Fair Trading Commission

Consultation Paper

THE BARBADOS LIGHT AND POWER COMPANY LTD.

PILOT PROGRAMMES

- Time of Use Tariff
- Renewable Energy Rider
- Interruptible Service Rider

Document No. **FTC / CONS2009/01** **Date: October 21, 2009**

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SECTION 1 – BACKGROUND

1.1 INTRODUCTION

1. As part of its Rate Review Application "Application" dated May 8, 2009 the Barbados Light & Power Company Limited "BL&P" filed with the Commission Schedule K entitled "Memorandum on Proposed Tariffs" in which the BL&P proposed the introduction of a new Time-of-Use (TOU) tariff, an Interruptible Service Rider (ISR) and a Renewable Energy Rider (RER). The BL&P has proposed that the TOU tariffs along with the two riders, ISR and RER should be implemented on a pilot basis for a period of three years before the BL&P decides on whether it ought to implement the schemes permanently. The terms and conditions of these pilots as submitted by the BL&P are found in Appendix 1, Appendix 2 and Appendix 3. Worked examples of the pilot programmes are provided in Appendix 4.

2. The Commission acknowledges that these pilots are being undertaken on a research basis. The research is being conducted by the BL&P in order to gather information so that it may determine whether and how to fully implement the schemes.

3. The Commission also acknowledges that the Applicant has not included any expenses or revenues relating to these pilot services in its submissions for its review of rates dated May 08, 2009. These pilot programmes would therefore not factor into the Commission's determination of the BL&P's revenue requirement or rate base.

4. These are the two primary reasons for the Commission not including the pilot programmes as issues to be determined during the substantive rate hearing.

5. However, the Commission recognises that it has a role to play as the regulator in ensuring that it gives due consideration to the BL&P's programmes especially as the Time-of-Use tariff is a new rate being proposed and the new Renewable Energy Rider and Interruptible Service Rider may introduce new provisions or new terms of service to customers. Accordingly, the Commission is conducting outside of the Rate Review Hearing, a public consultation, partly written and partly oral, in order to obtain a wide cross-section of views before responding to the BL&P on this matter.

6. This consultation paper provides an overview of the proposed operation of the individual pilot schemes.

1.2 PURPOSE OF CONSULTATION

7. In the interest of transparency and accountability the Commission is required to seek public input on matters relating to the regulation of public utilities.

8. This public consultation will among other things:-

- Determine how the public generally view the pilot programmes that are being proposed by the BL&P and facilitate discussion between the public and the BL&P;

- Bring to the public's attention important issues relating to BL&P's pilot programmes and promote public understanding of the issues;

- Determine whether the terms and conditions of service in respect of the TOU tariff, the ISR and the RER are adequate for the purposes that the BL&P have outlined;

- Facilitate the exchange of information which may result in improvements in the pilot programmes; and

- Invite comments from interested parties such as consumers, the BL&P, businesses, professionals and academics.

9. The Commission encourages the widest possible participation in this consultation process. Therefore in addition to receiving written responses the Commission also intends to convene a half day session to hear oral submissions and facilitate discussion between the BL&P, the public and the Commission.

10. The Consultation period will begin on October 21, 2009 and will end on November 18, 2009 at 4:00p.m. The Oral Session will be held on November 20, 2009 at the Lloyd Erskine Sandiford Centre.

1.3 LEGISLATIVE FRAMEWORK

11. The legislative framework seeks to ensure that the interests of consumers are protected by ensuring that service providers supply to the public service that is safe, adequate, efficient and reasonable pursuant to section 3(2) Utilities Regulation Act CAP. 282 (URA). The institution of pilot programmes (that is, initial testing by a small group), as is proposed by the BL&P, is one of the ways in which the Commission will be able to ensure that the service to be provided is safe, adequate and reasonable for consumers at large.

12. The Commission has sought to embark on an examination of the pilot programmes by way of Public Consultation and, in keeping with Section 4 (4) of the Fair Trading Commission Act, the Commission shall in performing its functions under subsection 3(a), (b), (d) and (f) consult with service providers,

representatives of consumer interest groups and other parties that have an interest in the matter before it. Subsections 3 (a) and (b) relates to the setting of rates.

SECTION 2 - DESCRIPTION OF PILOT PROGRAMMES

2.1 TIME-OF-USE (TOU) TARIFF

13. Time of Use (TOU) tariffs, also known as Time of Day tariffs involves dividing the day into tariff slots with higher rates at 'on peak' load periods and lower rates at 'off-peak' load periods. Customers may therefore benefit from lower rates by adjusting their usage to off-peak periods.

