



# FAIR TRADING COMMISSION

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BARBADOS

No. 1 of 2009

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

**IN THE MATTER** of the Utilities Regulation (Procedural) Rules, 2003;

**AND IN THE MATTER** of the Application by the Barbados Light & Power Company Limited for approval of the Depreciation Policy;

**APPLICANT**

The Barbados Light & Power Company Limited

**INTERVENORS**

Barbados Association of Non-Governmental Organisations

Olson Robertson

**BEFORE:**

Sir Neville Nicholls  
Mr. Floyd Phillips  
Mr. Michael Thompson  
Mr. Delisle Weekes  
Mr. Andrew Brathwaite

Chairman  
Commissioner  
Commissioner  
Commissioner  
Commissioner

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**DECISION**

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## **PART ONE - EXECUTIVE SUMMARY**

The Barbados Light & Power Company Limited “the Applicant” in its application dated November 10, 2008 and which was modified by letter dated January 20, 2009 set out an application seeking approval of its Depreciation Policy. The specific nature of the Order applied for by the Applicant read:

- “(a) the Applicant seeks regulatory approval of the capital balances, remaining lives and depreciation rates as shown in Exhibit A of the Depreciation Study prepared by Mr. Peter Huck of American Appraisal Associates Inc. so that the depreciation policies and rates used by the Applicant for regulatory accounting purposes are the same as those rates used for financial accounting purposes.*
- (b) Accordingly, the Applicant hereby requests that the Fair Trading Commission approve the capital balances, remaining lives and depreciation rates in columns ‘A’, ‘B’ and ‘C’ as noted in the accompanying spreadsheet prepared by the Applicant based on pages 1 and 2 of Exhibit A of the Depreciation Study.” This is attached as Schedule 1 of this Decision.*

The Application was accompanied by the Affidavits of Mr. Hutson Best, Mr. Mark King and Mr. Peter Huck and the Depreciation Rate Study dated December 2006 prepared by Mr. Peter Huck of American Appraisal Associates Inc. hereinafter referred to as the “2006 Depreciation Study”.

The evidence consisted of sworn Affidavits which were cross-examined along with additional evidence entered by way of information filings in response to information requests. The Commission determined this decision based on the evidence presented and on a deliberation of the issues agreed to prior to the

hearing which included, among other things, consideration of the elements of computing depreciation, examination of the techniques and methodologies used in the 2006 Depreciation Study and examination of factors affecting the stability of the depreciation rates.

In considering the evidence and analysing the case the Commission agrees with the principle that depreciation should recover the capital cost of investment in assets over their useful life. During the course of its deliberation the Commission recognised that in the schedule of the Applicant's application dated December 31, 2008 which detailed the computation of the depreciation expense for 2007 based on rates approved by the Public Utilities Board (PUB), the calculation did not include the estimated costs of retirement/salvage. It may be argued that the depreciation expense as computed in this schedule is therefore understated when compared with the Applicant's other schedule that was based on the proposed depreciation rates.

The Commission believes that the remaining life technique yields depreciation rates that are appropriate and would ensure that the depreciation expense computed for the test year is fair and reasonable. The Commission has therefore determined that the use of the remaining life method in the 2006 Depreciation Study provided depreciation rates that will lead to the Applicant's timely recovery of capital cost over the useful economic life of its assets.

The Commission is of the view that the financial information submitted by the Applicant to substantiate this Application and which was relied upon to prepare the 2006 Depreciation Study appears reliable. It, for the most part provided a sufficient degree of information on the depreciation of the Applicant's assets. The Commission believes that the way the 2006 Depreciation Study is presented is reasonable and comparable to other depreciation studies done by Canadian

International Power Services Inc. "CIP" in September 1989, Stone and Webster Consultants Inc. in November 1996 and E. Wotring Associates Inc. in December 2002.

The Commission therefore approves the Application for approval of the Depreciation Policy of the Barbados Light & Power Company Limited pursuant to Section 16 of the Utilities Regulation Act, CAP 282 of the Laws of Barbados.

The Policy using the straight-line method, remaining life technique and historic cost valuation is approved. Further, the capital balances, remaining lives and depreciation rates arising from the policy and set out at Schedule 1 of this Decision are also approved.

The approval of the depreciation rates proposed by the Applicant does not remove the authority from the Commission to set rates.

At all times the Applicant is required to apply to the Commission if it requires a change in the depreciation rates for regulatory reporting purposes. While the Applicant may at a later date choose to use different depreciation rates for its financial reporting, the depreciation rates to be used for regulatory reporting will be as determined in this Decision unless there is Commission approval of the change.

The Applicant shall submit to the Commission regulatory reports on an annual basis to show the regulatory financial results reflecting the depreciation rates that have been determined in this Decision. The content and format of these reports will be discussed and finalised with the Applicant.

The Commission in making its decision considers that the Intervenors' contribution has assisted the Commission.

Further details of the Commission's reasoning may be found in the body of this Decision.

## PART TWO - BACKGROUND

### THE APPLICATION

1. The Applicant made its application to the Fair Trading Commission “the Commission” by letter dated November 10, 2008 under Section 16 of the Utilities Regulation Act, CAP 282 of the Laws of Barbados seeking approval of a depreciation policy that results in a convergence of the depreciation policy used for regulatory purposes and setting electricity prices and that used for financial reporting purposes.
2. By said letter, the specific nature of the Order applied for by the Applicant is as follows:-

*“ (a) The Applicant seeks regulatory approval of the capital balances, remaining lives and depreciation rates as shown in Exhibit A of the 2006 Depreciation Study. If the depreciation rates are approved as requested, the depreciation policy used for regulatory purposes and that used for financial reporting purposes will be the same;*

*(b) Accordingly, the Applicant hereby requests that the Fair Trading Commission adopt the depreciation rates which the Applicant uses for financial reporting purposes and which themselves have been based on depreciation studies prepared by independent consultants retained by the Applicant and that the Applicant be allowed to continue to calculate its depreciation rates using the remaining life method.”*

