



**PUBLIC UTILITIES  
COMMISSION  
BELIZE**

**PUBLIC UTILITIES COMMISSION**

**INITIAL DECISION  
(2024 FULL TARIFF REVIEW  
PROCEEDINGS)**

**for**

**Belize Electricity Limited**

**29 June 2024**

# PUBLIC UTILITIES COMMISSION

## INITIAL DECISION BY THE PUBLIC UTILITIES COMMISSION IN THE MATTER OF BELIZE ELECTRICITY LIMITED FULL TARIFF REVIEW PROCEEDINGS FOR THE FULL TARIFF PERIOD 2024|2028.

### I. THE LEGAL FRAMEWORK

1. The Public Utilities Commission (the “*Commission*”) was established pursuant to the provisions of the Public Utilities Commission Act, CAP 223 of the Substantive Laws of Belize, R.E. 2020 (the “*PUC Act*”) and has the statutory authority to regulate every public utility provider for the electricity, telecommunications, and water sectors in Belize.
2. The primary functions of the Commission under the PUC Act are, to ensure that the services rendered by a public utility provider are satisfactory and that the rates charged by a public utility provider are fair and reasonable.
3. As it relates to the electricity sector in Belize, Belize Electricity Limited (“*BEL*”), holds a licence granted pursuant to the Electricity Act CAP 221 of the Substantive Laws of Belize, R.E. 2020, (the “*Electricity Act*”) to generate, transmit and supply electricity to any premises in Belize. This Licence terminates due to the effluxion of time on June 30, 2025.
4. The Electricity Act gives the Commission the power to develop and prescribe byelaws relating to the rates which may be charged by licensees such as BEL.
5. The Electricity (Tariffs, Fees and Charges) Byelaws, (the “*Byelaws*”) governs the methodology and process used by the Commission for the determination of tariffs, charges and fees to be charged for the provision of electrical services by licensees.
6. The Electricity Act mandates that such Byelaws on tariffs, charges and fees made by the Commission shall be made in a manner calculated to afford a licensee an opportunity to recover the reasonable costs of providing service and secure a reasonable

rate of return on investment when operating in a manner compatible with international standards of an efficiently operated power system of similar characteristics to that of Belize.

## **II. THE FULL TARIFF REVIEW PROCEEDINGS**

7. The Full Tariff Review Proceedings (“**FTRP**”) is a rate review process conducted by the Commission every four years to determine the regulated values, mean electricity rates, tariffs, rates, charges and fees to be applied over the next four-year Full Tariff Period (“**FTP**”).

Regulated values for the FTP include those determined by the Commission to be regulated values for those parameters set out in the Schedules to the Byelaws and also include, forecasts of the Costs of Power, appropriate fees for capacity support and appropriate fees for power delivery.

8. On March 22, 2024, BEL commenced the FTRP for the FTP 2024|2028, upon the filing of its submission to the Commission of its proposed regulated values, mean electricity rate, tariffs, rates charges and fees over the next FTP 2024|2028.

In making its filing, BEL has the obligation to provide projections of the various cost components required for determination of aggregate revenue requirements for FTP 2024|2028, along with the rationale for estimation of such costs.

## **III. SUMMARY OF BEL’S SUBMISSION**

9. BEL made its filing in FTRP 2024|2028 with the Public Utilities Commission on March 22, 2024 (*the “Filing”*) and it was subsequently uploaded to the PUC’s website.
10. The Filing from BEL covers actual performance for the FTP 2020|2024, and estimates, assumptions and projections for FTP 2024|2028.

BEL's Submission in FTRP 2020|2024

11. In looking back at the Company's submission for FTRP 2020|2024, the company envisioned that it would have achieved the following:

- (a) Total investments over the FTP of some \$228.56 million;
- (b) Total Operational Expenditure over the FTP of some \$133.05 million;
- (c) Total electricity purchased and generated over the FTP of some 2.943 billion kWh at a cost of \$ 730.09 million;
- (d) Total Revenue Requirements over the FTP of some \$1,184.8 million;
- (e) Total electricity sales over the FTP of some 2.319 billion kWh; and
- (f) A Mean Electricity Rate ("**MER**") of \$0.4533 per kWh over the entire FTP, derived from COP of \$0.2828 per kWh, VAD of \$0.1521 per kWh and Taxes/fees + Corrections + Other Revenues of \$0.0299 per kWh.

12. According to the Company's FTRP 2024|2028 Submission, the actual outcomes over FTP 2020|2024 were as follows:

- (a) Total investments over the FTP of some \$237.73 million;
- (b) Total Operational Expenditure over the FTP of some \$133.34 million;
- (c) Total electricity purchased and generated over the FTP of some 2.782 billion kWh at a cost of \$ 639.45 million;
- (d) Total Revenue Requirements over the FTP of some \$1,056.9 million;
- (e) Total electricity sales over the FTP of some 2,430 billion kWh; and
- (f) A Mean Electricity Rate ("**MER**") of \$0.4277 per kWh over the entire FTP, derived from COP of \$0.2632 per kWh, VAD of \$0.1456 per kWh and Taxes/Fees + Corrections + Other Revenues of \$0.0189 per kWh.

BEL's Submission in FTRP 2024|2028

13. Looking forward, BEL indicated in its filing that FTP 2024|2028 is based on the following projections, proposed investments, and expected revenue projections:

- (a) Total investments over the FTP of \$504.5 million;
- (b) Total Revenue Requirements over the FTP of some \$1,418.6 million;
- (c) Total Electricity Sales over the FTP of 3,203,708 MWhs;
- (d) Total electricity purchased and generated over the FTP of some 3,652,933 MWhs;
- (e) Total Annual Corrections of some \$46.8 million in favour of BEL;
- (f) Adjustments to and introduction of various other fees and charges; and
- (g) A Mean Electricity Rate (“*MER*”) of \$0.4428 per kWh over the entire FTP as shown in **Table 1** below:

