



**NOTIFICATION OF THE BARBADOS LIGHT & POWER COMPANY LIMITED (BLPC)
TO THE FAIR TRADING COMMISSION OF ITS INTENTION TO IMPLEMENT A FUEL
HEDGING PROGRAMME AND APPLICATION BY THE BLPC FOR APPROVAL TO
APPLY THE RESULTS AND COSTS OF HEDGING TO THE CALCULATION OF THE
FUEL CLAUSE ADJUSTMENT PURSUANT TO SECTION 16 OF THE UTILITIES
REGULATION ACT, CAP 282 OF THE LAWS OF BARBADOS**

EXECUTIVE SUMMARY

1. The Barbados Light & Power Company Limited (BLPC) seeks approval to implement a fuel hedging programme to reduce the fluctuations in the fuel component of customers' bills and to take advantage of the current favorable fuel price environment.
2. On March 20, 2020 during the 65th sitting of the House of Assembly, 2018-2023 Estimates, the Prime Minister of Barbados, the Honorable Mia Amor Mottley articulated her Government's policy direction in support of the hedging of energy products and encouraged the BLPC to engage in hedging to lock in the currently low oil prices for a period of up to two years.
3. In support of the Government's policy directive on the hedging of energy products, the BLPC reapplies to the Commission for approval to implement a fuel hedging programme and to be allowed to apply the settlement arising from the hedging programme and the associated costs to the calculation of the FCA.
4. The BLPC considers the implementation of a fuel hedging programme would be beneficial to electricity customers as it would allow for greater fuel price certainty.

5. The BLPC is pursuing the possibility of entering into hedging for the physical supply of fuel with its fuel suppliers. To date however BLPC has been unable to secure any arrangement with its fuel suppliers in relation to a physical hedge. As such, to complement any opportunity that may arise to hedge physical fuel supply in the future, the BLPC is seeking regulatory approval to implement a financial hedging programme to hedge up to 90% of its Heavy Fuel Oil (HFO) once market conditions are favorable. If approval is granted by the Commission, this would permit BLPC the flexibility to implement a fuel hedging program in the coming months, if market conditions are conducive.
6. The gains and losses from the hedging programme will be matched against fuel purchase prices from the BLPC's fuel suppliers and incorporated into the calculation of the monthly Fuel Clause Adjustment (FCA).

A. APPLICATION

7. The BLPC notifies the Commission of its desire to implement a fuel hedging programme. By virtue of this, pursuant to Section 16 of the Utilities Regulation Act, Cap 282 (URA) of the Laws of Barbados, the BLPC seeks approval from the Fair Trading Commission (Commission) for the results arising from the programme along with administrative costs incurred, to be applied to and form part of, the calculation of the Fuel Clause Adjustment.
8. Rule 25 of the Utilities Regulation (Procedural) Rules, 2003 (the Rules) provides for these proceedings to be commenced by the filing of an Application.



B. CONCISE STATEMENT OF FACTS (Rules 26 of the Rules)

9. The 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, the 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.
10. The Applicant is a wholly owned subsidiary of Emera Caribbean Inc. (the holding company).
11. The Applicant is required to manage the grid to ensure the instantaneous supply of electricity meets constantly changing customers' demand. The varying need for cooling, commercial & industrial uses, lighting and other end uses drives daily and seasonal patterns.
12. To satisfy demand, the BLPC operates four (4) generating plants utilizing a mix of technologies including steam, diesel, gas turbines and solar photovoltaic to produce electricity. These technologies satisfy the requirements for both base and peaking loads.
13. The steam and diesel units operate primarily on Heavy Fuel Oil and perform the baseload generation function of meeting the constant demand for electricity. Gas turbines, operating on Av Jet and diesel fuels are utilized as intermediate and peaking plant to meet periods of higher demand.
14. The BLPC purchases fuel under a contract with Barbados National Oil Company Limited (BNOCL), Sol (Barbados) Limited and Rubis West Indies Limited. The



BNOCL is contracted to supply HFO, Sol supplies the BLPC with Av Jet and Rubis supplies the BLPC with diesel fuel.