3. On a clarification sought by the Commission during the Issues Conference on January 16, 2009, the nature of the Order applied for by the Applicant was modified by letter dated January 20, 2009 to read:

- “(a) *the Applicant seeks regulatory approval of the capital balances, remaining lives and depreciation rates as shown in Exhibit A of the Depreciation Study prepared by Mr. Peter Huck of American Appraisal Associates Inc. so that the depreciation policies and rates used by the Applicant for regulatory accounting purposes are the same as those rates used for financial accounting purposes;*
- (b) *accordingly, the Applicant hereby requests that the Fair Trading Commission approve the capital balances, remaining lives and depreciation rates in columns ‘A’, ‘B’ and ‘C’ as noted in the accompanying spreadsheet prepared by the Applicant based on pages 1 and 2 of Exhibit A of the Depreciation Study.” This is attached as Schedule 1 of this Decision.*
4. The Application was also accompanied by the Affidavits of Mr. Hutson Best, Mr. Mark King and Mr. Peter Huck as well as the 2006 Depreciation Study.

#### **THE NATURE OF DEPRECIATION**

5. When setting depreciation rates a regulator must always be conscious of the interest of both the service provider and the consumer thus ensuring that the service provider is afforded an adequate return on investment to sustain its business and that the consumer receives service at a reasonable rate. In the landmark case of *Lindheimer v. Illinois Bell Telephone Company* 292 U.S. 151 (1934) depreciation is defined as:

*“...the loss, not restored by current maintenance, which is due to all the factors causing the ultimate retirement of the property. These factors*

*embrace wear and tear, decay, inadequacy and obsolescence. Annual depreciation is loss which takes place in a year."*

6. The Commission recognises that the determination of depreciation rates is a critical process. This is underscored by the National Association of Regulatory Utility Commissioners "NARUC" in its text "**Public Utility Depreciation Practices**" August 1996 at page 22:

*"Prescribing depreciation rates is one of the most important regulatory Commission activities impacting customer rates. The estimation of depreciation parameters is not, of course, a scientifically exact process, since it involves a large element of informed judgment. At the same time it cannot be an arbitrary figure selected for convenience because it must allocate the full cost over the life of the property in a rational manner. The depreciation rate is a calculated figure and there is a zone of reasonableness within which the underlying parameters may be expected to lie.*

*It is essential to remember that depreciation is intended only for the purpose of recording the periodic allocation of cost in a manner properly related to the useful life of the plant. It is not intended for example to achieve a desired financial objective or to fund modernization programs."*

7. The Commission is guided by the foregoing and remains cognisant that in setting depreciation rates it must look at a number of factors including obsolescence, technological changes, wear and tear and other relevant contingent factors and assess their impact on the remaining lives of a particular asset or asset group.

THE PROCEEDINGS - NOTICES, DIRECTIONS, ORDERS AND CONFERENCES

8. By letter dated October 21, 2008, the Commission granted the Applicant's request to determine the issue of depreciation prior to a rate review application. Following such, the Commission published a notice advising members of the public of the receipt of the Application whereby the Applicant applied for approval of its Depreciation Policy.
9. By letters of intervention dated December 17, 2008 and January 8, 2009, the Barbados Association of Non Governmental Organisations (BANGO) and Mr. Olson Robertson applied for and were granted intervenor status pursuant to Rule 64 of the Utilities Regulation (Procedural) Rules 2003.
10. On January 6, 2009 BANGO filed an Affidavit by Mr. Douglas Skeete in support of its Submissions. Mr. Olson Robertson did not file any Affidavits in support of his intervention.
11. Pursuant to Rule 4 of the Utilities Regulation (Procedural) Rules, 2003, the Commission issued Procedural Directions No.1 on November 19, 2008 inviting all parties to participate in a Procedural Conference on December 30, 2008 to assist in enhancing the parties' familiarity with the process and to set timelines for various activities. Arising out of the Conference, the Commission issued Procedural Order No.1 on January 7, 2009.
12. By Procedural Directions No.2 dated January 9, 2009, parties were invited to attend an Issues Conference on January 16, 2009 to identify issues that would be considered in the depreciation proceedings. Following the Issues Conference, the parties agreed and the Commission determined

and ordered by Procedural Order No.2 dated January 20, 2009 that the issues to be considered and determined at the depreciation hearing would be:

1. Elements for computing the depreciation
    - (a) The method used for calculating depreciation rates - remaining life, whole life (average service life);
    - (b) The depreciation rates - new rates are proposed for all of the assets.
    - (c) Expected residual value or net salvage value of assets.
  2. Capital recovery of cost over the useful lives of assets.
  3. Presentation of the 2006 Depreciation Study and confidence in the techniques used by the BL&P consultant to derive the new asset lives.
  4. The stability of new depreciation rates.
  5. Treatment of difference in values of asset categories that result from the use of the depreciation rates based on depreciation studies since 1983 and applied in financial reporting instead of the depreciation rates set by the PUB.
  6. Reasons for convergence of depreciation rates for regulatory reporting with those used for financial reporting.
13. On January 18, 2009 a Public Notice was published in the local newspapers and on the Commission's website advertising the

Depreciation Hearing which was convened from January 27, 2009 to January 30, 2009 from 9:30a.m. to 1:00p.m. each day.

