



PUBLIC UTILITIES
COMMISSION
BELIZE

Final Decision

Issued by the Public Utilities Commission (the “Commission”)

June 30, 2022

Re: 2022 Annual Tariff Review Proceeding (“ARP - 2022”) for Belize Electricity Limited (“BEL”)

1. Introduction

In its 2020 FTRP Final Decision the PUC approved a mean electricity rate (MER) of BZ\$0.4151/kWh for the period July 1, 2020, to December 31, 2020 and BZ\$0.4018/kWh for the period January 1, 2021, to June 30, 2024.

Subsequently, in its 2021 ATRP Final Decision the PUC approved a mean electricity rate (MER) of BZ\$0.3999/kWh for the period July 1, 2021, to June 30, 2024 and made related adjustments to the schedule of electricity tariffs.

The current ARP 2022 seeks to amend these Decisions to reflect actual business results for the year just concluded (ATP 2020|2021) and update projections for the upcoming three years (2021|2024).

In its ARP 2022 Submission, BEL prefigures an additional sum of \$39,666,577 in input costs over what had been previously approved by the Commission in the 2020|24 Full Tariff Period (2020|24 FTP). Based on this estimation, the previously approved Mean Electricity Rate (MER) of \$0.3999 per kilowatt-hour will be increased to \$0.4348 for the period July 1, 2022 to June 30, 2024. Along that trajectory, the Company’s Regulated Income will also be increased to \$48,807,126 in 2022|2023 and to \$53,262,118 in 2023|2024.

Despite the ominous increase in the MER over the next two years, BEL has strongly and persistently approached the Commission (on behalf of consumers) to ask for reprieve on what admittedly should be a tariff increase. In its submission, BEL stated that:

“As explained in our ARP 2021 submission, it is our view that a rate increase in these challenging economic times when the country is just emerging from the throes of the Covid-19 pandemic will only discourage sales and worsen cost recovery and cash collection challenges. While the costs, already incurred and those projected, justify a tariff increase, it is BEL’s prerogative and espoused principle, to support a pricing strategy that keeps the Company competitive in the market for evolving energy services, especially Distributed Generation (DG) (Emphasis ours).”

BEL’s position, then, is that electricity tariffs should not be revised and should remain consistent with the approved tariffs as set out in Schedule 6 of the Commission’s Belize Electricity Limited 2021 ARP Final Decision.

2. BEL's Submission

Belize Electricity Limited (BEL)

Proposed Tariff Basket Revenue (TBR) and Components and Mean Electricity Rate (MER) for Annual Tariff Period July 1, 2022 to June 30, 2024

| | 2020 2021 | 2021 2022 | 2022 2023 | 2023 2024 | Total FTP |
|-----------------------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| Revenue Components of TBR: | | | | | |
| Value Added of Delivery (VAD) | | | | | |
| OPEX | 32,524,967 | 33,012,258 | 33,506,842 | 34,008,830 | 133,052,897 |
| Return | 38,765,031 | 40,948,791 | 42,430,592 | 46,901,650 | 169,046,063 |
| Depreciation | 17,492,706 | 19,154,136 | 25,219,155 | 27,317,604 | 89,183,602 |
| Net Annual Corrections - FTRP | 8,842,163 | 8,842,163 | 8,842,163 | 8,842,163 | 35,368,652 |
| IE Fees Reimbursement - FTRP 20 | - | - | - | - | - |
| ARP 21 | - | (338,486) | - | - | (338,486) |
| ARP 22 | - | - | (4,536,205) | - | (4,536,205) |
| Taxes/License Fees | 4,913,482 | 5,655,287 | 5,614,558 | 6,015,890 | 22,199,217 |
| Sub total (VAD) | 102,538,349 | 107,274,149 | 110,738,618 | 122,747,651 | 443,298,768 |
| Reference Cost of Power | 120,093,293 | 148,416,227 | 143,465,965 | 149,293,913 | 561,269,398 |
| Less Other Income | 4,254,659 | 4,344,277 | 4,668,673 | 4,668,673 | 17,936,284 |
| Tariff Basket Revenue | 218,376,983 | 251,346,099 | 249,535,910 | 267,372,890 | 986,631,883 |
| Demand (kWh) | 534,376,841 | 585,589,395 | 603,095,764 | 634,313,654 | 2,357,375,654 |
| ARP | | | | | |
| MER | 0.4087 | 0.4292 | 0.4138 | 0.4215 | 0.4185 |
| COP | 0.2247 | 0.2534 | 0.2379 | 0.2354 | 0.2381 |
| VAD (excl. corrections) | 0.1674 | 0.1612 | 0.1687 | 0.1722 | 0.1675 |
| Corrections | 0.0165 | 0.0145 | 0.0071 | 0.0139 | 0.0129 |

Key highlights from BEL's 2022-ARP Submission are as follows:

- \$30.47 million increase in Cost of Power (COP) being forecasted for the remainder of the 2020|24 Full Tariff Period (FTP) driven by sharp rises in energy prices in the second half of 2021 and expected to continue through 2022;
- \$15.16 million increase in Depreciation driven by BEL seeking to raise depreciation rates from around the prevailing 4% to 5% starting from ATP 2022|2023;
- \$4.87 million increase in Return driven by accelerating additions to fixed assets, now projected to be \$262 million for the 2020 to 2024 period;
- \$2.96 million improvement in receipts from Other Revenues.
- BEL's Least Cost Generation Expansion Plan (LCEP) Study is still ongoing (although delayed) and BEL cost projections for energy supply is subject to revisions pending the results of this study.

The Submission contemplates the following:

- 7MW of solar added by January 2023
- 8 MW of solar and 25 MW of gas-fired generation added by January 2024
- 15 MW of solar added by January 2025
- 15 MW of solar added by January 2026
- There were no provisions made for battery storage solutions

Additionally, BEL submitted a series of datasets for the purpose of proposing new tariff classes and associated tariff schedules for persons deploying distributed energy resources (DERs). The Commission welcomes the initiative from BEL, but these Annual Rate Proceedings were never intended to handle such complex subject matters. The Commission is currently working, with the kind assistance of the United States Department of State, on DER Regulations and intends to implement the same within this calendar year.

3. The Decision Process

The Commission found itself faced, once again, with BEL's request to retain existing tariffs, despite a discernible increase in cost of power ("COP"). This position is not unique to Belize. In the United Kingdom, its Regulator, Ofgem, addressed the issue in its Decision of February 2, 2021 as follows:

"We have concluded that it's in customers' interests to allow suppliers to start to recover some additional costs related to COVID-19 from April 2021. This will help to ensure that suppliers have the finances to continue to supply energy to their customers and fulfil their licence obligations. We do not believe it is customers' interest to delay allowing suppliers to start to recover these additional costs as it would mean customers facing a much higher adjustment for the next cap period next winter."

The Commission came to its Final Decision by contemplating the following questions:

Question 1 Should the throes of the COVID-19 pandemic (as BEL so aptly describes it) be a factor to be considered by the Commission when deliberating on BEL's request to delay the recovery of COP, even though the Company has foretold in their comments to ARP 2021 that *"the end-result will be a substantial tariff shock at some point for future customers"*?

If the answer to Question 1 is 'yes', then,

Question 2: Considering the Commission's statutory obligation under Section 15(2) of the Electricity (Tariffs, Fees, and Charges) Byelaws, can the Commission legally authorize BEL to postpone the recovery of COP beyond this Full Tariff Period ("FTP")?

If the answer to Question 2 is 'no', then,

Question 3: Given the fragility of the economy, the Commission's obligation to zero the RSA, and the consensus to keep rates stable, what tools might the Commission have at its disposal to allow BEL to maintain the approved tariffs as set out in Schedule 6 of the Commission's Final Decision in ARP 2021?

