THE BARBADOS LIGHT & POWER COMPANY LIMITED

P.O. BOX 142
BRIDGETOWN, ST. MICHAEL, BB11000
BARBADOS, W.I.
TEL: 626-4300

January 29, 2024

The Chief Executive Officer
Fair Trading Commission
Good Hope, Green Hill
ST MICHAEL

Attention: Mr. Brian Reece, Director of Utility Regulation

Dear Madam

Re: Application for the Recovery of the Rental and Operating Costs of 11 MW of temporary Aggreko Generator Units through the Fuel Clause Adjustment

The BLPC hereby submits its Application, under affidavit of Dr. Adrian Carter, for the Fair Trading Commission's approval for the recovery of the rental and operating costs of 11 MW of temporary Aggreko generator units through the Fuel Clause Adjustment.

Yours faithfully,
BARBADOS LIGHT & POWER COMPANY LIMITED

Adrian Carter
Manager, Regulatory Affairs

Attchs

cc: Roger Blackman, Managing Director
Kim Griffith-Tang How, Director Customer Solutions

BARBADOS

THE FAIR TRADING COMMISSION

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

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

IN THE MATTER of the Application by The Barbados Light & Power Company Limited for approval to recover the rental and operating costs of 11 MW of generator units through the Fuel Clause Adjustment.

AFFIDAVIT OF ADRIAN CARTER

I ADRIAN CARTER, of #8 Diamond Corner, in the parish of St. Peter in this island, being duly sworn hereby **MAKE OATH** and say as follows:

1. I am the Manager of Regulatory Affairs at The Barbados Light & Power Company Limited ("the Applicant" or "the Company or "the BLPC"), a company registered under the Companies Act, Chapter 308 of the Laws of Barbados with its registered office situate at Garrison Hill in the parish of St. Michael. I am duly authorized to depose to the facts and matters in this Affidavit and the statement of facts herein are within my personal knowledge unless otherwise stated.

2. The purpose of my Affidavit is to provide an overview of the Application by Barbados Light & Power Company Limited for approval to rent 11MW of temporary generation and to recover the rental and operation costs of 11MW of temporary Aggreko generator units through the Fuel Clause Adjustment until such time that adequate additional permanent firm generation capacity becomes available.

3. To satisfy the needs of the electric system, the BLPC currently operates generating plants from three (3) locations (Spring Garden, St. Michael, Seawell, Christ Church

and Trents, St. Lucy) using a mix of technologies including low speed, medium speed and high speed diesel engines, gas turbines, and solar PV equipment to produce electricity.

4. The mix of generation resources employed by the BLPC is needed to allow for a sufficient reserve margin to maintain the reliability and resilience of the power supply.

5. The reserve margin represents the generating capacity available beyond the expected peak demand. This surplus generation capacity is a safety net, that ensures the power grid can accommodate unexpected fluctuations in demand, scheduled maintenance and the sudden unavailability of generation resources due to forced outages.

6. In the current context of a high penetration of intermittent renewables, the importance of an adequate reserve margin is even more critical. Intermittent renewable energy generation, unlike fossil fuel generation, is subject to variability given its dependence on weather conditions. This variability introduces challenges in matching electricity supply with demand instantaneously. An adequate reserve margin becomes essential in compensating for the unpredictability of renewable energy generation, ensuring that there is a reliable backup capacity available when renewable sources are unable to meet demand due to weather conditions.

7. Without an adequate reserve margin, there is an increased risk of power outages which can have severe consequences for customers and the functioning of the economy.

8. The BLPC's technical and operational analysis identified a capacity reserve margin at or near to 41% as adequate to maintain a resilient and reliable electricity supply given the characteristics of the national grid.

9. The active capacity reserve margin has not exceeded 38% over the most recent twelve months. Further, electricity demand in the latter half of 2023 exceeded that forecasted due to the unanticipated record high temperatures and the completion of new commercial projects finally coming on stream. This trend of increased demand is expected to continue in 2024 as the economy is expected to benefit from commercial investments and other activities such as T20-Cricket World Cup.