14. At the hearing all of the parties made Opening Submissions. Following this, the Applicant called its three witnesses, Mr. Hutson Best, Mr. Mark King and Mr. Peter Huck. The Commission had accepted Mr. Huck as the Applicant's expert witness. The witnesses were cross-examined by the Intervenors, the Commissioners and the Commission's staff. Mr. Douglas Skeete was not cross-examined on his Affidavit.
15. All parties delivered Closing Submissions at the end of the proceedings which gave a summary of their arguments.
16. The Applicant was represented throughout the hearing by Sir Henry de B Forde, Q.C., Attorney-at-Law and Ms. Tanya Goddard, Attorney-at-Law in association with Mr. Ramon Alleyne, Attorney-at-Law, Mrs. Debbie Fraser, Attorney-at-Law and Ms. Nicola Berry, Attorney-at-Law of the firm Clarke Gittens and Farmer.
17. BANGO was represented by Mr. Roosevelt King, Consumer Advocate/Secretary General of BANGO, Mr. Douglas Skeete, Chartered Accountant and Mr. Chris Halsall, Telecommunications Consultant. Mr. Olson Robertson, Management and Financial Consultant, appeared on his own behalf.
18. The Commission was assisted at the hearing by Ms. Peggy Griffith, Chief Executive Officer, Mrs. Sandra Sealy, Director of Utility Regulation, Mrs. Kim Griffith-Tang How, General Legal Counsel/Commission Secretary, Miss Dava Leslie, Senior Legal Officer (Ag), Mrs. Susanna Cooper-Corbin,

Financial Analyst, Miss Marisha Walcott, Research/Administrative Assistant and Miss Heather Waithe, Documentalist as well as Mr. Carlyle Forde who acted as a Financial Consultant to the Commission, other key Commission staff and Consultants.

### **THE EVIDENCE**

19. As aforementioned, the evidence consisted of sworn Affidavit evidence which was cross-examined along with additional evidence entered by way of information filings in response to information requests. The Commission has considered all the evidence before it in making its decision on the Application.

### **STATUTORY POWERS AND RESPONSIBILITIES**

20. The Commission is a statutory body established by the Fair Trading Commission Act, CAP 326B of the Laws of Barbados whose functions are *inter alia* to administer the Utilities Regulation Act and the Utilities Regulation (Procedural) Rules, 2003. Therefore, the provisions of the Utilities Regulation Act and the Utilities Regulation (Procedural) Rules, 2003 governed the depreciation hearing. The application was made by the Applicant to the Commission pursuant to Section 16 of the Utilities Regulation Act and the Utilities Regulation (Procedural) Rules, 2003.

21. By virtue of Section 5 of the Fair Trading Commission Act, the Commission exercised its power to sit, hear and determine applications of this nature.

22. The pre-hearing process and procedures were also governed by the Utilities Regulation (Procedural) Rules, 2003. Rule 4 enables the Commission to issue procedural directions which govern the conduct of

proceedings. The various conferences held to facilitate the parties' involvement in the process were convened by virtue of Rule 34 and 35 of the Utilities Regulation (Procedural) Rules, 2003.

23. The Commission also exercised its powers pursuant to Rule 19 of the Utilities Regulation (Procedural) Rules, 2003 to hear expert witnesses during the hearing.

### **BURDEN & STANDARD OF PROOF**

24. In order for the Commission to grant the relief that the Applicant is seeking in their application, the burden and the standard of proof required to be met under the law must be discharged. Section 14 of the Utilities Regulation Act places the burden of proof on the Applicant to show that the proposed depreciation rates are fair and reasonable and in accordance with the principles established by the Commission. Furthermore, the hearing before the Commission is akin to a civil proceeding in a Court of Law. Therefore, the standard of proof in this instance would be the same as a civil proceeding in a Court of Law.

25. Section 133 (1) of the Evidence Act, CAP 121 of the Laws of Barbados provides that:

*"In a civil proceeding, the Court shall find the case of a party proved if it is satisfied that the case has been proved on the balance of probabilities."*

Therefore the Commission must be satisfied that the Applicant's case has been proved on a balance of probabilities.

### PART THREE - REASONS FOR DECISION

26. The PUB set out the depreciation rates used and the computation of the depreciation expense for regulatory purposes in respect of the property, plant and equipment of the Applicant in Schedule 3 of its Decision dated May 12, 1983. The method used was the straight line method of depreciation applied to the historical cost of the assets and the narrative used suggests that the average service life technique was used. The depreciation rates as determined by the PUB are found in Table 1 below.

Table 1

**The Barbados Light & Power Co. Ltd.**

Depreciation Schedule

1982/83 Rate Case

	<b>Depreciation Rates %</b>
<b><u>Production Plant</u></b>	
Steam Plant Building A & B	2.5
Steam Plant Building Units 1&2 Spring Gdn	4.0
Steam Plant A. Equipment	4.0
Steam Plant B. Equipment	4.0
Steam Plant Equipment Equipment Sp. Gdn.	4.0
Natural Gas Ignition	5.3
Diesel Plant Building	5.0
"    "    Equipment - Garrison	6.0
"    "    Equipment - G M's Garrison	6.0
"    "    Equipment - G Ms Sp. Gdn.	6.0
"    "    Equipment -Mirrlees Sp.Gdn.	6.0
Gas Turbine	4.0
Fuel Tanks	6.0
Diesel Plant 3.5 kw Spring Garden	10.0
Low Speed Diesel Plant - Building	6.0
Low Speed Diesel Plant - Equipment	6.0

## Table 1 cont'd

### The Barbados Light & Power Co. Ltd.

Depreciation Schedule

1982/83 Rate Case

	<b>Depreciation Rates %</b>
<b><u>Distribution Plant</u></b>	
Substation Buildings	5.0
Substation Equipment	4.0
Poles and Accessories	4.0
Overhead Conductors	4.0
Underground Cable	4.0
Transformers	4.0
Services and Street Lighting	4.0
Meters and Meter Facilities	4.0
<b><u>General Property</u></b>	
Buildings	5.0
Furniture & Misc. Equipment	10.0
Transportation Equipment	25.0

27. The Applicant has requested the Commission to “approve the capital balances, remaining lives and depreciation rates...” determined as a result of the most recent Depreciation Rate Study as of December 31, 2006 by Mr. Peter Huck of American Appraisal Associates Inc. This 2006 Depreciation Study uses the straight line method and the remaining life technique.
28. The Commission determined that the decision would be based on six (6) issues which were addressed during the hearing of the Applicant’s request. These issues are considered below and follow the order set out at paragraph 12 of this Decision.