In answering Question 1, the Commission takes notice of public statements made by all utility service providers, including BEL that consumers are struggling to pay utility bills generally due to the impact of COVID-19, the levels of unemployment and the demand for goods and services.

The Commission does not have sufficient information before it to fully assess the overall impact on BEL, but believes, nonetheless, that it is incumbent on the Commission to ease the economic impact that has been caused by Covid-19 and, for that matter, the continuing crisis resulting from the war between Ukraine and Russia.

The Commission therefore shares the view expressed by BEL that Covid-19 should be at least one of the factors to consider, particular since any increase in Tariffs would likely amplify economic hardship and make cost recovery even more challenging for utility providers.

Having answered Question 1, in the affirmative, the Commission addressed the issue raised in Question 2. To answer the second question, the Commission is guided by its own Determination in ARP Amendment 2021, in which the Commission was confronted by a similar submission from BEL, that excess COP should be recovered in future tariff adjustments.

The Commission was confounded by BEL's submission as only months before, in May 2021, BEL excoriated this Commission for Decisions taken by previous Commissions. Specifically, BEL expressed the concern that these Decisions, in certain instances, had failed to reduce the rate stabilization account balance to zero by the end of the FTP.

The Commission noted in its Comments made in January 2022 relating to the ARP Amendment 2021 that it juxtaposes BEL's request to recover the excess Cost of Power ("COP") in future tariff adjustments against the Company's comments after the ARP 2021 was conducted in May 2021.

In ARP 2021, this Commission had determined that rates should be lowered by \$0.01/kWh and in BEL's written comments to the PUC on the Initial Decision, BEL objected.

To justify the Company's position, that the Commission should reverse its decision to reduce energy rates by 1 ct/kWh and instead hold tariffs constant as per the PUC's Final Decision in the FTRP 2020, BEL stated the following:

Section 15(2) of the Electricity (Tariffs, Fees, and Charges) Byelaws specifies that:

"The regulated values shall provide for rate adjustments so that any amounts in the rate stabilization account as of the commencement of the FTP shall be reduced to zero as of the termination of the FTP."

It is a requirement of the tariff setting methodology, that the rates are adjusted such to assure that the initial RSA balance is driven as much as possible to zero by the end of the FTP. In fact, this is the main purpose for conducting an ARP – to assure that variances between forecast and actual regulated costs are quickly netted towards zero. BEL acknowledges that this principle has not been strictly followed in rate reviews as both BEL and the PUC insisted on keeping rates as low and stable as practical in the best interest of customers. However, the RSA balance must be carefully managed in this FTP to avoid further noncompliance with this regulation and rendering it a moot provision.

Presently, the RSA balance is around \$25.7 million in favor to BEL. This balance represents the accumulated difference between forecast and actual regulated costs. BEL believes that this significant balance is the result of the PUC structurally underestimating the cost of power. BEL is not allowed to collect any interest on the RSA balance and thus incurs additional financing costs on this balance. This is in principle not problematic if the RSA balance were low and fluctuating around a level of zero (as intended by the Byelaws). However, it is a fact that the balance has averaged in excess of \$20 million since mid-FTP 2016. This implies that BEL is incurring structural and ever-increasing financing cost without certain prospect for the full and timely recovery of balance.

BEL fully recognizes that it is important to assure stability in the tariffs. Indeed, this is the raison d'être of the RSA, i.e. to act as a buffer between costs and rates and in this way protect customers against rate shocks. However, such a buffering function can only be sustained if accompanied by periodic (gradual) adjustments in the tariffs that bring down the RSA balance to zero; otherwise, necessary rate increases are postponed and accumulated. The end-result will be a substantial tariff shock at some point for future customers. Such an approach does not comport with good regulatory practice as it goes against the objective of achieving tariff stability, and it discriminates between current and future customers...

More generally, BEL requests that the Commission develops projections on the gradual reduction of the current RSA balance towards a level of zero over the current FTP and implements rate adjustments to accommodate this."

The Commission is in full agreement with BEL's interpretation of Section 15(2) of the Electricity (Tariffs, Fees, and Charges) Byelaws and holds the view, then, that the statute does not permit the Commission to delay recovery of COP beyond the FTP. As such, it answers Question 2 in the negative.

The aim of the Byelaw is to ensure that BEL recovers their cost from consumers within the FTP. This helps to ensure that BEL continues to have the necessary finances to provide electricity to consumers and meet their licensing obligations.

Regarding Question 3, the Commission is of the view that COP is only one of many other factors that, when considered *in toto*, would impact tariffs. In its Initial Decision, then, the Commission engaged itself in a more robust review of BEL's submission as elaborated below.

4. The Decision

The Commission finds BEL's proposal to keep Tariffs unchanged to be reasonable in terms of the Company's intent. The Commission is generally supportive; however, is of the view that some modifications must be made to the other components of the formula in order to achieve BEL's goal of keeping consumer rates unchanged. This, given the restriction imposed upon the Commission by Section 15(2) of the Electricity (Tariffs, Fees, and Charges) Byelaws.

The Commission reviewed the submission and various historical and forecast data, then made certain revisions to the recommended regulated values, tariffs, fees and charges and forecast data before approving them. The Commission then applied the Rate Setting Methodology (RSM) that it had refined in the 2020 Full Tariff Review Proceedings (2020 FTRP) to determine the regulated values, tariffs, fees and charges to be applied over the remaining 2022|24 Tariff Period.

In applying the RSM for the Final Decision, the Commission has retained the current schedule of Tariffs, Fees and Charges levied by BEL as a consequence of the MER remaining stable at \$0.3999 per kilowatt-hour. There will be no change in rates payable by consumers.

5. The Commission's RSM Model

Below is the Commission's Tariff Basket calculations and its estimate of the MER (See supporting Notes on attached Schedules)

Schedule 5
Belize Electricity Limited (BEL)

BEL 2022-ARP Initial Decision Tariff Basket Revenue (TBR) and Components and Mean Electricity Rate (MER) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Tariff Basket Revenue (TBR) and Revenue Components for each ATP of the FTP and Mean Electricity Rate for the FTP - \$:

| Year | Actual | projection | | forecast | | Total FTP | Change in FTP |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|
| | 2020 2021 | 2021 2022 | 2022 2023 | 2023 2024 | | | |
| Revenue Components of TBR: | | | | | | | |
| Value Added of Delivery (VAD) | | | | | | | |
| OPEX | 32,524,967 | 33,012,258 | 33,506,842 | 34,008,830 | 133,052,897 | - | |
| Return | 38,606,111 | 39,389,017 | 33,432,419 | 38,458,017 | 149,885,564 | (13,939,631) | |
| Depreciation | 17,492,707 | 17,492,707 | 19,422,283 | 19,850,499 | 74,258,195 | 390,504 | |
| Taxes/Licence Fees | 4,863,197 | 5,619,469 | 5,959,466 | 6,624,999 | 23,067,132 | (2,974,414) | |
| Sub-Total (VAD) | 93,486,981 | 95,513,450 | 92,321,011 | 98,942,345 | 380,263,787 | (16,523,541) | |
| Reference Cost of Power | | | | | | | |
| Corrections - F TRP | 8,842,163 | 8,842,163 | 8,842,163 | 8,842,163 | 35,368,653 | - | |
| - ARP 21 + IE 2020 | - | -338,486 | -338,486 | -338,486 | -1,015,457 | - | |
| - ARP 22 | - | - | -5,315,848 | -5,315,848 | -10,631,696 | - | |
| - ARP 23 | - | - | - | - | 0 | - | |
| Less: Other Income | -4,254,659 | -4,344,277 | -4,668,673 | -4,668,673 | -17,936,284 | (2,959,199) | |
| Tariff Basket Revenue | 216,142,105 | 249,754,182 | 238,378,642 | 240,909,060 | 945,183,988 | (1,781,318) | |
| Demand [MWhs] | 534,377 | 585,589 | 603,096 | 634,314 | 2,357,376 | 970 | |
| Mean Electricity Rate (MER) - July 1, 2020 - June 30, 2024 - \$: | \$ 0.4045 | \$ 0.4415 | \$ 0.3920 | \$ 0.3732 | \$ 0.4009 | -\$ 0.0009 | |
| Direct Cost of Delivery (COD) - \$: | \$ 0.1658 | \$ 0.1535 | \$ 0.1432 | \$ 0.1455 | \$ 0.1515 | -\$ 0.0058 | |
| Corrections + Taxes - Other Income - \$: | \$ 0.0177 | \$ 0.0167 | \$ 0.0074 | \$ 0.0081 | \$ 0.0122 | -\$ 0.0070 | |
| Cost of Power (COP) - \$: | \$ 0.2209 | \$ 0.2563 | \$ 0.2446 | \$ 0.2261 | \$ 0.2372 | \$ 0.0119 | |