**Table 1 – BEL’s Schedule 5 in FTRP 2024|2028 Filing**

Belize Electricity Limited (BEL)					
Tariff Basket Revenue (TBR) and Mean Electricity Rate (MER) for Full Tariff Period (FTP) September 1, 2024 to June 30, 2028					
Tariff Basket Revenue (TBR) and Revenue Components for each ATP of the FTP and Mean Electricity Rate for the FTP - \$:					
Year	2024 2025	2025 2026	2026 2027	2027 2028	Total FTP
<b>Revenue Components of TBR:</b>					
Value added of Delivery (VAD)					
OPEX	46,347,414	47,737,836	49,169,972	50,645,071	193,900,293
Return	47,047,193	58,461,393	65,966,917	72,321,148	243,796,652
Depreciate ion	29,606,377	32,966,219	36,216,225	39,220,652	138,009,473
Taxes/Licence Fees	8,708,239	9,201,241	9,687,237	10,126,675	37,723,392
Sub-Total (VAD)	131,709,224	148,366,689	161,040,351	172,313,546	613,429,810
Reference Cost of Power	189,893,977	191,163,836	196,162,777	200,869,148	778,089,739
Corrections - FTP	11,711,039	11,711,039	11,711,039	11,711,039	46,844,155
Less: Other Income	(4,939,959)	(4,939,959)	(4,939,959)	(4,939,959)	(19,759,838)
<b>Tariff Basket Revenue</b>	<b>328,374,280</b>	<b>346,301,605</b>	<b>363,974,207</b>	<b>379,953,774</b>	<b>1,418,603,865</b>
Demand [MWhs]	733,297	780,124	824,403	865,884	3,203,708
MER - July 1, 2024 - June 30, 2028	0.4478	0.4439	0.4415	0.4388	0.4428
Direct Cost of Delivery (COD) - \$:	0.1677	0.1784	0.1836	0.1873	0.1797
Corrections + Taxes - Other Income - \$:	0.0211	0.0205	0.0200	0.0195	0.0202
Cost of Power (COP) - \$:	0.2590	0.2450	0.2379	0.2320	0.2429

- 14. In BEL’s original submission, the company proposed to increase rates by two cents, for those Residential and Commercial I customers who consume above 300 kWh per month. BEL suggested that these rate increases would only become necessary if there is a delay in the rollout of utility-scale solar beyond the 2025 timeline.
- 15. The Commission, in reviewing Table 1, observed that taxes and licence fees were not referenced to the inflows resulting from current Corrections to BEL. This led to an underestimation of the MER, which was subsequently adjusted by the Commission to **0.4432**.

#### **IV. THE COMMISSION'S DECISION PROCESS**

16. Upon receipt of BEL's Filing and after conducting a cursory review of it, certain deficiencies were observed. Accordingly, a Discrepancy Note was communicated to BEL by the Commission on April 10, 2024 and BEL was informed that the Company is expected to provide the additional information/clarifications during their presentation at the Public Hearing to be held on April 11, 2024.
17. At the said Public Hearing, the Chief Executive Officer of BEL made a presentation to the Commission and to the public, which, in the Commission's view, did not satisfactorily address all deficiencies, nor did he fully furnish the additional information or clarifications that were requested pursuant to the Commission's Discrepancy Note.
18. Given that BEL did not address all deficiencies at that Public Hearing, the Commission proceeded to make an Interim Order dated 12<sup>th</sup> April, 2024, in which BEL was directed to answer the questions and to provide the supporting data as requested by the Commission, on or before April 16, 2024. BEL responded to the Interim Order by providing some, but not all, data and information Ordered by the Commission. The Interim Order is available on the PUC's website at <https://www.puc.bz/interim-order-bel-2024-full-tariff-review-proceedings/> and BEL's responses can be accessed at <https://www.puc.bz/bel-responses-to-questions-as-per-puc-interim-order-of-april-12-2024/>.
19. After the Commission's review of BEL's initial Submission, the Company's responses to the Interim Order and the issues and concerns raised by during the Public Hearing, the Commission made the following general observations about BEL's filing:
  - (a) In its submission, BEL proposes that the prevailing electricity tariffs remain unchanged at \$0.40 per kWh; however, the proposed MER of \$0.4428, as shown in Table 1 above, is significantly higher. That is to say, BEL is signaling once again that it will finance approximately \$137 million of costs to be incurred in excess of its revenue inflows. BEL addresses this issue in its Submission by saying

that, “*Variances between actual costs incurred by BEL and revenues collected through the electricity rates accumulate in the regulatory account balance and be recoverable in future periods when cost of power is sufficiently low and sales high so that corrections do not cause a rate increase*”.

The Commission notes that BEL has consistently stated that it does not intend to increase rates, although it continues to report over expenditure in the Cost of Power. This, the Commission contrasts with a recent public statement made by BEL’s Chairman of its Board of Directors in which he states that, “...*keeping rates artificially low has contributed to the problem we find ourselves ... you can’t have the redundancies in the system that are needed to give you the reliable system that you demand at 40 cents a kilowatt hour... And when you insist that that is the charge, that will be levied, and we go forward with that you go forward with that by foregoing some of the things that you need to do in order to make it reliable.*”

- (b) While BEL indicated its intentions not to increase electricity rates, it does suggest that it may become necessary to introduce additional consumption buckets for Residential and Commercial I Customers with a tariff that is two cents higher than the existing rates;
- (c) BEL does not provide the actual expenditures for projects that were approved for the 2020|2024 FTP and did not reasonably justify the significant increase in Operating Expenses (“*OPEX*”);
- (d) The Commission noted, with great concern, that several major projects had not commenced, although approved under previous FTRP’s in either 2016 or 2020, and despite the Commission repeatedly calling on BEL to complete them. The Commission views this gravely, considering the current energy crisis facing the country, and the subsidization of energy cost in the Northern Cayes.
- (e) The Commission notes expenses driving the increase in Cost of Power (COP);
- (f) The Commission observed that revenues are projected to grow disproportionately

slower than the projected expenditures in capital and OPEX. Given the unsustainability of these underlying dynamics, where costs are pacing ahead of revenues, BEL must closely monitor costs with a view to reducing costs, a matter which the Commission will elaborate further in the **Operational Resources/OPEX, GEC, COP OVERHEADS Section** below;

- (g) In an environment in which policymakers continue to push for the reduction in fossil fuel energy use and electrify everywhere, consumers will be encouraged to move toward energy efficient products and distributed generation and BEL needs to align its business model to Belize's policy environment; and
- (h) Under a volumetric pricing scheme for retail rates, the price signals for the costs drivers are misaligned, which makes the utility business model over the long run, unsustainable. The Commission and BEL must begin to rethink electricity tariff designs that incentivize economic efficiency, such as time variant pricing structures and capacity-based electricity charges for all, not a select few.