10. To mitigate the current risk of inadequate generation capacity for providing a reliable electricity supply to customers over the next year and until new firm generation capacity is added to the grid, there is an urgent need for temporary firm generation capacity.

11. The BLPC examined different options to address the gap in the reserve margin. BLPC concluded that temporary rental of 11 MW of Aggreko generator units is the more feasible option, to provide an immediate solution, given the requirements of the 2021 IRRP and the GoB stated policy that discourages investments in additional permanent fossil fuel generation.

12. BLPC is of the opinion that the Fuel Clause Adjustment is an appropriate mechanism to recover the monthly costs associated with temporarily renting and operating the 11 MW of Aggreko units.

13. BLPC requests that the Commission approve the recovery of the costs associated with the rental and operation of 11 MW of temporary Aggreko generator units through the Fuel Clause Adjustment.

14. BLPC also requests that the existing FCA mechanism incorporate the monthly rental and operating costs of the 11 MW of temporary Aggreko generator be based on the formula proposed below:

$$FCA_n = \frac{\sum_i \left(Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}} \right) + Purchase\ Power_{n-1} + AGG\ Recovery_{n-1}}{Energy\ Generation_{n-1} * (1 - Aus_{n-1}) * (1 - losses)} \left[\frac{BD\$}{kWh} \right]$$

where:

$AGG\ Recovery_{n-1} = Aggreko\ \ rental\ and\ operating\ costs\ in\ previous\ month$

and where:

FCA_n =Fuel Clause Adjustments for the month
$Energy\ Generation_{n-1}$= Energy generated in the previous month
Aus_{n-1}=Auxiliary consumption as a percentage of total generation in the previous month
$losses$= System losses as a percentage of total generation calculated based on a 12-month running average.
$Fuel\ Cost_{n-1}$=Fuel cost in previous month including cumulative under/over recovery
$Purchase\ Power_{n-1}$ = Purchase power from renewable sources in the previous month.
THR^i_{n-1}= Actual Heat Rate for generation plant/unit i, for month $n-1$
AHR^i_{n-1}= Actual Heat Rate for generation plant/unit i, for month $n-1$

15. The nonfuel costs associated with the Aggreko units that are targeted to be recovered through the FCA are estimated at $0.0106 per kWh.

16. Given a scenario where the rental cost of the Aggreko units was approved for recovery through the FCA. The FCA for the month of January 2024, would have been 3% higher

and the impact to the average Domestic Service (residential) customer consuming 255 kWh, would have been a 2% ($3.17) increase in the electricity bill.

SWORN TO by **ADRIAN CARTER**) ……...

)

this 29th day of January 2024)

Before me:

……

ATTORNEY-AT-LAW

BARBADOS

THE FAIR TRADING COMMISSION

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

AND IN THE MATTER of the Utilities Regulation (Procedural) Rules, 2003m (as amended);

AND IN THE MATTER of the Application by The Barbados Light & Power Company Limited for approval to recover the rental and operating costs of 11 MW of generator units through the Fuel Clause Adjustment.

APPLICATION FOR THE RECOVERY OF THE RENTAL AND OPERATING COSTS OF 11 MW OF TEMPORARY AGGREKO GENERATOR UNITS THROUGH THE FUEL CLAUSE ADJUSTMENT

A. APPLICATION

1. The Barbados Light and Power Company Ltd ('BLPC") hereby notifies the Fair Trading Commission (the "Commission") of its intention to rent 11 MW of temporary generation to enhance the grid's resilience and reliability. The BLPC specifically applies for approval to recover the rental and operation costs of 11 MW of temporary Aggreko generator units through the Fuel Clause Adjustment until such time that adequate additional permanent firm generation capacity becomes available.

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

2. BLPC is a vertically integrated electric utility company, established on May 6, 1955, and continued, under the Companies Act, Cap 308 of the Laws of Barbados. Its registered office is 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 forty-two years from August 1, 1986.

3. BLPC is a wholly owned subsidiary of Emera Caribbean Inc. (the 'Holding Company'). It is required to manage the grid to ensure the electricity network meets the rapidly evolving demands of power producers that supply services to the grid and customers supplied from the grid.