Based on the calculations above, and with the aim of reducing the Regulatory Account Balance to zero, the Commission has estimated the MER for the remainder of the FTP as follows:

| Cost Recovery Scenarios | | | | |
|---|-------------|------------|-------------|--------------|
| MER | \$ 0.4084 | \$ 0.3999 | \$ 0.3999 | \$ 0.3999 |
| Estimated surplus (deficit) attributable to Corrections | | 15,576,983 | (2,799,354) | (12,752,971) |
| Net Movement in Corrections | (8,842,163) | 7,073,305 | (5,987,184) | (15,940,800) |
| Regulatory Account Balance | 14,879,337 | 21,952,642 | 15,965,459 | 24,659 |

6. Considerations

General Considerations

- 6.1 ECONOMIC IMPACT OF THE COVID-19 PANDEMIC AND THE UKRAINE WAR - Since 2020 the COVID-19 pandemic caused an unprecedented contraction in economic output. The tertiary sectors in Belize being particularly hard hit, resulting in electricity consumption shrinking 14% in 2020. The good news is, Belize like the rest of the world has learnt to live with the SARS-COV-2 virus, resulting in the pace of economic activity accelerating in the second half of 2021, as did electricity demand. As of April 1, 2022, there has been a return to "normalcy", as the Government of Belize lifted all restrictions imposed to control the transmission of the virus.

Notwithstanding this, the Commission recognizes that the medium and small enterprises, as well as residential consumers have taken on new debt. With the economic environment improving, these consumers need all the assistance possible to contribute to the recovery of the economy.

6.2 GOVERNMENT COMMITMENTS – The Cabinet has approved an Electricity Road Map for Belize, consistent with their commitments in Glasgow at COP26, which among other things contemplate the following:

- (a) Achieving at least 75% renewables by the year 2030;
- (b) Achieving zero carbon emissions by the year 2050;
- (c) Promoting Distributed Energy Resources (DERs), such as rooftop solar, which have the potential to provide electricity services within distribution areas that are competitive with standard utility supply + transmission modalities; and
- (d) Creating an environment for Electric Vehicles (EVs) which has the potential to substitute imported liquid fuels with domestically produced renewable energy supplies.

Specific Considerations

6.3 UTILITY PLANS - During the 4th quarter of 2021, BEL embarked on the preparation of a least cost expansion plan (LCEP). The Licensee did communicate its preliminary findings and recommendations during two sessions in late March with the Commission; but the Commission notes that the expansion plans proposed in the 2022 ATRP Submission is the Licensee's business-as-usual (BAU) scenario and not the LCEP preliminary guidance. The Commission believes that adopting the LCEP preliminary recommendations is a more prudent course of action.

In particular, the Commission is of the view that following proposals ought to be taken into consideration as they impact the Reference COP:

- September 2023 – 2 x 15 MW of battery energy storage systems (BESS) added;
- January 2024 – 15 MW of solar added;
- April 2024 – upgrade of the Mile 8 power plant to LNG-fired modality;
- Further electricity supply additions for the 2020|24 FTP will be determined after review and approval of the LCEP;
- The impact of DERs uptake is not considered in this 2022-ARP Decision.
- BEL provided a briefing from their counterparts in Mexico (*CFE Calificados*), and indicated that projections for CFE are based on the following (i) Expansion Plans by Mexican Authorities to shore up and expand gas supply to the Peninsula. The Plans propose to almost double the supply of natural gas from 160 Mcd to 300 Mcd by 2023; then to 500 Mcd plus a new combined cycle power plant at the end of 2024, and (ii) Actual LMP prices is largely driven by prices for natural gas and network congestion, wherein expected prices in 2022 will be slightly higher than in 2021.

BEL did not show how the Xul-Ha LMP price forecasts from *CFE Calificados* factored into the Licensee's own forecasts for pricing such electricity imports.

- 6.3.1 HYDROELECTRIC SUPPLIES - The Commission largely adopted BEL's forecasts, except that the forecast for VACA was harmonized with Chalillo/Mollejon.
- 6.3.2 SUGARCANE CO-GENERATION - The Commission adopted BEL's forecast.
- 6.3.3 GAS-FIRED GENERATION - The Commission excluded the BEL's BAU scenario of an LPG-fired Otto-cycle powered plant. The only *gas-fired* option considered by the Commission is the upgrade of the Brayton-cycle powered plant at Mile 8. BEL's preliminary LCEP recommendation is LNG delivered in ISO containers and direct replacement of the LM2500 with a 3rd generation version. In a refinement, the Commission modelled a LNG-fired, Cheng-cycle powered LM2500 plant at Mile 8 by April 2024.

The Commission holds this view that BEL's plan for an LPG-fired Otto-cycle power plant is not in line with Cabinet's approved Energy Road Map for achieving 75% renewables by 2030. This technology is restrictive by nature in terms of fuel flexibility and the cost of LPG is prohibitive.

- 6.3.4 BATTERY ENERGY STORAGE SYSTEM (BESS) - The preliminary LCEP recommendation is 2 x 15 MW BESS having at least 4 hours of storage to be installed at the Belize City and San Pedro Substations respectively. An indicative timeline for in service by September 2023 has been made in the PUC's modelling.

The Commission is of the view that the introduction of battery storage is a precursor to the uptake of DERs and utility-scale intermittent renewables. Furthermore, under the LCEP recommendation, the batteries can delay expensive transmission line investments and provide grid stabilization services and black start capabilities.

- 6.3.5 UTILITY SOLAR - The Commission adopted BEL's recommendation of 15 MW solar commencing January 2024 but excluded the partial installation in January 2023. The Commission further noted that the indicative price cannot exceed prevailing long-run avoided costs of US\$0.065/kWh.

The Commission has excluded the proposed addition of 30 MW of solar since the BEL does not anticipate that this would not be in service until 2025, which is outside of this rate review period.

- 6.4 CHANGES IN MAJOR NETWORK PROJECTS – The consultants preparing the LCEP have so far not presented the results of any Transmission Node Study. Without the availability of this information, the Commission must rely on the CAPEX that had been approved by the Commission in FTRP 2020.

6.4.1 **SECOND TRANSMISSION LINE BETWEEN BELIZE AND MEXICO** - In May 2018, BEL approached the Government of Belize to assist the licensee in securing funding for a 2nd 230 kV line between Belize and Mexico to have commenced in 2019. The PUC indicated its support for the project given that import prices were expected to be less than US\$0.070/kWh, going forward. Furthermore, there are positive spillovers in network reliability, efficiency, and transfer capacity; and [*of interest to the Government and People of Belize*] synergies with the proposed arterial road connecting the North and West of the country.