V. **THE COMMISSION'S ANALYSIS AND DETERMINATION OF REGULATED VALUES**

- 20. In applying the rates setting methodology (the "*RSM Model*") to determine tariffs, rates, charges, fees and the mean electricity rate, the following components shall be included:
  - (a) The timely recovery of the full cost of power;
  - (b) A fee for the timely recovery of the amounts in the Rate Stabilization Accounts;
  - (c) A fee for capacity support to compensate the licensee for capacity it owns, including, without limitation, a reasonable return on investment when operating in a manner compatible with international standards of an efficiently operated power system of similar characteristics to that of Belize;
  - (d) A fee for power delivery service to compensate the licensee for the transport of electricity from its source to customers and for customer services associated with



the supply of electricity including, without limitation, a reasonable return on investment when operating in a manner compatible with international standards of an efficiently operated power system of similar characteristics to that of Belize; and

(e) A financial incentive for improvement in service reliability.

Capital Expenditures (CAPEX)

21. In its previous Decision in FTRP 2020|2024, the Commission approved \$255 million for the 2020|2024 FTP, in order for BEL to meet load growth, improve reliability and drive system efficiency as shown in **Table 2** below:

**Table 2.**

<b>Total Summary</b>	<b>PLAN 2020</b>	<b>PLAN 2021</b>	<b>PLAN 2022</b>	<b>PLAN 2023</b>	<b>PLAN 2024</b>	
Transmission	27,515	28,822	49,259	30,256	253	136,105
Land	2,500	-	-	-	-	2,500
Substation	12,118	2,205	500	500	593	15,916
Distribution	15,497	10,014	9,405	9,280	9,149	53,345
General Properties	5,417	3,817	585	438	220	10,477
Transportation	2,400	2,574	2,901	2,505	1,878	12,258
Capitalized Interest	3,021	2,277	3,007	2,063	580	10,949
Administrative Cost	2,615	2,654	2,709	2,751	2,793	13,523
<b>Total Capex</b>	<b>71,084</b>	<b>52,363</b>	<b>68,366</b>	<b>47,793</b>	<b>15,466</b>	<b>255,072</b>

22. Although it appears from BEL’s submission that it has in fact spent in excess of the \$255 million dollars that was approved in 2020, the Commission is notes that it had approved four (4) important capital works projects, as a part of that \$255 million dollars, which were neither commenced, nor undertaken over the current 2020|2024 FTP, as follows:

- (a) The 2<sup>nd</sup> 230 kV transmission line to Mexico;
- (b) The 2<sup>nd</sup> submarine cable from the mainland to San Pedro, Ambergris Caye;
- (c) The San Pedro-Caye Caulker submarine interconnection cable; and
- (d) Facilities to connect new power plants (solar and gas-fired).

In the case of the submarine cables for Caye Caulker and San Pedro, these projects remain outstanding even though the Commission imposed a penalty against BEL in ARP 2018 and ARP 2021 respectively.

These unaccomplished capital projects account for \$122 million of the \$255 million dollars that had been approved; meaning that BEL may have undertaken and possibly completed \$133 million worth of new capital projects, as approved in the FTRP 2020. The full list of projects approved under the \$255 million CAPEX in FTRP 2020|2024 are detailed in **Schedule 11**.

23. The US Energy Information Administration reported that price inflation for the energy sector from 2020 thru to 2023 was 20.6%. Even if the Commission takes a more generous view and increase the \$133 million by 25% to take into consideration the increase in cost, it can still only account for \$165 million of the \$255 million approved in 2020.
24. Although it still remains uncompleted, the Commission is aware that the submarine cable for Caye Caulker is in country and, based on BEL's submission, this accounted for another \$12 million dollars out of the \$255 million.
25. Taking into account all these additional cost factors, the Commission is still left with another \$78 million dollars that were spent on CAPEX, and that were not approved by the PUC, not subsequently justified by BEL in its submission, at the Public Hearing, nor in their response to the Commissioner's Interim Order.
26. The Commission cannot, then, determine whether these capital assets are of benefit to consumers or were contributed capital, nor can it determine whether or not these assets were brought into service during the 2020|24 FTP. Consequently, the Commission holds the view that the sum of \$78 million should not form part of BEL's actual CAPEX for the 2020|2024 FTP allocation and thus are unapproved.
27. As it relates to the upcoming FTP 2024|2028, BEL now proposes to invest another \$504.5 MN of capital. For the purposes of its analysis, the Commission separated BEL's proposed CAPEX for the 2024|2028 into three (3) Categories, namely (1) Approved Projects, (2) Approved Projects requiring Further Justification and Consents and (3) Projects that should not be in the RAV or for which the Commission cannot

justify the benefit to the consumer.

28. The Commission hereby approves execution and the associated budgets as proposed by BEL for all capital works projects as provided in **Schedule 8**. These projects are consistent with the Final Determination and Order by The Public Utilities Commission in The Matter of The Least Cost Expansion Plan for Belize as Submitted by Belize Electricity Limited dated March 12, 2024 (the “*Planning Determination*”).
29. In the instant filing, BEL has requested almost \$45 million for Regular line extension including requests from customers and for urban/pen-urban electrification. The Commission has determined that the proposed \$45MN shall be capped at \$25 MN for the years 2024 to 2028. That is, BEL is allowed on average to include in the rates \$5.0 million for regular line extensions. As it relates to Rural Electrification, under the EU-Belize Cooperation, there is a total budgetary allocation of \$11.2 million for micro-grids, which shall be offset as capital contributions. In addition, there is a \$1.3 million investment being ratepayers’ contribution, which is approved as part of the \$25 million.
30. For avoidance for any doubt, if BEL intends to make any investments that exceeds the approved quantum for any capital works or deviate from the approved projects listed in **Schedule 8**, or are not aligned with the Planning Determination, it shall be required to file a justification for those works before such investments can be recovered in future rates.
31. Planning is key to supporting investment decisions in the electricity industry and the Commission requires BEL to determine a minimum cost strategy for long term expansion of generation, transmission and distribution systems that would adequately supply their forecasted load. This, the Commission deliberated on and finalized in its Planning Determination referred to earlier.

Moving forward, if BEL intends for the Commission to consider any capital expenditure that falls outside of this Planning Determination, BEL is required to file a new plan for the Commission to assess for prudence and usefulness.

32. The Commission recognizes that large capital investments are generally necessary for upgrading and modernizing the grid and that BEL recovers such capital costs through an approved rate of return. A central challenge for the Commission, then, is to estimate what level of capital investments is necessary to achieve BEL's plans.

The Commission faces an obvious information asymmetry with BEL when, in determining whether proposed capital investments are prudent and necessary, such decisions are contingent on BEL providing adequate support for the proposed projects. When met with information asymmetry, the Commission is forced to take the most conservative approach, ensuring, always, that unsupported costs are not passed on to the consumers in the form of higher rates.