14. This type of tariff is designed to reflect the difference in the cost incurred by the utility in providing electricity service at the different times of day, i.e. it cost more to generate electricity during peak hours as beyond a certain threshold the incremental cost to produce each additional unit of electricity increases beyond the average.

15. While TOU can be used to control usage on the part of the customer, resulting in automatic load control, it is often simply the customer's responsibility to control his own usage, or pay accordingly (voluntary load control). This also allows the utility to reduce peak demand thereby minimizing the need for infrastructure expansion.

16. In the Barbados Light & Power Company Limited's application now before the Commission the Company is proposing a TOU pilot programme for three years to thirty Large Power (LP) customers, with an initial contract period of one year. This tariff will be offered on a first-come first-serve basis within the first twenty four months of the pilot programme, with no more than six services per entity unless otherwise approved by the Company. The proposed On-peak period is 10:00am to 9:00pm Monday through Friday, except annual published public holidays. All other times outside On-peak are considered Off-peak (9.00p.m. – 10.00 a.m.). The Company will supply three-phase alternate current at 50 Hz, and one of the nominal primary voltages specified

in the latest version of the Company's booklet entitled "Information and Requirements Covering Installation of Electric Services and Meters". It is proposed that the tariff be available for customers with billing demands of not less than 50 kVA.

17. Other specific conditions of service may be found in the Appendix 1 and a worked example is provided in Appendix 4.

Q1. Do you agree with the times proposed as On-peak and Off-peak?

2.2 RENEWABLE ENERGY RIDER (RER)

18. The Government of Barbados in its 2006 Draft Barbados National Energy Policy (under revision) document set a target of 10% of the island's primary electricity being supplied by renewable energy sources by 2012 and 20% by 2026. As a signatory to the United Nations Framework Convention on Climate Change, Barbados is morally obligated to reduce its green house gas emissions. This commitment, the threat of climate change and sea-level rise, along with the burgeoning economic impact of soaring oil prices has fuelled our interest in renewables. Some householders have capitalised on Governments tax incentive to use 'green' energy by utilising environmental preferred products and have retrofitted their homes to avail themselves of the abundant supply of solar energy.

19. In seeking to reduce their reliance on fossil fuels and explore 'green' and more environmentally friendly means of producing electricity, electric utilities the world over have looked and are looking to renewable sources as viable options.

20. The BL&P is now seeking to embark on a similar path by encouraging customers who already employ solar photovoltaic, wind turbine and hybrid (solar and wind) to supply the national electric grid. Under this proposal the Company is providing the opportunity for customers who produce renewable energy for their own use to sell excess to the grid.

21. The Renewable Energy Rider will be available to customers who qualify for the Domestic Service (DS), Employees (EMP), General Service (GS), Secondary Voltage Power (SVP), Large Power (LP) and Time-of-Use (TOU) tariffs, with the renewable power source located on the customer's own or rented premises. All the provisions of the applicable DS, EMP, GS, SVP LP and TOU tariffs will apply except as amended by the rider.

22. Customers applying for this rider are limited by the following conditions:

- the maximum number of systems connected to the grid will be limited to 200 customers on a first-come first-serve basis or a combined maximum installed capacity of 1,600 kW, which is equivalent to approximately 1% of the Company's overall system peak demand for 2008, whichever occurs first;

- applicants for this rider must be customers of the BL&P;

- the maximum size of an individual installation for customers on the DS, GS, and EMP tariffs will be limited to 5kW but not exceeding 50% of the ampere rating of the main breaker of the installation;

- the maximum of an individual installation for customers on the SVP, LP and TOU tariffs, will be 50 kW but not exceeding 50% of the ampere rating of the main breaker of the installation; and

23. All kWh sold to the grid will be compensated for via a credit at 1.8 times the Fuel Clause Adjustment or 31.5 cents/kWh, whichever is greater.

24. This rider will initially be offered as a pilot for three years; however consumers requesting service under this optional rider must enter into a power purchase agreement with the Company for a minimum of one year.

25. Other specific conditions of service may be found in the Appendix 2 and a worked example is provided in Appendix 4.

Q2. What are your views on the value of the proposed credit?

Q3. What are your views on the disbursement of the proposed RER credit? Do you agree that the credit, where applicable, should be carried forward to the next billing period or would you prefer an automatic cash refund?

Q4 Do you believe that any added financial incentive to produce 'green' energy is necessary?