4. To satisfy the needs of the electric system, BLPC currently operates generating plants from three (3) locations at Spring Garden, St. Michael, Seawell, Christ Church and Trents, St. Lucy using a mix of technologies including low speed, medium speed and high speed diesel engines, gas turbines, and solar PV equipment, to produce electricity.

5. The mix of generation resources employed by BLPC is needed to allow for a sufficient reserve margin to maintain the reliability and resilience of the power supply.

6. The reserve margin represents the generating capacity available beyond the expected peak demand. This surplus generation capacity is a safety net, that ensures the power grid can accommodate unexpected fluctuations in demand, scheduled maintenance and the sudden unavailability of generation resources due to forced outages.

7. Without an adequate reserve margin, there is an increased risk of power outages which can have severe consequences for customers and the functioning of the economy.

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

8. In the current context of a high penetration of intermittent renewables, the importance of an adequate reserve margin is even more critical. Intermittent renewable energy generation, unlike fossil fuel generation, is subject to variability given its dependence on weather conditions. This variability introduces challenges in matching electricity supply with demand instantaneously. An adequate reserve margin becomes essential in compensating for the unpredictability of renewable energy generation, ensuring that there is a reliable backup capacity available when renewable sources are unable to meet demand due to weather conditions.

9. BLPC's technical and operational analysis identified a capacity reserve margin at or near to 41% as adequate to maintain a resilient and reliable electricity supply given the characteristics of the national grid.

10. The active capacity reserve margin has not exceeded 38% over the most recent twelve months. Further, electricity demand in the latter half of 2023 exceeded that forecasted due to the unanticipated record high temperatures and the completion of new commercial projects finally coming on stream. This trend of increased demand is expected to continue in 2024 as the economy is expected to benefit from commercial investments and other activities such as T20-Cricket World Cup.

11. To mitigate the current risk of inadequate generation capacity for providing a reliable electricity supply to customers over the next year and until new firm

generation capacity is added to the grid, there is an urgent need for temporary firm generation capacity.

12. At the beginning of 2023, BLPC considered the level of reserve margin to be adequate to maintain an acceptable level of reliability.

13. At that time unit S1 was targeted for retirement at the end of 2023 and therefore was expected to be available to support the reserve margin through to the end of the year. However, the expectations for unit S1 did not materialize given that on February 15, 2023, the Commission directed the BLPC to discontinue operation of S1 as soon as possible but no later than December 31, 2023. In compliance with the Commission's directive, unit S1 was retired in March 2023.

14. Consideration was also given to extending the life of unit GT02, however this was not economically or technically feasible based on discussions with the Original Equipment Manufacturer. As such this unit was retired at the end of 2022 as scheduled.

15. The unavailability of S1 and GT02 to provide reserve margin support beyond 2023, coupled with the increased demand for electricity observed during the second half of 2023 and into 2024 necessitate urgent generation additions to adequately meet customer demand and provide additional reserves to facilitate routine generation maintenance and any unplanned maintenance on generation units during 2024.

16. The 2021 IRRP issued by the Ministry of Energy sets out the timing and capacity for generation technology additions and retirements which BLPC and other market participants are expected to follow. It identified new onshore wind, utility scale solar PV and batteries in 2023 which the IRRP report indicates would have provided short term reserves, however these developments did not occur and are not now expected to take place in the near term. Further, the procurement and installation of new battery storage is pending regulatory and government approvals.

17. BLPC examined different options (Aggreko rentals, purchasing additional caterpillar units, adding further RE capacity – solar and batteries, adding an additional cube at the CEB) to address the gap in the reserve margin. BLPC concluded that temporary rental of 11 MW of Aggreko generator units is the more feasible option, to provide an immediate solution, given the requirements of the 2021 IRRP and the stated policy of the Government of Barbados that discourages investments in additional permanent fossil fuel generation.

