NOTIFICATION OF THE BARBADOS LIGHT & POWER COMPANY LIMITED (BLPC) TO THE FAIR TRADING COMMISSION (COMMISSION) OF ITS INTENTION TO ESTABLISH A CUSTOMER ENERGY SAVINGS FINANCING PROGRAMME (CESF) PURSUANT TO SECTION 16 OF THE UTILITIES REGULATION ACT, CAP 282 OF THE LAWS OF BARBADOS.

A. APPLICATION

1. The Barbados Light & Power Company Limited (BLPC) hereby notifies the Fair Trading Commission (Commission) of its intention to implement a Customer Energy Savings Financing Programme (CESF) for certain energy efficiency (EE) and renewable energy (RE) projects for customers within the Domestic Service, General Service and Employee tariffs to enhance the grid's resilience and reliability, and to deliver electricity bill savings to customers. The CESF will provide energy saving benefits to customers, develop a financing mechanism to advance Barbados' national EE and RE transition goals and develop new demand side management tools for BLPC to support transition to renewable generation sources.

2. This CESF proposal is the culmination of a CARICOM initiative to encourage deployment of an Integrated Utility Services (IUS) business model by Caribbean utilities. The IUS model was designed to encourage rapid deployment of EE/RE programmes to benefit customers and to assist utilities in the development of new revenue lines needed for financial stability in the challenging business climate created by the clean energy transition in Caribbean countries.

3. The BLPC, after extensive research and analysis, proposes to apply the IUS model in the form of the CESF pilot to test two new business lines:

   (a) BLPC will advance customers the funds to complete certain EE retrofit and RE installation projects such as LED lighting, energy efficient air conditioner units and solar PV systems. In addition, customers can also access funding to complete meter socket base replacements and Uninterruptible Power Supply

(UPS) devices. Customers will make repayment on an agreed schedule through a separate charge on the customer's electricity bill; and

(b) BLPC will offer surge protection services designed to respond to customer requests for enhanced protection of customer-owned equipment against power fluctuation on the grid that are beyond the utility's control. Customers will make a monthly service charge payment for this service.

In relation to the two new business lines set out above, customers will be able to make monthly convenient payments via their electricity bills. Both business lines will feature an opt-in, on-bill repayment programme that enables customers to pay project or service costs over time on their utility bill in a simple, efficient process.

4. Pursuant to Section 16 of the Utilities Regulation Act, Cap 282 (URA) and Rule 26 of the Utilities Regulation (Procedural) Rules S.I. 2003 No.104 of the Laws of Barbados, BLPC seeks the Fair Trading Commission's (Commission) approval of:
    a. Implementation of the CESF Programme on a pilot basis for a period of twenty-four months;
    b. Allowance of CESF participants to make on-bill repayment through their monthly electricity bills;
    c. Establishment of a CESF surcharge, applied to participants' monthly electricity bills as an on-bill payment mechanism.

B. BACKGROUND

5. Barbados has established ambitious clean energy transition goals within the Barbados National Energy Policy 2019-2030 (BNEP) which outlines a 100% RE and carbon neutral economy by 2030 and an energy sector with the maximum feasible efficiency in energy production and consumption.

6. The BNEP is designed to establish a sustainable energy sector, ensuring energy security and affordability through diversity and collaboration. The BNEP includes provisions which promote equity for households that are unable to pay for energy

efficiency retrofits and products. (BNEP, pp 14, 75-78). The BNEP further includes the specific energy efficiency objectives to:

a. establish retrofits or energy efficiency where feasible (e.g. replacing fluorescent bulbs with LED lights);
b. consider energy efficiency alongside renewable energy development in an integrated approach to sustainability throughout the sector; and
c. develop regulations in tandem with all government ministries involved in the energy sector to identify a clear and defined process for new applicants in energy efficiency projects. (BNEP, p 77).

7. The BNEP sets out energy efficiency targets that entail a 20% reduction in electricity consumption compared to the Business As Usual (BAU) scenario through electrical energy efficiency efforts by the year 2030.