2.3 INTERRUPTIBLE SERVICE RIDER (ISR)

26. Currently a number of Barbadian manufacturers self-generate or have the capacity to generate their own electricity from non-renewable energy sources such as diesel. This option has appeared financially attractive depending on the price of diesel. These manufacturers however continue to rely upon the BL&P for a back-up electricity supply.

27. An interruptible service rider is defined by the BL&P as a rate or tariff paid to the contracted customer to voluntarily reduce their demand on request from

the BL&P. This tariff is operated in conjunction with the normal rate that is charged to the consumer and is associated with a penalty when the consumer fails to accede to the BL&P request to reduce demand (See Appendix 3, Interruptible Rider Agreement). The use of this type of rider is advantageous to both parties as the consumer is compensated, as a capacity credit, on a monthly basis for the avoidable demand (Non-firm Demand) while the Company is afforded the opportunity to reduce the overall demand on the system, which is particularly useful as it approaches peak load. A reliable interruptible demand offers greater long term investment flexibility.

28. This pilot Interruptible Service Rider is proposed for three years. It will be available to SVP and LP customers who can demonstrate their ability to reduce their load to the Firm Demand Level (FDL), the demand that the customer intends to exclude from interruption, within thirty minutes of being notified to do so by the Company. This FDL is a negotiated kVA demand that has been previously agreed to by both parties. Eligible customers must have a billing demand in excess of 300 kVA and a Monthly Interruptible Demand of not less than 100 kVA. This rider is to be made available on a first-come first-serve basis up to a maximum of twenty customers whose total installed capacity shall not exceed 10,000 kVA. TOU tariff customers are not eligible to participate under this rider.

29. A minimum FDL of zero is proposed and the customer shall not be required to exceed 240 hours of interruption in a contractual year.

Interruptible Capacity Credits

30. The Company will credit the customer for their Monthly Interruptible Demand (MID) at the following rates:

(a) \$12.00/kVA of Monthly Interruptible Demand (MID) for customers agreeing to be interrupted between 8.00 a.m. and 9.00 p.m. on any day except Saturdays, Sundays and public holidays.

(b) \$9.00/kVA of Monthly Interruptible Demand (MID) for customers agreeing to be interrupted between 8.00 a.m. and 4.30 p.m. on any day except Saturdays, Sundays and public holidays.

Where:

- The **Monthly Interruptible Demand (MID)** is the difference between the **Monthly Average Demand (MAD)** and the **Firm Demand Level (FDL)**

$$MID = MAD - FDL$$

- The **Monthly Average Demand (MAD)** in kVA is the number of kilowatt hours (kWh) consumed by the customer for the billing period divided by the number of days (DOS) in the billing period times 24 hours minus the number of hours interrupted in the month (Ih) and divided by power factor of 0.85:

$$MAD = (kWh/(DOS*24\text{-}Ih))/0.85 \text{ kVA}$$

- The **Firm Demand Level** (FDL) is the kVA demand level established between the Company and the customer that specifies the load limit of interruption. The customer must reduce the demand to this level or below during periods of required reductions.

31. In the event the Monthly Interruptible Demand (MID) is less than the minimum of 100 kVA no credit will be paid for that month.

32. Other specific conditions of service may be found in the Appendix 3 and a worked example is provided in Appendix 4.

Q5. What do you consider to be an acceptable minimum Firm Demand Level?

Q6. What do you consider to be an acceptable maximum number of interruptible hours in a contractual year?

Q7. Are you concerned about how frequently one customer will be requested to drop to its Firm Demand Level relative to another customer? What mitigating measures do you recommend?

Q8 What are your views on the eligibility of interruptible service rider customers for the time-of-use tariff during the pilot period or after?

33. The Commission is aware that some jurisdictions offer what is termed **'standby service**', which is somewhat the reverse of the above. A 'standby service' offers reserve capacity on the electric utility's transmission and distribution system for the delivery of a predetermined supply of electricity when the customer's generating facility is not in operation or is operating below its full capability or when the customer's load is greater than the capacity of its generating facility. 'Standby service' is paid for monthly regardless of whether the utility's supply is accessed or not.

34. Standby rates would apply to customers who rely on the electric utility intermittently to deliver electricity to replace or supplement what they generate themselves. Such rates usually reflect a cost-based rate that recognises that cost of providing service to standby customers should more accurately reflect the size of the facility needed to meet the customer's maximum demand for service at any given time. This varies not with the volume of electricity delivered, but primarily with the peak load (per-kilowatt) that must be delivered at any particular moment. The latter is justified in that this type of customer places demands on the system that are more intermittent and random.

