 of the URA and Section 36 of the FTCA. The Motion was heard by way of a written hearing in accordance with Rule 37 of the Utilities Regulation (Procedural) Rules 2003 (URPR).
26. The Commission reserved its right at all times under Rule 37(3) of the URPR to convene a one day oral session to hear oral submissions of the parties. However after review of the Written Submissions the Commission did not believe that it was warranted to convene an oral session.

PART FOUR - PUBLIC PARTICIPATION IN THE MOTION

27. The Commission published a Notice on May 29, 2013 advising members of the public that it was commencing a Motion to Review and vary the FCA. The Notice also invited intervention by interested members of the public no later than June 07, 2013.
28. The Commission received letters of intervention from six (6) persons. However, only four (4) persons were granted intervenor status, as two (2) of the letters of intervention did not meet the criteria to become an intervenor primarily because the issues being raised by these persons were not matters identified to be dealt with in this Motion.
29. The intervenors that actively participated in the Motion to Review the FCA were as follows:-
 - (1) The BL&P;
 - (2) Mr. Anthony Gibbs;
 - (3) CARITEL; and
 - (4) Mr. Erskine Durant.
30. Pursuant to Rule 4 of the URPR, the parties were issued with Procedural Directions. The Procedural Directions guided the parties on the procedural elements of the hearing and prescribed timelines for the completion of various activities to be completed throughout the Motion.
31. All intervenors were invited to submit either a sworn Affidavit or Written Submissions to the Commission expressing their views on the issues raised within the Motion. Intervenors were also permitted to request the production of documents from each other or from the Commission and to file interrogatories.

Affidavits & Written Submissions

32. The Commission received Written Submissions from Mr. Anthony Gibbs, CARITEL and the BL&P. The BL&P also filed an Affidavit from Mr. Stephen Worme, Chief Operating Officer of the BL&P on the calculation of the FCA and the issues raised within the Motion.
33. No Written Submissions were received from Mr. Erskine Durant.
34. All Written Submissions received were circulated among the parties and the parties were given an opportunity to respond to each other's submissions.
35. A response from the BL&P to Mr. Anthony Gibbs' Written Submissions was received and circulated to all parties.

Request for Production of Documents and Interrogatories

36. Both Mr. Anthony Gibbs and Mr. Erskine Durant made requests for information from and served interrogatories on the BL&P. The BL&P responded to both requests and the information was forwarded to the relevant intervenors. This information was also circulated to all other parties.
37. Further, the BL&P served interrogatories on the Commission seeking clarification on certain matters arising in the FCA Motion. The Commission responded to these interrogatories and forwarded the response to the BL&P. The Commission shared its response with the other intervenors.
38. The Commission thanks the intervenors for their contribution.

PART FIVE - SYNOPSIS OF THE WRITTEN SUBMISSIONS AND AFFIDAVIT

The BL&P

39. The BL&P in both its Affidavit and Written Submissions expressed the view that the current FCA formula continues to work well and believes that the existing formula is transparent and is easily and clearly auditable.
40. The BL&P at the time of filing its submissions was unclear whether the formula which is being proposed by the Commission includes the balance being carried forward. Further, the BL&P also wished to be reassured that the process of smoothing, which currently takes into account certain projections, will continue to be allowed so as to minimise the variation of the FCA and by extension the impact on customers' bills from one month to the next.
41. Notwithstanding its view that the present formula works well and is transparent, the BL&P has expressed that once the proposed formula includes the balance carried forward and the process of smoothing will be permitted to continue, then in accordance with the Affidavit of Mr. Stephen Worme and the Written Submissions, the BL&P has no objections to the formula being proposed by the Commission.

CARITEL

42. CARITEL stated in its Written Submissions that it supports the Commission's proposals as set down in the Motion with regard to employing the use of historic fuel costs to determine the FCA.
43. CARITEL further stated that the use of historic costs will re-enforce the Commission's duty to uphold transparency and safeguard the interest of consumers. CARITEL also agrees with the recommendation by the Commission that smoothing should continue to be used as a tool by the BL&P to minimise the monthly variation of the FCA. CARITEL has also expressed its support for enhanced reporting in the instances when the BL&P employs smoothing.