8. The Barbados Intended Nationally Determined Contribution under the Paris Climate Treaty establishes:
    a. A 2025 interim target of an economy-wide reduction in Greenhouse Gas Emissions (GHG) of 37% compared to the BAU scenario, equivalent to an absolute reduction of 21% compared to 2008 baseline year;
    b. a 2030 ultimate target of an economy-wide reduction in GHG emissions of 44% compared to the BAU scenario, equivalent to an absolute reduction of 23% compared to 2008 baseline year;
    c. an intended focus of mitigation activity to be on energy consumption, which accounted for 72% of Barbados' GHG emissions in 2008 baseline year, with 67% arising from energy generation and 33% from transport; and
    d. a 2029 target of 22% reduction in electricity consumption compared to the BAU scenario through electrical energy efficiency efforts.

9. In support of these policy objectives, BLPC has embraced a vision of:
    i. 100% Renewable or Clean Energy; and
    ii. 100% Electrification of business, industry, and transportation.

10. BLPC is also committed to supporting cost effective, flexible and scalable demand-side energy programmes as essential tools to enable the sustainable achievement of clean energy objectives and to minimize the need for costly generation asset investments.

11. In March 2020, BLPC advised the Commission that BLPC wished to undertake initiatives to assist customers most vulnerable to the economic shocks likely to ensue from the Covid-19 pandemic. BLPC has designed the CESF as a further customer initiative to facilitate affordable financing for the upfront costs of EE and RE projects that could lower customer bills on the Domestic Service, General Service and Employee tariffs. The pilot will also offer financing for Uninterruptable Power Supply (UPS) devices as well as affordable financing to customers for costs of upgrades to meter socket base equipment, owned by customers.

12. BLPC hopes to expand the CESF programme if the pilot project confirms that the design is efficient and effective for the customers and the utility, consistent with the practice of utilities in other jurisdictions. The pilot programme will also evaluate the feasibility of an on-bill financing programme to provide affordable project financing for customers to enable them to lower energy demands and electricity costs.

13. BLPC customers have expressed strong interest in EE and RE projects. However, a major barrier to the widespread adoption of EE and RE initiatives is access to the up-front financing to make the purchases. Investment in EE and RE initiatives will likely result in direct net bill savings to customers that exceed the initial investment cost, but customers often lack the collateral to secure the necessary upfront financing of these initiatives.

14. The CESF is an opportunity for customers to access affordable financing for EE and RE projects and is a convenient opt-in, on-bill repayment programme facility that enables customers to pay project costs over time on their utility bill in a simple, efficient process.

15. BLPC has worked in close cooperation with CARICOM, GIZ and other stakeholders to design an innovative, utility-led solution to address this market need, drawing upon

international best practices by utilities to facilitate customer access to EE and RE financing.

16. BLPC notes that there is an historical precedent for BLPC financing of customer-owned wiring. In 1964, BLPC undertook a rural electrification programme, which extended electricity to approximately 7,000 Barbadian households during the 13-year period ending in 1976. As part of the programme, approximately 4,700 families received interest free loans for initial home wiring. See generally, World Bank Staff Appraisal Report, Barbados Power Project, November 17, 1980, Report No. 3137b-BAR, section 1.08.

17. BLPC also plans to adopt the best practices of other international utilities in offering enhanced surge protection services to customers who seek increased protection for electronic equipment in their home. The BLPC surge protection services will provide customized protection packages for customers' needs. These services are now commonly offered in other grid systems.

18. The BLPC is aware that utilities operating in the State of Florida in the United States of America offer customers optional enhanced surge protection services to assist clients in protecting property in the face of frequent lightning and extreme weather-related surge incidents. Similar weather-related surge incidents also occur in Barbados.

C. CONCISE STATEMENT OF FACTS (Rule 26(1) (a) of the URP Rules)

19. BLPC is a vertically integrated electric utility company which was established on May 6, 1955 and incorporated on December 30, 1986 under the **Companies Act,** Cap 308 of the Laws of Barbados and has its registered office at Garrison Hill, St. Michael, Barbados. Pursuant to the Electric Light & Power Order, No. 3, set out in the Third Schedule of the **Electric Light and Power Act,** Cap 278 of the Laws of Barbados, BLPC was granted the right to supply energy for all public and private purposes for a period of forty-two years from August 1, 1986.

20. The Applicant is a wholly owned subsidiary of Emera Caribbean Inc. (the holding company).

21. BLPC is committed to undertaking this new pilot project initiative to complement its ongoing major shift towards renewable and clean energy sources in support of the stated policy of the Government of Barbados to reduce the island's dependence on fossil fuels and to facilitate greater energy price stability for customers.