18. In its 2018 Decision on The Barbados Light & Power Company Limited's Application to Recover the Costs of the 5MW Energy Storage Device through the Fuel Clause Adjustment[1] ("Energy Storage Decision"), the Commission stated as follows:

    '*The FCA was conceptualised to recover volatile costs that are outside the control of the utility and not capital expenditure.*'[2]

19. In the Energy Storage Decision, the Commission considered that while cost recovery in the rate base is a transparent and participatory process, it was a time and cost intensive process which, considering the (then) state of the RE industry and the urgency of the BLPC application, warranted consideration and employment of an alternative method of cost recovery.[3]

20. BLPC submits that recovery of the cost of the rental of the Aggreko units via rate base is inappropriate in this instance because of the temporary nature of the rental and deployment of the units and the permanence and cost and time requirements of a rate base exercise.

21. BLPC further submits that no other mechanism or appropriate rider exists for the recovery of the costs of rental of the Aggreko units and that the estimated time to complete a process for the development of an additional mechanism at

[1] Issued on 13 April, 2018 under Document No.: FTCUR/DECESD/BL&P-2018-02
[2] *Op cit* Page 16 paragraph 1
[3] *Op Cit* page 17, paragraph 1

this time is likely to extend beyond the time frames at BLPC's disposal if it is to be empowered to respond appropriately to the need to acquire additional reserve, in part fulfilment of its responsibility to make such improvements to its service as may be required to ensure that it provides adequate service to the public.

22. BLPC therefore submits that the recovery of the rental costs of the Aggreko units through the FCA is an appropriate method of cost recovery which suits the urgency and impermanence of the investment contemplated by BLPC, while providing the most efficient and cost-effective option for customers.

11 MW of Aggreko Generator Units

23. It is the BLPC's intention to procure the rental of 11 MW of diesel generating units on a temporary basis from Aggreko International Projects Limited ("Aggreko").

24. Aggreko is an experienced and proven supplier of rental diesel generating units. BLPC and its affiliates have previously rented generation units from this company and therefore are familiar with the performance of the company and their generation units.

25. BLPC anticipates the units will be needed by May 1, 2024 for a duration of at least twelve (12) months or until additional firm generation capacity becomes available. BLPC notes that its application is urgent and requests the urgent attention of the Commission to enable BLPC to execute necessary rental contracts as BLPC cannot execute same without an approved method of recovery from the Commission.

26. The rental cost of the units is anticipated to comprise of a monthly capacity payment and energy power payment. The capacity payment is estimated at $589,600 per month and the energy payment estimated at $0.0210 per kWh as per Table AGG-1.

Table AGG-1: Aggreko Company Rental Charges

Rental Charges	Rate	Amounts
Capacity Charge	per month	$589,600
Energy Power Charge	per kWh	$0.021
Mobilization Charge	One-time payment	$940,000
Demobilization Charge	One-time payment	$340,000

27. The rental costs include mobilization and demobilization charges directly related to Aggreko. The mobilization charge of $940,000 recovers the cost of shipping and other logistical costs of commissioning the plants at the Garrison generation site. The demobilization costs of $340,000 relate to the decommissioning costs at the conclusion of the rental agreement.

28. The BLPC estimates that the units will be required to deliver approximately 1.4 GWh per month, resulting in a rental energy payment of approximately $30,192 per month. The monthly operating and maintenance cost estimated at $236,256, includes the amortization of the mobilization and demobilization costs and excludes the cost of fuel.

Table AGG-2: Estimated Monthly Costs

Charges	Amounts
Capacity Charges	$589,600
Energy Power Charges	$30,192
Operating & Maintenance Charges	$236,256
Total	**$856,046**

29. The total cost to rent and operate the temporary Aggreko units is estimated at approximately $856,046 monthly as per Table AGG-2. This monthly cost does

not include the cost of the fuel utilized in the generation units. These costs will vary monthly dependent on the purchase cost of fuel.

Cost Recovery

30. BLPC is of the opinion that the Fuel Clause Adjustment is an appropriate mechanism to recover the monthly costs associated with temporarily renting and operating the 11 MW of Aggreko units.