That said, the Commission stands ready to receive more compelling and comprehensive support for the capital works projects listed in **Schedule 9**, and to hear how these projects fit into the Planning Determination recently made by the Commission. Given this, approvals for projects listed in **Schedule 9** are subject to BEL providing this additional justification.

33. The Smart Grid Architecture Model (**SGAM**) provides a standards-based, structured framework for understanding and visualizing the complex ecosystem of Smart Grids. In making the case for investments in Smart Grids using the SGAM, the Commission views that priority should be given to generation, system operations and transmission domains. BEL is hereby directed to showcase the benefits across different domains as per the SGAM.
34. Additionally, and as required by law, BEL shall undertake consent proceedings for all projects which require consent such as, transmission projects of 70 kV class or higher and where there is proposed changes in meter type.
35. The Commission does not include in the RAV, the projects that are listed in **Schedule 10**. As indicated above, BEL needs to prove that the proposed project is beneficial to the consumer, prudent and necessary or how these projects fit within the Planning

Determination. Additionally, assets labelled as generation expansion and the like have been excluded from BEL's RAV with reasons shown on the said Schedule 10.

For example, the Commission is left to question how a drive-thru in Belize City will be beneficial to BEL customers in the rest of the country where BEL has chosen not to reopen its satellite offices since the COVID-19 Pandemic. As such, it is unable to justify the \$3.2M investment proposed for the construction of this drive-thru at BEL's headquarters in Belize City. Similarly, the Commission also questions the construction of four new facilities across the country at the cost of approximately \$26M, when, again, BEL continues to keep existing facilities closed to the public.

36. Accordingly, the Commission is allowing the sums of \$73,427,878 in approved projects as detailed in **Schedule 8** and \$285,095,697 in approved projects that require further justification to form a part of the adjusted RAV as detailed in **Schedule 9**. The Commission is unable to substantiate how the other projects, amounting to \$170,554,349, should form Part of the RAV. These projects are listed in **Schedule 10**.
37. The Commission is prepared to review or vary its Decision on the projects that are listed in **Schedule 9**, where BEL can show that the projects are beneficial to consumers and are in the best interest of BEL that such project(s) should be approved.
38. The \$78 million of BEL's actual CAPEX for 2020|2024 FTP that has not been approved by the Commission will now be removed from the Work in Progress (**WIP**).
39. The Commission approves the adjusted RAV and various calculations as provided in **Schedule 2**.

#### RATE OF RETURN (ROR)

40. Section 7 of the Electricity Act (*the "Act"*) requires that the Commission, in setting rates, must afford BEL the opportunity to realize a reasonable rate of return. Section 7(4) specifically requires that BEL should secure a reasonable rate of return on

investment when operating in a manner compatible with international standards of an efficiently operated power system of similar characteristics to that of Belize;

41. In its submission, BEL requested a ROR Upper Limit of 12%, Lower Limit of 8% and a Target Limit of 10%, throughout the entire FTP. The company also requested a Gearing ratio (G) of 60% and Interest Rate for Interest during Construction (**IDC**) of 8%.
42. Upon request by the Commission to substantiate this proposal, BEL provided further clarification in its Responses stating that, the Weighted Average Cost of Capital (**WACC**) of BEL has historically been calculated using a target ROE of 8%, the average rate of interest on debt is 5.2% and a G of 37.32%. BEL provided a calculated WACC of 6.96%.
43. BEL proffers that while the PUC's target rate of 8.5% in ARP 2023|2024 is reasonable, it is insufficient if the level of operating expenses allowed is not increased in line with BEL's 2023 actuals and forecasted figure – failing this adjustment, then the target ROR should be reset at 10% for this FTP to provide for the shortfall in earnings due to understated OPEX allowance.
44. On May 1, 2024, Caribbean Utilities Company, LTD ("**CUC**") of Cayman Islands released its Quarter One (2024) Results and Strategic Milestones on their website at [https://www.cuccayman.com/fronthome/download\\_pdf?file=1714654325cuc\\_1st\\_quarter\\_2024\\_results\\_010524.pdf](https://www.cuccayman.com/fronthome/download_pdf?file=1714654325cuc_1st_quarter_2024_results_010524.pdf).

According to that report, CUC's Return on Rate Base for 2022 was 7%, 2023 was 7.76% and their targeted return for 2024 is in the range of 8.25% to 10.25%.

45. The Commission, having reviewed BEL's response and calculations and giving regard to its obligation under law and the projection by CUC for 2024, decided that the ROR Upper Limit of 10%, lower limit of 6% and a target of 8% was reasonable. The Commission accepted BEL's authorized G of 60% and Interest Rate for IDC of 8% as requested, and this is provided for in **Schedule 4**.

DEPRECIATION

46. The electricity utility is very capital intensive and thus depreciation forms a major component of costs, which must be recovered in tariffs. Any changes or adjustments to the formula for determining depreciation expense may thus result in substantial gains or losses to the regulated entity. For this reason, the Commission must balance smoother tariffs along with giving BEL an incentive to continue to invest in new or replacement assets.

Consequently, in the Commission's 2020|2024 FTRP Decision, it harmonized the depreciation rate at 4.7% on the RAV (Fixed assets less Mollejon line and contributed capital). The Commission has determined that this depreciation rate and the reasoning behind it should likewise apply in this 2024|2028 FTRP.

OPERATIONAL RESOURCES [OPEX, GEC, COP OVERHEADS]:

47. In the 2020 FTRP, the Commission approved an OPEX of \$133,052,897 for the 2020|2024 FTP. In this instant Submission, BEL is now proposing the sum of \$193,900,293 for the 2024|2028 FTP.

48. In summary, BEL is asking for a 45% increase in OPEX amounting to \$60,847,396. The Commission noted that this significant increase in OPEX is driven over the FTP by these four major cost drivers, which amounts to almost 75% of OPEX projection as follows:

- (a) Staff/Payroll Expenses - \$33.7 MN;
- (b) Computer hardware and software support - \$5.5 MN;
- (c) Contract labour and professional fees - \$2.7MN; and
- (d) Vegetation management - \$2.5 MN

49. Staff/Payroll Expenses, alone, accounts for half of this increase in OPEX as BEL proposes to increase its payroll expense by \$6.2M in the first year (2024 to 2025) and thereafter increasing this expense by 3% annually, up to 2028. This increase in payroll also has a consequential effect other staff costs such as pension contribution,

severance, bonuses and other benefits.

