Fair Trading Commission

FINDINGS REPORT

THE BARBADOS LIGHT & POWER CO. LTD.

PILOT PROGRAMMES

SUMMARY

On May 8, 2009 the Barbados Light & Power Company Limited (BL&P), also referred to as "the Company", submitted an application for a review of its electricity rates. In its Memorandum on Proposed Tariffs, the Company proposed the introduction of three pilot programmes[1] relating to a Time-of-Use (TOU) Tariff, a Renewable Energy Rider (RER) and an Interruptible Service Rider (ISR). The Fair Trading Commission "the Commission" determined that these pilot programmes would not be dealt with at the rate review hearing but through a separate public consultation. The Commission is required to provide regulatory oversight over programmes which introduce new provisions, rates or terms of service to customers.

This paper outlines the Commission's findings with respect to the RER, the ISR and the TOU tariff. As a consequence of the Commission's decision on the BL&P rate application dated January 28, 2010 which removed ratchet billing from the demand charge of Large Power (LP) and Secondary Voltage Power (SVP) customers, the BL&P submitted on February 24, 2010 a revised TOU tariff proposal whereby the base energy off-peak rate was increased from $0.044/kWh to $0.062 kWh plus VAT.

The Commission has reviewed all of the information submitted and is satisfied with the conditions under which the pilot programmes are being offered except for the duration. The Commission advises the BL&P that the pilot programmes should be undertaken for no more than two years from the date of implementation which should be no later than July 1, 2010.

[1] Appendix 2 provides a brief description of the pilot programmes as proposed by the BL&P

PUBLIC CONSULTATION

The BL&P proposed to implement the three aforementioned programmes on a pilot basis for a period of three years so as to gather information on their operational, financial and technical feasibility before determining whether the Company would implement these schemes permanently.

A consultation paper on the pilot programmes was issued on October 21, 2009 and an oral session was convened on November 20, 2009 at the Lloyd Erskine Sandiford Centre to allow all interested parties to comment on the pilot programmes.

Written responses were received from Ralph Dungan, Zenith Green Energy and Hallam Hope. Ralph Dungan, Hallam Hope, Dr. Erskine Simmons, Malcolm Gibbs-Taitt, Iain Edghill and Nigel Hoyte offered verbal submissions. Questions were raised by the Commission's staff and other attendees at the oral session. A summary of the issues raised is provided at Appendix 1.

Generally, respondents to the consultation paper dealt mainly with the Renewable Energy Rider. Discussion was focused on its feasibility, comparisons to renewable energy initiatives in other jurisdictions and to local established projects. The financial requirements and proposed credit were also discussed at length.

Requirements/Contracts - The Requirements for Grid Interconnection of Renewable Generation, the Renewable Energy Power Purchase Agreement and the Renewable Energy Interconnection Agreement contracts were reviewed by the Commission's legal department and recommended amendments were submitted to the BL&P. The BL&P has amended the documents to the Commission's satisfaction.

LEGISLATIVE FRAMEWORK

Section 3(2) of the Utilities Regulation Act CAP. 282 (URA) seeks to protect the interests of consumers by ensuring that service providers supply to the public service that is safe, adequate, efficient and reasonable. In keeping with section 4 (4) of the Fair Trading Commission Act, the Commission executed its functions under subsection 3(a), (b), (d) and (f) by consulting with service providers, representatives of consumer interest groups and other parties that have an interest in this matter.

COMMISSION'S FINDINGS

Sample Size

The major issues raised with respect to all of the proposed pilot programmes related to sample size and pilot duration.

For the **ISR** the Company proposed that a maximum of 20 customers from the SVP and LP class should take part in the ISR pilot and cited risks, in terms of potential lost revenue, as one of the main reasons for the small sample. Many respondents were of the view that the proposed sample size is too small. The LP class consists of 180 customers while the SVP class has 4,605 customers.

The Commission sought information from the Company on the number of customers that would be eligible for participation given the eligibility criteria for the ISR pilot. The information provided by the Company showed that the number of eligible customers varied depending on whether 2008 or 2009 information was used and whether the customers were able to reduce to a Firm Demand Level (FDL) of 30% of peak demand for the last 12 months or to a FDL of 0 kVA. In either of these scenarios the number of customers was less than 100 customers from the SVP and LP class.