Q9. What are your views on interruptible service versus standby service?

SECTION 3 – CONSULTATION PROCESS AND TIMETABLE

3.1 WRITTEN RESPONSE TO THIS CONSULTATION PAPER

35. This consultative document generally includes a series of specific questions on which the Commission is particularly seeking comments. To ease the task of analysing comments, respondents should reference the relevant question numbers in the document. If they consider it appropriate, respondents may wish to address other aspects of the document for which the Commission has not prepared specific questions. Failure to provide answers to all questions will in no way reduce the consideration given to the entire response. Commercially sensitive material should be clearly marked as such and included in an annex to the response.

36. The Commission invites and encourages written responses in the form of views or comments on the matters discussed in the Paper from all interested parties including the Barbados Light and Power Co. Ltd., Government ministries, non-governmental organisations (NGO's), consumer representatives, residential consumers, manufacturing businesses and academics.

3.2 ORAL RESPONSE TO THIS CONSULTATION PAPER

37. To facilitate wide discussion on the Pilot Programmes there will be an Oral Session where the BL&P will be invited to give a thirty minute presentation on the Pilot Programmes.

38. Other parties may also make a short presentation. The Commission will then facilitate an open discussion.

39. Persons who are interested in making a fifteen minute oral presentation must on or before 12 November 2009 advise the Commission's General Legal Counsel Mrs. Kim Griffith–Tang How by phone (424-0260) or e-mail (info@ftc.gov.bb) or in writing to the Commission's mailing address at paragraph 45.

3.3 CONSULTATION TIMETABLE

40. The Consultation period will begin on **October 21, 2009** and end on **November 18, 2009 at 4.00 p.m**. All written submissions should be submitted by this deadline.

41. The Oral Session will be held on November 20, 2009 at the Lloyd Erskine Sandiford Centre from 9:30 a.m. to 1:30 p.m.

42. The Consultation Paper may also be downloaded from the Commission's website at http:www.ftc.gov.bb

43. Respondents to the Consultation may submit responses in electronic format. The Commission would prefer that emailed responses be prepared as Word documents, attached to an email cover letter and forwarded to: info@ftc.gov.bb

44. Responses may be faxed to the Commission using fax number (246) 424-0300.

45. Mailed or hand delivered responses should be addressed to the Chief Executive Officer at the following mailing address.

Fair Trading Commission, Good Hope, Green Hill, St. Michael, BARBADOS

3.4 CONFIDENTIALITY

46. The Commission is of the view that this consultation is largely of a general nature. The Commission expects to receive views from a wide cross section of stakeholders and believes that views and comments received should be shared as widely as possible with all respondents.

47. **Respondents should therefore ensure that they indicate clearly to the Commission any response or part of a response that they consider to contain confidential or proprietary information.**

3.5 ANALYSIS OF RESPONSES

48. The Commission expects, as in most consultations, to receive a range of conflicting views. In such circumstances, it would be impossible for the Commission to agree with all respondents.

49. At the end of this Consultation process the Commission will issue its response to the BL&P Pilot Programme proposals and advise the Company if any revisions to the Pilot Programme are required before implementation.

THE FOLLOWING APPENDICES CONSISTS OF SUBMISSIONS OF THE BL&P

APPENDIX 1

The Barbados Light & Power Company Limited

K-9: PROPOSED TIME-OF-USE TARIFF (TOU)

APPLICATION

This tariff is available as a pilot program for three (3) years to customers who satisfy the criteria for the Large Power (LP) tariff on a first come first serve basis within the first twenty four (24) months of the pilot programme. This is available for a maximum of thirty (30) electricity services, with no more than six (6) services per entity subscribing unless otherwise approved by the Company.

TYPE OF SERVICE

Under this tariff, the Company will supply three-phase alternating current electricity at 50 Hz, and one of the nominal primary voltages specified in the latest revision of the Company's booklet entitled "Information and Requirements Covering Installation of Electric Services and Meters".

CONDITION OF SERVICE

This tariff is available for customers with a billing demand of not less than 50 kVA. No service may be transmitted from a customer to another premises without the express prior written consent of the Company.