The Commission had asked BEL to justify this leap in payroll expense in one year; however, the company failed to do so during the Public Hearing and in response to the Discrepancy Note. The Commission can therefore not support such a drastic increase in staff costs for the next FTP and, as alluded to earlier, BEL is urged to revisit its cost structure.

50. In relation to OPEX generally, the Commission had to look at international industry accepted standards for guidance. Based on the PUC's research, the following information was noted:

- (a) United States (US-PPI) Producer Price Index for Manufacturers rose 26.5%;
- (b) US Energy Information Administration ("*US-EIA*") reported price inflation for the energy sector from 2020 thru to 2023 was 20.6%; and
- (c) US Electric Coops saw revenue requirements rise 19.5% from US\$17,000/mile before the pandemic to US\$19,135/mile.

51. Given the above, the Commission approved an OPEX in line with the US-EIA inflation rate of 20.6%. This is reflected as an increase for the first year of the 2024-2028 FTP and subsequently, OPEX will escalate at the rate of 1.5% annually for the remaining FTP. The same applies to General Expenses Capitalized (**GEC**) as shown in **Schedule 4**.

52. BEL has historically treated the function of the Control Centre as part of COP, while the Commission has historically applied this cost under OPEX. In line with industry norms and BEL's accounting treatment, the Commission now reflects this cost under Cost Of Power below.

*COST OF POWER (COP):*

53. **Table 3** below references BEL's proposed Dispatch and Production Costing modelling for the period 2024|2028. Some of the major considerations included in



such a model are as follows:

- (a) Thermal supply options are priced as follows:
  - i. Comisión Federal de Electricidad (CFE) \$0.1500/kWh;
  - ii. Gas-fired \$0.1600/kWh;
  - iii. HFO-fired \$0.3584/kWh; and
  - iv. Diesel-fired \$0.6083/kWh.
  
- (b) Capacity additions such as, Battery Energy Storage Systems (BESS) and the new diesel-fired power plants (*the Mile 8 Gas Turbine* (GT) upgrade and the San Pedro GT) were not dispatched in BEL’s Model;

**Table 3. – BEL’s Schedule 3 in FTRP 2024|2028 Filing**

Year	2024 2025	2025 2026	2026 2027	2027 2028
KWHrs Purchased and Generated - KWHrs	838,026,092	890,072,844	938,925,458	985,908,814
Reference Cost of Power - \$	189,893,977	191,163,836	196,162,777	200,869,148
Approved Consumption/Demand - KWHrs	733,297,198	780,124,227	824,402,984	865,883,747
Reference Cost per KwHr Consumed - \$/KWHr	0.2590	0.2450	0.2379	0.2320

The Commission notes that despite the addition of 33 MW of diesel-fired sources in 2024, which is intended to support the growth in demand and has an operational cost of \$0.6083/kWh, BEL is projecting that COP will continue to fall over time from 26 cents to 23 cents.

- 54. The Commission in reviewing BEL’s Submission, accepted the following as presented by BEL:
  - (a) BEL’s forecasted production from in-country Independent Power Producers (IPPs);
  - (b) that 2024 will be a drought year;
  - (c) the forecasted demand;
  - (d) the forecasted losses; and
  - (e) the Peak demand.

55. The Commission revised and modified the dispatching of solar and battery energy storage to be in alignment with the Central Executing Unit’s timeline for the completion of these projects. The Commission’s Model anticipates an earlier deployment of Solar on a must dispatch basis, a reduction in the use of CFE especially during the day, the use of BESS for storage of excess solar and the dispatching the batteries when peaking prices are higher.
56. Consistent with the Commission’s Final Decision – Consent to Purchase Refurbished 21 MW Mobile Gas Turbine for San Pedro, Ambergris Caye, dated December 22, 2023, the Commission, in this Decision, approves no more than 5MW of capacity charge up to December, 2026, when the Commission anticipates that the San Pedro Second submarine cable will be installed.

The Commission reiterates that this determination is aligned with its previous Order dated 22 December 2023, in relation to the potential shortfall in supply to San Pedro.

57. As it relates to the Caye Caulker plant, BEL is projecting that it will discontinue generation on Caye Caulker by December, 2024. The Commission, in its dispatch, will keep the plant in as a backup capacity until December 2026 when the San Pedro Second submarine cable to is expected to be in place.
58. After applying the above considerations to its revised dispatching model, the Commission estimates that COP will be higher that estimated by BEL as shown in the

**Table 4** below:

Year	2024 2025	2025 2026	2026 2027	2027 2028
KWHrs Purchased and Generated - KWHrs	826,146,625	886,809,577	940,629,678	1,005,156,954
Reference Cost of Power - \$	197,795,232	210,221,388	222,052,635	223,612,302
Approved Consumption/Demand - KWHrs	726,425,940	779,867,982	825,420,943	866,836,377
Reference Cost per KwHr Consumed - \$/KWHr	0.2723	0.2696	0.2690	0.2580

**Table 4**

59. The Commission’s dispatch model, as shown in **Table 5** below, features the following highlights:
- (a) Reduced dependency on the supply from CFE;
  - (b) It has a large penetration of renewable solar energy into the system;
  - (c) Total production of energy from renewable sources will increase to 65% by 2028;
  - (d) Fossil fuels are also dispatched as part of in-country generation for energy security and reserve capacity.

Energy Supply - PUC Model					
Source	2024	2025	2026	2027	2028
Hydro	26.2%	27.8%	26.1%	24.8%	23.5%
Bio Mas	12.2%	11.3%	10.6%	10.1%	9.6%
Solar	0.1%	3.2%	18.2%	31.9%	32.2%
CFE	49.6%	46.7%	34.5%	24.4%	29.4%
Fossil Fuels	11.9%	11.2%	11.5%	12.0%	7.0%
BESS	0.0%	-0.1%	-0.9%	-1.3%	-1.2%
Possible exports	0.0%	0.0%	0.0%	-2.0%	-0.4%
Energy Production MWh	794,390	859,546	915,483	961,323	1,009,609
Renewable Energy	38.5%	42.2%	54.9%	66.8%	65.3%

**Table 5**

*CORRECTIONS:*

60. Following established practice, the Commission uses actuals from BEL’s monthly sales report to validate revenues and from BEL’s actual invoices from their IPPs and BEL’s invoice estimate spreadsheet to validate COP.
61. BEL in its Response to the Commission’s questions have confirmed that the San Pedro-Caye Caulker/submarine cable project has not been completed since 2018, as the company had committed. The Commission maintains its right to impose the 1% penalty on the RAV as being binding on BEL and has so applied it as reflected in **Schedule 1**.
62. Schedule 1 also provides for the corrections done for the completed ATP 2022|2023.