## **1. Elements for Computing Depreciation**

### **(a) The method used for calculating depreciation rates – remaining life, whole life (average service life)**

29. The Applicant proposed continued use of the straight line method for calculating depreciation rates. Additionally the Applicant has proposed using the remaining life technique/method to allocate the depreciation expense over the useful life of the assets.
30. Using the straight line method of depreciation, the annual expense is calculated by amortising the depreciable amount (historical cost or the valuation of an asset, adjusted for the future amount of net salvage or cost of removal) over the estimated useful life of the asset. With the straight line depreciation method the depreciable amount of an asset is simply divided by the estimated useful life of the asset to give the depreciation expense. The depreciation expense is then expressed as a proportion of the historical cost in order to determine the annual depreciation rate.
31. A variety of depreciation techniques such as the whole life or average service life technique or the remaining life technique can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life.

#### **Whole Life or Average Service Life Technique**

32. When using the whole life or average service life technique it is assumed that assets will be retired or disposed of after a specific average life and that the future amount of net salvage or cost of removal is known at the time that the depreciation rate is determined. No further adjustment is made to the depreciation rate during the life of the asset. Employing this

technique, the annual depreciation expense is allocated evenly over the estimated average life of the asset. The same depreciation rate remains in place throughout the life of the asset.

### **Remaining Life Technique**

33. When the remaining life technique is used, the estimated life of the asset and the future amount of net salvage or cost of removal of the asset are determined when the asset is put into use. There is periodic review of the estimated remaining life and net salvage or cost of removal of the asset. As a result of the review, if it is determined that the original estimated useful life of the asset and/or the net salvage or removal cost are different from the original estimates, the annual depreciation expense would be amended to ensure that the amended depreciable amount is allocated evenly over the remaining life of the asset. The computed depreciation expense would be expressed as a proportion of the historical cost of the asset and a new rate of depreciation is likely to result.

### **Intervenors' Position**

34. Mr. Skeete in his cross-examination of Mr. Peter Huck noted that the Applicant has continued to use the straight line method of depreciation since the PUB decision of 1983. He queried whether the Applicant had considered using the units of production method which results in a charge based on the expected use or output in developing a depreciation policy for the Applicant. Mr. Huck indicated that this method was hardly ever used in the energy industry in the USA and Mr. Skeete did not pursue the matter.

## Commission's Findings

35. The straight line depreciation method was used by the PUB and the 2006 Depreciation Study and was accepted by the Commission.
36. In deciding whether to approve the use of the remaining life technique for computing the depreciation expense the Commission considered several definitions of depreciation. These include the Federal Energy Regulatory Commission's (FERC); National Association of Regulatory Commissioners' (NARUC) and the definition in the International Accounting Standard No. 16 (IAS 16).
37. IAS 16 indicates that the depreciation method used for Property, Plant and Equipment<sup>1</sup> "shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity" and shall be reviewed annually. If there has been a significant change in the expected pattern of consumption the method should be changed to reflect this so as to allocate the depreciable amount of an asset on a systematic basis over its useful life. These depreciation methods include straight line, diminishing balance and units of production methods. The entity should select the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. The method should be "applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits."
38. The Units of Production method suggested by Mr. Skeete and referred to above ties the rate of depreciation to the assets' lifetime capacity to work. These units can be measured in a number of ways depending on the asset, for example in the case of a generator it would be hours used. In this

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<sup>1</sup> IAS 16 paragraphs 16.60, 16.61 and 16.62

method, depreciation has nothing to do with the asset's age. Rather, the more the asset is used, the more it depreciates. The units of production method therefore results in a charge based on the expected use or output.

39. The PUB utilised the average service life technique when it approved depreciation rates in 1983. The Applicant's requested approval of the use of the remaining life technique was queried by the Intervenors, however there was no compelling evidence indicating that the remaining life technique would be inappropriate or would yield results which would be unsatisfactory or misleading.

The remaining life technique uses reasonably recent information in respect of estimated life and net salvage value. As a method of computing the future depreciation expense, the remaining life technique will yield more accurate results because of the need to review the estimated life and net salvage costs during the life of the asset. The Applicant engaged experts in the past to review and determine these two elements.

**(b) The depreciation rates – new rates are proposed for all of the assets**

40. The Applicant is requesting a change in the depreciation rates of several categories of assets. These rates were last approved by the PUB in the 1983 rate hearing. Due to technological and other changes, asset lives have been reviewed in subsequent depreciation studies undertaken by the Applicant. Since depreciation methods and rates allocate capital expenditure over the estimated life of the asset, review of the useful lives is necessary and in accordance with IAS 16 to reflect the expected pattern of consumption of those future economic benefits. Once the estimated remaining life and net salvage value or removal cost change, this would

result in a change in the depreciation rates. Under the average service life method, where the rate is fixed, the asset life does not change.

### **Intervenors' Position**

41. Mr. Olson Robertson, in his closing argument queried the "remaining useful lives method" citing Table 1 of Mr. Best's Affidavit as it relates to transmission and distribution category of assets. He cited the fact that the PUB approved lives for Transmission and Distribution were 25 years whereas the Applicant is recommending 13 to 32 years. He considered that since in Mr. King's Affidavit there is a replacement programme with stainless steel transformers, he would expect the useful life to be closer to the 32 years and not Mr. Huck's recommended 22 years.

### **Commission's Findings**

42. Since the PUB rate hearing of 1983 the Applicant has retained experts to undertake periodic depreciation studies. The available reports from Canadian International Power Services Inc. "CIP" in September 1989, Stone & Webster Consultants, Inc. in November 1996, E. Wotring Associates Inc. in December 2002 and American Appraisal in December 2006 have been reviewed.

43. The Commission has examined the evidence submitted and the recommended depreciation rates for transformers based on these studies were as follows:

PUB (1983)	CIP (1989)	Stone and Webster (1996)	Wotring (2002)	American Appraisal (2006 Depreciation Study)
4%	4.4%	4.51%	7.17%	4.92%

44. The Commission notes that the scientific basis of the PUB's (1983) rates was not confirmed but recognises the decrease in the depreciation rate from 7.17% in the Wotring 2002 study to 4.92% in the 2006 Depreciation Study. This supports the Applicant's claim that increasing use of stainless steel transformers, which have a longer physical life, will result in a lower depreciation rate. Further Mr. Huck confirmed that the service life of the transformer asset category based on his study increased from 20 to 22 years.