15. The BLPC utilizes approximately 250,000 tons of fuel annually, of which:
 - Heavy fuel oil (\approx 57% cost)
 - Av jet (\approx 39% of cost)
 - Diesel (\approx 4% of cost)

16. The cost of fuel is recovered monthly from customers through the Fuel Clause Adjustment (FCA). The FCA was established by the Commission's forerunner, the Public Utilities Board (PUB) in 1965 to recover the cost of fuel purchased to generate electricity.

17. In 2013 the Commission reviewed and undertook an analysis of the FCA. During that process, the Commission varied the principle/formula which was implemented by the PUB and was being used by the BLPC to calculate the FCA. The Commission issued a Decision and Order for the BLPC to implement a new formula for calculating the FCA. BLPC has been utilizing this new formula since its implementation in 2013

18. The FCA is the largest component of customer's bills, accounting for more than 50% of customer's monthly electricity costs and is the main source of bill uncertainty.

19. The magnitude of the FCA charge is largely determined by the cost of fuel purchased from the BLPC's suppliers which are driven by changes in global oil prices.

20. Global oil prices experienced unprecedented peaks and troughs in the past two decades. Oil prices have declined from a high of US\$134 per barrel in June 2008 to a fifteen (15) year monthly average low of US\$29 per barrel in March 2020.

Figure 1: Historical Fuel Clause Adjustment



21. The significant volatility in the purchase price of fuel is transmitted to customers through the FCA. The FCA over the period experienced severe peaks as a result of the volatility associated with global oil prices. Characterised by significant spikes between 2011 and 2012 to peak at BDS\$0.49 per kWh in 2012 only to decline to a low of BDS\$0.11 per kWh in 2016. Since 2016, significant volatility continued, with notable price declines in one month followed by sizable price increases (Figure 1).

22. The current low oil prices are welcomed but are unlikely to remain at this low level indefinitely. In fact, daily prices continued to fluctuate in recent days increasing from US\$20 per barrel on March 31, 2020 to US\$28 per barrel on April 3, 2020 before plunging to under US\$1 per barrel on April 20, 2020 and recovering to US\$17 per barrel on April 24, 2020.

23. Fluctuations in the purchase price of fuel have been a major source of customer dissatisfaction in recent years, as it translates into significant volatility in the fuel portion of customer's bills. The responses obtained from the annual customer satisfaction surveys administered by the BLPC suggest that customers value price stability.
24. The BLPC is seeking the approval of the Commission to implement a fuel hedging programme as a means of providing customers with greater price stability thereby reducing the exposure of the fuel component of customers' bills to extreme price increases.
25. Timing is an important consideration in hedging. Prudence dictates that the BLPC seek to implement a fuel hedging programme at this time to reduce the volatility of the FCA and to take advantage of the current favorable fuel price environment.
26. BLPC contemplates hedging up to 90% of its Heavy Fuel Oil and Av Jet volumes. The actual amount of fuel that will be hedged will depend on the prevailing market conditions.
27. The BLPC requests that the gains and losses from the hedging programme be matched against fuel purchase prices from suppliers and along with any other costs associated with the programme to form part of the calculation of the monthly Fuel Clause Adjustment (FCA). The BLPC therefore proposes the following revised FCA formula:

$$FCA_n = \frac{\sum(Fuel\ Cost_{n-1} \cdot \frac{THR_{n-1}^i}{AHR_{n-1}^i}) + AdminCost_{n-1}}{Energy\ Generation_{n-1} * (1 - Aus_{n-1}) * (1 - losses)} \left[\frac{BD\$}{kWh} \right]$$

Where:

FCA_n =Fuel Clause Adjustments for the current month n

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

Aus_{n-1} =Auxiliary consumption as a percentage of total generation in 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 and **gains/losses from fuel hedge** in the previous month.