The Commission undertook an estimated corrections for ATP 2023|2024 which is still running by using 8 months of actual data, and is forecasting the remaining 4 months. The Commission has decided to include this correction in this FTRP analysis in Schedule 1 as a preliminary correction that will be reconciled in the next ATP.

63. In the proposed Schedule 1 of its Submission, BEL includes a Prior Period Corrections Outstanding in the sum of \$31,032,023. The Commission affirms its previous decision in ARP 2023 that BEL ought to have objected at the stage of the Initial Decision otherwise the Commission is mandated to finalize its Initial Decision.
64. The Commission stresses that based on the Byelaws, it has no authority to retrospectively revisit rates that were determined to be just and reasonable at the time that those rates were set. BEL should have put forward its objections at the Initial Decision, at which time the Commission would have had to revisit its decision. By failing to do so, BEL cannot *repeatedly* request that the Commission go contrary to the clear language of the Byelaws to revisit what it calls Prior Period Corrections. Consequently, the Commission does not recognize this sum as submitted by BEL in **Schedule 1**.
65. Finally, all variances that exist between the forecasted and the actual regulated values in each remaining year of the FTP are applied to the remaining years of the FTP and consequently cumulative corrections are fully paid during an FTP.

*NEW PROPOSED TARIFFS:*

66. BEL has repeated its filing in this FTRP Submission for new tariffs for Distributed Generation, Electric Vehicle charging, and Tourism. These rates had been filed previously in ARP 2023|2024 and the Commission reaffirms its Decision and Order dated April 10, 2024, **Belize Electricity Limited (Grid-Tied and Feed-In, Electric Vehicle Charging, Spanish Lookout and Tourism Rate) Decision** and as provided in **Schedule 6 B**.
67. In this instant Submission, BEL proposes to introduce an additional consumption

bucket for Residential and Commercial I Customers with a tariff that is two cents higher for consumption above 300 kWh per month and to eliminate a bucket of Commercial II Customers that had the lowest rate. This proposed rate increase is contingent on whether there is a delay in the rollout of utility-scale solar beyond the 2025 timeline.

On the basis of BEL's own submission, the Commission has decided not to increase existing rates and hereby approves **Schedules 6A**. The Commission reserves a decision on the two cents increase for those Residential and Commercial I customers who consume above 300 kWh per month as this remains contingent on future events.

68. The Commission makes no changes to any other fees and charges and hereby approves **Schedule 7**.

*TAXES AND LICENCE FEES:*

69. The Commission accepts and approves the annual taxes and licence rates as submitted by BEL.

**VI. THE COMMISSION'S FINDINGS AND CONCLUSIONS**

70. As previously indicated in this Decision, the Commission's initial view of BEL's submission was that the submission was lacking some critical supporting data. The Responses filed by BEL pursuant to the Interim Order of the Commission provided additional, but not all, details on the Submission.
71. The Commission therefore relied on BEL's initial submission, the Responses, and other available resources such as information from the Central Executing Unit, the Industry Standards Inflation Rates post Covid-19 and Industry Accepted Fossil Fuel Rate Indicators to complement.
72. The Commission then applied the Rate Setting Model to determine the regulated values to be applied over the 2024-2028 FTP.

73. There will be no change the existing rates payable by ratepayers.
74. The Commission is in full support of Grid Modernization especially where it would benefit ratepayers in achieving better service at a lower cost. The Commission urges BEL to commence Grid Modernization Proceedings and reiterates that BEL must properly explain all the subcomponents of this project, as Ordered in the previous FTRP 2020 and the subsequent ARPs, listed in **Schedule 9**.
75. In BEL's Filing, the proposed investment in vehicles, specialized equipment, computers, and office equipment ("Capital Goods") for the 2024|2028 period is \$33.8 million. Currently the value of BEL's stock of Capital Goods is approximately \$13 million and normal investment level is \$11 million over a given four-year period. BEL's proposal for this FTRP is to triple the normal rate of Capital Goods, making it difficult to reconcile. As such, the Commission has included approximately \$23.5M in Schedule 9, which requires BEL to provide further justification before these expenditures are approved.
76. The Commission reiterates its position that any other CAPEX project or capital works submitted by BEL, not identified in **Schedule 8 or 9**, are excluded from the RAV and the justifications for its Decision are stated in **Schedule 10**.
77. In accordance with the **Operational Resources/OPEX, GEC, COP OVERHEADS Section** above, the Commission reassessed the OPEX as proposed by BEL and instead has applied a 20.6% price escalation, in accordance with the US Energy Information Administration (Electricity Subsector) and applied it to the OPEX approved in the 2020|2021 ATP.
78. Give the above, the allocation of operational resources over the entire FTP shall be as follows:
- (a) OPEX - \$155.5 million;
  - (b) GEC - \$13 million;
  - (c) COP Overheads + Control Room - \$8.8 million.

79. In accordance with the **Operational Resources/OPEX, GEC, COP OVERHEADS Section**, the Commission reassessed the GEC submitted by BEL and similarly adopts the 20.6% price escalation in accordance with US-EIA as its benchmark on the GEC approved in the 2020/2021 ATP.
80. The Commission's dispatch model being used in this FTRP 2024 is in conformity with its Planning Determination and aligns with the Central Executing Unit project timeline. This model presumes that the share of renewables in 2028 electricity mix is approaching 66% and there will be a reduced reliance on CFE Mexico.
81. In its Planning Determination the Commission recognized that the 2042 peak demand of 155 MW that was forecasted in BEL's Least Cost Expansion Plan (LCEP) will likely be achieved as early as 2028. As such, there is an urgent need to undertake a comprehensive least cost expansion plan (LCEP) by end of 2025, to formulate adequate Supply-side expansion, Demand-side programmes, an integrated transmission/distribution plan and feasible regional interconnections for the period 2027 and beyond.
82. The Commission reiterates and affirms its previous decision in ARP 2023 that the cost associated with other unregulated business investments and commercial ventures should not be paid for by the ratepayers. As such, BEL is reminded to institute accounting separation so that all costs and revenues associated with these new commercial ventures can clearly be segregated.
83. The Commission expresses its gratitude to the Management of BEL for consenting to the granting additional time to finalize this Initial Decision.