45. It is not unreasonable to expect that rates of depreciation may change as additional information on the life span and net salvage value becomes available.

46. The Commission is of the view that based on the 2006 Depreciation Study presented by Mr. Huck, the Applicant's expert witness, due consideration was given to the methods used in determining asset lives and that the lives as presented in the study are reasonable and should be accepted.

**c) Expected residual value or net salvage value of assets**

47. The Applicant referred to the IAS 16 for guidance on the residual value which is the estimated amount that an entity would obtain from disposal

of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life. Such cost of an item of Property, Plant and Equipment includes the cost of its dismantlement, removal or restoration; the obligation an entity incurs as a consequence of installing the item. It is possible to have a negative net residual or salvage value indicating that net costs will be incurred in retiring the asset.

### **Intervenors' Position**

48. The Intervenors did not dispute that salvage values should be included in the calculation of depreciation but BANGO raised concerns about the high salvage costs for poles.

### **Commission's Findings**

49. The Commission is of the view that in computing depreciation, the expected residual value or net salvage value must be determined. In the 2006 Depreciation Study, Mr. Huck has set out his assumptions in determining the residual value or net salvage value. The element of net salvage was not considered when the PUB approved depreciation rates in 1983.

50. The negative net salvage value at December 31, 2006 according to Mr. Huck's schedule is \$42.8 million that is 5% of the historical cost of the assets at that date. In the Schedule submitted by the Applicant showing the computation of the depreciation expense for 2007 using the rates approved by the PUB, the calculation does not include the estimated costs of retirement/salvage (See schedule captioned "The Barbados Light and Power Co. Ltd. - Fixed Assets - Fair Trading Commission 2007"). Inclusion of these retirement costs is in accordance with provisions of

International Accounting Standard 16. The definition of depreciation used by the Federal Energy Regulatory Commission and the National Association of Regulatory Utility Commissioners also envisages the inclusion of such costs in computing the depreciation expense.

51. Some significant retiral expenses were questioned particularly poles but were satisfactorily explained. Sir Henry Forde at paragraph 38 in his closing summation explained that while the salvage value appeared high for poles it actually amounts to an average removal cost of \$200.00 per pole.

## **2. Capital recovery of cost over the useful lives of assets**

52. The Applicant through Mr. Best has stated that it *“intensively utilizes long-lived capital and that it is necessary that the depreciation policy that is applied for regulatory purposes and for financial reporting, accurately captures the Applicant’s depreciation cost”*.

53. On capital recovery Mr. Huck supports the Applicant’s position in this way: *“Based on this study, it is our opinion that the depreciation factors as recommended are reasonable and appropriate for BLPC’s full and timely capital recovery.”*

54. The Applicant is seeking the Commission’s approval to use the remaining life method to calculate depreciation rates for, according to Mr. Huck, the remaining life method is superior with respect to capital recovery and increasing accuracy as the assets grow older.

### **Intervenor's Position**

55. BANGO's concern centered on the fact that the depreciation rates the Applicant is applying for "*may have a material effect on the cost of doing business*".

### **Commission's Findings**

56. The Commission notes that there was no significant cross-examination on the issue of capital recovery. The Commission believes that in regulation the basic purpose of depreciation accounting is to recover through revenues the cost invested in the physical plant that contributes to the production of these revenues. The Commission is also aware that aligning the recovery of costs with the use of the asset will promote investor security as capital costs are recovered in a timely manner. The Commission acknowledges that the remaining life method was used in the four independent depreciation studies submitted by the Applicant.

57. In considering the evidence and analysing the case the Commission agrees with the principle that depreciation should recover the capital cost of investment in assets over their useful life. In the hearing there was no disputing that the objectives and methods of accounting for depreciation for regulatory purposes and for financial reporting purposes are the same.

58. The Commission has determined that the use of the remaining life method in the 2006 Depreciation Study provided depreciation rates that will lead to a timely recovery of capital cost over the useful economic life of the asset.

### **3. Presentation of the 2006 Depreciation Study and confidence in the techniques used by the BL&P consultant to derive the new asset lives**

59. The Applicant presented Mr. Peter Huck of American Appraisal as their expert witness. However, during cross-examination of this witness, Mr Douglas Skeete, representative of BANGO spent some time questioning the witness on his credentials. In particular BANGO questioned whether the procedures and techniques employed by Mr. Huck were commonly utilised in the industry and their applicability to the Barbados environment.

#### **Commission's Findings**

60. The role of Mr. Peter Huck was of primary importance to the Applicant's application and the expert witness filed evidence by way of Affidavit with the Commission in support of the application.

61. The Commission accepts that the utilisation of an expert in proceedings is for the purpose of providing evidence on specific matters. The expert is also utilised to assist in the understanding of the case that is before the Commission for its determination. Furthermore, experts are entitled to not only relay the facts that are directly related to the case but are also entitled to give evidence on matters because of their qualifications and experience in their particular area of expertise. The role of the expert is also to provide independent evidence that will assist the Commission in making a determination in the matter. Furthermore, experts are required to act in an objective and impartial manner and to give independent professional advice.