AdminCost_{n-1}= Administrative costs of hedging programme in the previous month

THR_{n-1}ⁱ=Generation Heat Rate Target

AHR_{n-1}ⁱ=Generation Heat Rate Performance

28. On December 3, 2014 the BLPC sent correspondence to the Commission to inform of its proposed fuel hedging strategy programme and sought approval to implement such an arrangement. The primary reason for wishing to implement the hedging programme at that time was because the BLPC anticipated that the programme would be of significant benefit to electricity customers and would allow for better management of the volatility in the Fuel Clause Adjustment and provide for a more stable and predictable price of electricity.
29. By letter dated December 17, 2014 the Commission determined that the BLPC did not require approval from the Commission to enter into a hedging programme but advised that if the BLPC intend to apply the results of the hedging programme to the calculation of the FCA or any other rate the BLPC would be required to make an Application to the Commission in accordance with Section 16 of the URA.
30. On February 2, 2015, the BLPC made a formal Application to the Commission for approval to implement a Fuel Hedging Programme and to apply the results and associated costs of the programme to the calculation of the FCA.
31. The BLPC received correspondence from the Commission dated March 17, 2015 advising the Commission would only consider the Application if actual results and costs from at least two hedging transactions are submitted by May 19, 2015. BLPC explained during a meeting with the Commission on March 18, 2015 and in subsequent correspondence dated March 26, 2015 and May 11, 2015 that conducting hedging transactions outside of the FCA mechanism

would negate the objective of fuel hedging and would provide no meaningful results to inform the Application.

32. The BLPC further indicated to the Commission it would be unable to satisfy the request of submitting actual results and costs from two or more hedging transactions by May 19, 2015.
33. The FTC advised in correspondence dated June 25, 2015 that the Application to implement a fuel hedging programme and apply the results and costs to the calculation of the FCA was rejected given the inability of the BLPC to supply the FTC with actual results and costs from more than two hedging transactions outside of the FCA mechanism.
34. The BLPC remained convinced that the implementation of a fuel hedging programme would be beneficial to electricity customers and on March 29, 2016 the BLPC made another Application to the Commission to implement a fuel hedging programme and to be allowed to apply the results and costs associated with a fuel hedging programme, to the calculation of the FCA.
35. The Commission accepted the Application and commenced formal proceedings where intervenors were invited to participate in a consultation on the BLPC's proposed hedging programme. On December 29, 2016 the Commission issued its Decision and denied the BLPC's Application to apply the results and costs of fuel hedging to the FCA on the following grounds:
 - I. *The Commission is conscious of the risks associated with fuel hedging and does not agree that the BL&P should be allowed to pass the cost of hedging and associated gains or losses onto the consumers of Barbados.*
 - II. *The Applicant has not provided enough evidence to suggest that the Barbadian public is willing to pay for the reduced volatility in fuel prices.*

36. On March 20, 2020 during the 65th sitting of the House of Assembly, 2018-2023 Estimates, the Prime Minister of Barbados, the Honorable Mia Amor Mottley indicated the Government's policy direction in support of the hedging of energy products and encouraged the BLPC to engage in hedging to lock in the currently low oil prices for a period of up to two years.
37. In support of the Government's policy directive on the hedging of energy products, the BLPC hereby reappplies to the Commission for approval to implement a fuel hedging programme and to be allowed to apply the settlement arising from the hedging programme and the associated costs to the calculation of the FCA.

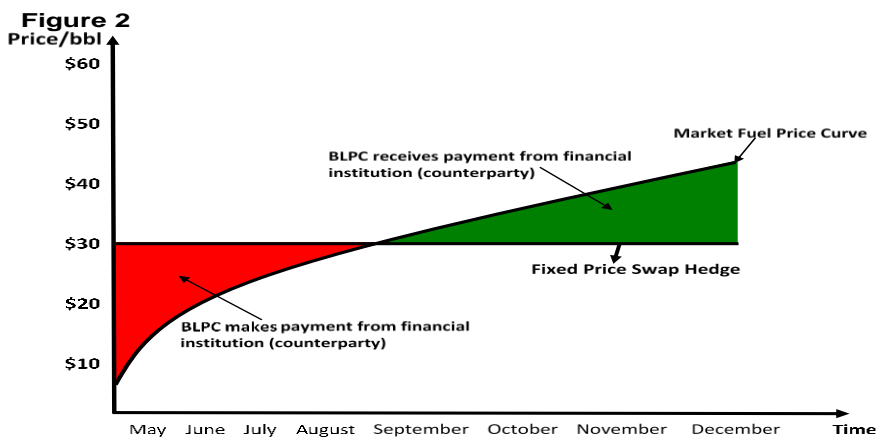
C. GROUNDS FOR THE APPLICATION

38. 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.
39. 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.
40. 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.
41. The BLPC's Application may result in the alteration of the FCA formula or any other rate and therefore this Application, made pursuant to Section 16 of the

URA, forms the statutory basis on which the Commission may act in relation to granting our request.