The Commission recognises that not all of the eligible customers would be willing to participate in the ISR pilot due to several factors including:

- Inability to provide alternative power
- Possible risk of equipment damage during change-over if there are problems synchronising the systems
- Inconvenience to operation (manufacturing, hotel, etc.)

The Commission also considered the risk of the BL&P losing revenues if there were errors in assumptions that the Company used to estimate the credit and is of the view that a small sample size will limit this risk.

The Commission considers that the ISR sample size of 20 is acceptable given the number of eligible consumers.

The sample size proposed for the **RER** is 200. Some concern was also expressed about this number and more specifically on how the various classes will be apportioned. The Company has indicated that it is amenable to either increasing the total number of participants or instituting a quota for each class of customer to ensure that all customer classes are adequately represented.

The Commission supports the promotion of the use of renewable energy systems and respondents believe that there is the possibility that this pilot RER may be oversubscribed**.** The pilot will allow for the evaluation of how distributed generation can be accommodated in what is now a centralised generating system. Any increase in the sample size to facilitate the interests of respondents has to be balanced against having a smaller sample which facilitates better analysis and management of any safety and technical issues that may arise. Additionally the Commission recognises that any increase in the number of participants in this pilot will negatively impact the Company's revenue requirement. This was not accounted for in the rate application.

The Commission is satisfied with the proposed sample size for the RER but has no objection to the Company increasing the sample size. The Commission advises that the Company should institute a quota for each class of customer to ensure that all customer classes are adequately represented.

The **TOU tariff** is only available to Large Power customers and the sample size for this tariff is 30. One respondent was of the view that the number of large power customers allowed to participate should be significantly increased. There are currently 181 customers in the LP class.

The Commission considers that the TOU sample size of 30 is acceptable given that the total number of eligible Large Power customers is 181.

Pilot Duration

The time frame put forward for the pilot programmes is three years. This duration was queried by many respondents who believed that it was too long. Those that have practical experience with photovoltaics have called for the immediate implementation of the RER programme on a permanent basis. Respondents were also of the view that a one-year contract for the RER pilot was too short considering the level of financial investment needed for a renewable energy system.

The Commission acknowledges that renewable initiatives are not new and are currently being utilised in other jurisdictions. However the peculiarities of the Barbados environment will be assessed through these pilot programmes.

The contracts state that the agreements may go to the end of the pilot period but must be for at least one year. The Commission considers that it is acceptable to have the pilot contract period commensurate with the duration of the pilot as it is a research project with a finite time frame.

It appears that while at this time the BL&P is seeking to gather information based on consumers that are currently utilising renewable energy, it is not seeking to exclude customers who subsequently install renewable energy systems. On completion of the pilot and it is determined that the programme should be implemented on a permanent basis the Commission expects that the Company will make an offer of an extended contract period that is in line with those used in other jurisdictions which have this type of distributed renewable energy generation.

The Company has stated in Schedule K of its Application that the approved RER would continue for participating customers after the pilot programme has been completed so as not to compromise their investment decisions. The Company advised the Commission that for customers who have invested in equipment for the RER *" the Company does not propose to withdraw the connection but to continue the pilot in any requisite modified format based on the results of the pilot and approval of the FTC."*

The Commission advises that the experimental period should be undertaken for no more than 2 years from the date of implementation of the pilot programmes which should be no later than July 1, 2010.

Compensation

Many respondents were concerned about the level of compensation being offered to RER participants. One respondent suggested that the customer should be compensated for all the renewable energy that is generated, not only the excess that is fed to the grid. Another suggestion was that compensation should be based on the avoided cost of generation as opposed to avoided fuel cost only. One respondent expressed the view that the proposed Renewable Energy Rider will not adequately compensate for investment in photovoltaic systems.