GENERAL PROVISIONS

When two or more rates are available for certain classes of service the choice of such rates rests with the customer. The Company will at any time, upon request, advise any customer as to the rate best suited to existing or anticipated service requirements, as defined by the customer. The Company does not assume responsibility for the selection of such rate or the continuance of the lowest annual cost under the selected rate. A customer, having selected a rate, may not change to another rate within a 12-month period unless there is a substantial change in the character or conditions of the service. In the case of a new service, customers will be given reasonable opportunity to determine their service requirements before selecting their preferred rate.

MONTHLY RATE

1) **Customer Charge** - This applies to each electricity service under this tariff for the fixed costs of providing service, including the service installation, meter reading, billing and customer service.

   $300.00/month + VAT

2) **Demand Charge** - This applies to each electricity service under this tariff for the costs associated with the generating facilities, transmission and distribution lines, substations, transformers and other facilities required to meet individual and combined customer peak demand.

   $18.00/kVA of Billing Demand + VAT

3) **Base Energy Charge** - This applies to each electricity service under this tariff for the variable energy costs associated with the provision of this service, except the cost of fuel, within the time periods shown below:

   On-peak: 21.90 cents / kWh + VAT

   Off-peak: 4.40 cents / kWh + VAT

4) **Fuel Charge** - This applies to each electricity service under this tariff for the cost of fuel associated with the provision of this service, within the time periods shown below:

   On-peak: 1.12 times the Fuel Clause Adjustment (cents/kWh) plus VAT

   Off-peak: 0.92 times the Fuel Clause Adjustment (cents/kWh) plus VAT

The Fuel Clause Adjustment is calculated according to the Fuel Clause approved by the Fair Trading Commission and may vary from month to month.

DEFINITION OF TIME PERIOD

On-peak	10:00am to 09:00pm Monday through Friday, except annually published public holidays
Off-peak	All hours other than on-peak

METERING ON LOW VOLTAGE SIDE

Normally the usage for customers under this tariff will be metered on the high voltage side of their transformer. However, under special circumstances, at the Company's discretion, their usage may be metered on the low voltage side of the transformer. On these occasions the Company shall increase the Billing Demand and energy consumed by a loss factor for the calculation of the Demand, Base Energy and Fuel Charges to account for losses incurred in the customer's transformer.

MINIMUM BILL

The minimum bill shall be the Billing Demand Charge plus the Customer Charge.

BILLING DEMAND

(a) Customers connected under this rate shall be metered as to demand and the billing demand shall be the maximum measured demand of the current month or the maximum measured demand of any of the previous 11 months, whichever is greater, but not less than 50 kVA. The measured demand may be measured in either kW or kVA at the option of the Company depending upon the character of the service. If the demand is measured in kW then the maximum kW reading shall be divided by a correction factor of 0.85 for conversion to kVA for billing purposes.

(b) The Company shall reserve the right to assess the billing demand based on a connected load for installations with high momentary demands including lifts, cranes, X-ray equipment and welders.

(c) For customers with a contracted demand, the billing demand shall be the higher of (a) or (b) or the contracted demand.

TERMS OF SERVICE

The initial contract period for this tariff is for a minimum of one year. At the end of the pilot programme the Company will review the experience it has gained from the programme and determine whether to continue to offer this tariff. Customers will be advised accordingly. If the Company decides to continue to make this tariff available, customers who wish to remain on it with the new arrangements will not be required to take any further action. However, if the Company decides not to continue with it or the customer no longer wants to participate, the other party shall be advised and the customer will revert to the LP tariff.

RULES AND REGULATIONS

Service under this schedule is subject to the orders of the Fair Trading Commission and the latest publication of the "Information and Requirements Covering Installation of Electric Services and Meters". In case of a difference of interpretation between any provision of this schedule and the "Information and Requirements Covering Installation of Electric Services and Meters" booklet the provision of this schedule shall apply. A bill calculated under this tariff is subject to change under the provisions of such applicable rider(s) as may be approved and / or amended by the Fair Trading Commission.

APPENDIX 2

The Barbados Light & Power Company Limited

K-10: PROPOSED RIDER FOR RENEWABLE ENERGY (RER)

APPLICATION

This rider is available as a pilot programme for a period of three (3) years to customers who qualify for the Domestic Service (DS), Employee (EMP), General Service (GS), Secondary Voltage Power (SVP), Large Power (LP) and Time-of-Use (TOU) tariffs. All of the provisions of the applicable DS, EMP, GS, SVP, LP and TOU tariffs will apply except as amended by this rider. This rider is specific to customers with renewable resource generation facilities (hereinafter collectively referred to as "customer-generators" and each as a "customer-generator") utilizing a wind turbine, solar photovoltaic or hybrid (wind/solar) power source located on the customer's owned or rented premises.