For reasons not communicated to the Commission, BEL did not implement the project in 2019 and in fact has removed the project entirely in their 2020 submission. The Commission its own discretion, inserted the project back into the CAPEX project for FTP 2020|2024.

Given proposed plans for 30 MW of BESS at the Belize City and San Pedro Substations, the Commission has taken the decision to remove this project from FTP 2020|24 and deferred the installation of the 2nd Transmission Line to some undetermined date.

6.4.2 **REDUNDANT SUBMARINE CABLE FROM MAINLAND TO AMBERGRIS CAYE** - BEL is forecasting that by 2024, the current 17 MVA capacity of the submarine cable will be breached. The PUC approved the project given the clear business case.

The Commission viewed this project as having the highest priority and made a determination for a penalty regime if the Licensee failed to meet its previous commitment for a redundant submarine cable in 2023.

Given proposed plans for 15 MW of BESS at the San Pedro Substation the Commission has decided to remove this project from the FTP 2020|2024 CAPEX and suspend the penalty regime, provided that the Licensee installs the BESS within the timeline determined by the Commission.

6.4.3 **MAJOR TRANSMISSION LINE & SUBSTATIONS UPGRADING** - BEL is conducting a series of works intended to better sectionalize and improve network topology. The Commission has included these projects in the RAV given their strategic, technical and economic benefits; even though BEL is yet to update the Commission on the expected impacts on operational performance and constraints in the context of proposed technical designs, timing and economics.

6.5 DETERMINING REGULATED VALUES

6.5.1 OPERATIONAL EXPENDITURE – In FTRP 2020, the Commission approved, without amendment, the following resources from ratepayers.

| | PLAN 2020 | PLAN 2021 | PLAN 2022 | PLAN 2023 |
|--------------------------------|-------------------|-------------------|-------------------|-------------------|
| OPEX | 32,508,023 | 32,995,843 | 33,476,338 | 33,976,349 |
| GEC | 2,634,256 | 2,673,770 | 2,713,876 | 2,754,584 |
| COP Overheads | 950,000 | 950,000 | 950,000 | 950,000 |
| TOTAL COSTS: OPERATIONS | 36,092,279 | 36,619,612 | 37,140,214 | 37,680,933 |

In its ARP - 2022 Submission, BEL proposed that OPEX remain as approved by the Commission in FTRP 2020. However, the Company seeks to shift resources from OPEX to GEC and COP Overhead, contrary to what had been approved in FTRP 2020.

After consideration, the Commission has decided to retain the resources as approved in FTRP 2020.

6.5.2 DEPRECIATION – In BEL’s ARP - 2022 Submission, the Commission noted a change in the accounting treatment of depreciating the Company’s fixed assets. In prior years, the Company expensed its fixed assets over a 25-year period, which is consistent with industry best practices.

Based on the submission from BEL, the company now proposes to depreciate assets over a 20-year period going forward.

This change in accounting treatment would result in an extra \$5.0 million per annum in depreciation expense. The impact of such a change is of concern to the Commission, and undoubtedly (*if implemented*) may require the Commission to reassess the risk and reward profile for BEL.

In its RSM Model, the Commission therefore applied a depreciation rate of 4% in keeping with historical treatment by BEL and industry best practice.

6.5.3 CAPITAL EXPENDITURES (CAPEX) AND ASSOCIATED CHANGES TO THE REGULATED ASSET VALUE (RAV) - In its 2020 FTRP Final Decision, the Commission approved a Capital Programme totaling \$255 million for the 2020 to 2024 period to meet load growth, improve reliability and drive system efficiency.

Given the remodeling of the Capital Programme conducted by the Commission, wherein the connection for the LPG-fired project has been removed from the CAPEX, the redundant submarine cable is delayed to the next FTP and the 2nd transmission line to Mexico is deferred indefinitely, the Commission has recalculated the total approved CAPEX as \$149.3 million over the 2020 to 2024 period.

BEL's ARP-2022 Submission contemplates an increase in CAPEX even above the \$255 Million that was revised downward. The proposed increase in CAPEX did not provide adequate documentation or justification that would assist the Commission to assess the value of such an increase in CAPEX to ratepayers.

Given, this, the Commission took the decision to disallow any increase in CAPEX and adopted its remodeled CAPEX of \$149.3 Million over 2020 to 2024.

- 6.5.4 COST OF POWER (COP) - In its ARP - 2022 Submission, BEL is reporting that it has incurred the sum of \$120.093 million in COP expenses for the ATP 2020|2021 which it seeks to recover from ratepayers.

The Commission has tabulated COP for the ATP 2020|2021 period from the invoices and reconciliation spreadsheets provided by BEL. Based on its own reconciliation of the information provided by BEL, the Commission could only account for the sum of \$118.068 million.

Given the above, the Commission has approved the recovery of \$118.068 million for the ATP 2020|2021. Additionally, the Commission has approved the extraordinary expense in the sum of \$1.55 million that was incurred during the month of February 2021 for CFE electricity purchases.

Despite the Commission's approach to estimating COP going forward, the regulated value for COP is in line with the forecast that had been presented by BEL in ARP-2022 Submission.

- 6.5.5 TAXES AND LICENCE FEES – In ARP 2021, the Commission approved for BEL to recover annual licence fees of 1% in the rate from consumers with effect from January 2021 and payable in April 2022.

The Commission, given the challenging economic times that consumers currently face, has revised the date to January 2023 to adjust the licence fee.

Consequently, licence fees accumulated in excess of 0.5% or \$1.115 Million from January 2021 have been returned to the consumers.

- 6.5.6 RATE OF RETURN - In its ARP-2022 Submission, BEL has provided for a 10% Rate of Return (ROR), which would yield regulated income amounting to \$48,807,126 in 2022|2023 and to \$53,262,118 in 2023|2024.

In determining the ROR to be applied to the RAV, the Commission was guided by the following:

- a. The cost of electricity has a strong correlation with economic development and keeping rates low is, without a doubt, going to be a key economic driver for Belize in its post Covid-19 recovery efforts. High electricity rates will continue to discourage investments, reduce productivity of manufacturers, and burden the tourism sector.

Access to electricity in rural areas will no doubt continue to boost school enrollment and attendance, improve agricultural methods and support other income generation ideas.

- b. BEL's fervent appeal to the Commission that *"...a rate increase in these challenging economic times when the country is just emerging from the throes of the Covid-19 pandemic will only discourage sales and worsen cost recovery and cash collection challenges."*
- c. BEL's healthy financial position as supported in their ARP-2022 Supplemental Data.
- d. Section 11(1) of the Public Utilities Commission Act which provides that "Every rate made, demanded or received by any public utility provider shall be fair and reasonable and in any case shall be in conformity with and shall use the rate setting methodologies specified in an Regulations, Bylaws, Orders, directions or other subsidiary legislation or administrative orders made under the Electricity Act.
- e. The Commission's authority under Statutory Instrument No. 116 of 2009 Byelaws that provides for the Commission to set a regulated upper limit, lower limit and a target for ROR.

Having given consideration to 6.5.6 (a) to (e) the above, the Commission has determined that the rate of return is lowered to 8% for the ATP 2023|2024 and to 8.5% for the ATP 2023|2024. The Commission is of the view that the revised ROR affords BEL the opportunity to realize a reasonable rate of return in compliance with section 7 and Section 6(2) (a) & (b) of the Electricity Act, Section 22(2) of the Public Utilities Act and Table 1 of the First Schedule of Statutory Instrument No. 116 of 2009 Byelaws.