  
**DEAN MOLINA**  
**Chairman**  
**Public Utilities Commission**

**DECISION OF THE COMMISSION**

**BELIZE**

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*ORDER made by the Public Utilities 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, Byelaw 20 of the Electricity (Tariff, Fees and Charges) Byelaws, as amended, and all other powers thereunto the Commission enabling.*

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**Short Title.** 1. This Order may be cited as the:

**BELIZE ELECTRICITY LIMITED (FULL TARIFF REVIEW PROCEEDINGS) INITIAL DECISION ORDER, 2024.**

**Decisions and Orders.** 2. The Belize Electricity Limited (“BEL or the Company”) submitted its filing for its Full Tariff Review Proceedings on March 22, 2024 (the “Filing”) for the determination of regulated values, mean electricity rates, tariffs, rates, charges and fees for the Full Tariff Period (FTP) September 1, 2024, to June 30, 2028.

3. The Public Utilities Commission (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 forecast Consumption and 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), General Expenses 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 Rate (MER) 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 6A and 6B, and hereby orders the Belize Electricity Limited (BEL) to levy the said Tariffs in respect of the electricity services it is licensed to provide;
- (g) The Commission hereby approves the Fees and Charges and Deposit requirements contained in Schedule 7, and hereby orders the Belize Electricity Limited (BEL) to continue to levy the said approved Fees and Charges in respect of the relevant electricity services it is licensed to provide
- (h) The Commission hereby approves all capital works contained in Schedule 8 hereby ORDERS the Belize Electricity Limited to seek approval for any projects not listed, or any investments exceeding the quantum stated in the said Schedule 8.
- (i) The Commission reserves its approval on the capital projects listed in Schedule 9, subject to BEL providing proper justification and obtaining approval from the Commission.
- (j) The Commission does not approve any capital projects listed Schedule 10 to be included in the RAV.

**Amendment**

- 4. This Order may be amended at any time during an Annual review Proceeding (ARP) within the FTP, subject to the provisions of the subject to the provisions of the Electricity (Tariff, Fees and Charges) Byelaws, as amended.

**MADE** by the Public Utilities Commission this        day of        , 2024.

**(DEAN E. MOLINA)**  
*Chairperson, Public Utilities Commission*

**Schedule 1  
FTRP 2024|2028**

**Belize Electricity Limited (BEL)  
Annual Corrections - September 1, 2022 - June 30, 2023**

**General Corrections - July 1, 2022 - June 30, 2023**

<b>Approved Tariff Basket Revenue - \$:</b>	<b>260,741,938</b>
<b>Realized Tariff Basket Revenue - \$:</b>	<b>252,362,945</b>
<b>Variance (Total Approved less Total Realize) -\$:</b>	<b>8,378,992</b>
<b>Disallowed Costs - CCK Penalty</b>	<b>(4,033,474)</b>
<b>Regulatory Account Balance -\$</b>	<b>4,345,519</b>

Caye Calulker Penelty is equivalent to 1% of the ending Regulated Asset Value of 2023

**Belize Electricity Limited (BEL)  
Forecasted Annual Corrections - July 1, 2023 - June 30, 2024**

**General Corrections - July 1, 2023 - June 30, 2024**

<b>Approved Tariff Basket Revenue - \$:</b>	<b>298,177,985</b>
<b>Realized Tariff Basket Revenue - \$:</b>	<b>274,795,861</b>
<b>Variance (Total Approved less Total Realize) -\$:</b>	<b>23,382,124</b>
<b>Regulatory Account Balance -\$</b>	<b>23,382,124</b>

**Schedule 2**  
**FTRP 2024|2028**  
**Belize Electricity Limited (BEL)**

**Rate Review for FTRP 2024|2028**  
**Approved Regulated Asset Value (RAV) for Full Tariff Period (FTP) September 1, 2024 to June 30, 2028**

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

<b>Year</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
<b>Starting RAV</b>	403,347,365	432,018,994	455,921,040	475,842,223	538,855,686	600,872,663
<b>Depreciation</b>	19,835,221	20,304,893	21,428,289	22,364,584	25,326,217	28,241,015
<b>Work In Progress</b>	7,942,208	82,367,305	82,909,484	89,277,474	82,250,967	48,849,964
<b>Additions</b>	81,002,164	7,942,208	82,367,305	82,909,484	89,277,474	82,250,967
<b>Net Contributed Capital</b>	1,168,630	265,247	3,805,285	(2,739,653)	(1,249,715)	(1,274,715)
<b>Ending RAV</b>	432,018,994	455,921,040	475,842,223	538,855,686	600,872,663	659,670,583

Schedule 3  
 FTRP 2024|2028  
 Belize Electricity Limited (BEL)

Updated Cost of Power (COP) Parameters and Demand for Full Tariff Period (FTP) July 1, 2024 to June 30, 2028

Rate Review for FTRP 2024|2028

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

Year	2024 2025	2025 2026	2026 2027	2027 2028
KWHrs Purchased and Generated - KWHrs	826,146,625	886,809,577	940,629,678	1,005,156,954
Reference Cost of Power - \$	197,795,232	210,221,388	222,052,635	223,612,302
Approved Consumption/Demand - KWHrs	726,425,940	779,867,982	825,420,943	866,836,377
Reference Cost per KwHr Consumed - \$/KWHr	0.2723	0.2696	0.2690	0.2580

<b>System Operation</b>				
Power Purchase Overheads \$	950,000	950,000	950,000	950,000
Control Center Operations	1,251,881	1,270,659	1,289,719	1,309,065
<p style="text-align: center;">PUC Note: Only expenses supported by invoices will be accepted for Power Purchase Overheads. The approved amount is the            Maximum expenses allowed.</p>				

Schedule 4  
 FTRP 2024|2028  
 Belize Electricity Limited (BEL)  
 Rate Review for FTP 2024|2028

Approved Rate of Return (ROR), OPEX, and Gearing Ratio (G) for Full Tariff Period (FTP) September 1, 2024 to June 30, 2028

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

Period	2024 2025	2025 2026	2026 2027	2027 2028
<b>ROR Lower Limit</b>	6.5%	6.5%	6.5%	6.5%
<b>ROR Target Limit</b>	8.0%	8.0%	8.0%	8.0%
<b>ROR Upper Limit</b>	10.0%	10.0%	10.0%	10.0%

Approved OPEX for each ATP of the FTP \$:

Period	2024 2025	2025 2026	2026 2027	2027 2028
<b>OPEX</b>	37,973,229	38,542,827	39,120,970	39,707,784
<b>GEC</b>	3,176,913	3,224,566	3,272,935	3,322,029