The customer-generator shall have a capacity of not greater than 5 kilowatts (kW) for services in the DS, EMP and GS tariffs and a capacity of not greater than 50 kW for other tariffs unless otherwise approved by the Company. This rider is available on a first-come first-serve basis up to a maximum of 200 eligible electricity services or a combined installed capacity of 1,600 kW, whichever occurs first. The Company reserves the right to limit the number of services per individual or entity.

This rider is applicable only to the energy supplied to the Company's electric grid by the customer-generator. All other services supplied to the customer-generator will be billed in accordance with the rates and charges under the customer's- applicable standard tariff. Service under this rider is conditional on the continuance of service to the customer under one of the applicable standard tariffs.

CONDITIONS OF SERVICE

The service under this rider will be provided to the entire premises through a single point of delivery at a single voltage in accordance with the terms of the standard tariff applicable to the customer. The customer-generator must be:

(1) capable of providing single or three phase voltage at 50 Hz, with its rated output not exceeding 50% of the Ampere rating of the main breaker of the installation, and

(2) manufactured, installed and operated to meet the Company's standards for interconnection as set out in the Company's "Renewable Energy Interconnection Agreement" and the "Requirements for Grid Interconnection of Renewable Generation Systems" and all applicable Government and industry safety and performance standards.

The Company reserves the right to disconnect the electricity supply to the entire premises to which the customer-generator is connected without notice and without incurring any liability, for failure to comply with the requirements of the interconnection agreement or for other reasons relating to safety and reliability.

Provision must be made for the measurement of energy produced by the customer-generator through a meter provided by the Company at the customer's expense or by the customer installing equipment suitable for this purpose, subject to the Company's prior written approval.

INTERCONNECTION

The customer must obtain approval in writing before any customer-generator is connected to the electric grid. Customers desirous of selling electricity to the electric grid should:

(1) apply to the Company;

(2) submit a certificate of approval from the Government Electrical Engineering Department (GEED) for connection of the customer-generator to the electrical installation;

(3) demonstrate its ability to meet the Company's safety and performance standards and interconnection requirements;

(4) enter into an interconnection agreement with the Company, stipulating the point of connection of the customer-generator to the electricity grid; and

(5) enter into a separate power purchase agreement with the Company for a contracted period of not less than one year for electricity purchased by the Company.

MONTHLY RENEWABLE ENERGY CREDIT

All kWh supplied to the grid **1.8 times** the **Fuel Clause Adjustment** or **31.5 cents/kWh**, whichever is greater.

The Fuel Clause Adjustment is calculated according to the Fuel Clause approved by the Fair Trading Commission and may vary from month to month.

BILLING

The Company will utilize a Net Billing with Rolling Credit and Buyback methodology for billing purposes. At the end of each billing period, if the account is in debit after the renewable energy credits have been applied, the balance due will be billed and payable. If the account is in credit, the credit will be carried forward (rolled over) to the next billing period.

If at the end of each calendar year, the customer has accumulated a renewable energy credit and would like this to be refunded rather than rolling the credit forward, the customer may request a refund of the credit from the Company.

TERMS OF SERVICE

At the end of the pilot programme the Company will review the experience it has gained from the programme and determine whether to continue to offer this Rider. Customers will be advised accordingly. Once a determination is made the existing customers may be required to enter into revised interconnection and power purchase agreements.

RULES & REGULATIONS

Service under this schedule is subject to the orders of the Fair Trading Commission and the latest publication of the "Information and Requirements Covering Installation of Electric Services and Meters". In case of a difference of interpretation between any provision of this schedule and the "Information and Requirements Covering Installation of Electric Services and Meters" booklet the provision of this schedule shall be deemed to apply. A bill calculated under this Rider is subject to change as may be approved and/or amended by the Fair Trading Commission under the provisions of applicable riders.

APPENDIX 3

The Barbados Light & Power Company Limited

K-11: PROPOSED RIDER FOR INTERRUPTIBLE SERVICE (ISR)

APPLICATION

This rider is available for three (3) years from the effective date of this tariff to customers in the Secondary Voltage Power (SVP) and Large Power (LP) tariffs ("eligible customers"), as follows:

(a) to eligible customers with a Billing Demand in excess of 300 kVA and a Monthly Interruptible Demand of not less than 100 kVA, and

(b) on a first-come first-serve basis up to a maximum of twenty (20) customers whose total installed capacity shall not exceed 10,000 kVA.