By adjusting the ROR, BEL's Regulated Income over the 2020|24 FTP will average \$43 Million, rather than \$49.8 Million as had been proposed by BEL.

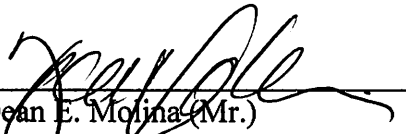
7. CONCLUSIONS

The Decision of the Commission allows both the Commission and BEL to achieve their mutual aim, which is to protect the Belizean consumer from the bludgeoning increase in Cost of Power.

The Commission reaffirms BEL's position that the Section 15(2) of the Electricity (Tariffs, Fees, and Charges) Byelaws prohibits it from postponing the recovery of COP beyond this Full Tariff Period ("FTP").

By conducting its own remodelling exercise, the Commission was able to maintain the approved tariffs as set out in Schedule 6 of the Commission's ARP 2021 Final Decision.

The full details of the Commission's remodeling are included in the Notes to Schedules 1 to 5, which are attached and incorporated in this Final Decision by reference.



Dean E. Molina (Mr.)
Issued for and on behalf of the
Public Utilities Commission

SCHEDULES

&

NOTES

Schedule 1: CORRECTIONS for the 2020|21 ATP

The Commission approved corrections of some \$10,631,696 in favour of Customers as a result of recalculating the Regulated Values and application of the performance penalty of \$3,860,611 on Return applicable for the 2020|21 ATP.

Schedule 1

Belize Electricity Limited (BEL)

Annual Corrections - July 1, 2020 to June 30, 2021

General Corrections - July 1, 2020 - June 30, 2021

| | | |
|--|-------------|--|
| ¹ Approved Tariff Basket Revenue - \$ | 216,142,105 | |
| ² Realized Tariff Basket Revenue - \$ | 222,913,189 | |
| Variance (Total Approved less Total Realized) - \$ | -6,771,085 | |
| ³ less: Disallowed Costs - \$ | -3,860,611 | |
| Approved Corrections for 2020 21 ATP - \$ | -10,631,696 | |

Caye Caulker penalty for non-performance:
-1% of RoR

Notes–

¹ **Approved Tariff Basket Revenue** is the total revenues to be derived from sales of electricity that BEL must receive from its customers to cover its operating costs, capital recovery & financing costs, statutory charges and earn a reasonable return (profit)

² **Approved Tariff Basket Revenue** is the revenues BEL derived, from its customers, in respect of electricity sales

³ **Disallowed Costs** is as a penalty regime applied for BEL’s failure to meet standards of performance set by the PUC, in respect of the interconnection of Caye Caulker to the National Grid.

Schedule 2: DEPRECIATION, INVESTMENTS, RAV

Schedule 2
Belize Electricity Limited (BEL)
Approved Regulated Asset Value (RAV) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Regulated Asset Value (RAV) as at December 31 of each year - \$:

| Year | 2019 | Validated 2020 | forecast 2021 | forecast 2022 | forecast 2023 | 2024 |
|-------------------------|-------------|-------------------|------------------|------------------|------------------|-------------|
| Starting RAV | 369,640,959 | 373,256,368 | 386,061,108 | 408,890,169 | 417,905,243 | 452,447,254 |
| Depreciation | 17,458,394 | 17,492,707 | 17,492,707 | 19,422,283 | 19,850,499 | 21,491,245 |
| Work In Progress | 16,654,000 | 34,708,449 | 78,927,751 | 77,201,286 | 108,558,627 | 40,231,733 |
| Additions | 53,061,000 | 22,029,955 | 0 | 75,000,000 | 36,123,466 | 60,000,000 |
| Net Contributed Capital | | 856,975 | -1,967,216 | 9,062,643 | 1,169,223 | -1,253,258 |
| Ending RAV | 373,256,368 | 386,061,108 | 393,890,169 | 417,905,243 | 452,447,254 | 480,271,000 |

Notes:

1. The Depreciation and RAV for 2021 could not be properly calculated because BEL's Fixed Assets Register ending December 31, 2021 has not been filed with the PUC. As a consequence, the Commission updated the 2021 depreciation with the value from 2020 and updated the 2021 RAV to account for \$0 in capital additions made in 2021.
2. The Depreciation and RAV for 2021, 2022 and 2023 were recalculated to be the forward-looking business results from BEL, while significantly trimming capital additions to stay within the level of capital spending and related additions in those years, as per the 2020 FTRP Final Decision.
3. The Commission adopted BEL's updated Capital Contributions schedule, but requires clarity on the negative value incurred in May 2021.
4. The Commission recalculated IDC for the FTP by applying the Gearing Ratio (G) of 0.6 and an interest rate of 8%.
5. GEC is a revenue cap throughout the 2020|24 FTP. Any actual GEC in excess of these regulated values shall be disallowed (Disallowed GEC). This Disallowed GEC shall be treated as follows: 50% of the value added to the line item Disallowed RAV the next year, with the remaining 50% being added the following year.
6. In determining the RAV, the Commission classified investments made in a given year as Work in Progress (WIP) for that year, to be capitalized the following year.
7. In determining the RAV, the Commission added 50% of capitalized investments in a given year, with the remaining 50% being added the following year.

Schedule 3: COST OF POWER (COP)

Schedule 3

Belize Electricity Limited (BEL)

Approved Cost of Power (COP) Parameters and Demand for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Approved Generation and Purchase of Power and Reference Cost of Power (COP), and Demand for each ATP of the FTP:

| Year | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 |
|---|-------------|-------------|-------------|-------------|
| ¹ KWHrs Purchased and Generated - KWHrs | 610,260,601 | 664,391,800 | 686,464,373 | 720,696,133 |
| ² Reference Cost of Power - \$ | 118,067,620 | 150,081,331 | 147,538,475 | 143,447,558 |
| ³ Approved Consumption/Demand - KWHrs | 534,376,841 | 585,589,395 | 603,095,764 | 634,313,654 |
| ⁴ Reference Cost per KwHr Consumed - \$/KWHr | 0.2209 | 0.2563 | 0.2446 | 0.2261 |

Notes--

¹ **KWHrs Purchased and generated** is electricity supplied by IPP's and BEL-operated power plants for resale to customers expressed in units of kWhs. The PUC recalculated these monthly values utilizing BEL's projected system losses, as **Consumption/(1- Losses)**.

² **Reference Cost of Power** is the total costs for the electricity supplied by IPP's and BEL-operated power (Actuals to Feb-2022 and Projected) expressed in BZ Dollars.

³ **Approved Consumption/Demand** is electricity sales expressed in units of kWhs. In its RSM modeling, the Commission adopted BEL's monthly values for the entirety of the FTP

4. The Commission adjusted the Reference Cost of Power (COP) forecasts made in BEL's ARP - 2022 Submission as follows:

- i. New electricity supplies modelled in its RSM as per the preliminary LCEP recommendation (see note 2.3.1.1) instead of BEL's BAU scenario (see note 1.5);
- ii. There appeared to be errors made in VACA output *vis-à-vis* output from Chalilo/Mollejon, plus the unit prices did not always conform to prevailing charges;
- iii. Productions costs from power plants utilizing conventional fuels were considered too low - \$0.30/kWh fuel charge for GT and CCK and \$0.2350/kWh for LPG-fired. In its RSM Model the Commission assumed HFO being \$4.50/US gal in 2022 and \$3.80/US gal in 2023-24. LFO prices are assumed to be 20% more than HFO;
- iv. The proposed rate for solar PV was considered too high at US\$0.085/kWh, reduced to US\$0.065/kWh.