44. CARITEL expressed support for the submissions made by fellow intervenor Mr. Anthony Gibbs. CARITEL stated *"We have read Mr. Gibbs' analysis and proposal on both matters under consideration and believe them to have considerable merit. The analysis and suggestions are related to the specific points at hand."*

MR. ANTHONY GIBBS

45. Within his Written Submissions, Mr. Gibbs not only dealt with the two (2) issues which are central to the Motion but he also raised other issues in relation to the BL&P's Renewable Energy Rider (RER), the BL&P's Integrated Resource Plan (IRP) and other issues raised in the Commission's FCA Findings Report such as enhanced reporting and verification of the FCA. He also examined the issue of monthly meter reading and the associated increased costs linked to this activity.
46. It is acknowledged that some of these issues may be co-mingled into the issue of determining the FCA and may raise concerns that the Commission will have to ultimately consider. However, for the purpose of this Motion, Mr. Gibbs' Submissions were analysed based on the two (2) issues being determined within the Motion.
47. Mr. Gibbs was of the view that although the Commission's proposed method based on actual generation will easily be determined, it *"does not however reflect actual monthly energy sales, since it is a derived quantity ..."* The latter, he considered, could only be determined from meter readings.
48. Mr. Gibbs also noted that the Commission's proposed approach to calculating the FCA *"ignores the importance of Renewable Energy in the national energy landscape"* and he was of the view that developments in the sector will see the involvement of domestic rate-paying generators and independent power producers which *"begs for a new approach for calculating the FCA to incorporate this purchased power."*

49. Further, in relation to the technique of smoothing, he believes that this process "*lacks transparency*". Mr. Gibbs raised a number of concerns with the Commission's proposals within the Motion and explored alternative proposals of his own which he believes that the Commission should consider including the use of hedging and price bands.

PART SIX - ANALYSIS OF THE ISSUES

50. In examining the parties' submissions, the Commission identified the following issues.

Issue 1: Cumulative Under/Over Recovery Brought from the Previous Month

51. The first issue which concerns the BL&P is whether the Commission's proposed formula includes the cumulative under/over recovery brought forward from the previous month.

Commission's Analysis

52. The Commission is aware that by including this balance brought forward in the FCA formula this would allow for the BL&P to minimise the variation of the FCA through the use of smoothing.

53. Paragraph 16 of the Commission's Motion to Review the FCA states that:-

"Fuel cost_{n-1} will include adjustments for any over/under recovery from the previous month. It is possible that the fuel revenue recovered from the FCA may be different from the actual fuel cost of the previous month. This may be due to monthly variations in electricity sales which will affect the revenue recovered from the FCA. It is therefore important to note that any under or over recovery would be added to the fuel cost incurred in the current month when the calculation of the FCA is undertaken for the next month."

Commission's Decision

54. **The Commission determines that the fuel cost_{n-1} in the new formula for calculating the FCA will include the adjustments for any cumulative under/over recovery from the previous month.**

Issue 2: Smoothing

55. In relation to the issue of smoothing, it must be determined whether the BL&P will be permitted to continue to smooth the FCA in the same manner that it now smoothes, which takes into account certain projections.

Commission's Analysis

56. Smoothing is a technique that is used by the BL&P to reduce the impact on customers of significant fluctuations in the FCA from one month to the next. After calculating the FCA from the current month, if there is a significant difference from the previous month the BL&P applies the smoothing technique resulting in an adjusted FCA which is applied to customer's bills.
57. The Commission advises that the two FCA audits conducted on behalf of the Commission during 2006 and 2012 by the Commission's consultants found that, notwithstanding the use of smoothing, there was no evidence of any significant under or over recovery of fuel cost by the BL&P.
58. The Commission continues to hold the view that without smoothing, the customer will be exposed to the full volatility of prices in the fuel market. The Commission believes that smoothing carries with it benefits to customers. This notwithstanding, the Commission reiterates its desire to have more robust oversight of the smoothing process by enhanced reporting.

