FAIR TRADING COMMISSION

DECISION

The Barbados Light & Power Company Limited Application for Approval to Implement a Fuel Hedging Programme and to Apply the Results and Costs of Hedging to the Calculation of the Fuel Clause Adjustment

Document No.: FTC/UR/DECBL&P/2021-02 Date of Issue: October 21, 2021

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DOCUMENT TITLE: Decision on the BL&P application to Apply the Results and Costs of Hedging to the calculation of the Fuel Clause Adjustment

ANTECEDENT DOCUMENTS

Document Number	Description	Date
FTC/URD/CONBL&P/2020-01	Consultation Paper - the BL&P Fuel Hedging Application 2020	November 9, 2020
FTC/UR/DECCHFCA/2016-4	Decision - The BL&P Application to Apply the Results and Costs of Hedging to the Calculation of the Fuel Clause Adjustment	December 29, 2016

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GLOSSARY

Call option	A form of an option contract (more particularly defined below) between two parties where the buyer of the call option earns a right (not an obligation) to exercise the option to buy a particular asset from the call option seller for a stipulated period of time. If the buyer chooses to buy, the seller must sell.
Collars	Collar strategy involves the purchase (or sale) of a call, which is offset by the sale (or purchase) of a put (more particularly defined below). The call and put have out-of-the-money strike prices and expire in the same month.
Derivatives	Derivatives are instruments, the financial value of which is determined by the value of an underlying asset. Examples of derivatives used in the management of commodity risks include: swaps, collars, options, futures and forwards.
Forward contract	An informal agreement, traded through a broker-dealer network, to buy and sell specified assets, at a specified price at a certain future date.
Investment Policy Statement	The Investment Policy Statement (IPS) is a strategic guide in the planning and implementation of an investment program. Issues related to governance of the investment program, planning for appropriate asset allocation, implementation of an investment program with external and/or internal managers, monitoring the results, risk management and appropriate reporting. The IPS establishes accountability for the various entities that may work on behalf of an investor. The IPS serves as a policy guide that offers an objective course of action to be followed during periods of market disruption when emotional or instinctive responses might otherwise motivate less prudent actions[1].

[1] Elements of an Investment Policy Statement for Institutional Investors, CFA Institute May 2010

Option	A contract which provides the contract buyer with the right, but not the obligation, to purchase or sell a particular amount of a specific commodity (or the financial equivalent thereof), on or before a specific date or period of time at an agreed price. Most market participants choose to buy or sell their physical supplies through existing channels, using futures or options to manage price risk and liquidating their positions before delivery.
Put option	A put option is an option where the buyer of the put earns the right (not an obligation) to exercise his option to sell a particular asset to the put option seller for a stipulated period of time. Once the holder of the put exercises his option (before the expiry date) the holder of the put must buy at the strike price.
Strike price	The predetermined price at which the buyer and seller of an option agree on a contract or exercise a valid and unexpired option.
Swap	A swap refers to an exchange of one financial instrument for another between the parties concerned. A swap is generally an over-the-counter (OTC) instrument where two parties agree to exchange cash flows at a future date according to an agreed upon formula.

SECTION 1 – DECISION SUMMARY

1. On May 8, 2020, the Barbados Light & Power Company Limited (the "BL&P") notified the Fair Trading Commission (the "Commission") of its intention to implement a fuel hedging programme and made an application to the Commission for its approval to apply the results and costs of the said hedging programme to the calculation of the Fuel Clause Adjustment (the "FCA") (the "Application").

2. The primary aims of the proposed fuel hedging programme stated by BL&P in the Application were to reduce the fluctuations in the fuel component of customers' bills and to take advantage of the existing favourable fuel price environment. In the Application, the BL&P also referred to the Government of Barbados' (the "GoB") policy direction articulated by the Prime Minister of Barbados, the Honourable Mia Amor Mottley, during the 65th sitting of the House of Assembly, 2018-2023 Estimates. The GoB's said policy direction supported the hedging of energy products and encouraged the BL&P to engage in hedging to lock in the then low oil prices.

3. Although the BL&P does not require the approval of the Commission to engage in a fuel hedging programme, it does require the Commission's permission to pass on the related results and costs to the consumer through the FCA or otherwise. In this regard, the BL&P has indicated that it will not engage in fuel hedging without the Commission's approval to pass the related costs and results onto the consumer[2].

4. The Application was subject to a public consultation, per section 4(4) of the Fair Trading Commission Act, Cap 326B (the "FTCA"). The Commission also invited the public to intervene in the proceedings and hosted a Procedural and Issues Conference, on June 5, 2020 (the "Conference") which provided the interested parties with an opportunity to participate in the proceedings and make

[2] BL&P Fuel Hedging Application paragraph 31 dated May 8, 2020

submissions, ensuring that there was transparency in the decision of the Commission. Ultimately, three interested parties met the criteria to participate in the Conference through the submission of their respective letters of intervention.

5. The Commission carefully considered all relevant information, including the submissions made by the interested parties, and determined that the BL&P is permitted to initiate a fuel hedging programme **on a pilot basis** in accordance with the following measures/requirements:
    a. **The duration of the pilot fuel hedging programme shall not exceed twenty-four (24) months (2 years);**
    b. **The pilot fuel hedging programme shall be limited to no more than 40% of fuel volumes being hedged;**
    c. **The results and costs associated with the said pilot fuel hedging programme shall be shared evenly (50/50) between the BL&P and the consumer;**
    d. **The IPS and all strategies employed therein, including hedging, shall require the prior written approval of the Commission.**
    e. **Any amendments to the IPS shall require the prior written approval of the Commission;**
    f. **The BL&P and the Commission shall determine the investment manager;**
    g. **The cost of hedging shall include costs borne by the Commission in the management/establishment of the fuel hedging programme by the BL&P. These costs will be passed to the BL&P, 50% of which will be passed through the FCA;**
    h. **The equation used to calculate the FCA shall be revised to account for:**
        i. **the passing on of the results and costs of hedging to the consumers; and**
        ii. **the inclusion in the divisor of the equation the generation losses itemised by generation plant, including renewable energy generation.**

i. **The Commission reserves the right to audit the pilot hedge programme on a quarterly basis or on such basis as the Commission deems fit;**
j. **The BL&P shall submit to the Commission within 45 days after the end of each quarter the investment performance report from the investment manager.**

This Decision shall be reviewed by the Commission three (3) months prior to the end of the twenty-four (24) month pilot period.

6. The Commission's approval for the BL&P to commence the aforementioned pilot fuel hedging programme is also **conditional** and shall not become effective until the date on which the BL&P submits, to the Commission's satisfaction, the BL&P's IPS. In this regard, the Commission reserves the right to comment on/request amendments to the BL&P's IPS documents before the BL&P's permission to commence the pilot fuel hedging programme becomes effective.

7. Further details of the Commission's reasoning may be found in the body of this Decision. The Commission, in making its decision, considers that the respective submissions of the intervening parties have assisted the Commission and thanks them for their contributions.

The revised FCA equations are as follows:

Equation 1 (for months other than February):

$$FCA_n = \frac{\sum_i (Fuel\ Cost_{n-1}.\frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power\ Cost_{n-1} \quad + 0.5 HedgeResults \quad _{n-1}}{\sum_j Energy\ Generation_{n-1}.(1 - Aux^j_{n-1}).(1 - losses^j_{n-1})} [BD\$/kWh]$$

Equation 2 (for the month of February):

$$FCA_{Feb} = \frac{\sum_i (Fuel\ Cost_{n-1}.\frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power\ Cost_{n-1} \quad + 0.5 HedgeResults_{n-1} + ESD\ Recovery\ yt}{\sum_j Energy\ Generation_{n-1}.(1 - Aux^j_{n-1}).(1 - losses^j_{n-1})} [BD\$/kWh]$$

SECTION 2 – BACKGROUND

8. On April 27, 2020, the BL&P submitted an incomplete application seeking the Commission's approval to implement a hedging programme and apply the results and administration fees of this programme to the calculation of the FCA. The BL&P thereafter submitted an amended and complete application dated May 8, 2020 (i.e., the Application, as defined above) seeking the Commission's aforementioned approval, pursuant to section 16 of the URA.

9. The proposed fuel hedging programme sought the Commission's permission for the BL&P to hedge up to 90% of its Heavy Fuel Oil ("HFO") consumption volumes with a third party, using financial hedge transactions such as fixed price swaps. The annual administrative cost (estimated at BDS$720,000.00), along with the results of the programme, would be passed on to the consumer through the FCA. The BL&P did not state a specific duration for the programme in the Application.

10. The BL&P is unable to undertake any physical fuel hedging (more particularly defined below) without the cooperation of the Barbados National Oil Company Limited (the "BNOCL"); the BNOCL being the sole company that is authorised to import fuel into Barbados. The BL&P has, however, indicated that while it will continue to attempt to pursue opportunities to enter into a physical hedge, it will instead implement a financial hedge programme, with the goal of achieving fuel price certainty for up to 90% of its HFO volumes[3]. Using this methodology, any gains or losses that result from the BL&P's fuel hedge contracts will be included in the calculation of the monthly FCA.

11. Currently, the BL&P purchases fuel under contracts with BNOCL, Sol (Barbados) Limited ("Sol") and Rubis West Indies Limited ("Rubis"). BNOCL supplies HFO,

[3] Ibid page 2, paragraph 5 dated May 8, 2020

Sol supplies Aviation Jet Fuel ("Av Jet") and Rubis supplies diesel fuel. Prices of HFO are linked to the New York Harbor Residual Fuel #6 index[4].

12. According to the Application, the BL&P uses approximately 250,000 tons of fuel per year. For the year 2019, the cost of fossil fuel purchased by the BL&P was BDS$266 million and the four-year average of the cost of fuel is apportioned as follows:

    HFO – 57% of cost
    Av jet – 39% cost
    Diesel – 4% of cost[5]

13. The cost of fuel purchased by the BL&P is passed to BL&P's customers via the FCA. The fluctuation in the FCA is therefore partially reflective of the changes in the price of fuel on the international market. Smoothing is also employed from month to month to mitigate shocks.

14. Previously, the BL&P submitted two applications to the Commission seeking permission to pass on the results and costs of a proposed fuel hedging programme to its consumers, on February 2, 2015 and March 29, 2016, respectively. The Commission rejected both applications. The first application was rejected by the Commission due to a lack of information from the BL&P while the second application was rejected by the Commission due to the BL&P's inability to submit sufficient evidence to substantiate its assertion that the Barbadian public was willing to pay for the reduced volatility in fuel prices.