31. BLPC is requesting that during the period when the Aggreko units are being rented and operated that the monthly FCA formula be revised to recover the monthly costs associated with renting and operating the 11 MW of Aggreko units as follows:

$$FCA_n = \frac{\sum_i \left(Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}} \right) + Purchase\ Power_{n-1} + AGG\ Recovery_{n-1}}{Energy\ Generation_{n-1} * (1 - Aus_{n-1}) * (1 - losses)} \left[\frac{BD\$}{kWh} \right]$$

where:

$AGG\ Recovery_{n-1} = Aggreko\ rental\ and\ operating\ costs\ in\ previous\ month$

and where:

FCA_n =Fuel Clause Adjustments for the month

$Energy\ Generation_{n-1}$= Energy generated in the previous month

Aus_{n-1}=Auxiliary consumption as a percentage of total generation in the previous month

$losses$= System losses as a percentage of total generation calculated based on a 12-month running average.

$Fuel\ Cost_{n-1}$=Fuel cost in previous month including cumulative under/over recovery

$Purchase\ Power_{n-1}$ = Purchase power from renewable sources in the previous month.

THR^i_{n-1}= Actual Heat Rate for generation plant/unit i, for month $n-1$

AHR^i_{n-1}= Actual Heat Rate for generation plant/unit i, for month $n-1$

32. The nonfuel costs associated with the Aggreko units that are targeted to be recovered through the FCA are estimated at $0.0106 per kWh. See table AGG-3.

Table AGG-3: Estimate FCA per kWh Impact

Items	Units	Amounts
Monthly Sales	kWh	80,788,187
Monthly Costs	$ per month	$856,046
FCA Impact	**$ per kWh**	**$0.0106**

33. Given a scenario where the rental cost of the Aggreko units was approved for recovery through the FCA, the FCA for the month of January 2024, would have been 3% higher and the impact to the average Domestic Service (residential) customer consuming 255 kWh, would have been a 2% ($3.17) increase in the electricity bill.

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

34. 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.

35. Section 2 of the URA defines “principles” as “the formula, methodology or framework for determining a rate for a utility service.” In keeping with this definition, the FCA is deemed a formula for the purposes of the URA.

36. Section 2 of 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.

37. Additionally, the BLPC has structured its Application and the order being sought in accordance with Rule 26 of the Rules.

38. The BLPC's Application will result in the alteration of the FCA formula and therefore this Application, made pursuant to Section 16 of the URA and Rule 26 of the Rules, forms the statutory basis on which the Commission may act in relation to granting our request.

E. NATURE OF ORDER BEING SOUGHT

39. BLPC requests that the Commission urgently approve the recovery of the costs associated with the rental and operation of 11 MW of temporary Aggreko generator units through the Fuel Clause Adjustment.

40. BLPC also requests that the existing FCA mechanism incorporate the monthly rental and operating costs of the 11 MW of temporary Aggreko generators and be based on the formula proposed below:

$$FCA_n = \frac{\sum_i \left(Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}} \right) + Purchase\ Power_{n-1} + AGG\ Recovery_{n-1}}{Energy\ Generation_{n-1} * (1 - Aus_{n-1}) * (1 - losses)} \left[\frac{BD\$}{kWh} \right]$$

where:

$AGG\ Recovery_{n-1} = Aggreko\ rental\ and\ operating\ costs\ in\ previous\ month$

and where:

FCA_n =Fuel Clause Adjustments for the month

$Energy\ Generation_{n-1}$= Energy generated in the previous month

Aus_{n-1}=Auxiliary consumption as a percentage of total generation in the previous month

$losses$= System losses as a percentage of total generation calculated based on a 12-month running average.

$Fuel\ Cost_{n-1}$=Fuel cost in previous month including cumulative under/over recovery

$Purchase\ Power_{n-1}$ = Purchase power from renewable sources in the previous month.

THR^i_{n-1}= Actual Heat Rate for generation plant/unit i, for month $n-1$

AHR_{n-1}^{i}= Actual Heat Rate for generation plant/unit i, for month $n-1$

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

125. 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 29th DAY OF JANUARY 2024

SIGNED BY: ……

ADRIAN CARTER

THE APPLICANT'S REPRESENTATIVE AND DULY AUTHORIZED OFFICER

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