Commission's Decision

59. **The Commission determines that the BL&P will be permitted to employ the smoothing technique at its discretion and when warranted. The Commission believes that the BL&P should determine how to smooth the FCA, as this will reduce the impact on customers of significant fluctuations in the FCA from one month to the next.**

The Commission however determines that enhanced reporting to the Commission on how the FCA is smoothed is required. The BL&P shall

advise whether and to what extent the FCA was smoothed. The BL&P shall also advise the Commission on all the factors that were taken into account to determine the “smoothed” FCA.

Issue 3: Actual Sales

60. The issue of the actual generation not reflecting actual monthly energy sales was raised since it is a derived quantity which is determined by netting out system and internal losses from gross generation. The view was held that these losses can only be truly determined when customers’ meters are read.

Commission Analysis

61. Customers’ meters are read every other month. However, the BL&P does not read every meter on the last day of the month. This means that actual sales in a particular month cannot be easily and accurately measured.
62. There will always be discrepancies between monthly bill sales which are used to derive projected sales in the existing FCA and the actual sales in a calendar month which the new formula seeks to represent. This is compounded by the fact that half of the bills issued to domestic service customers are interim bills and so do not give an account of actual energy sales.
63. The Commission is satisfied that the records on generation output and auxiliary consumption are available and more auditable. Further, although the losses involve some degree of estimation, the value of the losses is relatively small (6%-7%) and so this factor would have a relatively small impact on the FCA.

Commission’s Decision

64. **The Commission determines that the denominator in the new formula will continue to be Energy Generation_{n-1}.(1 - Aux_{n-1}). (1 - losses) as given in the formula.**

$$FCA_n = \frac{FuelCost_{n-1}}{EnergyGeneration_{n-1} \cdot (1 - Aux_{n-1}) \cdot (1 - losses)} \left[\frac{BDS}{kWh} \right]$$

Issue 4: Purchased Power

65. The issue of purchased power was raised whereby it was noted that renewable energy purchased by the BL&P will soon constitute a “non-trivial variable cost, akin to that of diesel and heavy fuel oil which it avoids. And like the fuel it replaces, this variable cost has to be fully passed through, free of margins, to customers by way of the FCA.”
66. The view was expressed that what constitutes energy generation and energy sales now has to be defined in a broader sense and reflected in the calculation of the FCA.

Commission’s Analysis

67. The Commission acknowledges the issue raised as a valid one. The Commission however confirms that the existing methodology for calculating the FCA for any particular month includes the cost of energy purchased under the Renewable Energy Rider Programme within the total cost of fuel.

Commission’s Decision

68. **For the purpose of transparency, the Commission determines that the BL&P, in its monthly and quarterly reports, shall clearly show how the RER credits are included in the calculation of the FCA. In relation to other purchased power from third party sources the regime for this is yet to be established.**

Issue 5 – Price Bands and Hedging Strategies

69. The use of price bands and max-min rules were other approaches that were placed before the Commission for consideration as an alternative to smoothing. A view was held by an intervenor that these are more effective than moving averages in mitigating price volatility but it was acknowledged

that these approaches would present a higher risk to cash flows and may lead to substantial under or over recovery which might be inappropriate.

70. The Commission was also asked to consider another approach - a hedging strategy. This would involve option contracts that lock in a future price of fuel and thereby avoid the BL&P having to bear the risk of short term fluctuations in spot market prices upon which Barbados National Oil Company Limited's (BNOCL) wholesale prices are determined and that "*the option contracts will define a min-max band determined by market forces and within which the FCA would fluctuate.*"

Commission Analysis

71. The Commission noted that the BL&P indicated that the hedging strategy as proposed is not presently possible under the Company's current contractual arrangement that governs the procurement of heavy fuel oil from the BNOCL.
72. In the Commission's April 2013 FCA Findings Report it advised of the difficulty in setting specific criteria for smoothing the FCA and concluded that monthly FCA variations cannot be readily capped to the benefit of customers whilst simultaneously minimising the cumulative under/over recovery of fuel cost to the benefit of the BL&P.