[4] New York Harbor is a major refined product spot market. Most of the major refined products have spot assessments in the New York Harbor market. Fuel oil is a broad term that could refer to a number of different refined products ranging in density from kerosene (No. 1) to residual fuel oil (No. 6) - New York Harbor | McKinsey Energy Insights. It is important to note if the index being hedged strongly correlates to the physical fuel purchased as this impacts the hedge effectiveness of the strategy.

[5] Ibid, page 4, paragraph 15

15. The BL&P's current application, i.e., the Application, again seeks to use hedging to reduce the BL&P's exposure to fuel cost volatility, as well as to lock in low oil prices. It is also intended by the BL&P that the administration fees and the profit or loss arising from hedging will be applied to the actual cost of the purchased fuel and consequently, the FCA.

16. The BL&P additionally proposes that the FCA formula be revised to reflect the results and costs as follows in Equation 3 below.

$$FCA_n = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + AdminCost_{n-1}}{Energy\ Generation_{n-1} . (1 - Aus_{n-1}) . (1 - losses)} [BD\$/kWh]$$

Where:

FCA_n	=	FCA for the current month n (other than February)
Aus_{n-1}	=	Auxiliary consumption as a % of total generation in the month n-1
Fuel $cost_{n-1}$	=	Fuel cost in previous month including cumulative under/over recovery, purchase power and gains/losses from fuel hedge in the month n-1
$AdminCost_{n-1}$	=	Administrative Costs of hedging programme in the month n-1

SECTION 3 – PROCEEDINGS

17. In consideration of the Application, the Commission undertook a public consultation as required by section 4(4) of the FTCA and convened a hearing of the matter, to which the Commission invited the public to intervene in the proceedings. In furtherance of its hearing of the matter, the Commission also hosted the Conference with the BL&P and the Intervenors (more particularly defined below) with the intent of ensuring efficient management of the hearing. The intervenors approved to participate in the Application were:

    i. Mr. Hallam Hope / CARITEL;
    ii. Barbados Renewable Energy Association ("BREA") and
    iii. The Ministry of energy and Water Resources ("MEWR")

    (together, the "Intervenors")

18. In furtherance of the Conference, an issues list was agreed and filed in accordance with Rule 34 of the URPR. This list is as follows:

    a) The desirability of fuel hedging, including:
        i. What are the stated objectives of the Fuel Hedging Strategy?
        ii. What is the context for a Fuel Hedging Programme, including - What is the geo-political environment relevant to this strategy;
        iii. How will the Barbados National Energy Policy's mandate to achieve 100 percent renewable energy by 2030 impact the proposed fuel hedging programme?
        iv. What is the proposed method of hedging – physical or financial – and why was this method selected?
    b) The risk of the proposed hedging programme, considering:
        i. The target price and level of hedging, including justification for proposal to hedge up to 90 percent of HFO;
        ii. The risk to consumers, including an assessment of the risk of hedging vs. likely benefit to consumers, as well as competence and volatility concerns; and

iii. The administrative costs, including but not limited to cost of the administrator and method of selecting the administrator.

c) Whether the BL&P should be permitted to recover the costs of the fuel hedging programme via the FCA, including:
    i. The appropriateness of recovery through the FCA, any alternative methods of recovery and relative benefits;
    ii. The formulation of the FCA; and
    iii. Regulatory oversight and governance concerns, including: - The implementation of a hedging policy and –
    iv. How the programme, if approved, would be monitored by the Commission.

SECTION 4 – LEGISLATIVE FRAMEWORK

19. Pursuant to Section 4(3)(a) of the FTCA, the Commission is responsible for establishing principles for arriving at the rates to be charged by service providers. The Commission also has this duty pursuant to Section 3(1)(a) of the URA, which states:

> *"The functions of the Commission under this Act are, in relation to service providers, to*
>
> *(a) establish principles for arriving at the rates to be charged;*
>
> *(b) …"*

20. For the purposes of Section 3(1)(a) of the URA, "principles" means the formula, methodology or framework for determining a rate for a utility service, according to the interpretation section of the FTCA, Section 2. Section 2 of the FTCA also states that "rates" include:

"

(a) every rate, fare, toll, charge, rental or other compensation of a service provider;

(b) a rule, practice, measurement, classification or contract of a service provider relating to a rate; and

(c) a schedule or tariff respecting a rate;"

21. By virtue of Section 16 of the URA, where the Commission has not fixed a period of time in accordance with Section 15(1) (i.e., a period of time not exceeding 5 years in which the rates, principles and standards of service for a utility service will apply), 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. Pursuant to this provision, the BL&P, as a service provider, has correctly filed an application with the Commission for approval to apply the results and costs of hedging to the calculation of the FCA, namely the Application.

Previously, the Commission initiated its own Motion to Review the FCA, pursuant to Section 16 of the URA and issued its Decision on October 11, 2013. The FCA has been approved by the Commission as a principle or formula that the BL&P is permitted to use to pass the cost of fuel used to generate electricity for use by its customers.

22. By virtue of Section 36 of the FTCA, the Commission may, on application or on its own motion, review and vary or rescind any decision or order made by it and, where a hearing is required before any decision or order is made, pursuant to the URA, such decision or order shall not be altered, suspended or revoked without a hearing.

23. Essentially, the Application, if successful, could therefore result in the alteration of the FCA formula as previously approved by the Commission in 2013.

SECTION 5 – ISSUES

24. During the Conference, the Intervenors agreed that the issues that would be dealt with would be limited to those agreed at that forum, namely, the issues listed at paragraph 18 herein. In consideration of each issue, this Decision summarises, in turn, the BL&P's position, the Intervenors' submissions (where received) and the Commission's comments, respectively.

25. In instances where the Intervenors also provided responses to the Commission's Consultation Paper dated November 9, 2020[6] that relate to the issues considered by the Commission, those responses are also included. A full summary of the said Consultation Paper, however, may be found at Appendix B to this Decision.

ISSUE A: DESIRABILITY OF FUEL HEDGING

Sub issue i: What are the stated objectives of the Fuel Hedging Strategy?

BL&P's Position:

26. The BL&P has stated that the objective of its proposed fuel hedging programme is to "*to reduce the fluctuations in the fuel component of customers' bills and to take advantage of the current favourable fuel price environment*[7]." The BL&P further explains that "*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)*[8]".

27. The BL&P stated that its secondary objective is that the price of electricity after the implementation of the hedge programme does not significantly exceed what it would have been without the programme.

[6] FTC/URD/CONBL&P/2020-01
[7] BL&P Application Paragraph 1
[8] IBID Paragraph 6

28. Following the above stated objectives, the BL&P postulates that the ability to hedge their fuel prices may provide protection against fuel price shocks that have the potential to erode the economy and therefore the ability to facilitate the transition towards a 100% RE economy.

29. The justification of the BL&P's Application was based on the position that "*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*." This is supported by BL&P's August 2017 Customer Satisfaction Survey[9] in which the BL&P collected information about, inter alia, the value of specific attributes of the energy service[10]. The report concludes that the major concern to customers related to the cost of electricity, and this is the main detractor from overall satisfaction.

Intervenors' Submission:

30. The Ministry of Energy has opined that the transition to RE has the potential to "cushion the economy from the fluctuating price shocks associated with the volatility in oil prices[11]". The MEWR believes that RE offers greater stabilisation of electricity costs and as such will act as a financial hedge, reducing exposure to fuel price risks. This would arise from reduced demand for fuel imports, lower and more predictable operating costs resulting in potentially reduced demand for fossil fuels and an ease in costs.

Consultation Paper Responses:

31. In its response to the consultation, BREA expressed its support for hedging by the BL&P. BREA noted that if hedging is done correctly, it can play a significant role in mitigating the impact of the cost of electricity in an environment of

[9] Residential Survey Summary. An Overview of Customers' Perception of BLPC Service Quality Performance August 2017
[10] Ibid
[11] Letter to FTC from MEWR dated 2020-05-29 re: Application to Apply the Results and Costs of Fuel Hedging to the Fuel Clause Adjustment File No. FTC-0001/20BL&P-FH

increasing electricity prices. However, at the same time if not done correctly can result in higher cost to the consumer when prices are falling[12]

Commission's Comments:

32. Hedging is an established method by which companies of all types manage their commodity risk.

33. Three examples of utility companies that utilise fuel hedging along with their objectives are:

i. Caribbean Utilities Company Ltd. of Grand Cayman (CUC): The Electricity Regulatory Authority of Cayman Islands approved, in March 2011, a Fuel Price Volatility Programme for the CUC. CUC is allowed to use hedging to reduce the impact of volatility in its Fuel Cost Charge which is paid by customers for fuel, similar to the BL&P's FCA. The programme uses call options in order to promote transparency in pricing and to create a ceiling price for fuel costs at predetermined contract premiums.

ii. St. Lucia Electricity Services Limited (LUCELEC): LUCELEC started a Hedging Pilot Programme in 2009, and advanced to a fully-fledged hedging programme in 2010 using fixed prices swaps following the execution of the pilot. The full programme was approved in December 2009 and managed by a Fuel Risk Management committee, made up of senior management staff. Its operations are guided by international best practice and it must submit regular reports to the LUCELEC Board of Directors[13].

iii. Duke Energy, United States: Duke Energy uses energy commodity derivatives to hedge against exposure to the prices of power, fuel for

[12] Letter to FTC from BREA dated 2020-05-29 re: Application Pursuant to Section 16 of the Utilities Regulation Act, CAP 282 for Approval of the Barbados Light & Power Company Limited to Implement A Fuel Hedging Programme and to Apply the Results and Costs of Hedging to the Calculation of the Fuel Clause Adjustment

[13]LUCELEC, "THE POWER of CARING: Annual Report 2009" (, 2009), https://www.lucelec.com/sites/default/files/annual-reports/LUCELEC_Annual_Report_2009.pdf.

generation and natural gas for customers. Also, the company's Commercial Renewables business may enter into short term or long-term hedge instruments to manage price risk associated with project output.[14]

34. The use of hedging instruments has been shown to be useful to dampen the level of fuel price spikes. To illustrate how this can be achieved, consider the example provided by the BL&P (the purchase of 140,000 barrels of fuel for US$30.bbl using a fixed price swap) – see Table 1.