Schedule 4: RATE OF RETURN (ROR)

Schedule 4

Belize Electricity Limited (BEL)

Approved Rate of Return (ROR), OPEX and Gearing Ratio (G) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Approved Rate of Return (ROR) for each ATP of the FTP - %:

| Period | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------|---------|---------|---------|---------|
| ROR Lower Limit | 8 | 8 | 8 | 8 |
| ROR Target Value | 10 | 10 | 8 | 8.5 |
| ROR Upper Limit | 12 | 12 | 12 | 12 |

Approved OPEX for each ATP of the FTP - \$:

| Period | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|--------|------------|------------|------------|------------|
| OPEX | 32,524,967 | 33,012,258 | 33,506,842 | 34,008,830 |
| GEC | 2,615,387 | 2,654,419 | 2,708,677 | 2,751,442 |

| | |
|----------------------------------|-----|
| Approved Gearing Ratio (G)- FTP: | 0.6 |
|----------------------------------|-----|

Notes:

1. The Commission adjusted the Target Rate of Return (t-ROR) used in the RSM for determining the Return (profitability) on the BEL's RAV (rate base):
 - (i) In its FTRP 2020 Final Decision, the Commission had approved a ROR of 10% applicable for each ATP;
 - (ii) In its ARP 2022 Initial Decision the Commission has fixed the ROR for the 2022\23 ATP at 8% and the ROR for the 2023\24 ATP at 8.5%.
2. All other regulated values in Schedule 4 remain unchanged as approved in the FTRP 2020 Final Decision.

**Schedule 5: Tariff Basket Revenue, Value Added of Delivery,
Other Income and Mean Electricity Rates**

| Schedule 5 | | | | | | |
|--|---------------------|-------------------------|-----------------------|-----------------------|--------------------|--------------------|
| Belize Electricity Limited (BEL) | | | | | | |
| BEL 2022-ARP Initial Decision Tariff Basket Revenue (TBR) and Components and Mean Electricity Rate (MER) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024 | | | | | | |
| Tariff Basket Revenue (TBR) and Revenue Components for each ATP of the FTP and Mean Electricity Rate for the FTP - \$: | | | | | | |
| Year | Actual 2020 2021 | projection 2021 2022 | forecast 2022 2023 | forecast 2023 2024 | Total FTP | Change in FTP |
| Revenue Components of TBR: | | | | | | |
| Value Added of Delivery (VAD) | | | | | | |
| OPEX | 32,524,967 | 33,012,258 | 33,506,842 | 34,008,830 | 133,052,897 | - |
| Return | 38,606,111 | 39,389,017 | 33,432,419 | 38,458,017 | 149,885,564 | (13,939,631) |
| Depreciation | 17,492,707 | 17,492,707 | 19,422,283 | 19,850,499 | 74,258,195 | 390,504 |
| Taxes/Licence Fees | 4,863,197 | 5,619,469 | 5,959,466 | 6,624,999 | 23,067,132 | (2,974,414) |
| Sub-Total (VAD) | 93,486,981 | 95,513,450 | 92,321,011 | 98,942,345 | 380,263,787 | (16,523,541) |
| Reference Cost of Power | | | | | | |
| Corrections - FTRP | 8,842,163 | 8,842,163 | 8,842,163 | 8,842,163 | 35,368,653 | - |
| - ARP 21 + IE 2020 | - | -338,486 | -338,486 | -338,486 | -1,015,457 | - |
| - ARP 22 | - | - | -5,315,848 | -5,315,848 | -10,631,696 | - |
| - ARP 23 | - | - | - | - | 0 | - |
| Less: Other Income | -4,254,659 | -4,344,277 | -4,668,673 | -4,668,673 | -17,936,284 | (2,959,199) |
| Tariff Basket Revenue | 216,142,105 | 249,754,182 | 238,378,642 | 240,909,060 | 945,183,988 | (1,781,318) |
| Demand [MWhs] | 534,377 | 585,589 | 603,096 | 634,314 | 2,357,376 | 970 |
| Mean Electricity Rate (MER) - July 1, 2020 - June 30, 2024 - \$: | \$ 0.4045 | \$ 0.4415 | \$ 0.3920 | \$ 0.3732 | \$ 0.4009 | -\$ 0.0009 |
| Direct Cost of Delivery (COD) - \$: | \$ 0.1658 | \$ 0.1535 | \$ 0.1432 | \$ 0.1455 | \$ 0.1515 | -\$ 0.0058 |
| Corrections + Taxes - Other Income - \$: | \$ 0.0177 | \$ 0.0167 | \$ 0.0074 | \$ 0.0081 | \$ 0.0122 | -\$ 0.0070 |
| Cost of Power (COP) - \$: | \$ 0.2209 | \$ 0.2563 | \$ 0.2446 | \$ 0.2261 | \$ 0.2372 | \$ 0.0119 |
| Cost Recovery Scenarios | | | | | | |
| MER | \$ 0.4084 | \$ 0.3999 | \$ 0.3999 | \$ 0.3999 | | |
| Estimated surplus (deficit) attributable to Corrections | | 15,576,983 | (2,799,354) | (12,752,971) | | |
| Net Movement in Corrections | (8,842,163) | 7,073,305 | (5,987,184) | (15,940,800) | | |
| Regulatory Account Balance | 14,879,337 | 21,952,642 | 15,965,459 | 24,659 | | |

BEL's ARP - 2022 Submission, as recalculated by the Commission

Belize Electricity Limited (BEL)

BEL 2022-ATRP Submission Tariff Basket Revenue (TBR) and Components and Mean Electricity Rate (MER) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Tariff Basket Revenue (TBR) and Revenue Components for each ATP of the FTP and Mean Electricity Rate for the FTP - \$:

| Year | Actual 2020 2021 | forecast 2021 2022 | forecast 2022 2023 | forecast 2023 2024 | Total FTP | Change in FTP |
|---|---------------------|-----------------------|-----------------------|-----------------------|--------------------|-------------------|
| Revenue Components of TBR: | | | | | | |
| Value Added of Delivery (VAD) | | | | | | |
| OPEX | 32,524,967 | 33,012,258 | 33,506,842 | 34,008,830 | 133,052,897 | - |
| Return | 38,765,048 | 40,889,017 | 42,291,572 | 46,746,564 | 168,692,201 | 4,867,006 |
| Depreciation | 17,492,706 | 19,129,230 | 25,160,193 | 27,249,491 | 89,031,619 | 15,163,928 |
| Taxes/Licence Fees | 5,473,424 | 6,945,161 | 6,963,974 | 7,328,027 | 26,710,585 | 366,065 |
| Sub-Total (VAD) | 94,256,145 | 99,975,665 | 107,922,581 | 115,332,912 | 417,487,302 | 5,706,465 |
| Reference Cost of Power | | | | | | |
| Corrections - FIRP | 8,842,163 | 8,842,163 | 8,842,163 | 8,842,163 | 35,368,653 | - |
| - ARP 21 + IE 2020 | - | -338,486 | -338,486 | -338,486 | -1,015,457 | - |
| - ARP 22 | - | - | -1,988,124 | -1,988,124 | -3,976,247 | - |
| - ARP 23 | - | - | - | - | 0 | - |
| Less: Other Income | -4,254,659 | -4,344,277 | -4,668,673 | -4,668,673 | -17,936,284 | (2,959,199) |
| Tariff Basket Revenue | 218,936,942 | 252,551,293 | 253,235,426 | 266,473,705 | 991,197,366 | 33,214,799 |
| Demand [MWhs] | 534,377 | 585,589 | 603,096 | 634,314 | 2,357,376 | 970 |
| Mean Electricity Rate (MER) - July 1, 2020 - June 30, 2024 - \$: | \$ 0.4097 | \$ 0.4464 | \$ 0.4165 | \$ 0.4128 | \$ 0.4205 | \$ 0.0139 |
| Direct Cost of Delivery (COD) - \$: | \$ 0.1661 | \$ 0.1589 | \$ 0.1674 | \$ 0.1703 | \$ 0.1658 | \$ 0.0084 |
| Corrections + Taxes - Other Income - \$: | \$ 0.0188 | \$ 0.0190 | \$ 0.0146 | \$ 0.0145 | \$ 0.0166 | -\$ 0.0011 |
| Cost of Power (COP) - \$: | \$ 0.2247 | \$ 0.2534 | \$ 0.2379 | \$ 0.2354 | \$ 0.2381 | \$ 0.0128 |
| Rate Recovery Scenarios | | | | | | |
| MER | \$ 0.4084 | \$ 0.3999 | \$ 0.4348 | \$ 0.4348 | | |
| Estimated surplus (deficit) attributable to Corrections | | 18,374,094 | (8,990,612) | (9,325,872) | | |
| Net Movement in Corrections | (8,842,163) | 9,870,416 | (15,506,166) | (15,841,426) | | |
| Net Corrections Balance | 21,534,786 | 31,405,202 | 15,899,036 | 57,610 | | |
| Regulated Income | 47,607,212 | 49,392,694 | 48,807,126 | 53,262,118 | | |