62. In this hearing, Mr. Huck who appeared on behalf of the Applicant has a particular expertise in the area of electric and gas utilities practice and valuation. Mr. Huck also has expertise in depreciation rate studies of utility property and in fair market value appraisal of business and assets of electric and gas utilities.
63. In accordance with Rule 19, the Commission accepted Mr. Huck as an expert witness and is entitled to determine the weight that will be given to the witness's testimony. The qualifications and experience of the witness will be a factor in determining the weight to be given to that witness's testimony. The Commission will also look at the basis of the expert's opinions and the extent to which they are supported by the evidence, the consistency and logic of his evidence as well as the methods employed to arrive at his conclusions. This approach is generally taken by the courts in examining the role of an expert witness. In Langford VR (1974) 20 FLR 11 the Court examined the role of the expert witness called by the defense and said:

*".... like any other expert witness (was) called to assist the court on technical matters, (but) the court is not entitled to accept an expert's opinion blindly nor does an expert opinion relieve the court from coming to its own conclusions based on all of the evidence, including the evidence of the expert witness. An expert gives evidence – he does not decide the issue. No one is infallible and no expert however specialised his knowledge would claim to be. The opinion of an expert is only as reliable as his reasons for reaching that opinion and the methods employed to establish his reasons. If the method employed consists of tests, the court must look at the nature of the tests and the qualifications and experience of the person administering them. If the tests themselves are inadequate or the qualifications and experience of the person interpreting the results are limited, this must affect the weight to be attached to the reasons based on those tests and to the opinion reached"*

64. The Commission is satisfied that the Applicant has provided enough evidence and background information on Mr. Huck which justifies him being presented as an expert witness at the Depreciation Hearing. The Commission also is satisfied that Mr. Huck is credible. When required he gave extensive explanations of the various mechanisms for determining depreciation and on how he arrived at various conclusions in the 2006 Depreciation Study.

65. The Commission is therefore satisfied with the information provided in the 2006 Depreciation Study.

#### **4. The stability of new depreciation rates**

66. The Applicant has since the 1983 PUB Decision, undertaken four depreciation studies between 1989 and 2006 which have shown that periodic changes in depreciation rates should be made and demonstrated that the remaining lives of the Applicant's assets have changed from the lives stated in the PUB Decision.

67. Mr. Best in his Affidavit noted that actual experience and best practices have demonstrated that it is "necessary, reasonable, fair and just to review and adjust depreciation rates". Mr. Huck also advised that periodic depreciation studies will be needed as changes in technology occur. This is further supported by Mr. King who explained and provided examples of the manner in which technical and economic conditions affect the actual retirement dates of the assets. Mr. Best further indicated that the proposed depreciation rates were more reflective of reality.

#### **Intervenors' Position**

68. Mr. King was challenged by BANGO's representative, Mr. Halsall, with regards to the Applicant's claim that with increased utilisation of newer electronic meters the asset category would have shorter service life in the future. However, Mr. King explained that the newer meters did not have serviceable parts and were "throw away items".

69. BANGO cross-examined Mr. Huck with regards to the frequency of depreciation studies.

70. BANGO also sought to ascertain if the presence of third party equipment on the poles contributed to a shorter life.

### **Commission's Findings**

71. The Commission accepts that the evidence presented shows that depreciation rates are not permanent. Both the rates and the depreciation expense will fluctuate over time. One of the reasons for this is that they are determined at a point in time based on the installed plant and the data available. Over time, changes in plant or technology occur and there is also additional information on the use of assets. Another factor that has to be taken into account is the element of judgement and subjectivity in depreciation studies that are used to determine depreciation rates.

72. In determining the use of a depreciation method and rates, the Commission would wish to ensure that the depreciation expense computed for the test year is representative of the current and likely short-term depreciation expense.

73. In cross examination of the Applicant, both the Commission and the Intervenors sought to get a sense of whether there was an

acceptable/recommended timeframe for the updating of depreciation studies and adoption of new rates.

74. The responses show that while it is accepted and agreed that there should be periodic review and update of depreciation rates and policies, there is no specific generally applied timeframe. The studies instead are triggered by changes in assets, use, technology and investments.

75. The Commission believes that the Applicant is in the best position to make that choice. The Commission will therefore not determine the frequency at which the Applicant will do its Depreciation Studies but will however reserve the right to direct the Applicant to conduct one.

**5. Treatment of difference in values of asset categories that result from the use of the depreciation rates based on depreciation studies since 1983 and applied in financial reporting instead of the depreciation rates set by the PUB**

76. Mr. Best asserted that at December 31, 2007 there were significant differences between the depreciable amount of individual categories of property, plant and equipment if one compares the result of using the rates set by the PUB with the rates used from the depreciation studies, as reflected in the accounting records and statutory financial statements of the Applicant. The net difference between the total accumulated depreciation charge for all asset categories using the PUB rates and the 2006 Depreciation Study rates is \$7.7 million.

**Intervenors' Position**

77. During the hearing there was minimal discussion on this issue.

## **Commission's Findings**

78. The Commission notes that the PUB rates were set in 1983 and would not have been modified as a result of changing conditions. The computations done by the Applicant are as a result of changing conditions and consequent modification of depreciation rates. It should not be expected that the two methods would yield similar results in the respective categories.

79. The difference of \$7.7 million between the depreciable amounts computed for respective categories of assets at December 31, 2007 using the different depreciation methods is negligible when one considers that it represents less than 1% of total assets. Therefore, the capital balances are approved.

### **6. Reasons for convergence of depreciation rates for regulatory reporting with those used for financial reporting**

80. The Applicant is seeking regulatory approval of the capital balances, remaining lives and depreciation rates recommended in the 2006 Depreciation Study so that the policy and rates used by the Applicant for regulatory accounting are the same as the rates used for financial accounting purposes.

81. Mr. Best, the Applicant's primary witness on this issue, in his first Affidavit states that approval of the deprecation policy results in convergence of the depreciation policies used for regulatory and financial reporting purposes. He explained that the depreciation studies that were

undertaken have all *“demonstrated that the remaining lives of the Applicant’s assets have changed from the lives stated in the PUB Decision”*.

82. Another reason put forth by the Applicant for convergence was that it would eliminate the need to keep separate records for regulatory and financial reporting of assets and asset lives.

### **Intervenors’ Position**

83. BANGO in its letter of intervention expressed concern that changing the depreciation policy will affect the rate base. Mr. Skeete in his supporting Affidavit states that if permission to converge the depreciation policies is allowed *“the company might be permitted to revalue its assets”*. In response to this, Mr. Best in his second Affidavit explained that from 2006 the financial reports were based on historic cost and *“the Applicant does not intend, without the approval of the Commission to use revaluation of assets or the RCN<sup>2</sup> for regulatory accounting purposes”*.