Table 1: Illustration of Fuel Hedge on the FCA

	Est. Value	**Est. Value**
Gross Generation for Month (GWh)	79.28	
Auxiliaries for month (GWh)	2.7	
Net Generation for Month (GWh)	76.58	
Losses (12-month average)	6.19%	
Net Generation adj for losses for mth (GWh)		71.84
Fuel cost for the month (BDS$'000's)	19,537	
Add Heat Rate (Penalty)/Incentive (BDS$'000's)	0	
Add Purchase Power for the mth (BDS$'000's)	1,591.7	
Add under/ (less over) recovery at month (BDS$'000's)	5,110.4	
Less Fuel Hedge Settlement contribution for month (BDS$'000's)	(1,680.0)	
Add Fuel Hedge Administrative costs for month (BDS$'000's)	60.0	
Total Fuel & Purchased Power for the month (BDS$'000's)		24,619
Calculated FCA for month - unsmoothed (cents/kWh)		**34.269**
FCA without Fuel Hedge (cents/kWh)		**36.525**

35. In this instance, a positive hedge settlement has been generated from the market price of fuel being higher than the hedge price, resulting in an FCA that is 6.2% lower than the FCA without the effect of hedging. The impact of this on the consumer's bill is illustrated in Table 2.

Table 2 FCA Impact

	Energy (kWh)	**FCA ($/kWh)**	**Fuel Charge**	**Total ($) incl VAT**	**Difference from Reference Case**
Reference Case	200	0.36525	73.05	134.36	
With Hedge	200	0.34269	68.54	129.06	-4%

36. In this instance, the results satisfy the objective of reducing the impact of the increase in fuel price. However, in an instance where the price of fuel falls below the hedge price, there is a resulting increase in FCA.

Table 3 Calculation of the FCA to Illustrate a Hedge

	Est. Value	**Est. Value**
Gross Generation for Month (GWh)	79.28	
Auxiliaries for month (GWh)	2.7	
Net Generation for Month (GWh)	76.58	
Losses (12-month average)	6.19%	
Net Generation adj for losses for mth (GWh)		71.84
Fuel cost for the month (BDS$'000's)	17,306.2	
Add Heat Rate (Penalty)/Incentive (BDS$'000's)	0	
Add Purchase Power for the mth (BDS$'000's)	1,591.7	
Add under/ (less over) recovery at month (BDS$'000's)	5,110.4	
Less Fuel Hedge Settlement contribution for month (BDS$'000's)	560.0	
Add Fuel Hedge Administrative costs for month (BDS$'000's)	60.0	
Total Fuel & Purchased Power for the month (BDS$'000's)		24,628
Calculated FCA for month - unsmoothed (cents/kWh)		**34.282**
FCA without Fuel Hedge (cents/kWh)		**33.419**

Table 4 - FCA Impact - Average Customer

	Energy (kWh)	**FCA ($/kWh)**	**Fuel Charge**	**Total ($) incl VAT**	**Difference from Reference Case**
Reference Case	200	0.33419	66.84	127.06	
With Hedge	200	0.34282	68.56	129.09	2%

37. In the examples presented, the hedging strategy allows the BL&P to protect the consumer from the high levels of volatility on the upside. This can be considered a prudent action by the BL&P, and it would therefore be a reasonable action for the cost related to this to be passed on to the consumer. However, the strategy does not speak to the opportunity to benefit from falling oil prices.

38. The BL&P's objective is focussed solely on protecting the consumer from upside volatility, with little or no consideration given to managing occasions when the price of fuel falls significantly. This strategy is considered one that is less than prudent and therefore some consideration should be given to the apportioning of this downside risk, that is, whether all of the risk should be passed on to the consumer. The Commission is of the opinion that a hedge strategy should also provide the flexibility that allows the consumer to benefit from falling prices as well as protection from rising prices.

39. While the cost of electricity is of some concern to customers, the BL&P has not provided significant evidence to support its position that customers are willing to pay for reduced volatility in electricity costs, even though they believe that the cost of fuel will rise in the short to medium term.

Sub issue ii: The context of fuel hedging including: What is the geo-political environment relevant to this strategy.

BL&P's Position:

40. Fuel prices have historically been volatile, reflecting unexpected changes in weather, political regimes, global economic shocks, and countless other factors. As an example, the current COVID-19 pandemic temporarily caused the price of fuel to fall, as the demand for the commodity fell due to reduced economic output. At the time of the submission of the Application, oil prices had fallen to a monthly average low of US$29 per barrel in March 2020[15] and it is this level of oil prices that the Application was trying to benefit from. In paragraphs 1 and 2[16] of the Application, the BL&P highlighted the Government's policy direction which encouraged the BL&P to engage in hedging to lock in the then low oil prices for a period of up to two years.

41. The BL&P has indicated that a hedging model will be developed that will take account of these above-referenced impacts.

Intervenors' Submission:

42. In correspondence to the Commission dated May 29, 2020, BREA requested urgent action on the Application because that organisation wanted to benefit from the low oil prices around the first quarter of 2020[17].

43. In an interrogatory[18], CARITEL suggested that there are a number of global developments which could have an impact on hedging. Specifically, CARITEL noted a report which connects COVID-19 to continued reduced demand for oil in 2020.

Commission's Comments

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[15] Ibid
[16] Ibid
[17] Letter to FTC from BREA dated 2020-05-29 re: Application Pursuant to Section 16 of the Utilities Regulation Act, CAP 282 for Approval of the Barbados Light & Power Company Limited to Implement A Fuel Hedging Programme And to Apply the Results and Costs of Hedging to the Calculation of the Fuel Clause Adjustment
[18] Letter from CARITEL

44. The volatility in oil prices is indicative of the level of risk in the market. It reflects how participants anticipate and adjust to new information, both in the physical energy market as well as the energy-related financial derivative market.

45. In addition to the ongoing world events noted by the BL&P as drivers of fuel prices, the Commission notes that politics often acts as an overarching driver in fuel prices, customarily in the form of OPEC+[19] manipulating the supply side of oil. The Commission acknowledges that it is difficult to accurately account for such political drivers in quantitative modelling. Therefore, it is an unreasonable expectation for consumers to bear 100% of the risk associated with hedging in an environment where the outcome cannot be modelled with any degree of confidence.

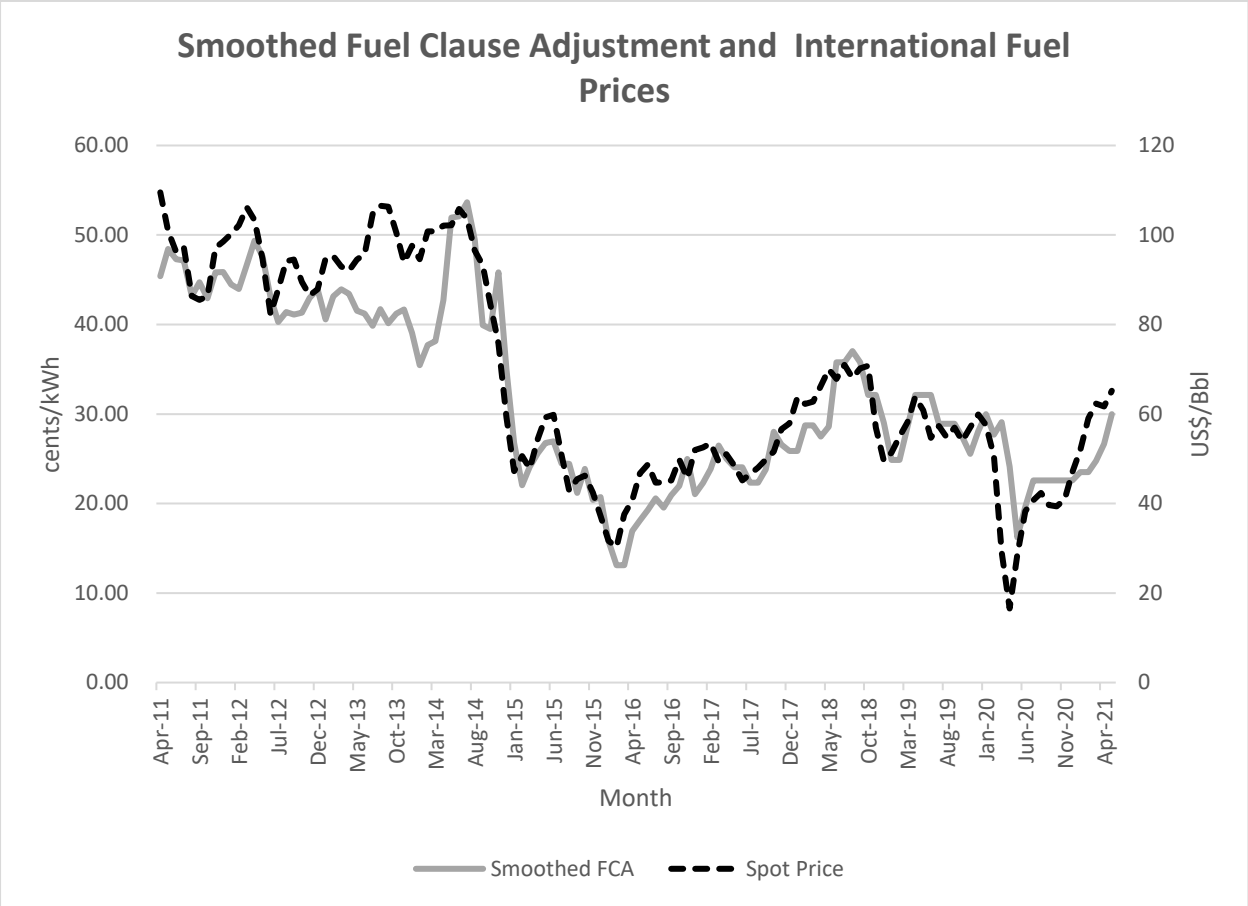
46. The Commission concedes that consumers prefer not to experience unexpected changes in their fuel bills as it impacts their ability to budget adequately[20]. In some instances, unexpected price spikes can have a significant negative impact on the financial viability of an individual or business.

47. Figure 1 shows the historic performance of international fuel prices, compared to the FCA over the same period for the last ten years. The graph shows the volatility of the electricity prices alongside the volatility of oil prices over the period.

[19] OPEC+ includes the members of OPEC as well as 10 additional oil exporting countries. This group was formed in 2016 with the additional countries being Russia, Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, South Sudan and Sudan.