A Synopsis of how the Fuel Hedging Programme would work

42. Hedging can be conducted for either the physical delivery of fuel or the price of fuel. The BLPC is pursuing the possibility of entering into hedging for the physical supply of fuel with its fuel suppliers. To complement any future opportunities to hedge the physical supply of fuel, the BLPC will implement a financial hedging programme once market conditions are favorable. The programme would allow BLPC to enter into a financial arrangement with third parties to achieve fuel price certainty for specific volumes of fuel.
43. The BLPC will continue to purchase fuel from its fuel suppliers at the market rate and enter into hedge contracts with third parties at a targeted hedge price. Realized gains and losses from the hedge will be matched against fuel purchase prices from its suppliers in the calculation of the monthly Fuel Clause Adjustment.
44. The BPC would pay its fuel supplier at the contracted rate for fuel purchases and enter into a hedge such as a fixed price swap with financial institutions/counterparties to pay a fixed price, for example US\$30 per barrel, for a portion of its fuel purchases.



45. This means in instances when the underlying market price increases above the hedge price in our example of US\$30 per barrel (see green area in Figure: 2), the BLPC will receive a payment for the difference in the hedge price and the market price. The converse occurs in the event market prices fall below the hedge price of US\$30 (see red area in Figure: 2), the BLPC would make payment to counterparties for the amount of the price difference.
46. Figure 3 depicts examples of a fixed price swap transacted at a hedge price of US\$30 per barrel for volumes of 140,000 barrels while the market price of fuel fluctuates above and below the hedge price.

Figure 3: Examples of Possible Monthly Outcomes

Hedge Price is <u>LESS</u> than Floating/Market Price	Hedge Price is <u>GREATER</u> than Floating/Market Price
<ul style="list-style-type: none"> ▪ Hedge Price:US\$30 per barrel ▪ Floating/Market Price:US\$36 per barrel ▪ Monthly Hedged Volumes:140,000 barrels ▪ Financial institutions/counterparties pays BLPC the difference between the floating market price and the hedged price multiplied by the volumes hedged for that month. ▪ Financial institutions/counterparties pays BLPC: $(US\\$30 - US\\$36) * 140,000 = US\\$840,000$ (BDS\$1,680,000) ▪ The US\$840,000 payment BLPC receives from the counterparties would be used to offset the cost of the physical fuel purchased from suppliers. 	<ul style="list-style-type: none"> ▪ Hedge Price:US\$30 per barrel ▪ Floating/Market Price:US\$28 per barrel ▪ Monthly Hedged Volumes:140,000 barrels ▪ BLPC will pay the financial institutions/counterparties the difference between the floating market price and the hedge price multiplied by the volumes hedged for that month. ▪ Financial institutions/counterparties pays BLPC: $(US\\$30 - US\\$28) * 140,000 = US\\$280,000$ (BDS\$560,000) ▪ The US\$280,000 payment BLPC makes to counterparties would be offset by the lower physical cost of the fuel purchased from suppliers.

47. In the example, where the hedge price is less than the market price, the BLPC would receive the difference between the market price and the hedge price from counterparties. The gains received (\$1,680,000) would be used to offset the cost of the physical fuel purchased from suppliers and incorporated into the calculation of the monthly fuel clause adjustment as depicted in Figure 4.



48. In the example where the hedge price is greater than the market price, the BLPC would pay the difference between the market price and the hedge price to counterparties.