All of the provisions of the applicable SVP and LP tariffs will apply except as amended by this rider.

Customers on the Time-of-Use Tariff are not eligible to participate under this rider.

CONDITIONS OF SERVICE

To be eligible, customers must be able to demonstrate the ability to reduce their load to the Firm Demand Level (FDL) within 30 minutes of being notified to do so via the communication channel agreed between the customer and the Company. The minimum FDL shall be zero. The customer shall not be required to exceed 240 hours of interruption in a contractual year.

POWER INTERRUPTION NOTIFICATION

The Company will notify the customer, using an agreed method, of the time the customer will be required to interrupt their load at least thirty minutes in advance and will notify them, at an appropriate time, when the interruption will end.

INTERRUPTIBLE CAPACITY CREDITS

The Company will credit the customer for their Monthly Interruptible Demand (MID) at the following rates:

(a) $12.00/kVA of Monthly Interruptible Demand (MID) for customers agreeing to be interrupted between 8.00 am and 9.00 pm on any day except Saturdays, Sundays and public holidays.

(b) $9.00 /kVA of Monthly Interruptible Demand (MID) for customers agreeing to be interrupted between 8.00 am and 4.30 pm on any day except Saturdays, Sundays and public holidays.

Where:

1. The **Monthly Interruptible Demand (MID)** is the difference between the **Monthly Average Demand (MAD)** and the **Firm Demand Level (FDL)**

   MID = MAD –FDL:

2. The **Monthly Average Demand (MAD)** is the number of kilowatt hours (kWh) consumed by the customer for the billing period divided by the number of days (DOS) in the billing period times 24 hours minus the number of hours interrupted in the month (Ih) and divided by power factor of 0.85:

   MAD = (kWh/(DOS*24-Ih))/0.85

3. The **Firm Demand Level** (FDL) is the kVA demand level established between the Company and the customer that specifies the load limit of interruption.

The customer must reduce the demand to this level or below during periods of required reductions.

SPECIAL PROVISIONS

In the event the Monthly Interruptible Demand (MID) is less than the minimum of 100 kVA no credit will be paid for that month.

INTERRUPTIBLE RIDER AGREEMENT

Customers who wish to participate in this program must register for this rider. Those eligible customers selected by the Company to participate in the pilot programme must enter into an interruptible rider agreement with the Company (the Agreement) for a contract period of not less than one year (the initial contract) provided that the initial contract must terminate by the end of the pilot program. A customer may request termination of the contract by giving the Company twelve months notice of its desire to terminate the contract.

In the event that the Company notifies the customer of an interruption and the customer fails to reduce power usage as required by the Agreement, no monthly credit will be issued for the month in which the customer failed to reduce power usage. In addition, the value of the credit that would otherwise have been afforded to the customer had it reached its FDL during an interruptible period for that billing month, will be added to the customer's bill for the current month.

TERMS OF SERVICE

The minimum contract period for this rider is one year. At the end of the pilot programme the Company will review the experience it has gained from the programme and determine whether to continue to offer this Rider. Customers will be advised accordingly. If the Company decides to proceed with new arrangements, the customer will be required to enter into a new contractual agreement with the Company.

RULES AND REGULATIONS

Service under this schedule is subject to the orders of the Fair Trading Commission and the latest publication of the "Information and Requirements Covering Installation of Electric Services and Meters". In case of a difference of interpretation between any provision of this schedule and the "Information and Requirements Covering Installation of Electric Services and Meters" booklet the provision of this schedule shall be deemed to apply. A bill calculated under this Rider is subject to change as may be approved and / or amended by the Fair Trading Commission under the provisions of applicable riders.

APPENDIX 4 - WORKED EXAMPLES

Time-Of-Use (TOU) Tariff

Billing Demand = D (kVA)
Energy Used During On-Peak Period = P (kWh)
Energy Used During Off-Peak = OP (kWh)
Fuel Clause Adjustment = FCA

Bill = $300 + $18 x D + (0.219 x P + 0.044 x OP) + (1.12 x FCA x P + 0.92 x FCA x OP)

Worked Example – TOU

EXAMPLE (Time of Use)

Billing Demand (D)	200	kVA	@$18/kVA
On-Peak Energy (P)	10,000	kWh	@0.219$/kWh
Off-Peak Energy (OP)	40,000	kWh	@0.044$/kWh
Fuel Clause Adjustment (FCA), as used in the Application.	0.158099	$/kWh	