[20] https://www.iisd.org/sites/default/files/publications/how-to-respond-when-prices-go-up-indonesia.pdf Accessed July 5, 2020

Figure 1 - Historic Fuel Clause Adjustment and Fuel Prices[21]

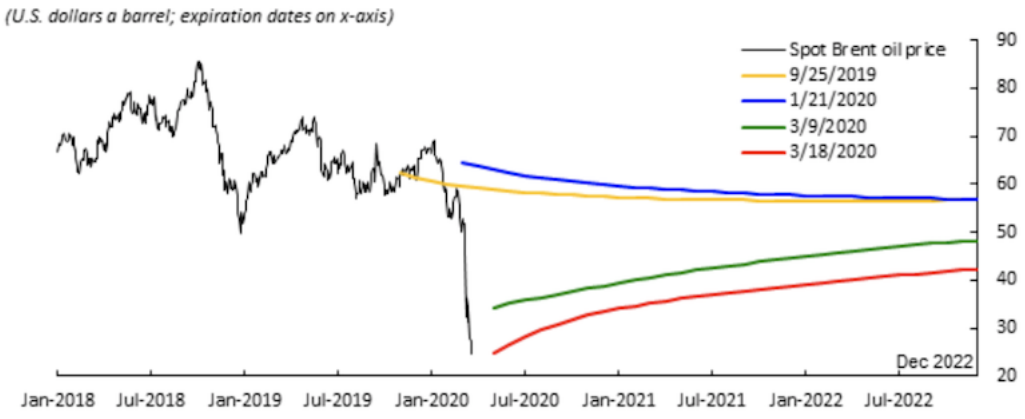


48. Current expectations are that oil prices will continue to rise. These expectations are based on increased demand due to expected improvements in the global economic outlook, as major economies continue to vaccinate their populations against COVID-19 and its various strains.

49. Indicators of this growth are suggested by the JP Morgan forecasting of GDP growth in 2021 to be 5.8% globally, with Euro area growth of 4.8%, and growth in the USA at 5.5%[22]. Low levels of travel will however restrain this. The International Monetary Fund is projecting growth for Latin America and the

[21] https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RWTC&f=M Accessed October 13, 2020
[22] https://www.jpmorgan.com/insights/research/2021-global-market-outlook Accessed February 19, 2021

Caribbean of 4.4%[23] for 2021 following a contraction of 7.4% in 2020. As noted on page 23 of this document, the monthly average oil price fell as low as US$29 per barrel in March 2020. On March 17, 2021, the WTI crude oil futures price was US$64.60/barrel, up US$37.65 from a year earlier[24]. Figure 2 below depicts the anticipated movement of oil prices in September 2019, Jan 21, 2020, March 9, 2020 and March 18, 2020.



Source: Bloomberg, L.P.
Note: The black line indicates spot price of Brent crude oil. The colored lines illustrate the futures prices of Brent crude oil on, respectively, September 25 2019; January 21, 2020; March 9, 2020, after the disintegration of the OPEC+ alliance; and March 18, 2020.

Figure 2

50. The WTI crude oil futures price currently stands at US$73.06/barrel[25]more than double the price of oil in March 2020, and higher than the levels forecast seen in Figure 2.

51. This is typical of how unpredictable the price of oil can be. In fact, had the BL&P hedged at that time based on any of these projections, customers would currently be benefitting from the fact that the market price of fuel would have exceeded the hedge price. This graphical example supports the logic that hedging, in certain scenarios, could be beneficial for the consumer.

[23] https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update Accessed Feb 24, 2021
[24] https://www.eia.gov/ Accessed March 18, 2020
[25] Homepage - U.S. Energy Information Administration (EIA) Accessed June 23, 2021 3:24PM

52. It would be of some value if the BL&P has a hedging programme in place that gives them the flexibility to respond to changing market conditions, and execute hedges when they are advised by qualified professionals that it is prudent to do so.

53. However, as previously noted, this discussion on geo-politics has been focussed on the BL&P responding to the risk of an increase in the price of fuel, while not taking consideration of the ability to benefit from falling oil prices.

54. The geo-political environment has a significant impact on the implementation of a hedging strategy. It is therefore a fundamental component of any model that is to be used to determine the hedging strategy. This is a position that is recognised by the BL&P, the Intervenors and the Commission.

Sub-issue iii: How will the Barbados National Energy Policy mandate to achieve 100 percent renewable energy by 2030 impact the proposed fuel hedging programme?

BL&P's Position:

55. The BL&P noted that Barbados had signalled its intention to transition away from a fossil fuel economy to one that is supported by 100% renewable energy (RE) in the Barbados National Energy Policy 2030 ("BNEP 2030"). A shift towards RE will mean that lower volumes of fuel purchased result in less need for fuel hedging to achieve fuel price stability. While this transition happens however, the BL&P believes that fuel hedging will assist in achieving greater fuel price stability[26].

[26] Affidavit – Submission of The Barbados Light & Power Company Limited In response to the Interrogatories of the Fair Trading Commission

Intervenors' Submission:

56. As noted on page 17 of this Decision, the MEWR has opined that the transition to RE will cushion the economy from the fluctuating price shocks associated with the volatility in oil prices and therefore provides a financial hedge to reduce the exposure to fuel price risks.

Commission's Comments:

57. At the end of December 2020, BL&P had 2,170 RE customers. In 2020, these customers sold 51.3MWh to the grid. Installed capacity at the end of December 2020 stood at 41.8MW in addition to the BL&P's 10MW solar plant. In the BNEP 2030 it is estimated that the target level of RE required by 2030 is 625 MW. Current installed capacity represents only 6.7% of that total.

58. This transition to RE will lead to a reduced demand for fossil fuel products and will therefore result in a reduced need to hedge fuel prices. If the RE transition is successful, the need for managing fuel price risks should not extend beyond 2030 (approximately 9 years).

59. While this build-out is occurring, the existing system will continue to rely on the use of fossil fuel in order to supply the people of Barbados with a reliable electricity system, and therefore consumers will continue to be exposed to the impact of variability in fuel prices. Consequently, the transition to 100% RE should not be considered as a deterrent to the BL&P using fuel hedging as a risk management tool during this transitionary period.

60. Also, fuel hedging is not expected to be in place for an extended period of time, and the volumes that can or should be hedged would fall as the increase in RE build-out takes place.

Sub-issue iv: What is the proposed method of hedging – physical or financial – and why was this method selected?

61. In the Application, the BL&P stated that it was currently pursuing the possibility of entering into hedging for the physical supply of fuel, and would implement a financial hedging programme once market conditions were favourable[27]. With respect to this financial hedging request, Paragraph 5 of the Application states its intention "*to complement any opportunity that may arise to hedge physical fuel supply in the future*". In Exhibit DC1 in the Affidavit of Dominick A. Chirichella, it was stated that the methodology chosen will be guided by that which is most cost effective: "*In designing a fuel hedging programme, we will develop the most cost-effective tools to use to achieve the objectives. In many cases that is often a combination of physical and financial instruments.*"

62. The BL&P's strategy is to buy physical fuel from its regular fuel suppliers at market rates while entering into hedge contracts with third parties at targeted prices. Settlement gains/losses will then be matched against fuel purchase prices from the supplier, and applied to the calculation of the FCA.

63. In response to Interrogatories of the Commission, the BL&P noted that its methodology in designing the hedge programme will be focussed on using available products that have the highest correlation to the HFO and Av Jet fuel, the physical fuel product currently being used by BL&P in its energy generation. It is expected that the actual volume of fuel hedged will be based on the BL&P's forecast of annual volumes of fuel given its expectations of load demand and mix of generation dispatch, with a maximum 90% of HFO and Av jet fuel usage.

64. BL&P has expressed that it is likely to use a fixed price swap as the suitable hedge instrument. BL&P further opines that if market conditions change, it

[27] Ibid paragraph 42

may be prudent for the BL&P to use alternative hedge instruments in order to achieve its objectives. The gains and losses will be offset against the price of the physical fuel purchases, and the related hedge costs to calculate the monthly FCA.

Intervenors' Submission:

65. While BREA generally supported the implementation of a hedging strategy by the BL&P, the submissions from the Intervenors expressed no preference for the BL&P to hedge via physical or financial means.

Commission's Comments:

66. As previously noted, fuel hedging is an often used and suitable method of price risk management. The BL&P is currently limited in the ability to use physical hedging given that it cannot import fuel directly. The BL&P would also be restricted in its use of physical hedging by its limitations on storage capacity and the resulting opportunity costs. The use of paper hedges can be considered more beneficial from a cash flow perspective, without the requirements for large storage capacity, or the same level of lost opportunity cost.

67. A well-managed hedge strategy with an appropriate regulatory framework using financial hedges could achieve the objectives of the BL&P.

ISSUE B: THE RISK OF THE PROPOSED HEDGING PROGRAMME

Sub-issue i: Considering the target price and level of hedging, including justification for proposal to hedge up to 90 percent of HFO:

BL&P's Position:

68. The BL&P noted in its Application at paragraph 18 that the FCA accounts for more than 50% of customer's monthly electricity costs. There are risks

associated with fuel hedging. These are evident when higher electricity prices are the result of the market moving in the opposite direction to what the hedge was originally designed to protect. The execution of the hedge programme is done at a cost which, when added to any hedge losses can be a further burden to the customer. No hedge is perfect or without risk. However, extreme price spikes can have a significant negative impact on the economy and customers and it is this that the BL&P is trying to avoid.

69. In the affidavit of Dominick A. Chirichella, the BL&P posited that a market/macro fundamental and technical model should be used in managing the design of the hedge programme and this model would be used to determine the optimum hedge strategy, the volumes to be hedged, as well as the entry points for the hedges.

70. The BL&P expressed that it is important to do more hedging in high price environments than in stable or falling price environments. This requires the hedge programme to be responsive to changing market conditions. The model therefore would guide in establishing trends that suggest when market conditions are either more or less favourable to hedging. The model would help the BL&P determine what percentage of fuel to hedge under various potential outcomes. The outcomes should not change daily, but should be more medium to long term. The model to guide the actual volumes of fuel and time period to be hedged would include the following:

71. Optimum percentage hedge levels/forward hedge period under various conditions. The model should be back tested with actual historical data to develop a comfort factor with the model outcomes.

72. A variety of parameters that may be included are:

    1. Geopolitics
    2. Macro and micro fundamentals (supply, demand and inventories)

3. OPEC & its activity
4. Weather and other miscellaneous fundamentals
5. Technical Analysis
6. Frequency distribution (mean reversion analysis)

73. Each parameter may be weighted differently based on its historical impact on prices and normal seasonality in the market. A sub-model should be considered to help identify whether the hedging programme should use fixed price instruments or insurance-based instruments such as options or collars, as suggested by the BL&P[28].

Intervenors' Submissions:

There were no submissions from the Intervenors on this issue.