The proposed RER is 1.8 times the Fuel Clause Adjustment (FCA) or $0.315 per kWh, whichever is greater. In response to the Commission's request for the Company to

show the basis of the credit, the Company advised the Commission that using actual generation figures it compared the estimated fuel cost avoided by renewable sources with the average fuel cost over a period from May 2008 to March 2009. The fuel clause adjustment was used as a proxy for the average fuel cost. The Company noted that in countries where higher payments are made there are often subsidies provided by government or levies paid by all customers to support the renewable initiative.

The Commission recognises that the credit is not expected to compensate for investment. The Commission accepts that the rate of compensation proposed for the RER which is based on avoided fuel costs is an appropriate and sound methodology. The Commission will monitor the avoided fuel cost factor during the pilot programme.

Size of Individual Installations

The RER size restrictions of 5kW for Domestic Service, General Service and Employee Service and 50 kW for Secondary Voltage Power, Large Power and Time of Use tariffs was debated. The Commission is aware that the existing electrical grid was designed for the distribution of electricity from central generating stations with power being delivered to customers via small step-down transformers. The Company advised that transformers are unable to automatically adjust voltage and therefore would be unable to cope with the potentially high voltages being fed to the grid at dispersed points.

The Commission has no objection to the size restrictions on individual installations.

Reliability and Stability of Network

As it pertains to the continued delivery of adequate electricity service to all of BL&P's customers the Commission must consider the impact that the inclusion of renewable energy sources will have on the system. Some respondents suggest that these systems can reliably produce a predetermined voltage on a consistent basis. The Commission however accepts that power quality, harmonics and fluctuations in power supply also factor into the stability of the network and thus limits on the number of installations, in the pilot phase, will have to be imposed to test and minimise any negative impacts.

ISR Penalty

The BL&P's terms of service for the ISR indicate that in the event 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 Firm Demand Level during an interruptible period for that billing month, will be added to the customer's bill as a charge for the current month.

The Commission understands that this penalty is applied for breach of contract and that without the penalty there would be no incentive for customers to reduce their usages and "drop down" to the requisite Firm Demand Level. The Commission's initial concern was that the penalty was disproportionate to the point of being detrimental to the customer. The Commission is however satisfied that the penalty is not unreasonable.

ISR - Frequency of Interruption

There were queries regarding the frequency with which a customer will be requested to drop to its Firm Demand Level relative to another customer. The

Company's position was that it would endeavour to share requests for interruptions among customers so as to ensure that all participating customers are impacted fairly. ***The Commission is satisfied with this approach but believes it should be closely monitored and tracked during the pilot period.***

TOU Tariff – On-peak and Off-peak times

The times proposed for On-peak are 10:00 a.m. to 9:00 p.m. and for Off-peak 9.00 p.m. to 10.00 a.m. The basis of these times was queried in view of the fact that most commercial activity in Barbados is conducted between the hours of 8:00 a.m. and 4:30 p.m. Additionally it was queried whether there was consideration of the use of a shoulder period in addition to on and off peak periods. The Company confirmed that it was considered but that they decided against its use as they did not want to make the system too complex.

The Commission is satisfied with the information the Company submitted to support the choice of the on–peak and off–peak times. The Company undertook a statistical analysis which included identifying periods of different cost levels to separate time periods. The Commission accepts that incorporating an additional rate for the shoulder period would make the tariff unnecessarily complex.

The Commission is satisfied with the proposed On-peak (10:00 a.m. to 9:00 p.m.) and Off-peak (9:00 p.m. – 10:00 a.m.) times.

CONCLUSION

The Commission is generally satisfied with the conditions under which the pilot programmes for the RER, the ISR and the TOU tariff are being offered but advises the BL&P that the pilots should be undertaken for no more than two years from the date of implementation which should be no later than July 2010.

Monitoring and Reporting

In recognising the need for regulatory oversight of these pilot programmes the Commission considers that it is necessary to put in place a reporting mechanism and format.

The BL&P is therefore required to provide performance reports on the pilot programmes on a six-month basis and a final comprehensive report at the conclusion of the pilot programmes. The reports should include but are not limited to information on:

- Number of customers participating in the pilots
- Reduction in total kWh sold to the RER participants
- kWh renewable energy fed to grid
- Total renewable credits and average amount of renewable credits per customer
- kWh used in on-peak and off-peak periods by TOU tariff participants
- Number and length of interruptions (ISR)
- Distribution of interruptions among participants (ISR)

Any technical or operational problems arising and the mitigating measures employed by the Company should also be reported to the Commission.