84. Under cross-examination by Mr. Skeete, Mr. Best explained that the Applicant is not required and does not maintain separate regulatory accounting records but the Applicant maintains separate fixed asset records for regulatory and financial purposes. Both Intervenors sought clarification on why the Applicant needed to converge in view of the fact that the difference was not significant. The Applicant responded to this in evidence under cross examination and in responses to interrogatories emphasising that depreciation studies should be undertaken to reflect the reality of changes in the useful lives of a utility’s assets and that

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<sup>2</sup> RCN – Reproduction Cost New

*“It is desirable that the most appropriate rate be applied to each asset category.”*

85. Mr. Robertson contends that convergence would make the Commission irrelevant. He also claimed that convergence would raise the issue of the outstanding balance in Deferred Taxes.

### **Commission’s Findings**

86. The Commission acknowledges that depreciation rates and depreciation expenses are factors in calculating the rate base and the revenue requirement of the Applicant. It is therefore correct to say that the Commission’s decision in this hearing will affect the rate base. As the Regulator the Commission’s main objective with regards to determining an appropriate depreciation policy and associated depreciation rates is to align the recovery of invested capital with the asset’s useful life. Charles F. Philips in his text, *The Regulation of Public Utilities (1973)*, noted that *“by matching capital recovery with capital consumption a more accurate measure of current cost of operation is possible”*.

87. The useful life of the plant is determined by both historical experience and functional considerations such as facilities becoming obsolete or inadequate due to changes in customer demand or technology.

88. The Commission is of the view that the Applicant in its Application may have given the impression that it was seeking convergence in the broad sense rather than specific to the rates in the 2006 Depreciation Study. For example the original paragraph 10 of the Application filed on November 10 stated:

*“(b) Accordingly, the Applicant hereby requests that the Fair Trading Commission adopt depreciation rates which the Applicant uses for financial reporting purposes ...”*

89. Additionally, Mr. Best’s Affidavit in response to the Affidavit of Mr. Skeete stated:

*“... I really believe that convergence of the Applicant’s method for regulatory and financial reporting would eliminate the need to keep separate records of assets and asset lives.”*

90. In regard to this the Commission notes that the Applicant in its closing statements stated that it “wishes to clarify that it is not seeking to converge depreciation rates for regulatory reporting with financial reporting. The Applicant is seeking approval from the Commission of the capital balances, remaining lives and depreciation rates as shown in the Spreadsheet so that the depreciation policies and rates used by the Applicant for regulatory purposes are the same as those rates used for financial accounting purposes.”

### **Commission’s Findings**

91. In the Commission’s view, the primary issue is not whether there should be convergence of rates but whether the depreciation rates used for the computation of the depreciation expense to be used in the test-year are likely to result in a depreciation expense which is fair and reasonable, based on available information. The Commission believes that based on the information provided, the use of the depreciation rates submitted in the Application is appropriate.

92. The Commission is cognisant of its regulatory responsibility under the Utilities Regulation Act Section 3 (1) to, *inter alia*, establish the principles for arriving at the rates to be charged and to carry out periodic review of rates and principles for setting rates.

93. For the avoidance of doubt and in response to the Applicant's statements and the Intervenors' concerns arising with regard to this issue, the Commission advises that:

- i. The approval of depreciation rates proposed by the Applicant does not remove the authority from the Commission to set rates.
- ii. The capital balances and depreciation rates determined in this Hearing will be factors in the Applicant's calculation of revenue requirement in a rate review.
- iii. At all times the Applicant will be required to apply to the Commission if it requires a change in depreciation rates for regulatory reporting.
- iv. While the Applicant may at a later date choose to use different depreciation rates for its financial reporting the depreciation rates to be used for regulatory reporting will be as determined in this Decision unless there is Commission approval of the change.

## **ADDITIONAL ISSUES RAISED DURING THE DEPRECIATION HEARING**

### **Reliability of the Applicant's Financial Information and Data**

94. During the Depreciation Hearing, the Applicant asked the Commission to consider the evidence of Mr. Hutson Best which dealt primarily with the

data and the information used in the financial reporting. This information was made available to and was relied upon by Mr. Peter Huck for conducting the 2006 Depreciation Study.

95. In re-examination of its witnesses, the Applicant's Legal Counsel also sought to clarify that it had kept good records since 1965 and so the information being relied upon for the 2006 Depreciation Study did not have any deficiencies, was accurate and had been regularly audited.

### **Intervenors' Position**

96. In cross-examination of the Applicant's witnesses, specifically Mr. Hutson Best and Mr. Peter Huck, BANGO had several questions relating to the basis of the information and apparent differences in the data found in the different studies.

97. BANGO also commented on the absence of regulatory financial reports from the Applicant.

### **Commission's Findings**

98. Intervenors highlighted that in some instances the estimated average service life of some categories of assets had been amended in Mr. Huck's study without an explanation for such changes, as had been done in the previous 2002 Wotring study. However, there were very few instances where the average service lives computed by Mr. Huck differed significantly from those computed in the Wotring study. Further, in the response to the Request for Information from the Commission and BANGO, Mr. Huck on February 6, 2009 submitted schedules to show and explain Salvage Costs and reconciliation of the figures in the 2002 Wotring study with the 2006 Depreciation Study.

99. The Commission on its own initiative undertook a regulatory audit of the Applicant in 2006. This regulatory audit was, among other things, to satisfy the Commission that the Applicant was operating in accordance with the 1983 Decision, to review the accounting policies and to get an understanding of the Applicant's current operation. The result of the audit has provided the Commission with a level of satisfaction of the reliability of the data maintained by the Applicant. In addition, the Applicant's statutory financial statements are audited yearly by an independent accounting firm further supporting the reliability of the Applicant's financial information.