Consultation Paper Responses:

74. BREA, in response to the Commission's Consultation Paper FTC/URD/CONBL&P/2020-01 expressed the view that 90% was a "*reasonable amount*" of fuel volume to hedge. BREA opined that a risk model should be developed, and "*a predetermined criteria be set to help decide when to hedge and the volume of the hedge.*" Based on probabilities of fuel price moving either up or down as determined by this model, the volumes of the hedge would be decided. "*If the probability of the price of fuel to go up is high, as worked out through the risk model, and the probability of it going down is a lot lower, larger volumes can be hedged (90% is a reasonable amount).*"

Commission's Comments:

75. The BL&P has presented an explanation of their approach to designing a hedging programme. This process would indicate when to hedge, at what price, and the fuel volumes to hedge as well as the duration of the hedges. The model design is also expected to determine what hedging instruments would be used.

[28] BL&P Affidavit

76. However, the BL&P has provided no evidence to support why it should risk up to 90% of its fuel volumes. A comparison of the level of the hedging exposures can be made with the LUCELEC programme, which only hedges up to 75% of its fuel volumes[29]. LUCELEC considers that it would not be prudent practice to hedge at any higher level.

77. The BL&P's approach to the design of the hedge programme is a sound approach. However, the proposal to hedge up to 90% of fuel volumes is not supported and is not considered "prudent practice". Prudent practice involves acknowledging that along with opportunities and benefits, there are also dangers and risks. Furthermore, there is never a guarantee of profit. Often, the higher the risk involved, the higher the possibility of greater reward, in addition to the higher probability of loss (as risking 90% also carries a risk of losing 90%). To incur losses on almost 100% of exposure would result in significant cost to the consumer. A prudent decision therefore should not be to "risk all" for the sake of a bigger reward.

78. The Commission is willing to investigate the potential impact of hedging on the BL&P customers. However, the Commission is hesitant to expose these customers to almost 100% of the commodity risk, especially considering that the BL&P has no experience in fuel hedging at this time. A more prudent approach would be to investigate the strategy on a pilot basis, with only a limited percentage of fuel volumes being hedged. The pilot design should, instead of the 90% of fuel volumes proposed, consider a fuel exposure of 40% of fuel volumes. In the case where only 40% of the BL&P's fuel volumes are hedged, the effects of an unsuccessful hedge can at least be dampened by the fact that 60% of the fuel volumes are not exposed to risk.

[29] LUCELEC's Fuel Price Hedging Programme | St. Lucia Electricity Services Limited

Sub-issue ii: What is the risk to consumers, including an assessment of the risk of hedging vs. likely benefit to consumers, as well as competence and volatility concerns:

BL&P's Position:

79. In Exhibit DC1 of the Affidavit of Dominick A. Chirichella, the BL&P stated that "*oil products have at times the highest level of volatility of any traditional commodity. Left unhedged this normally results in significant exposure to wide price swings that could last for extended periods of time*." The affidavit further states that "*The BPLC must balance their desire to create customer value using hedging with the obligation to minimize prudence risk for shareholders. This balance is usually resolved by minimizing market-responsive decisions, and that promotes "lock and leave*[30]*" hedge programmes*."

80. In Mr. Chirichella's abovementioned Affidavit, the BL&P explained that the first phase of hedging would be focused on stabilizing the electricity price by locking into a fixed price relationship for fuel. This certainty is expected to eliminate any upside price exposure for customers. However, if fuel prices fall significantly during the hedged forward period, the cost of electricity will remain fixed but a possible opportunity to pay a lower price for fuel would be missed. However, the objective of stabilizing the price would still have been achieved.

81. The establishment of a hedge mechanism would give the BL&P the flexibility to lock in prices for specific times and volumes under certain market conditions.

[30] Under the lock and leave approach, an x% hedge ratio seeks to constrain costs to x% of unmitigated upside exposures. The implicit flipside is a willingness to accept hedge losses equals to (100-x) % of potential downside market movements. In effect, the decision to establish an x% ratio implies a willingness to accept the consequences of (100-x) % of any market movements in either direction, regardless of how severe volatility might be in the year to come.

82. Option[31] instruments can be considered in addition to fixed price swaps. Hedging instruments can be used to reduce upside price exposure while allowing for some lower price market participation when prices decline under certain market conditions. These instruments are insurance type hedges and are very similar in functionality to buying an insurance policy. A premium is paid on the option, and allows the company to participate when market prices fall, while protecting it when prices rise.

Intervenors' Submissions:

There were no submissions from the Intervenors on this issue.

Commission's Comments:

83. In using the lock and leave approach, there is an explicit decision to accept the consequences of (100-x) % of the market movement specifically when fuel prices are falling, with consumers not being able to enjoy the benefits of these lower prices. This decision allows for the goal of price stability to be still achieved. This means that the consumers will be paying for fuel at a price that is higher than the market price of fuel at that point in time.

84. Risks are upside as well as downside. It is prudent to aim to balance the mitigation of upside costs against the hedge loss potential by identifying cost tolerance as well as hedge loss tolerance. Given that risk conditions vary continuously, the objectives should be routinely monitored to ensure high confidence in tolerable cost and loss outcomes. The management of these competing tolerances goes against the objective of simple volatility reduction, and therefore would affect the hedge strategy that is utilized.

[31] Option - An option is a contract which provides the contract buyer with the right, but not the obligation, to purchase or sell a particular amount of a specific commodity (or the financial equivalent thereof), on or before a specific date or period of time at an agreed price.

85. The purchase of the option for insurance would increase the costs of the programme. In addition to paying for the hedging strategy, the purchase of the insurance is an additional cost.

86. An examination of how other entities have been impacted by their hedging programmes would be useful for comparison.

87. Airlines have historically hedged their fuel exposure given that fuel is a significant input in their operation. Airlines in 2020, and the first quarter of 2021 have been significantly impacted by the COVID-19 pandemic which has seen reduced demand for travel, and subsequently, reduced demand for fuel. That same fall-off in demand has contributed to the significant fall off in oil prices to historic lows[32]. The reduction in fuel demand meant that airlines were hedged for significant amounts of unneeded fuel purchases. As reported in Eurofinance in April 2020, European airlines such as Ryanair, Air France, Easy Jet and International Airlines Group faced mark-to-market losses of up to $6.82 billion on these fuel hedges[33]. Following this crisis, some of these companies have ceased hedging.

88. In the Caribbean, some utility companies have been hedging for a number of years. The Electricity Regulatory Authority of Cayman Islands approved, in March 2011, a Fuel Price Volatility Programme for the Caribbean Utilities Company Ltd. of Grand Cayman. The said company is allowed to use hedging to reduce the impact of volatility in its Fuel Cost Charge which is paid by customers for fuel, similar to the BL&P's FCA. The programme uses call options in order to promote transparency in pricing and to create a ceiling price for fuel costs at predetermined contract premiums.

[32] On March 31, 2020, the price of oil was US$20 per barrel, moving to US$28 per barrel on April 3, 2020[32].

[33] https://www.eurofinance.com/news/european-airlines-may-quit-fuel-hedging-after-4-66-billion-in-losses/ Accessed Feb 24, 2021

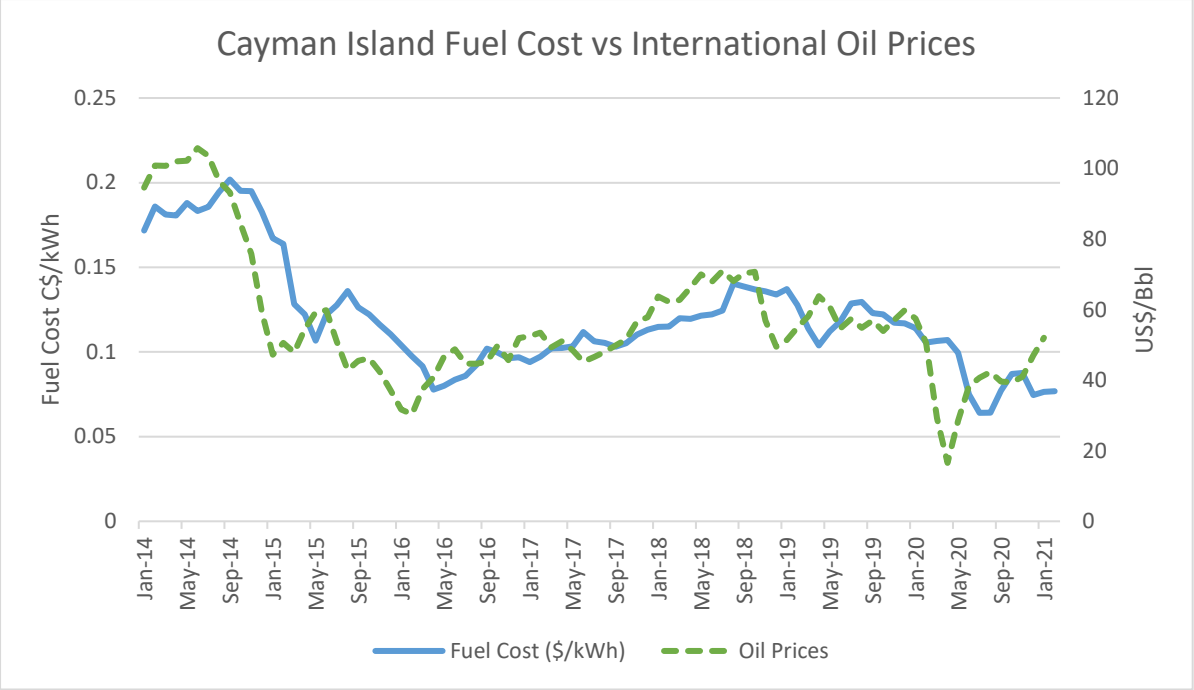


Figure 3

89. A graphical representation of the fuel cost charge compared to international oil prices for the period January 2014 to January 2021 gives some indication of the impact of hedging on the company's customers in Cayman Islands. Visually, one can see that the fluctuation of the fuel cost is "damper" that the fluctuations in oil price and there are no significant swings in fuel cost away from oil prices.

90. The BL&P proposes to implement its hedge programme with the assistance of experienced risk management professionals. The first phase of the process will be the establishment of what the BL&P refers to as a comprehensive risk management framework, which will establish the necessary criteria for the execution of hedge transactions. This framework will also set out the strategy for hedging driven by the company's explicit hedge objectives. The framework should also set out the parameters for the routine monitoring of risks, as well as the hedge effectiveness.