Next Steps

The RER and the ISR are not new tariffs as they lower the charge below the maximum rate set by the Commission; neither do they create new customer classes. Instead they are credits that are associated with pre-existing tariffs and as such will act to lower a participating customer's bill. Given the general compensatory nature of the riders a hearing will not be required after the pilot phase has concluded before full implementation can take place. The Commission requires notification of the BL&P's assessment of the pilot programmes for these riders and any proposed amendments prior to implementation.

Under the Utilities Regulation Act (URA) the TOU tariff is a new rate and would create a new class of customers. Section 3(1) (b) of the URA requires the Commission to set maximum rates and section 14 of the URA states that in any proceeding before the Commission involving a proposed rate the burden of proof to show that the rate is fair and reasonable shall be on the service provider. In view of this the Company, at the end of the pilot period and having garnered the necessary information, should submit an application to the Commission to justify that the proposed rate to be offered to the general public is fair and reasonable.

Between the conclusion of the pilots and the permanent implementation of the RER, ISR and TOU tariff all terms and conditions applicable under the pilot period will continue to apply unless expressly stated.

The Commission expects that for the RER, new contracts with extended time periods will be submitted to the Commission for review prior to permanent implementation.

APPENDIX 1

SUMMARY OF RESPONDENTS' COMMENTS

Renewable Energy Rider (RER)

Compensation

Many respondents were concerned about the level of compensation being offered to RER participants. One respondent suggested that the consumer should be compensated for all the renewable energy that is generated, not only the excess that is fed to the grid. He further intimated that if we are serious about renewable energy buy-back then the rates would have to be reflective of a proper rate of return as no lending institution is going to finance a photovoltaic system or anything else where the compensation is not based on an adequate rate-of-return. Another respondent proposed compensation based on the avoided cost of generation as opposed to avoided fuel cost only. As an example he referenced the Ontario model which, under its net metering arrangement, compensates the consumer at a rate that is commensurate with what the consumer is charged. A third respondent asserted that by proposing a single tariff of 1.8 times the fuel adjustment charge wind energy will be over compensated and solar energy undercompensated. He further contended that the RER should provide compensation to customers based on the avoided energy cost. These avoided costs consist of avoided energy cost, avoided variable operations and maintenance cost, avoided technical losses and avoided capacity or outage cost. He added that these costs are dependent upon the time of day when these costs are incurred and therefore dependent on the load shape of the renewable resource. These costs are equivalent to the load dependent marginal cost of the applicant.

In its written response the Company submitted that in countries such as Canada, Germany and Spain large subsidies are provided by the government or levies are paid by all customers to support renewable initiatives. These measures allow such

countries to offer payments for renewable energy that are higher than avoided cost. There are no such mechanisms in place in Barbados.

Contracts

The issue of contract negotiation and duration was raised. It was pointed out that the citizenry were not afforded the opportunity to make an input into the terms of the contract and that a one to three- year contract would not satisfy the requirements of a lending agency as this time frame would not allow for the recovery of investment costs. Twenty-year contracts were considered standard in countries utilizing renewable energy.

Incentives to New Renewable Energy Generators

The use of the term "customers who already employ photovoltaic, wind turbine and hybrid solar and wind……" was queried. It was suggested that there was no incentive for new persons to participate. The Company states that it would not be excluding any persons from participating in the pilot.

Incentives for 'Green' Energy Production

In response to question 4 of the Commission's consultation paper a respondent indicated that he believes that an added financial incentive to produce 'green' energy is warranted. The Company has stated that it is interested in participating in programmes that promote the use of renewable energy.

Sample Size and Duration of Pilot

Concern was voiced about the RER quota of 200 customers. The fear was that Large Power and Secondary Voltage Power customers may utilise all the available slots, causing the response of the residential customers to be lost. It was suggested that either the total number of participants be increased or quotas be given to each class of customer. Reservations over the proposed duration of the pilot were also raised.