Commission's Decision

73. **The Commission determined that price-bands should not be applied. While this option could offer some protection to customers from fuel price volatility, the BL&P could be highly exposed to financial risks through significant under recovery. The Commission advises that hedging is not currently available and so is not an option for consideration.**

PART SEVEN - COMMISSION RULING

74. The Commission determines that:

- The FCA will be calculated using historic costs instead of projected fuel costs.

The new formula will be

$$FCA_n = \frac{\text{FuelCost}_{n-1}}{\text{EnergyGeneration}_{n-1} \cdot (1 - \text{Aux}_{n-1}) \cdot (1 - \text{losses})} \left[\frac{\text{BD\$}}{\text{kWh}} \right]$$

Where

- *FCA_n factor will be applied to electricity bills in month n;*
 - *Energy generation (kWh) is metered at the power plant;*
 - *Fuel costs (BD\$) is based on consumption and price of fuel in the previous period/month;*
 - *Auxiliary consumption (% of total generation) is the quantum of energy consumed by auxiliary equipment of the generating unit/s and transformer losses within the generating station, expressed as a percentage of gross energy generated; and*
 - *System losses (as a % of net energy produced) are based on a 12 month running average which is the difference between net energy produced (which is the energy produced by power plants less the auxiliaries) and energy sold to end customers over the 12 month period as a percentage of net energy produced.*
- The fuel cost_{n-1} in this formula for calculating the FCA will include the adjustments for any cumulative under/over recovery from the previous month.
 - The Commission determines that the BL&P will be permitted to employ the smoothing technique at its discretion and when warranted.
 - The BL&P in its monthly reporting shall advise whether and to what extent the FCA was smoothed. The BL&P shall also advise the Commission on all the factors that were taken into account to determine the “smoothed” FCA.

- **The BL&P, in its monthly and quarterly reports, shall provide information to show how the RER credits are included in the calculation of the FCA.**

Dated this 11th day of October 2013

Original Signed by

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Neville V. Nicholls
Chairman

Original Signed by

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Gregory F.M. Hazzard
Commissioner

Original Signed by

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Andrew F. Brathwaite
Commissioner

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Andrew W. Willoughby
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FAIR TRADING COMMISSION

BARBADOS

FTCUR/REVFCA-2013-01

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AND IN THE MATTER of the Motion to Review the Fuel Clause Adjustment pursuant to Section 16 of the Utilities Regulation Act, CAP.282 of the Laws of Barbados.

BEFORE:

Sir Neville Nicholls
Mr. Gregory Hazzard
Mr. Andrew Brathwaite
Mr. Andrew Willoughby
Dr. Philmore Alleyne

Chairman
Commissioner
Commissioner
Commissioner
Commissioner

ORDER

UPON READING the Written Submissions of the Intervenors, the Barbados Light & Power Company Limited (BL&P), Mr. Anthony Gibbs and CARITEL;

AND UPON READING the Affidavit of Mr. Stephen Worme of the Barbados Light & Power Company Limited

IT IS HEREBY ORDERED AS FOLLOWS THAT:-

1. The FCA will be calculated using historic costs instead of projected fuel costs.

2. The new formula will be

$$i. FCA_n = \frac{FuelCost_{n-1}}{EnergyGeneration_{n-1} \cdot (1 - Aux_{n-1}) \cdot (1 - losses)} \left[\frac{BD\$}{kWh} \right]$$

3. The fuel cost_{n-1} in this formula for calculating the FCA will include the adjustments for any cumulative under/over recovery from the previous month.

4. The Commission determines that the BL&P will be permitted to employ the smoothing technique at its discretion and when warranted.

5. The BL&P in its monthly reporting shall advise whether and to what extent the FCA was smoothed. The BL&P shall also advise the Commission on all the factors that were taken into account to determine the "smoothed" FCA.

6. The BL&P, in its monthly and quarterly reports, shall provide information to show how the RER credits are included in the calculation of the FCA.

Dated this 11th day of October 2013

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Neville V. Nicholls
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