100. The Commission believes that the 2006 Depreciation Study as presented is reasonable and comparable to other depreciation studies. It, for the most part, provided a sufficient degree of information on the issue of depreciation. However, during the hearing, the Commission recognised that it needed additional information in some cases as it related to some asset groups and the conclusions made. In these instances, it requested such. This is an ordinary practice in any regulatory proceedings. Where additional information is needed by a party or the regulator to clarify a point, they are not precluded from requesting it from the Applicant who has a duty to prove its case and support its Application.

101. The Commission will however require the Applicant to submit regulatory reports on an annual basis showing the regulatory financial results reflecting the depreciation rates that have been determined in this Decision. The content and format of these reports will be discussed and finalised with the Applicant.

### **Deferred Tax**

102. Mr. Robertson raised the issue of deferred tax. The Commission is of the view that deferred tax is not material to the determination of the depreciation rates or policy. Deferred tax would more appropriately be addressed in a rate hearing.

### **Intervenors' Involvement**

103. The Commission in making its decision considers that the Intervenors' contribution has assisted the Commission.

104. The Commission believes that for the most part the Intervenors tried to focus on the issues agreed prior to the hearing.

# SCHEDULE 1

**The Barbados Light & Power Company Limited**

Spreadsheet based on Pages 1 and 2 of Exhibit A - American Appraisal - Depreciation Study

AS OF DECEMBER 31, 2006  
DEPRECIATION FACTORS AND RATES

ACCOUNT NO.	ACCOUNT NAME	ORIGINAL 'HISTORIC' COST	"CAPITAL BALANCES" (ACCUMULATED DEPRECIATION) at 2006/12/31	AVERAGE REMAINING LIFE	RATE
		\$	\$	Years	%
<b>GENERATION PLANT</b>					
<b>GARRISON</b>					
	GAS TURBINE GT02	21,320,842	13,579,806	8.5	4.51%
	<b>TOTAL GARRISON</b>	<b>21,320,842</b>	<b>13,579,806</b>		
<b>SPRING GARDEN</b>					
	STEAM PLANT - Building	2,163,517	2,163,517	4.50	2.78%
	STEAM PLANT - Equipment	44,557,529	43,049,952	4.50	3.53%
	FUEL TANK	1,349,749	1,009,350	28.50	1.41%
	LOW SPEED DIESEL NO. 10 - 13 - Building	24,641,467	18,112,755	11.00	2.77%
	LOW SPEED DIESEL NO. 10 - 13 - Equipment	127,639,773	93,648,613	11.00	2.69%
	LOW SPEED DIESEL NO. 14 - 15 - Building	22,600,000	1,017,000	28.50	3.49%
	LOW SPEED DIESEL NO. 14 - 15 - Equipment	122,864,064	8,853,681	28.50	3.36%
	35 kVA EQUIPMENT	33,005	33,005	4.50	0.00%
	<b>TOTAL SPRING GARDEN</b>	<b>345,849,104</b>	<b>167,887,873</b>		
<b>SEAWELL</b>					
	GAS TURBINE - Building	2,243,207	832,008	20.50	3.31%
	GAS TURBINE GT03	23,507,943	11,384,717	14.50	3.69%
	GAS TURBINE GT04	23,071,223	8,052,636	17.50	3.83%
	GAS TURBINE GT05	23,206,083	5,480,359	19.50	4.02%
	GAS TURBINE GT06	19,467,112	4,131,251	20.50	3.94%
	FUEL TANK	1,120,579	437,504	20.50	3.71%
	<b>TOTAL SEAWELL</b>	<b>92,616,147</b>	<b>30,318,475</b>		
	<b>TOTAL GENERATION PLANT</b>	<b>469,786,093</b>	<b>211,786,164</b>		
<b>TRANSMISSION &amp; DISTRIBUTION PLANT</b>					
	361.0 SUBSTATION BUILDINGS	11,648,875	3,335,347	28.50	2.86%
	362.0 SUBSTATION EQUIPMENT	68,729,528	27,925,325	19.65	3.28%
	364.0 POLES	66,691,618	32,911,483	12.39	5.70%
	365.0 OVERHEAD CONDUCTORS	34,235,204	14,718,119	17.05	3.93%
	367.0 UNDERGROUND CABLES	91,030,111	15,464,321	26.92	3.08%
	368.0 TRANSFORMERS	40,259,795	14,422,710	14.05	4.92%
	369.0 SERVICES	23,660,436	9,603,693	12.31	5.23%
	373.0 STREETLIGHTS	9,997,577	5,744,877	8.28	5.74%
	370.0 METERS	10,745,160	5,081,359	11.68	4.94%
	<b>TOTAL - TRANSMISSION AND DISTRIBUTION</b>	<b>366,998,304</b>	<b>129,207,234</b>		
<b>GENERAL PLANT</b>					
	390.1 BUILDINGS - Haggatt Hall & Spring Garden	5,485,072	1,673,185	30.96	2.41%
	390.2 BUILDINGS - Other (Garrison)	12,810,789	3,321,232	26.33	2.81%
	392.1 TRANSPORT - Heavy	10,028,173	6,513,012	5.69	5.28%
	392.2 TRANSPORT - Light	2,728,088	1,508,122	3.79	7.58%
	391.1 FURNITURE & EQUIPMENT	6,819,325	3,140,153	7.48	7.21%
	391.2 COMPUTER EQUIPMENT	3,135,076	3,135,076	2.56	16.67%
	391.3 COMPUTER SOFTWARE	12,245,422	12,245,422	2.08	14.29%
	<b>TOTAL GENERAL PLANT</b>	<b>63,261,946</b>	<b>31,636,202</b>		
<b>Note:</b>					
	1. Reference page 10 of the Depreciation Rate Study carried out by American Appraisal for The Barbados Light & Power Company Limited.				

HAB

Dated this 25<sup>th</sup> day of February 2009

*Original Signed by*

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Neville Nicholls  
Chairman

*Original Signed by*

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Floyd Phillips  
Commissioner

*Original Signed by*

.....

Michael Thompson  
Commissioner

*Original Signed by*

.....

Delisle Weekes  
Commissioner

*Original Signed by*

.....

Andrew Brathwaite  
Commissioner