In replying to this concern the Company indicated its agreement with the suggestion. The Company further indicated that it is not its intention to limit

participation in the RER to only those customers who already employ renewable energy sources. The programme will be available to all customers within the approved limit.

One respondent disagreed with the notion of a three-year pilot period. He suggested that renewable energy systems have been around for some time and have advanced technologically and that photovoltaics were ideally suited for Barbados. The latter assertion was supported by the fact that Barbados has many more hours of adequate sunlight than the European countries which have delved into solar energy. His own findings from his home system show that a system located in Barbados is able to produce twice the amount of electricity as a similarly sized unit in Europe. Another respondent called for the renewable energy programme to be implemented immediately on a permanent basis. On this issue, the Company contends that it will need adequate time to assess the impact. The three years will be used to collect load research data as well as monitor the system. The Company submitted that it operates an island system and thus has to be sure that that the system will not be negatively impacted by renewable technologies which by their nature are intermittent.

Size of Individual Installations

A respondent queried the size restriction on individual installations. This clause, he believes, restricts the amount of electricity that can be produced privately. In his response Mr. Worme, Chief Marketing Officer of BL&P, indicated that the size restriction on the individual installations was intended to ensure that their customers who utilise conventional electricity are not negatively impacted. There are also issues of power quality and reliability that have to be taken into consideration. In the Company's written response it was noted that the electrical grid was designed for the distribution of electricity from central generating stations with power being delivered to customers via small step-down transformers. It was explained that the transformers cannot automatically adjust the voltage.

Interconnection

The issue of interconnection was also raised. It was stated that there needed to be clear guidelines. The Commission notes that subsequent to the oral consultation draft requirements for interconnection were published on the Company's website.

Legal Grounding

The legal basis for the RER pilot project was queried. Sir Henry Forde, Legal Counsel for the BL&P indicated that there are statutory provisions that regulate the sale of electricity and the conditions under which people can receive or can output electricity. Mr. Peter Williams, Managing Director of the BL&P, later indicated that Barbados has no energy policy that speaks to the subsidisation of renewable energy.

Metering

The question of the type of metering system proposed was also tabled.

The Company informed the Commission that the BL&P was proposing the use of bi-directional meters which are capable of measuring the electricity entering the customer's premises from the grid and also that which is being fed to the grid from the customer's premises. The Company indicated that it was not looking at straight net metering – the difference between what goes out from what comes in, but that it is proposing a rate that is linked to the fuel cost. He also stated that the company is proposing that the meter be used for measuring the renewable resource.

Quality and Reliability

One respondent who has practical experience in the operation and use of photovoltaics assured the Commission that with respect to the "purity" or quality of the electricity generated from photovoltaics, the system he employs is reliably able to produce 110 volts almost consistently. He further intimated that when voltage drops do occur the system remains pure because of the grid time system. The system is monitored 24 hours a day.

In response Mr. Worme cautioned that there were other factors to be considered other than power quality including voltage, harmonics, and fluctuation in power

supply. He contended that one installation will not have a big impact on the national system but multiple installations have the potential to impact the overall system and individual transformers. He indicated that the Company has to ensure that once the renewable energy interconnection is broadly available existing customers are not negatively impacted.

Credit System

A query as to why a rolling credit system was chosen as the preferred means of compensation under the RER pilot was voiced.

The Company submitted that it is the most reasonable approach given the levels of expected credits and charges. The Company however suggested that it was prepared to adjust the system after information had been gathered during the pilot phase.

Alternative renewable sources

It was noted that no reason was given as to why the Company limited its proposal to solar and wind energy. It was suggested that there is potential for biomass, biogas and bio-fuel power generation on the island.

Interruptible Service Rider (ISR)

Sample Size and Duration of Pilot

Questions were raised concerning the empirical value to be gained from limiting the sample to 20 participants and using a three-year sampling period. Many respondents considered the sample size to be too small and the duration too long. Staff also queried the sufficiency of the proposed sample size. The Company intimated that they were being very careful with this particular pilot because there is a greater revenue risk involved.