22. Consistent with the requirements of its licence to supply electricity, and the underlying principle stated in the Utilities Regulation Act Cap. 282, Sec.3(3)(a), that electricity service should be "safe, adequate, efficient and reasonable", the Applicant proposes a pilot programme to test the feasibility of an opt-in, on-bill repayment system to deliver financing options to empower customers to adopt energy efficient and renewable energy equipment, such as LED lighting, energy efficient air conditioner units and solar PV systems.

23. Another important step in the clean energy transition is the installation of Advanced Metering Infrastructure (AMI), an integrated system of smart meters, communications networks, and data management systems that is essential to the transition to a Smart Grid that will enable the network to smooth out fluctuating demand and lower peak demand through application of time of use tariffs, thereby avoiding unnecessary new generation asset investment.

24. While BLPC has been successful in installation of AMI meters at more than 90% of customer accounts, with more than 100,000 meters installed, BLPC has not been able to install the AMI meters in premises where customer-owned meter socket base apparatus is corroded and requires replacement. Some residential and small business customers, faced with the need to replace their meter socket base equipment, have advised BLPC that they cannot afford the cost of hiring the necessary licensed electrician to perform the upgrade, and those premises remain without AMI services. These vulnerable customers need access to affordable financing.

25. BLPC also continues to explore how best to enhance reliability and customer experience in the near-term, and has identified strong customer interest in surge protection and UPS devices to protect customers' equipment from surges and spikes in power supply due to causes that are outside the utility's control. These customers seek access to reliable and affordable professional guidance and products to secure this objective.

26. The CESF will facilitate investments in the energy improvement technologies outlined above and represents a prudent investment of utility funds to advance EE and RE objectives at minimal risk, enabling evaluation of pilot programme results before a major scale-up to additional technologies and customer segments.

D. GROUNDS FOR THE APPLICATION (Rule 26 (1)(b) of the URP Rules)

27. Though there has been long-standing Government of Barbados policy support for energy efficiency projects and small-scale renewable energy projects, many BLPC customers have been unable to afford the initial project costs due to lack of access to affordable financing.

28. The CESF is an on-bill financing programme that provides customers with funding to finance the costs of certain EE and RE projects and customer meter socket base replacement projects. The BLPC will make funds available to customers to make investments in energy efficient devices, renewable energy systems, and other energy improvement items and the related installation costs. The CESF will also fund upgrades to customers' meter socket bases.

29. The customer will be required to repay the amount advanced by the BLPC for these energy improvement projects through a monthly CESF surcharge on their electricity bill over a period not exceeding seven (7) years.

30. Those customers enrolled in the surge protection programme would pay their monthly service charge through a separate line-item on their electricity bill.

31. The benefits of the CESF include:
    a. Customer convenient access to capital for energy improvement projects;
    b. Customer convenient access to surge protection services with professional guidance;
    c. Acceleration of the investments in EE and RE initiatives;
    d. Deferral of new generating capacity and reduction in the use of the more costly to operate peaking generation;
    e. Programme participants bearing the direct financing costs of the programme, avoiding undue burden on other ratepayers;
    f. Reduced upfront financing costs to customers; and
    g. Net bill savings to participants over the life of the investments.
    h. Providing an opportunity in the future for BLPC to introduce demand response services as well as other distributed resource management services.

Description of Pilot Project

On-bill Financing for Energy Improvement Technologies

32. Under the pilot programme, BLPC will initially make available $300,000 BBD to customers to purchase different energy improvement technologies including EE and RE equipment, replacement of customer-owned meter socket base and UPS devices as described in Appendix A-1 Technology and Potential Customer Bundled Offerings. Participants will generally be required to contribute up to a maximum of 15% of the cost of the energy improvement technology. The BLPC reserves the right to waive this contribution from participants. Potential customer bundles have been developed based on the company's assessment of the most complementary combinations of the technologies. Though the company has identified these bundles, customers are not precluded from selecting an individual technology or packaging a bundle to suit their individual needs.

33. Installation of the EE and RE equipment under the pilot programme would enable customers to reduce energy consumption. These technologies can lower customer energy demand, and improve energy utilization intensity, lowering expenditures for energy and petroleum imports to Barbados.