BILL CALCULATION (excluding VAT).			LP Rate Comparison
Customer Charge		$300.00	$300.00
Demand Charge	200*18	$3,600.00	$5,000.00
On-Peak Base Energy Charge	10,000*0.219	$2,190.00	$4,700.00
Off-Peak Base Energy Charge	40,000*0.044	$1,760.00	
On-Peak Fuel Charge	1.12*0.158099*10,000	$1,770.71	$7,904.95
Off-Peak Fuel Charge	0.92*0.158099*40,000	$5,818.04	
	BILL TOTAL	$15,438.75	$17,904.95

Interruptible Service Rider (ISR)

Firm Demand Level = FDL kVA
Billing Period (Days of Service) = DOS days
Interrupted hours for month = Ih hours
Energy used = E kWh

Monthly Average Demand = MAD = E / ((24 x DOS - Ih) X 0.85)
Monthly Interruptible Demand = MAD - FDL

If MID >= 100 kVA
For customers signed up for 8.00 am to 9.00 pm:
IS credit = $12xMID

For customers signed up for 8.00 am to 4.30 pm
IS credit = $9xMID

If MID < 100 kVA
IS credit = 0

Worked Example

EXAMPLE for a customer on LP with IS (Interruptible Rider)

Billing Demand	500	kVA
Firm Demand Level (FDL)	200	kVA
Energy Used	250,000	kWh
Billing Period (DOS)	30	Days
Interrupted Hours for Month (Ih)	4	Hours
Interruptible Credit	$12	per kVA

Monthly Average Demand (MAD)	250,000/((24*30)-4)X(0.85)	410.8	kVA
Monthly Interruptible Demand (MID)	410.8-200	210.8	kVA

BILL CALCULATION (excluding VAT).

			LP Rate Comparison
Customer Charge	$300	$300.00	$300.00
Demand Charge	500*25	$12,500.00	$12,500.00
Base Energy Charge	250,000*0.094	$23,500.00	$23,500.00
Fuel Charge	250,000*.158099	$39,524.75	$39,524.75
Interruptible Credit	(210.8*12)	($2,529.60)	
	BILL TOTAL	$73,295.15	$75,824.75

Renewable Energy Rider

Energy sold to BL&P = E (kWh)
Fuel Clause Adjustment = FCA

Renewable Energy Credit = (greater of (1.8 X FCA) or 0.315) X E

EXAMPLE for a customer on Domestic Service (Renewable Energy Rider)

Assumptions				
Domestic Customer				
Customer's Total Energy Use		A	400	kWh
	33% during day	B	132	kWh
	67% during night	C	268	kWh
Solar PV producing 12 kWh /day		D	360	kWh/month
Consumption from BL&P		C	268	kWh
Sold to BL&P	(360-132)	D-B	228	kWh
Fuel Clause Adjustment (FCA)			0.158099	$/kWh

BILL CALCULATION (excluding VAT).

Customer Charge		$10.00
Base Energy Charge	100*0.15+168*0.176	$44.57
Fuel Charge	268*0.158099	$42.37
Bill Sub-total, before Renewable Energy Credit		$96.94
Renewable Energy Credit	(228*(greater of 1.8*0.158099 or 0.315))	($71.82)
BILL TOTAL, after Renewable Energy Credit		$25.12

NOTE: If Renewable Energy Credit exceeds consumption from BL&P for the billing period and the acount is in credit, the credit will be carried forward to the next billing period.

SUMMARY OF QUESTIONS

TIME-OF-USE (TOU) TARIFF

Q1. Do you agree with the times proposed as On-peak and Off-peak?

RENEWABLE SERVICE RIDER (RER)

Q2. What are your views on the value of the proposed credit?

Q3. What are your views on the disbursement of the proposed RER credit? Do you agree that the credit, where applicable, should be carried forward to the next billing period or would you prefer an automatic cash refund?

Q4. Do you believe that an added financial incentive to produce 'green' energy is necessary?

INTERRUPTIBLE SERVICE RIDER (ISR)

Q5. What do you consider to be an acceptable minimum Firm Demand Level?

Q6. What do you consider to be an acceptable maximum number of interruptible hours in a contractual year?

Q7. Are you concerned about how frequently one customer will be requested to drop to its Firm Demand Level relative level to another customer? What mitigating measures do you recommend?

Q8. What are your views on the eligibility of interruptible service rider customers for the time-of-use rate during the pilot period or after?

Q9. What are your views on interruptible service versus standby service?