**PUBLIC UTILITIES
COMMISSION
BELIZE**

PUBLIC UTILITIES COMMISSION

**ORDER FOR
FINAL DECISION**

(2022 ANNUAL REVIEW PROCEEDING)

for

Belize Electricity Limited

JUNE 2022

Legal Framework

The Public Utilities Commission (PUC) is authorized under the Public Utilities Commission Act Cap. 223 of the Laws of Belize to serve as the economic regulator for the electricity, water and telecommunications sectors in Belize.

The primary duty of the PUC is to ensure that the services rendered by public utility providers in all three sectors are satisfactory and that the charges imposed in respect of those services are reasonable. The PUC has the power to determine and prescribe rates that may be charged in respect of utility services and the standards which must be maintained in relation to such services. In addition, the PUC is responsible for the award of licences and for monitoring and enforcing compliance with licence conditions.

Sector specific legislation provides the legal framework for the PUC to carry out its duties and functions in a particular utility sector. As obtains in the regulation of the electricity sector, the pertinent laws are the Electricity Act (No. 13 of 1992), (the “Act”), as amended by Electricity (Amendment) Act 2007 (No. 12 of 2007) and Electricity (Amendment) Act 2011 (No. 4 of 2011) and the Electricity (Tariffs, Fees and Charges) Byelaws (Statutory Instrument No. 145 of 2005; the “Byelaws”), as amended by Statutory Instruments No. 116 of 2009 and No. 21 of 2012. The Byelaws govern the tariffs, rates, charges and fees for the transmission and supply of electricity and for existing and new services to be charged by a licensee to consumers in Belize, and the mechanisms, formulas, and procedures whereby such tariffs, rates, charges and fees shall be calculated and determined for all purposes. They also govern the quality-of-service standards (service reliability) for existing and new services at any time provided or to be provided by a licensee, and the mechanisms, formulas and procedures whereby such services shall be calculated and determined for all purposes. Further, the Byelaws reference the methodology used for Review Proceedings.

Annual Review Proceeding

The Annual Review Proceeding (ARP) for the Annual Tariff Period (ATP) July 1, 2022 to June 30, 2023 commenced on April 1, 2022, upon the submission by Belize Electricity Limited (BEL) to the PUC requesting the PUC’s approval of proposed amendments to regulated values, mean electricity rates, tariffs, charges and fees for the period July 1, 2022 to June 30, 2024, as previously approved in the 2021 Annual Tariff Review Proceeding (hereafter the “2021 ATRP” or “2021 ARP”).

Summary of BEL's Submission

The 2022 Annual Tariff Review Proceeding Submission and Supplemental information (hereafter the "2022 ARP Submission") made on April 1, 2022 by BEL contained the following key points:

- Total Fixed Investments over the 2020 to 2024 period of \$262.03 million
- Total Operational Expenditure over the FTP of \$133.05 million
- Depreciation over the FTP, rising from \$73,867,691 approved in the 2021 ARP to \$89,183,602
- Other Income over the FTP, improves from \$14,977,085 approved in the 2021 ARP to \$17,936,284
- Total Electricity Sales over the FTP of 2.357 billion kWh
- Total Electricity Purchased and Generated over the FTP of 2.674 billion kWh at a cost of \$561,269,398.
- Mean Electricity Rate over the FTP rising from \$0.4019 per kWh approved in the 2021 ARP to \$0.4187 per kWh
- No adjustments to Tariffs, Fees and Charges

Decision of the Commission

BELIZE:

ORDER made by the Public Utilities Commission (hereinafter referred to as “the Commission”) in exercise of the powers conferred upon it by the Public Utilities Commission Act, Chapter 223 of the Laws of Belize, the Electricity Act, Chapter 221 of the Laws of Belize, the Electricity (Tariff, Fees and Charges) Byelaws as amended, and all other powers thereunto the Commission enabling.

Short title. 1. This Order may be cited as the:

**BELIZE ELECTRICITY LIMITED 2022 ANNUAL REVIEW
PROCEEDING FINAL DECISION**

**Decisions and
Orders.**

2. (1) In respect of the application made April 1, 2022, by the Belize Electricity Limited (BEL) for the determination of Regulated Values, Mean Electricity Rates, Tariffs, Fees and Charges in its Annual Review Proceeding (ARP) Submission for the remaining Annual Tariff Periods (ATPs) of the Full Tariff Period (FTP) of July 1, 2022, to June 30, 2024, the Commission hereby makes the following Decisions and Orders:


- (a) The Commission hereby approves the Annual Corrections (AC) contained in Schedule 1;
- (b) The Commission hereby approves the Regulated Asset Value (RAV) for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 2;
- (c) The Commission hereby approves the Reference Cost of Power (COP) for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 3;
- (d) The Commission hereby approves the Target Rate of Return (ROR), the Rate of Return Lower Limit (RORLL), the Rate of Return Upper Limit (RORUL), the Operational Expenditure (OPEX), the Generalized Expenditures Capitalized (GEC) and the Gearing Ratio (G) for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 4;

- (e) The Commission hereby approves the Value Added of Delivery (VAD), the Other Income and the Tariff Basket Revenue (TBR) for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) and the Mean Electricity Rates (MERs) for the Full Tariff Period (FTP) as contained in Schedule 5;
- (f) The Commission hereby approves the Tariffs to be applied during each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 6, and hereby orders the Belize Electricity Limited (BEL) to levy the said Tariffs in respect of the electricity services it is licenced to provide;
- (g) The Commission does not adjust any other previously approved Regulated Values, Fees and Charges, and hereby orders the Belize Electricity Limited (BEL) to continue to levy the said previously approved Fees and Charges in respect of the relevant electricity services it is licenced to provide.
- (h) Pursuant to sub-regulation 33(2)(b) of Statutory Instrument 145 of 2005, as amended by Statutory Instrument 116 of 2009, the Commission's written determinations for the enforcement of this Decision, shall be binding on the Belize Electricity Limited (BEL) and any other licensee.

Amendment.

3. This Order may be amended at any time during an Annual Review Proceeding (ARP) within the Full Tariff Period (FTP), subject to the provisions of the Electricity (Tariff, Fees and Charges) Byelaws.

MADE by the Public Utilities Commission this 30th day of June, 2022.