34. These energy improvement technologies are expected to generally improve the efficiency of customers' energy usage and give rise to bill savings. In the case of surge protection services, the customer will benefit from enhanced protection for a monthly service charge.

35. BLPC will monitor participant energy bills to determine if bill savings are realized. The actual total electricity bill savings in each individual case are determined by the customer's personal use profile and may vary for many reasons through time. But the energy savings will enable the customer to lower costs when compared to similar baseline use habits using the older replaced equipment.

Surge Protection Services

36. Surge protection or the primary protective device (PPD) can be a plug and play or hard-wired device by the meter socket base which protects mainly bigger motor-driven equipment from harmful surges.

37. Customers will pay a one-time installation fee plus a monthly maintenance fee for the PPD. Customers will also have the option to purchase secondary protective devices (SPD) and Uninterruptible Power Supply (UPS) for other sensitive equipment within the home as these complement the surge protection. As part of the programme, a certified technician will properly install the surge protection devices at the meter.

38. BLPC's surge protection pilot programme will be an opt-in programme available only to the Domestic Service, General Service and Employee customer classes who meet the criteria for surge protection in their homes. Criteria includes:
    - the presence of effective earths/grounds
    - on inspection, meter socket base condition must be to BLPC's satisfaction
    - good 24-month credit history in BLPC electricity bill payment as well as timely payment status for the past 12 months

39. The additional/optional SPDs and UPS devices are additional layers of protection for specific electronic devices within the home. The monthly fee will also cover additional

insurance coverage for devices covered under the programme in the rare event the primary protective device malfunctions.

Customer Qualification

40. Customers who opt to participate in the CESF pilot programme must meet credit qualification standards based on a good 24-month credit history in BLPC electricity bill payment as well as timely payment status for the past 12 months.

41. The application process would have two stages:

    i. Stage One: Pre-Qualification - BLPC will pre-qualify customers and help them to identify programme opportunities to lower electricity bills and allow customers to identify the vendors and installers they wish to partner with. During this stage, customers will also obtain and submit the specification and cost details of their specific energy improvement technologies for approval; and

    ii. Stage Two: Approval - BLPC's review of the customer's application to determine the loan amount, the monthly on-bill repayment amounts and execution of contracts.

CESF Surcharge for Programme Participants

42. BLPC would recover the funds advanced under the programme from participants through a CESF Surcharge assigned to the customer account. The surcharge would be a rider on the Domestic Service, General Service and Employee Service tariff categories and would allow for monthly repayments as a separate line item on participants' bills. See Appendix A - Table A2 Example of Amount Financed & Estimated On-bill Repayment.

43. The CESF Surcharge will recover the following costs:
    a. The amounts advanced to customers to finance their projects; and
    b. a rate of return on the funds advanced not exceeding BLPC's approved rate of return.

44. The CESF surcharge will become part of a participating customer's electricity bill and therefore customers will be subject to electricity service disconnection in the event of non-payment of their total electricity bill.

45. The BLPC considers that the use of the CESF surcharge for the services described above is an appropriate on-bill customer repayment mechanism to enable recovery of costs incurred to deliver EE and RE project financing and related services to customers.

46. BLPC also views the Commission as having the authority to enable a rate of return not exceeding BLPC's approved rate of return for the financing of the project costs. This is reinforced by the value to customers, who are accessing capital on terms that compare favorably to commercial bank loans to finance similar projects, assuming customers could qualify for such loans, which is not always the case. There is significant value in this BLPC service, as customers will benefit from significant energy improvement projects and simplified financing procedures.

47. The monthly repayment through the CESF surcharge will not be contingent upon the participating customers realizing the estimated energy savings, given that the customers' electricity usage is not within the utility's control, and could increase over the 7 year repayment period due to unrelated factors. But there are several programme customer protections to ensure the participating customers get the intended programme benefit:

    a. BLPC will monitor the initial installation to determine if energy savings from the installed equipment are consistent with estimates.
    b. BLPC will encourage customers to secure product warranties from vendors and installers in the event of equipment malfunction;
    c. Contracts between BLPC and the customer will require customers to perform regular service and maintenance on the equipment in accordance with the Manufacturer's recommendation so that the equipment remains in optimal operating condition.