91. This emphasizes the need for the creation of an IPS so that the Commission can understand and monitor what the BL&P intends to do and how they intend to do it.

Sub-issue iii: What are the administrative costs, including but not limited to cost of administrator and method of selecting the administrator.

BL&P's Position:

92. The administrative costs of hedging include:

- The costs of buying the hedge instrument; and
- the cost of managing the hedge operation.

The cost of buying the hedge instrument such as a fixed price swap is low. There is however a cost to administering the hedge programme. The administrator is required to:

A. provide advice on appropriate risk controls;
B. oversee the hedging strategy and hedge execution; and
C. provide market intelligence to inform hedging strategy.

Additional costs of hedging would relate to the internal company resources required to provide the necessary governance of the hedging programme.

The internal company resources would include the following:

- the establishment of a risk policy by the BL&P;
- the establishment of a hedge committee which includes representatives from the BL&P and stakeholders; and
- ensuring the BL&P personnel have necessary risk management training.

93. The cost of the 2020 Fuel Hedge programme was estimated, based on bids provided by the competitive quotations received during the 2016 Fuel Hedge Programme application process, with a 5% mark up to allow for any inflationary increases. The BL&P first ascertained if the companies which provided the previous bids still provided the services that had been initially

quoted for. The cost of financing margin calls is not included in the administration costs[34].

94. The BL&P intends to provide its relevant staff with the appropriate technical and operational training by the risk management professionals so that in approximately a year's time, the BL&P will be in the position to independently perform the investment manager's role, similar to what is currently done in other utility companies, such as LUCELEC[35].

95. The BL&P does not anticipate that the cost attributed to the internal company resources to manage the hedging programme will be significant, and is not included in the initial hedge administration cost of BDS $720,000. These would instead be incorporated as part of BL&P's normal operational costs. The BL&P does not anticipate that it will require a full-time internal team to manage the hedge programme at this time. In the medium term, the responsibility of managing the programme internally will be incorporated into already existing job functions.

Commission's Comments

96. The BL&P has estimated the annual cost of the proposed fuel hedging programme to be approximately BDS$720,000, to be passed through the FCA. Using the March 2021 FCA as a base month with a calculated FCA of 31.42 cents/kWh, this represents an increase in the monthly FCA of 0.34 cents/kWh.

97. The BL&P will determine the final costs to be paid to the risk management specialists using a bidding procedure. The Commission will use the comparative bids to assess the reasonableness of the final cost charged to the

[34] A **margin call** refers to a broker's demand that a customer deposit additional money or securities into the account so that it is brought up to the minimum value, known as the maintenance **margin**.
[35] LUCELEC started a Hedging Pilot Programme in 2009, and advanced to a fully-fledged hedging programme in 2010 following the successful execution of the pilot. https://lucelec.com/content/lucelec's-fuel-price-hedging-programme. Accessed October 14, 2020

BL&P. Furthermore, the Commission shall be involved in the selection of the investment manager and shall approve the investment manager retained by the BL&P. This assessment cannot be made at this point in time.

ISSUE C: WHETHER THE BL&P SHOULD BE PERMITTED TO RECOVER THE COSTS OF THE FUEL HEDGING PROGRAMME VIA THE FCA, INCLUDING:

Sub-issue i: The appropriateness of recovery through the FCA, any alternative methods of recovery and relative benefits; and

Sub-issue ii: The formulation of the FCA

BL&P's Position:

98. In validation of the request to pass through the results and costs of fuel hedging to the customer, BL&P has noted that hedging is part of the physical process of fuel acquisition, and this is an essential part of electricity generation. The BL&P therefore is of the opinion that the hedging element of the fuel acquisition should be combined with the physical acquisition of fuel to determine the FCA.

99. To further advance its argument, BL&P has highlighted that various electric utilities in the USA use hedging and combine the gains and losses from the various programmes in the determination of their fuel cost calculation. An example provided is, Central Hudson Gas and Electric Corp of New York which is allowed to fully recover risk management costs through its natural gas and electricity cost adjustment charge clauses. Their risk management costs specifically include functions related to reductions in price volatility or reduced overall costs to customers.

Intervenors' Submissions:

100. There were no submissions from the Intervenors on this issue.

The Commission's Comments:

101. Hedging can be considered as being related to the acquisition of fuel and can therefore be combined with the physical acquisition of the input. However, it is not a mandatory part of the fuel acquisition process. This fact

notwithstanding, the cost that is incurred in this process may result in a benefit to the consumer, even though this economic benefit is not guaranteed.

102. The passing of the costs of hedging through FCA analogous mechanisms is also practiced by utilities in other jurisdictions, CUC in the Cayman Islands and LUCELEC in St. Lucia being two such examples.

103. There is currently an approved formula used by the BL&P for the determination of the cost of fuel used by the customer. The components of this formula (Equation 6) are fuel cost, the application of heat rate targets for specific BL&P generating units, purchased power, energy generation, auxiliary losses and technical and commercial losses. This formula also includes a component for the recovery of the cost of the BL&P's energy storage device and this is done once a year in February.

104. The results of any hedging programme and any approved hedging costs would have to be accounted for in the FCA calculation. Additionally, for transparency, it is also necessary to expressly state how the losses on energy generation are accounted for. The denominator must include the energy generated from RE sources along with the energy generated by fossil fuel per unit, taking into account the losses as they apply to all individual generation units. The gains and losses from the hedge programme will be matched against fuel purchase prices from BL&P's fuel suppliers.

The existing formulas (Equations 4 & 5) for the FCA are:

Equation 4:

$$FCA_n = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power_{n-1}}{Energy\ Generation_{n-1} . (1 - Aux_{n-1}) . (1 - losses)} [BD\$/kWh]$$

Equation 5:

$$FCA_{Feb} = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power_{n-1} + ESD\ Recovery\ yt}{Energy\ Generation_{n-1} . (1 - Aux_{n-1}) . (1 - losses)} [BD\$/kWh]$$

Where:

ESD Recovery$_{yt}$ = % Net Fuel Savings$_{yt-1}$

And:

FCA$_n$	=	FCA for each current month other than February
FCA$_{Feb}$	=	FCA for February
Energy Generation$_{n-1}$	=	Energy generated in the previous month
Aux$_{n-1}$	=	Auxiliary consumption as a % of total generation in the previous month
Losses	=	System losses as a % 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
Purchased Power$_{n-1}$	=	Purchased power from renewable sources in the previous month
i	=	Generation plant/unit
BD$/kWh	=	Barbados dollars per kilowatt hour
ESD Recovery$_{yt}$	=	Storage Cost recovery for the previous year including any cost under recovery accumulated from the previous year
Net Fuel Savings$_{yt-1}$	=	The difference between the fuel cost with and without the Energy Storage Device
AHR$^i_{n-1}$	=	Actual Heat Rate for generation plant/unit i, for month n-1
THR$^i_{n-1}$	=	Target Heat Rate for generation plant/unit i, for month n-1

The revised formula proposed by the BL&P is.

Equation 6:

$$FCA_n = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + AdminCost_{n-1}}{Energy\ Generation_{n-1} . (1 - Aus_{n-1}) . (1 - losses)} [BD\$/kWh]$$

Where:

FCA_n	=	FCA for the current month n (other than February)
Aus_{n-1}	=	Auxiliary consumption as a % of total generation in the month n-1
Fuel $cost_{n-1}$	=	Fuel cost in previous month including cumulative under/over recovery, purchased power and gains/losses from fuel hedge in the month n-1
$AdminCost_{n-1}$	=	Administrative Costs of hedging programme in the month n-1

105. The Commission, under its own volition has proposed a further revision of the determination of the FCA to adjust the denominator of the equation to clarify the losses for each generation plant.

The revised equations recommended by the Commission are:

Equations 7:

$$FCA_n = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power\ Cost_{n-1} \quad + 0.5 HedgeResults \quad _{n-1}}{\sum_j Energy\ Generation_{n-1} . (1 - Aux^j_{n-1}) . (1 - losses^j_{n-1})} [BD\$/kWh]$$

Equation 8:

$$FCA_{Feb} = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power\ Cost_{n-1} \quad + 0.5 HedgeResults_{n-1} + ESD\ Recovery\ yt}{\sum_j Energy\ Generation_{n-1} . (1 - Aux^j_{n-1}) . (1 - losses^j_{n-1})} [BD\$/kWh]$$

Where:

$ESD\ Recovery_{yt}$	=	% $Net\ Fuel\ Savings_{yt-1}$

FCA_n =	FCA for each (current) month other than February
FCA_{Feb}	FCA for February
$Energy\ Generation_{n-1}$ =	Energy generated in the month n-1

Aux_{n-1} =	Auxiliary consumption as a % of total generation in the month n-1
Losses =	System losses as a % of total generation calculated based on a 12-month running average
Fuel $cost_{n-1}$ =	Fuel cost in the month n-1 including cumulative under/over recovery
Purchased $Power_{n-1}$ =	Cost of Purchased power from renewable sources in the month n-1
Purchased Power $Energy_{n-1}$	Purchased power from renewable sources in the month n-1
i =	Thermal Generation plant/unit
BD$/kWh =	Barbados dollars per kilowatt hour
j =	Generation plant/unit (Thermal and RE, including purchased energy)
AHR^{i}_{n-1} =	Actual Heat Rate for generation plant/unit i, for month n-1
THR^{i}_{n-1} =	Target Heat Rate for generation plant/unit i, for month n-1
$HedgeResults_{n-1}$ =	Administrative Costs and Hedge Results of hedging programme in the month n-1
ESD $Recovery_{yt}$ =	Storage Cost recovery for the previous year including any cost under recovery accumulated from the previous year
Net Fuel $Savings_{yt-1}$ =	The difference between the fuel cost with and without the Energy Storage Device

106. It would therefore be Equations 7 and 8 that are amended to account for the inclusion of any administration costs related to the proposed fuel hedging programme.

107. In consideration of the Application, and similar to concerns raised during the analysis of the BL&P's previous fuel hedge application, the Commission remains wary of the need to ensure that the FCA continues to reflect the fair and efficient cost of fuel used to generate electricity, and does not pass on costs resulting from failures by the BL&P to manage its electricity system properly. This concern is currently managed through the Commission's monitoring of heat rate targets for the generation units.

108. In addition, as previously acknowledged in this paper, fuel hedging is a useful tool that is used to manage price risk, for the benefit of the consumer. It is

therefore a reasonable expectation that the prudently incurred cost of the investment strategy should, at least in part, be borne by the consumer.