(DEAN E. MOLINA)
Chairman, Public Utilities Commission

Schedule 1

Belize Electricity Limited (BEL) Annual Corrections - July 1, 2020 to June 30, 2021

General Corrections - July 1, 2020 - June 30, 2021

| | |
|--|-------------|
| Approved Tariff Basket Revenue - \$ | 216,142,105 |
| Realized Tariff Basket Revenue - \$ | 222,913,189 |
| Variance (Total Approved less Total Realized) - \$ | -6,771,085 |
| less: Disallowed Costs - \$ | -3,860,611 |
| Approved Corrections for 2020 21 ATP - \$ | -10,631,696 |

Schedule 2

Belize Electricity Limited (BEL)

Approved Regulated Asset Value (RAV) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Regulated Asset Value (RAV) as at December 31 of each year - \$:

| Year | 2019 | Validated | Validated | forecast | forecast | 2024 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| | | 2020 | 2021 | 2022 | 2023 | |
| Starting RAV | 369,640,959 | 373,256,368 | 386,061,108 | 408,890,169 | 417,905,243 | 452,447,254 |
| Depreciation | 17,458,394 | 17,492,707 | 17,492,707 | 19,422,283 | 19,850,499 | 21,491,245 |
| Work In Progress | 16,654,000 | 34,708,449 | 78,927,751 | 77,201,286 | 108,558,627 | 40,231,733 |
| Additions | 53,061,000 | 22,029,955 | 0 | 75,000,000 | 36,123,466 | 60,000,000 |
| Net Contributed Capital | | 856,975 | -1,967,216 | 9,062,643 | 1,169,223 | -1,253,258 |
| Ending RAV | 373,256,368 | 386,061,108 | 393,890,169 | 417,905,243 | 452,447,254 | 480,271,000 |

Schedule 3

Belize Electricity Limited (BEL)

Approved Cost of Power (COP) Parameters and Demand for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Approved Generation and Purchase of Power and Reference Cost of Power (COP), and Demand for each ATP of the FTP:

| Year | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 |
|--|-------------|-------------|-------------|-------------|
| KWHrs Purchased and Generated - KWHrs | 610,260,601 | 664,391,800 | 686,464,373 | 720,696,133 |
| Reference Cost of Power - \$ | 118,067,620 | 150,081,331 | 147,538,475 | 143,447,558 |
| Approved Consumption/Demand - KWHrs | 534,376,841 | 585,589,395 | 603,095,764 | 634,313,654 |
| Reference Cost per KwHr Consumed - \$/KWHr | 0.2209 | 0.2563 | 0.2446 | 0.2261 |

Schedule 4

Belize Electricity Limited (BEL)

Approved Rate of Return (ROR), OPEX and Gearing Ratio (G) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Approved Rate of Return (ROR) for each ATP of the FTP - %:

| Period | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-------------------------|----------------|----------------|----------------|----------------|
| ROR Lower Limit | 8 | 8 | 8 | 8 |
| ROR Target Value | 10 | 10 | 8 | 8.5 |
| ROR Upper Limit | 12 | 12 | 12 | 12 |

Approved OPEX for each ATP of the FTP - \$:

| Period | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---------------|-------------------|-------------------|-------------------|-------------------|
| OPEX | 32,524,967 | 33,012,258 | 33,506,842 | 34,008,830 |
| GEC | 2,615,387 | 2,654,419 | 2,708,677 | 2,751,442 |

| | |
|---|------------|
| Approved Gearing Ratio (G)- FTP: | 0.6 |
|---|------------|

Schedule 5

Belize Electricity Limited (BEL)

Approved Tariff Basket Revenue (TBR) and Components and Mean Electricity Rate (MER) for Full Tariff Period (FTP) July 1, 2020, to June 30, 2024

Approved Tariff Basket Revenue (TBR) and Revenue Components for each ATP of the FTP and Mean Electricity Rate for the FTP - \$:

| Year | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | Totals - FTP |
|---|----------------|----------------|----------------|----------------|----------------|----------------|---------------------|
| Revenue Components of TBR: | | | | | | | |
| Value Added of Delivery (VAD) | | | | | | | |
| OPEX | 29,798,691 | 30,245,671 | 32,524,967 | 33,012,258 | 33,506,842 | 34,008,830 | 133,052,897 |
| Return | 36,964,096 | 37,325,637 | 38,606,111 | 39,389,017 | 33,432,419 | 38,458,017 | 149,885,564 |
| Depreciation | 15,712,634 | 17,458,394 | 17,492,707 | 17,492,707 | 19,422,283 | 19,850,499 | 74,258,195 |
| Net Corrections - FTRP | -105,799 | 12,574,255 | 8,842,163 | 8,842,163 | 8,842,163 | 8,842,163 | 35,368,653 |
| - ARP 21 | | | | -338,486 | -338,486 | -338,486 | -1,015,457 |
| - ARP 22 | | | | | -5,315,848 | -5,315,848 | -10,631,696 |
| - ARP 23 | | | | | | 0 | 0 |
| Taxes/Licence Fees | 5,963,382 | 5,536,778 | 4,863,197 | 5,619,469 | 5,959,466 | 6,624,999 | 23,067,132 |
| Sub-Total (VAD) | 88,333,004 | 103,140,735 | 102,329,145 | 104,017,128 | 95,508,840 | 102,130,174 | 403,985,288 |
| Reference Cost of Power | 179,959,419 | 146,831,364 | 118,067,620 | 150,081,331 | 147,538,475 | 143,447,558 | 559,134,984 |
| Less: Other Income | -3,253,225 | -3,893,097 | -4,254,659 | -4,344,277 | -4,668,673 | -4,668,673 | -17,936,284 |
| Tariff Basket Revenue | 265,039,198 | 246,079,001 | 216,142,105 | 249,754,182 | 238,378,642 | 240,909,059 | 945,183,988 |
| Demand (MWhs) | 567,812 | 576,627 | 534,377 | 585,589 | 603,096 | 634,314 | 2,357,376 |
| Actual/Estimated MER | | | 0.4045 | 0.4265 | 0.3953 | 0.3798 | 0.4009 |
| Approved Mean Electricity Rate (MER): July 1, 2020 - December 31, 2020 - \$: | | | 0.4151 | | | | |
| Approved Mean Electricity Rate (MER): January 1, 2021 - June 30, 2021 - \$: | | | 0.4018 | | | | |
| Approved Mean Electricity Rate (MER): July 1, 2021 - June 30, 2024 - \$: | | | | 0.3999 | | | |

Schedule 6

Belize Electricity Limited (BEL)

Approved Tariffs for Full Tariff Period (FTP) - January 1, 2021, to June 30, 2024

| Customer Class | Service Type/ Consumption Block | Rate/Tariff \$/Mth; \$/KVA; \$/KWhr |
|----------------------|---|--|
| Social | 0 - 60 KWhrs Minimum Charge | 0.22 5.00 |
| Residential | 0 - 50 KWhrs 51 - 200 KWhrs > 200 KWhrs Minimum Charge | 0.33 0.38 0.43 10.00 |
| Commercial 1 | 0 - 50 KWhrs 51 - 200 KWhrs > 200 KWhrs Minimum Charge | 0.33 0.38 0.43 10.00 |
| Commercial 2 | Service Charge 0-10,000 KWhrs 10,001-20,000 KWhrs > 20,000 KWhrs | 150.00 0.41 0.39 0.38 |
| Industrial 1 | Service Charge Demand (KVA) Energy | 250.00 35.82 0.30 |
| Industrial 2 | Service Charge Demand (KVA) Energy | 250.00 23.00 0.26 |
| Street Lights | Energy | 0.45 |