48. The CESF Surcharge ensures that only the participating customers pay the actual project financing costs.

49. For the purpose of the pilot programme, the administrative costs of the programme will be recovered from all of the utility's ratepayers. However, this approach to the recovery of the administrative costs will be evaluated at the end of the pilot programme period. This shared approach is justified by the system-wide benefits of the EE and RE pilot projects, which are a necessary transition step to future programme scale-up, enabling Barbados to meet its national objectives and the potential fuel savings from this programme.

E. STATUTORY PROVISIONS UNDER WHICH THE APPLICATION IS BEING MADE (Rule 26(1) (c) of the URP Rules)

Utilities Regulation Act, Chapter 282

50. The Utilities Regulation Act, Chapter 282 (URA) Sec. 4 provides that the Commission shall have regard to national environmental policy in establishing the standards of service for regulated utilities, defined as "the quality and extent of services provided by service providers", and further defined in the URA.

51. The URA defines "utility service" to mean a service specified in the Schedule (which in turn specifies the supply or distribution of electricity) and includes the "supplying or furnishing of any commodity derived directly from the activities in which a service provider is engaged but does not include any other activity of the service provider which is not connected with a service specified in the Schedule."

52. For the purpose of this innovative pilot programme, BLPC believes that the URA fully supports the authority of the Commission to establish a programme to enable customer access to EE and RE programmes consistent with priority national environmental objectives.

53. The URA further sets out that the term “rates” includes every rate, fare, toll, charge, rental or other compensation of a service provider; a rule, practice, measurement, classification or contract of a service provider relating to a rate; and a schedule of tariff respecting a rate. The charges of the pilot programme are appropriately considered charges and compensation for the enhanced electricity services offered to the customer account benefitting from the EE and RE and related services of the pilot.

54. Section 16 of the URA provides that where the Commission has not fixed a period of time in accordance with section 15 (1) the Commission may on its own initiative or upon an Application by a service provider or consumer, review the rates, principles and standards of service for the supply of a utility service.

55. BLPC requests approval to implement the CESF programme to enable customer access to affordable financing and enhanced services with convenient on-bill repayment. Therefore, this Application, made pursuant to Section 16 of the URA and Rule 26 of the URP Rules, forms the statutory basis on which the Commission may act in relation to granting our request.

56. BLPC has structured its Application and the order being sought in accordance with Rule 26 of the URP Rules.

F. NATURE OF ORDER BEING SOUGHT

57. BLPC requests that the Commission approves:
    a. Implementation of the CESF Programme on a pilot basis for a period of twenty-four months;
    b. Allowance of CESF participants to make on-bill repayment through their monthly electricity bills; and
    c. Establishment of a CESF surcharge, applied to participants’ monthly electricity bills as an on-bill payment mechanism.

G. PERSONS AFFECTED BY THE APPLICATION (Rule 26 of the URP Rules)

58. Pursuant to Rule 26 (4) of the Rules, the Applicant advises that it is impractical to set out all the names and addresses of each customer affected by the Application because they are too numerous. However the persons affected can generally be described as customers of the Applicant that fall within our customer classes or tariff groups. These customers are affected because the Applicant supplies service to them.

DATED THIS 13th DAY OF OCTOBER, 2020

SIGNED BY: ……

ADRIAN CARTER

THE APPLICANT'S REPRESENTATIVE AND DULY AUTHORIZED OFFICER

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Appendix A: Pilot Programme Technology Offerings and Cost Analysis

A1. Technology and Potential Customer Bundled Offerings

The pilot programme would offer different energy improvement technologies to customers within the Domestic Service, General Service and Employee tariffs. While four potential bundles are described below in Table A1, customers will be able to select any combination of the technologies outlined below that best meets their needs.

- **LED Lighting**

  A light-emitting diode (LED), is a type of solid-state lighting that uses a semiconductor to convert electricity into light. LED bulbs can be six-seven times more energy efficient than conventional incandescent lights and may reduce energy usage by more than 80 percent and can last more than 25 times longer than traditional light bulbs.[1]

- **Energy Efficient Air Conditioner Unit**

  Air conditioners use energy to transfer heat from the interior of your home to the relatively warm outside environment. Switching to high-efficiency air conditioners could reduce energy usage up to 50%. An inverter air conditioner unit is a more energy efficient unit. The key difference between an inverter and non-inverter air conditioner is that an inverter air conditioner can regulate the speed of its compressor motor. Once the room is cool, inverter air conditioners lower the speed of the motor to save the energy and refrigerant used to cool the air.