109. However, the strategy proposed considers only upside risk, with the lack of downside risk management not being of benefit to the consumer. In this case, even when the strategy as stated has been met, the consumer can pay electricity prices that are higher than what they would pay had the BL&P not entered into hedging contracts. There is therefore some justification for the sharing of all risks (both upside and downside) to the benefit of both the customer and the BL&P. This approach would also mean that the costs of hedging would be shared between the BL&P and the consumer.

Sub issue iii: Regulatory oversight and governance concerns, including the implementation of a hedging policy;

BL&P's Position:

110. The establishment of a fuel hedging programme by a regulated utility company should be accompanied by the establishment of a regulatory framework which would present the policies and procedures to govern the implementation of said programme.

111. The framework would include:

- The establishment of an Executive Risk Management Committee
- The establishment of a Governing Policy[36].
- The Governing Policy is expected to address the philosophy, framework and the delegation of authorities necessary to govern the activities related to the BL&P's fuel risk management programme.

[36] Submission of Barbados Light & Power Company Limited In Response to the Interrogatories of the Fair Trading Commission

112. The above structures would be further supported by the creation of a formal Risk Management Policies and Procedures document. This supporting structure facilitates compliance and understanding of the programme's objectives, activities and required actions. Items to be addressed in this document are:

- Delegation of Authorities
- Multisector stakeholder roles
- Standards of Conduct
- Risk Management Philosophy
- Permissible Activities and Instruments
- Quantification of Positions and Exposures
- Management and Control
- Monthly or quarterly analysis of the effectiveness of the hedging strategies[37]

113. BL&P indicates that their risk management procedure will include:

- The establishment of a corporate risk policy
- The establishment of a hedge committee that includes representatives from the BL&P along with stakeholders;
- Training for BL&P staff in requisite risk management;
- Definitions of price exposure based on:
  - The quantity, type and quality of input product(s)
  - Structure and exposure derived from the existing physical supply contracts.
- Assessment and evaluation of the company's risk profile and how it translates to customers. This includes market risk exposure, and drives the choice of hedge products.
- Definition of the hedge objective, the optimum forward hedging period and volumes to be hedged;

[37] Ibid

- Identification of the most cost-effective hedging strategy
- Establishing relationships with several providers of financial hedge instruments
- Development of daily mark to market evaluation of the hedge instruments/physical product exposure
- Development of an objective plan to respond to changing market conditions in a very systematic way.

The development of this procedure would be completed using the services of experienced risk management professionals[38].

114. The documentation of guidelines allows the BL&P's risk management team (including their professionals) to work within a well-managed structure. It also allows the regulator to assess the programme for regulatory prudence related to any costs that must be passed on to the consumer. Should the Fuel Hedging Application be approved, it will be prudent to consider a written risk-management policy which includes the above noted documentation that describes the hedging programme, to be filed with the Commission. It is recommended that this policy include the following:

    - The types of trades that are approved;
    - The commodities that are approved for hedging, including the quantity and timeframe limits; and
    - The hedging tools that are approved for use.

Consultation Paper Responses:

115. In the response to the Consultation, BREA indicated that the inclusion of a regulatory framework in the proposed fuel hedging programme would

[38] BL&P Fuel Hedging Application Paragraph 54

increase customer confidence, and reduce the likelihood of losses, and increase the likelihood of gains.

116. BREA further expressed that the regulatory framework should include an Investment Committee and the committee should approve the risk management model, tools and overall process, as well as monitor the use of it and provide guidance where required. BREA cautioned that the process should not be bureaucratic so as not to miss opportunities.

Intervenors' Submissions:

117. There were no submissions from the Intervenors on this issue.

Commission's Comments:

118. In the establishment of a regulatory framework, there should be a mutual recognition of its merits and implications between the Commission and the BL&P. Neither the BL&P nor the Commission can be expected to unilaterally implement or impose methods for risk mitigation. In this respect, the role of the Commission would include the following:
    - Laying out guidelines and setting out the essential components of the hedging plan;
    - Evaluating the reasonableness of the utility's hedging strategy before it is executed;
    - Evaluating the prudence of the plan's execution for determining cost recovery;
    - Evaluating the reasonableness of a hedging strategy ex-ante and the execution of the strategy.

119. Given that the Application requests that the outcome of hedging mainly affect the customer, this is a reasonable posture for the Commission to take.

120. The Commission supports the framework as put forward by the utility as it encompasses the Commission's own determination. It is recommended that certain key documentation be required in order for the utility to execute an IPS.

121. **A. A Price Risk Policy –** This document should be signed off by the Board of Directors of the Company and should provide the principles and guidelines for the company to facilitate its hedging activities. Important features of this policy would include:

a) the risk appetite of the company with respect to price risk, that is, the degree of risk that the company is willing to expose its business margins to, such as commodity fluctuations.

b) Risk management principles of the company – the philosophy and guidelines for facilitating the hedging activities

c) Authorised markets (e.g., the list of exchanges) and hedging instruments (futures, options) that the company has been approved to undertake in its hedging activities.

122. **B. Standard Operating Procedures –** Key operating guidelines for undertaking the hedging activities which are supplemented by the internal controls maintained within the company.

123. **C. Reporting Framework –** Reports to be provided to various levels of the company's management with respect to the exposures, hedges, hedge performance and other aspects required from the company's price risk and hedging framework. This reporting structure allows the Commission to assess the effectiveness of the hedge programme on an ongoing basis thus keeping an eye on hedge accumulation.

Hedging Accountability

124. Within the framework of the proposed hedging plan, the following should be included:

i. Names of the managers who are authorized to enter into hedges;
ii. Names of Managers who must approve trades;
iii. Names of Managers who must receive trade confirmations;
iv. Defined purposes for which hedge can and cannot be used;

1. For example, hedging used to reduce volatility but not for trading purposes

v. Set limits on the notional value of hedges that may be outstanding at any one time;

vi. Ensure that top management and the company's board of directors are aware of the hedging activities;

vii. All risks are properly accounted for and managed;

1. Including Credit Risk - risk of default on a debt that may arise from a borrower failing to make required payments.
2. Include Counterparty Risk – the risk that a counterparty will not live up to its contractual obligations.

viii. Hedge strategy;

ix. Hedge Administrator; and

x. Disclosure requirements would require presentation of:

1. The utility's risk management strategy
2. The effect of the utility's risk management activities on the nature, timing and uncertainty of the cash flows; and
3. The effect that hedge accounting has on the primary financial statements.

- Quarterly reporting with respect to the ongoing hedging should be provided to the Commission and should include the following:
- Market Conditions;
- Hedge Effectiveness;
- Compliance;
- Hedge gains/Losses; and
- Risk Metrics

125. The IPS must be filed with the Commission for its approval. The benefit of the IPS is that it allows the Commission to approve how the BL&P manages its exposure to commodity risks as the consumers also have exposure to said risks through the FCA.

126. Any amendment to the IPS must obtain prior written approval from the Commission.

127. At inception and when changes are to be made, the BL&P will be required to file with the Commission an IPS for its hedging programme. The IPS must address certain important issues identified by the Commission in relation to, *inter alia*, the risks that the BL&P foresees with respect to fuel hedging, the strategies that the BL&P intends to employ to fulfil its risk management objectives and the BL&Ps reporting and monitoring systems. A complete list of the requirements to be addressed by the BL&P are contained at Section 6, paragraph 141 of this Decision.

Sub-issue iv: How the programme, if approved, would be monitored by the Commission

128. In the field of risk management, the quantification of statistical parameters, in particular price volatility, to measure risk and design effective hedging strategies is key. These tools are used to monitor risk and make hedging decisions in support of the strategy that has been chosen. A requirement by the regulator that these risks are quantified, monitored and reported should form part of the regulatory framework. This is especially important given that hedging is not part of the core competency of the utility.

129. One of the primary tools for the monitoring and measurement of risk is the use of Value at Risk (VaR) which can be produced on a daily or weekly basis. This measure allows the utility and the regulator to determine the risk of breaching cost boundaries or hedge loss boundaries and allows the utility to respond accordingly.

The Commission's Comments

130. The Commission investigated the regulatory framework of fuel hedging in St. Lucia, as would be executed by the National Utilities Regulatory Commission

(NURC) as a potential benchmark. LUCELEC commenced their hedging programme in 2009, prior to the establishment of NURC which was established in 2016. Based on the current Electricity Supply Act of St. Lucia, NURC to date is not in the position to provide robust regulatory oversight of LUCELEC's hedging programme.

131. Hedging is a complex topic and it is not an area that the Commission encounters on a regular basis. It is a fundamental tool in financial risk management and the Commission has no issues with the BL&P using the tool to manage its risks. However, the Commission opts to employ the services of an experienced professional to assist in the analysis of the development of the framework, setting correct hedge criteria, and requisite risk metrics. Furthermore, the Commission's involvement would be guided by any professional assistance employed to facilitate the process. The cost of this guidance would be included in the cost of the investment programme, thus further increasing the cost of the overall programme since these costs should be attributed to the BL&P for inclusion to the fuel hedging costs.

Smoothing

132. The BL&P indicates that it is its intention to continue smoothing along with the hedging programme, as it believes that it would allow the BL&P to reduce the monthly variations in electricity costs for the unhedged portion of the fuel expenses.

Consultation Paper Responses:

133. BREA agreed with the BL&P's position on smoothing in its response to the Consultation Paper.

SECTION 6 – THE DETERMINATION

134. The BL&P has expressed to the Commission its desire to pass the costs and results related to its proposed fuel hedging programme to its customers through the current FCA. The Commission supports the BL&P engaging in a fuel hedging programme, as hedging is an established risk management tool for managing commodity price risk. However, the Commission is of the opinion that the BL&P has not provided sufficient evidence that supports the Application in its current format, or provides sufficient protection for a potential negative impact to the consumers. The following specific issues have been identified by the Commission:

i. a lack of sufficient evidence from the BL&P showing that customers are willing to pay for the reduction in volatility;
ii. limitations around the consumer being able to benefit when the price of fuel falls;
iii. the absence of justification for the BL&P to hedge up to 90% (almost all) of its fuel volumes resulting in potential significant exposure for the consumer; and
iv. insufficient justification for the consumer to bear the full risk of a hedge programme in an environment where the BL&P has no control over the decisions made in the international arena.