FIGURE: 4 Monthly Fuel Clause Adjustment Calculation Examples

	Hedge Price is LESS than Floating/Market Price	Hedge Price is GREATER than Floating/Market Price
Gross Generation for month (GWh)	79.28	79.28
Auxiliaries for month (GWh)	2.70	2.70
Net Generation for month(GWh)	76.58	76.58
Losses (12 month average)	6.19%	6.19%
Net Generation adjusted for losses for the month (GWh)	71.84	71.84
Fuel cost for the month (BDS \$'000s)	\$19,537.0	\$17,306.2
Add Heat Rate (Penalty)/Incentive (BDS \$'000s)	-	-
Add Purchased Power for the month (BDS \$'000s)	\$1,591.7	\$1,591.7
Add under/(less over) recovered at month (BDS \$'000s)	\$5,110.4	\$5,110.4
Less Fuel Hedge settlement contribution for month (BDS \$'000s)	(\$1,680.0)	\$560.0
Add Fuel Hedge Administrative costs for month (BDS \$'000s)	\$60.0	\$60.0
Total Fuel & Purchased Power for the month (BDS \$' 000s)	\$24,619.1	\$24,601
Calculated Fuel Clause Adjustment for month – Unsmoothed (Cents/kWh)	34.269	34.245
Fuel Clause Adjustment <i>without</i> fuel hedge (Cents/kWh)	36.524	33.382

49. The payment (\$560,000) made by the BLPC to the counterparties will be incorporated into the calculation of the monthly fuel clause adjustment as depicted in Figure 4.

50. All realized gains and losses from the hedge along with the administrative costs associated with the hedging programme will be incorporated into the calculation of the monthly fuel clause adjustment.

51. In the example where the hedge price is less than the market price, the FCA is calculated at \$0.3426 instead of \$0.3652 per kWh with no hedge in place. While in the example where the hedge price is greater than the market price, the FCA is calculated at \$0.3424 instead of \$0.3338 without the hedge. The variability of the FCA from month to month is reduced considerably with the adoption of the fuel hedging mechanism.

52. Global oil prices are currently at their lowest in recent years but are unlikely to remain at the current low levels indefinitely. The BLPC considers the use of a hedging mechanism at this time would reduce fluctuations in the fuel component of customers' bills and allow customers to benefit from the current favorable lower fuel price environment.
53. The BLPC will invite proposals from experienced and qualified companies on their hedging products and will identify institutions to function as agents for the BLPC to execute the hedging programme and enter into hedging contracts with counterparties for up to 90% of BLPC's fuel consumption volumes.
54. The services of experienced risk management professionals with core expertise in hedging will be identified and contracted to provide guidance on the most efficient hedging instruments and the actual volumes of fuel that should be hedged to reduce the BLPC's risk exposure.
55. A fixed price swap hedge has initially been identified by the BLPC's team as the hedging instrument to achieve the BLPC's price stability objective. However, further guidance on the most efficient hedging instruments will be obtained from contracted risk management professionals.
56. A fixed Price Swap mechanism is currently being utilized in Grand Bahama Power Company (GBPC) and St. Lucia Electricity Services.
57. The BLPC has targeted 2020 to commence the hedging programme in order to take advantage of the current price environment. BLPC will obtain quotations for appropriate indices and execute a hedge up to a maximum of 90% of its HFO and Av Jet fuel volumes once the forward price falls below a predetermined targeted hedge price.



58. There is zero initial cost directly involved in transacting the hedging programme other than the margin; however we estimate BDS\$720,000 in annual administrative costs associated with engaging an Agent to manage the programme on behalf of the BLPC.
59. The BLPC asks that the Commission give favorable consideration to its Fuel Hedging Application because it offers an opportunity to reduce the risk of fuel price spikes to its customers. Ignoring the opportunity to hedge implies an expectation that fuel prices will continuously decline or be stable, which is not a likely future scenario.

D. NATURE OF ORDER BEING SOUGHT

60. The fuel hedging programme outlined in this Application is anticipated to provide BLPC's customers with the benefits of greater price stability, price certainty and a level of predictability in their electricity bill budget.
61. The BLPC requests the following:
1. The Commission approve the BLPC's implementation of a fuel hedging programme to hedge up to 90% of its HFO and Av Jet fuel consumption volumes;
 2. The settlements arising from the fuel hedging programme (gains and losses) and associated administrative costs be incorporated in the calculation of the monthly Fuel Clause Adjustment (FCA).

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

62. 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 8th DAY OF MAY, 2020

SIGNED BY:

ADRIAN CARTER

THE APPLICANT'S REPRESENTATIVE AND DULY AUTHORIZED OFFICER

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