- **Meter Socket Base**

  The meter socket base is the unit that holds the BLPC's meter and is placed between the utility company's wires and the customer's home electrical system. It is the responsibility of the customer to maintain the meter socket base so as not to compromise the safety of their electricity supply. However, during BLPC's AMI deployment programme, it was recognized that some customers' meter socket bases needed replacing (usually due to corrosion) and a segment of those customers are unable to finance the replacement.

[1] U.S. Department of Energy.
https://www.energy.gov/energysaver/save-electricity-and-fuel/lighting-choices-save-you-money/led-lighting
https://www.energy.gov/articles/top-8-things-you-didn-t-know-about-leds

- **Uninterruptible Power Supply Devices**

  An uninterruptible power supply (UPS) is an electrical apparatus that provides emergency power when there is an electricity interruption. Components plugged into the UPS can receive power for a limited amount of time and therefore offers some protection from the sudden loss of power.

- **Solar Photovoltaic Systems**

  A photovoltaic system, also PV system or solar power system, is a power system designed to supply usable solar power by means of photovoltaics. It consists of an arrangement of several components, including solar panels to absorb and convert sunlight into electricity, a solar inverter to convert the output from direct to alternating current, as well as mounting, cabling, and other electrical accessories to set up a working system.

- **Surge Protection Services**

  Electricity supply to customers is subject to brief voltage fluctuations outside of the nominal supply voltage. These spikes and surges, known as “transient” voltages, can last up to a few milliseconds. The cause of most transient voltages are outside the utility’s control, ranging from the most common - downed power lines, tree limbs or animals coming into contact with power lines, sudden changes in electricity use by nearby customers, or even the switching or cycling on and off of equipment in customer home or business, to the most extreme - lightning-induced surges.

  All modern electrical appliances now contain delicate electronic circuitry, leaving common appliances as vulnerable as computers to the effects of surges. A power surge may last for only a few millionths of a second, but at its worst, it carries tens of thousands of volts, enough to destroy circuit boards in most important appliances, requiring complete replacement. Customers are recommended to have surge protection system, which works to divert most of the surge energy at the main service line, as well as a second layer of protection with additional surge protection and UPS devices to protect specific equipment.

  The pilot program offers a customizable package that include the two layers of surge protection and UPS devices. The surge protection system works to divert most of the surge

energy at the main service line, while providing additional protection from residual voltage inside the customer premises. The first layer of surge protection is a primary unit installed behind or near the electric meter, designed to absorb a large amount of transient surges before they enter the premises wiring. The second layer of protection features sophisticated plug-in protectors that help safeguard sensitive electronics. If momentary outages or flickers threaten Wi-Fi connection, digital video recording device or other sensitive electronics, a UPS device can be used to provide surge protection and battery backup to isolated equipment.

Table A1.1 Product Bundles by Customer Class

Bundle	Technologies
1	Uninterruptible Power Supply (UPS) + Meter Socket Base Replacement
2	Meter Socket Base Replacement + LED Lighting
3	Solar PV + LED Lighting
4	Efficient AC + LED Lighting

A1.2 Proposed Technology Cost, Warranty Life, and Certification

Proposed Technology	Estimated Cost (BBD)	Warranty Life	Energy Star or other Certification
LED Lighting (12 units)	$280	3 year	Energy Star, Hong Kong Safety Mark
Air Condition (Inverter 24000 BTU)	$3,189	1-3 year (supplier dependent)	Energy Star, Eurovent
Solar Rooftop PV (3 kW)	$11,730	20 years	UL Listed, Hong Kong Safety Mark
UPS (420 W)	$348	3 years	UL Listed, Energy Star
Meter Socket Base Replacement	$500	15 years	ETL Listed – Intertek

A2. Cost Analysis

Table A2 below presents a summary of potential on-bill payments as well as savings customers may realize from adopting the energy improvement technologies bundles outlined in Table A1.1 above. The energy savings are estimated using conservative assumptions concerning the baseline use by customers before installation, and assuming consistent customer usage patterns after installation.