135. The primary goal of the implementation of fuel hedging as a risk management strategy is stated as to reduce the volatility of fuel prices that are passed on to BL&P's customers. The Commission has determined that the use of hedging can indeed be effective in achieving this objective. In doing so, however, the Commission notes that according to the BL&P's proposal, it incurs no risk in this strategy, as all of the risk of hedging is passed on to the customer. This is especially important given that the BL&P has presented no evidence to support its assertion that the Barbadian customer is so risk-averse as to pay for the costs associated with a reduction in fuel price volatility. Despite this, the

Commission acknowledges that the volatility of fuel prices is expected to remain high and can move in either direction due to the changes in the international market, politics, the weather, or even limitations on storage, to name just a few reasons.

136. The Commission recognises the usefulness of the strategy as a price stability mechanism, and would therefore support further investigation in what a suitable strategy would look like for the BL&P.

137. As a result of the foregoing, and with a view to mitigate any effects of the issues/limitations identified above, the Commission therefore supports the initiation of a fuel hedge programme on a **pilot basis**, in order to provide the BL&P and the Commission with experience and knowledge about how a hedging programme would work, as well as to assess the potential impact on the BL&P's customers.

138. The Commission has therefore determined that the BL&P is permitted to initiate a fuel hedging programme on a **pilot basis** in accordance with the following requirements:

a. **The duration of the pilot fuel hedging programme shall not exceed twenty-four (24) months (2 years);**
b. **The pilot fuel hedging programme shall be limited to no more than 40% of fuel volumes being hedged;**
c. **The results and costs associated with the said pilot fuel hedging programme shall be shared evenly (50/50) between the BL&P and the consumer;**
d. **The IPS and all strategies employed therein, including hedging, shall require the prior written approval of the Commission.**
e. **Any amendments to the IPS shall require the prior written approval of the Commission;**

f. The BL&P and the Commission shall determine the investment manager;

g. The cost of hedging shall include costs borne by the Commission in the management/establishment of the fuel hedging programme by the BL&P. These costs will be passed to the BL&P, 50% of which will be passed through the FCA;

h. The equation used to calculate the FCA shall be revised to account for:

(i) the passing on of the results and costs of hedging to the consumers; and

(ii) the inclusion in the divisor of the equation, the generation losses itemised by generation plant, including renewable energy generation.

i. The Commission reserves the right to audit the pilot hedge programme on a quarterly basis or on such basis as the Commission deems fit;

j. The BL&P shall submit to the Commission within 45 days after the end of each quarter the investment performance report from the investment manager.

This decision shall be reviewed by the Commission three (3) months prior to the end of the twenty-four (24) month pilot period.

139. The Commission's approval for the BL&P to commence the aforementioned pilot fuel hedging programme is also conditional and shall not become effective until the date on which the BL&P submits, to the Commission's satisfaction, the BL&P's IPS. In this regard, the Commission reserves the right to comment on and/or request amendments to the BL&P's IPS documents before the Commission's approval for the BL&P to commence the pilot fuel hedging programme becomes effective.

140. The revised FCA equations are:

Equations 9:

$$FCA_n = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power\ Cost_{n-1} \quad + 0.5 HedgeResults \quad _{n-1}}{\sum_j Energy\ Generation_{n-1} . (1 - Aux^j_{n-1}) . (1 - losses^j_{n-1})} [BD\$/kWh]$$

Equation 10

$$FCA_{Feb} = \frac{\sum_i (Fuel\ Cost_{n-1} . \frac{THR^i_{n-1}}{AHR^i_{n-1}}) + Purchased\ Power\ Cost_{n-1} \quad + 0.5 HedgeResults_{n-1} + ESD\ Recovery\ yt}{\sum_j Energy\ Generation_{n-1} . (1 - Aux^j_{n-1}) . (1 - losses^j_{n-1})} [BD\$/kWh]$$

Where:

ESD Recovery$_{yt}$ = % Net Fuel Savings$_{yt-1}$

And Where:

FCA_n =	FCA for each (current) month other than February
FCA_{Feb}	FCA for February
Energy Generation$_{n-1}$ =	Energy generated in the month n-1
Aux_{n-1} =	Auxiliary consumption as a % of total generation in the month n-1
Losses =	System losses as a % of total generation calculated based on a 12-month running average
Fuel cost$_{n-1}$ =	Fuel cost in the month n-1 including cumulative under/over recovery
Purchased Power$_{n-1}$ =	Cost of Purchased power from renewable sources in the month n-1
Purchased Power Energy$_{n-1}$ =	Purchased power from renewable sources in the month n-1
i =	Thermal Generation plant/unit
BD$/kWh =	Barbados dollars per kilowatt hour
j =	Generation plant/unit (Thermal and RE, including purchased energy)
AHR^i_{n-1} =	Actual Heat Rate for generation plant/unit i, for month n-1
THR^i_{n-1} =	Target Heat Rate for generation plant/unit i, for month n-1
HedgeResults$_{n-1}$ =	Administrative Costs and Hedge Results of hedging programme in the month n-1
ESD Recovery$_{yt}$ =	Storage Cost recovery for the previous year including any cost under recovery accumulated from the previous year
Net Fuel Savings$_{yt-1}$ =	The difference between the fuel cost with and without the Energy Storage Device

141. In the development of the IPS and any amendments thereto, the BL&P shall consider the following requirements:

Requirement 1:

a) Quantities of fuel that the utility expects to hedge for a particular year through financial hedging and the activities to be executed, to the extent that such forecasts are made;
b) Each risk, general and specific, that the utility may encounter with its fuel hedging activities;
c) The utility's policy delineating individual and group transaction limits and authorizations for hedging activities;
d) The utility's strategy to fulfil its risk management objectives; and
e) Chosen hedge method and expected benefits and likely costs of such methods.

Requirement 2:

a) The utility is allowed to "charge/credit" to the fuel costs 50% of its "non-speculative, prudently-incurred costs and gains and losses associated with financial hedging transactions".
b) Examples of such items include transaction costs associated with the investment strategy as contained in the IPS (e.g. fees and commissions payable to the investment manager), gains and losses on futures contracts, premiums on options contracts, and net settlements from swap transactions."

The utility is required to maintain records of each transaction for the Commission's audit purposes.

Requirement 3

The utility is allowed to recover through the FCA 50% of prudently incurred expenses for the purpose of initiating and/or maintaining a new or expanded non-speculative financial hedging program designed to mitigate fuel price volatility for its retail

customers each year for a period of two (2) years starting from the date of approval of the IPS by the Commission.[39]

Requirement 4

The utility is required to submit as part of its final true-up fuel filing the following information:

a) The volumes of each fuel the utility actually hedged using a fixed price contract or instrument;
b) The types of hedging instruments the utility used, and the volume and type of fuel associated with each type of instrument;
c) The average period of each hedge; and
d) The actual total cost (e.g., fees, commissions payable to the investment manager, option premiums, futures gains and losses, swap settlements) associated with using each type of hedging instrument.

[39] Prudence shall be determined under established regulatory standards.

The term 'speculative' refers to physically and/or financially purchasing more of a commodity than one is expected to consume, or physically and/or financially selling more of a commodity than one owns.

Dated this 18th day of October 2021

Original signed by

……..

Tammy Bryan

Chairman

Original signed by

……..

John Griffith

Commissioner

Original signed by

……..

Ruan Martinez

Commissioner

Original signed by

……..

Simon Naitram

Commissioner

Original signed by

……..

Samuel Wallerson

Commissioner

APPENDIX A

Summary of Responses to Questions Posed in the Fuel Hedging Consultation Paper

1. **What are your views regarding the utility entering into a hedge programme in order to reduce the level of variation in your electricity bills and overall lock in lower electricity bills?**

Respondent's Comments

Support was given for hedging; however, the success of a hedge programme depends on its management. Customers want electric price stability, but not at any costs. Hedging transaction should therefore be limited to those times when the market is unstable, and the experts suggest that oil prices will increase and there is a low risk of prices dropping lower than 10% - 15% lower than the hedge price.

2. **The benefits or costs of hedging relate to the potential losses or gains that might occur as a result of the transaction, in addition to the administration costs that are borne during the fuel hedge programme. The BL&P is requesting that these benefits/losses be passed on to the consumer, and the company is unwilling to enter into a hedge programme otherwise.**

   Using the simulations above as a guide, what percentage of these losses, costs included, or benefits, do you think the customer should pay, in order that they can enjoy more stable prices?

Respondent's Comments

It was felt that hedging should be limited to times of rising oil prices. Losses which arise when predicted oil prices do not materialize should be passed on to the consumer, as long as the appropriate procedures are followed.

This respondent opined that BL&P could buy insurance at a "*reasonable price*" to cover situations if the fuel price falls more than 15% below the hedge price thus reducing the risk of losses.

This respondent also noted that the administrative cost of $720,000 per year is a small amount to pass on to customers (approximately 0.076 cents/kWh, assuming sales of 950 GWh per year), and worth the price to stabilize or even reduce electricity prices. This position assumes that this price stated includes the cost of the recommended insurance.

This respondent also noted the importance of accurate communication about the hedge programme to customers in order to ensure that their expectations are not unrealistic, such as a fixed FCA.

3. **What is the maximum level of hedged fuel volume are you comfortable with? Give reasons why.**

The use of a transparent risk model in addition to well defined and "*predetermined criteria,* it was felt, would be beneficial in determining the appropriate level of risk exposure and when hedging should be done. Expectations of price increases would give a sign to hedge. The respondent felt that 90% was a reasonable level

4. **In recognition that hedge losses do occur, if the hedge programme is implemented, what percentage of the hedge losses are you prepared to accept?**

The respondent expressed that as long as the BL&P follow the agreed process of hedging, if losses did occur, they should be allowed to pass on the full cost of those losses to the customers. The use of insurance for "higher risk hedges" should be investigated, to "cover the excess losses" if prices drop by more than 15% below hedge prices. The respondent opines that the cost of insurance should be included in the administrative costs and passed to the FCA calculation.

5. **What is your opinion on the utility continuing the practice of smoothing alongside a fuel hedge programme?**

The respondent supports the use of smoothing in the determination of the FCA. The respondent opined that there is more disruption when a month with gains and a low

FCA is followed by a month of higher FCA, arising from change in generation mix or expected fuel prices.

6. **What are your views on the composition and structure of the FCA equation?**

The respondent supports the inclusion of the administrative cost in the FCA. The respondent also opines that these costs should include insurance costs as referred to in Question 4 above.

7. **Would the inclusion of a regulatory framework increase your confidence in a fuel hedging programme? Please provide reasons for your response.**

The respondent supports the inclusion of a regulatory framework since it would increase the confidence in a fuel hedging programme, with reduced risk of hedge and higher likelihood of gains, and lower likelihood of losses.

What would you like to see included in such a regulatory framework? Please provide any comments.