Load

It was enquired whether the load level that would trigger an interruption would be variable or fixed. Mr. Worme indicated that the interruptible load level would be very variable because the interruption will be determined by the amount of capacity that is available to the Company.

Dual Participation in ISR and TOU Tariff

Explanation was sought as to why Interruptible Service Rider customers are not allowed to benefit from the Time-of-use tariff. The answer given to this question was that it would not benefit the company financially to have a single customer utilise two schemes that both seek to reduce demand in the on-peak period.

Interruptible Service Diversity Factor

The Company was questioned about the marginal cost analysis that guided the development of the interruptible service credit, and how the two proposed capacity credits were determined.

The Company indicated that the marginal cost study was used to calculate the capacity credit and provided the Commission with the calculation.

Time of Use (TOU) Tariff

Sample Size and Duration of Pilot

On the issue of the TOU tariff, the restriction on the number of participants and the proposed duration of the pilot was queried. One respondent was of the view that either the proposed time frame was too long and suggested 18 months or the number of large power customers allowed to participate should be significantly increased. He questioned the empirical value that could be gained from looking at a small (30) sample size for such a long time (3 years).

On-peak and Off-peak Times

A respondent disagreed with the times proposed as On-peak (10:00 am to 9:00 pm) and Off-peak (9:00 p.m. –10:00 a.m.). His argument was based on the fact that most commercial activity in Barbados is conducted between the hours of 8:00 a.m. and 4:30 p.m. during week-days and suggested that this time should instead be used as On-peak.

Benefit Derivation

It was queried whether the Company had planned or is amenable to making provisions for discussions with large power customers taking part in the TOU pilot on matters relating to how they may optimise their involvement in the pilot. In responding Mr. Worme revealed that the Company did not have much information with which to work but the participating companies would have an idea of how they use their power and therefore if they would be likely beneficiaries. He however indicated that they intend to work with individual customers.

Shoulder Period

The use of a shoulder period in addition to on and off peak periods was suggested. Mr. Worme confirmed that it was considered but decided against its use as they did not want to make the system too complex.

General Comment

Impact of Approved Substantive Rates on Pilot Rates

In responding to the question of whether the rates for the pilot programmes and those in the substantive rate application were linked and if so how would a denial of the proposed rates in the substantive application affect the pilot rates, Mr. Worme indicated that they were linked. He further pointed out that the cost-of-service information and the proposed rates were used to develop the rates for the Time-of-

use and Interruptible Service Riders and any adjustments of the proposed substantive rates would require a revision of the rates for the proposed riders.

APPENDIX 2

Brief Description of Renewable Energy Rider as proposed by the BL&P

The Renewable Energy Rider provides the opportunity for customers who produce renewable energy for their own use to sell excess to the grid. It is proposed that this 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 Domestic Service, Employee Service, General Service, Secondary Voltage Power, Large Power and TOU tariffs will apply except as amended by the rider. The rider was proposed to initially be offered as a pilot for three years; however consumers requesting service under this optional rider are required to enter into a power purchase agreement with the Company for a minimum of one year.

Customers applying for this rider would be 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

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.

Brief Description of Interruptible Service Rider as proposed by the BL&P

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 30 minutes of being notified to do so by the Company. This FDL is a negotiated kVA demand that would have 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 20 customers whose total installed capacity shall not exceed 10,000 kVA. TOU tariff customers are not eligible to participate under this rider.

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

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

(a) $12.00 / kVA ($13.80 VAT inclusive) 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 ($10.35 VAT inclusive) 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:

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

$$MID = AD - FDL$$

b) The **Average Demand (AD)** 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:

$$AD = (kWh/(DOS*24-Ih))/0.85$$

c) 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.

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

Brief Description of Time-of-Use Tariff as proposed by the BL&P

This tariff is available as a pilot programme 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.

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*".

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 other premises without the express prior written consent of the Company.

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 + $45.00 VAT = $345.00/month

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 + $2.70 VAT = $20.70/kVA

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: $0.2190 / kWh + $0.03285 VAT = $0.25185/kWh

Off-peak: $0.0620 / kWh + $0.0093 VAT = $0.0713/kWh

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 10:00 a.m. to 9:00 p.m. 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.

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.