Table A2. Example of Amount Financed & Estimated On-bill Repayment

Proposed Bundles	**BLPC Amount Financed** (85% of investment)	**Estimated Monthly On-bill Repayment** (7 year average)	**Estimated Monthly Bill Savings** (10 year average)
Bundle 1 UPS, Meter Socket Base Replacement	$721.00	$8.00	-
Bundle 2 LED Lighting, & Meter Socket Base Replacement	$664.00	$8.00	$25.00
Bundle 3 LED Lighting & Solar PV	$10,209.00	$118.00	$214.00
Bundle 4 LED Lighting & Inverter A/C	$2,950.00	$34.00	$80.00

A3. Calculation of Repayment Schedule

The customer on-bill repayment is calculated by determining the amount to be repaid monthly to recover the total cost of the customer's energy improvement technology over a 7- year repayment period. This cost includes a rate of return not exceeding BLPC's approved rate of return.

The pilot project assumes that BLPC and the customer will work toward bill neutrality, and that this goal will be achieved in most cases. However, this is not a requirement of the programme, as some customers may seek only meter socket base replacement or a shorter repayment period.

A4. Risk Mitigation for Consumers and BLPC

The pilot project mitigates risk to the customer and BLPC in several ways:

1. Customers may choose their equipment vendors and installers, but the programme will require any participating vendor to demonstrate their technical skill and reliability in accordance with the BLPC vendor/installer criteria. BLPC will not provide any installation or equipment sales services with the exception of the Surge Protection. BLPC will advise customers to purchase EE and RE equipment from vendors who supply equipment that has received credible third-party verification as energy efficient and reliable equipment. EE and RE Equipment installers will be requested to demonstrate their technical skill and reliability by providing at least two comparable successful project references.

2. BLPC will advise customers to ensure that all EE and RE equipment purchased is done on terms that assign product warranties to the customer, thereby allowing the customer to seek the warranty protections in the event the equipment fails to function properly.

3. BLPC will require customers purchasing EE and RE equipment to maintain and service such equipment to assure equipment remains in optimal operating condition. In the case of surge protection service, the customer will be required to ensure that adequate earthing is maintained.

Appendix B: CESF Surcharge Rider

CUSTOMER ENERGY SAVINGS FINANCING PROGRAMME (CESF) SURCHARGE RIDER

APPLICATION

This rider is available to customers who qualify for the Domestic Service (DS), General Service (GS) and Employee (EMP) tariffs. All of the provisions of the applicable DS, GS and EMP tariffs will apply except as amended by this Rider. This rider is specific to customers that are participants in the Customer Energy Savings Financing Programme (CESF) on a pilot basis.

CONDITIONS OF SERVICE

The CESF is a voluntary pilot programme available to customers to facilitate financing to purchase energy improvement technologies including energy efficiency and renewable generation devices.

TERMS OF SERVICE

Under the Rider:

1. Up to a maximum of 15% contribution is required from participating customers to defray the initial costs of the energy improvement project, with the remainder of the initial costs to be paid by BLPC.
2. Customer shall be responsible for repayment of the BLPC investment in accordance with the Repayment Schedule agreed to by BLPC and customer.
3. Customers who enroll in the Surge Protection programme shall pay a monthly fee to BLPC.
4. The CESF surcharge amount and/or surge protection monthly service charge shall be set forth on a separate line item on the customer's electricity bill until paid in full.
5. The CESF surcharge shall be part of the Company's charges and is expected to be paid by the customer. Failure to make payment may result in disconnection in accordance with the Company's approved Terms and Conditions.
6. Although the Company expects that all participating customers in EE and RE projects will receive lower monthly utility bills, there is no guarantee of savings.

7. When an account is closed, the outstanding balance of the loan obligation remains with the customer and may be transferred to a new account of the customer. If customer does not open a new account, the remaining balance is to be paid in full within 30 days of account closing.
8. The CESF surcharge will be calculated by the Company utilizing its standard economic model of discounted cash flows. In calculating the monthly surcharge, the Company will utilize an annual interest rate not exceeding its regulatory approved weighted average cost of capital (WACC).
9. The number of periods for the surcharge shall not exceed seventy-five (75) percent of the estimated life of the purchase or seven (7) years whichever is less.

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” booklet. 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.