<b>Approved Gearing Ratio (G) - FTP</b>	0.6
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<b>Interest Rate for IDC (after approved Gearing Ratio) - FTP %</b>	8.0
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Schedule 5  
FTRP 2024|2028  
Belize Electricity Limited (BEL)

Tariff Basket Revenue (TBR) and Mean Electricity Rate (MER) for Full Tariff Period (FTP) September 1, 2024 to June 30, 2028

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

Year	2024 2025	2025 2026	2026 2027	2027 2028	Total FTP
<b>Revenue Components of TBR:</b>					
Value added of Delivery (VAD)					
OPEX	37,973,229	38,542,827	39,120,970	39,707,784	155,344,810
Return	36,473,683	38,067,378	43,108,455	48,069,813	165,719,329
Depreciation	20,304,893	21,428,289	22,364,584	25,326,217	89,423,983
Taxes/License Fees	8,328,866	8,773,188	9,293,122	9,577,863	35,973,039
Sub-Total (VAD)	103,080,671	106,811,682	113,887,131	122,681,678	446,461,162
Reference Cost of Power	197,795,232	210,221,388	222,052,635	223,612,302	853,681,557
Corrections - ATP 2023 2024 Forecasted	5,845,531	5,845,531	5,845,531	5,845,531	23,382,124
- ATP 2022 2023	1,086,380	1,086,380	1,086,380	1,086,380	4,345,519
Less: Other Income	(4,939,959)	(4,939,959)	(4,939,959)	(4,939,959)	(19,759,838)
<b>Tariff Basket Revenue</b>	<b>302,867,854</b>	<b>319,025,021</b>	<b>337,931,717</b>	<b>348,285,931</b>	<b>1,308,110,523</b>
Demand [MWhs]	726,426	779,868	825,421	866,836	3,198,551
MER - July 1, 2024 - June 30, 2028	0.4169	0.4091	0.4094	0.4018	0.4090
Direct Cost of Delivery (COD) - \$:	0.1304	0.1257	0.1267	0.1305	0.1283
Corrections + Taxes - Other Income - \$:	0.0127	0.0124	0.0124	0.0121	0.0124
Cost of Power (COP) - \$:	0.2723	0.2696	0.2690	0.2580	0.2669

**Schedule 6A  
FTRP 2024/2028**

Belize Electricity Limited (BEL)

**Belize Electricity Limited (BEL)**  
Approved Tariffs for Full Tariff Period (FTP)  
September 1, 2024, to June 30, 2028

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

**Schedule 6B  
FTRP 2024/2028**

Belize Electricity Limited (BEL)

**Belize Electricity Limited (BEL)**  
Approved Tariffs for Full Tariff Period (FTP)  
September 1, 2024, to June 30, 2028

<b>Demand Rate</b>		
<b>All Classes</b>	Demand (KVA)	30.00
	Energy: Peak	0.35
	Energy: Off-Peak	0.30
<b>FEED-IN TARIFFS</b>		
<b>All Classes</b>	Energy	0.13
<p>Note: All customers (Prosumers) operating under SI No. 39 of 2024 ELECTRICITY LICENSING AND CONSENT REGULATION, will be billed by Belize Electricity Limited using this Schedule (6B).</p> <p>Any regular customer can voluntarily apply switch from Schedule 6A to Schedule 6B</p> <p>This Demand Rate is being considered a "Regulatory Sand-Box" and will be running for the ATP 2024/2025. That is from 1st September 2024 to 30 June 2025.</p>		

Schedule 7  
FTRP 2024|2028  
Belize Electricity Limited (BEL)

Approved Fees and Charges effective September 1, 2024

<b>Service Fees and Charges/Penalties</b>		
<b>Description</b>	<b>Customer Classification</b>	<b>Fee/Charge (\$,%)</b>
New Connection		200.00
Temporary Supply		200.00
Service Upgrade/Service Relocation		55.00
Move In/Activation/Transfer		40.00
Temporary Disconnection by Request	Social	10.00
Reconnection (after Temporary Disconnection by Request)	Residential, Commercial 1 & 2	15.00
	Commercial 2 with CT Meter & Industrial	100.00
Reconnection (Disconnection for Non-payment)	Social	10.00
	Residential, & Commercial 1	15.00
	Commercial 2	25.00
	Commercial 2 with CT Meter & Industrial	150.00
Reconnection at Pole (Disconnection for Non-Payment or Tampering)		150.00
Returned Cheque		25.00
Replacement of damaged meter		150.00
Replacement of damaged meter cover		50.00
Replacement of Meter due to Service/Meter Tampering		40.00
Pole Rental (Monthly Fees per attachment per Pole)	Telecommunications Operations (PSTN, Etc)	2.75
	Cable Operators - Cities/Towns	1.50
	Cable Operators - Rural	1.20
Late Payment Penalty (Applied to Arrears over 30 days less Deposit)	Commercial 2, Industrial	0.83% / Month
<b>Deposits:</b>		
<b>Service Size</b>	<b>Customer Classification</b>	<b>Fee/Charge (\$)</b>
60 Amps Service	Residential	50.00
	Commercial 1	100.00
100 Amps Service - 45 kVA Dedicated Service	Residential	100.00
	Commercial 1	200.00
	Commercial 2	1,000.00
112.5 kVA Dedicated Service		3,000.00
225 kVA Dedicated Service		8,000.00
500 kVA Dedicated Service		15,000.00
1000 kVA Dedicated Service		30,000.00

**Notes:**

\* To be applied together with other applicable fees/charges/penalties, after summary conviction for Service/Meter Tampering  
The Commercial 1 category shall be applied to commercial customers with average monthly consumption less than 2,500 kilo-watthours.  
The Commercial 2 category shall be applied to commercial customers who are not classed as Commercial 1 or Industrial.  
Where any requested service requires that extraordinary costs be incurred by a Licensee, the Licensee may recover some or all of such costs as determined according to a relevant methodology contained in any relevant and approved Code of Practice required by the Conditions of the License granted to such Licensee.



**Schedule 8**  
**FTRP 2024|2028**  
**Belize Electricity Limited (BEL)**

**Approved Project for Full Tariff Period (FTP) September 1, 2024 to June 30, 2028**

	<b>APPROVED</b>					<b>Total Approved</b>
	2024	2025	2026	2027	2028	2024-2028
<b>TRANSMISSION AND SUBSTATIONS UPGRADE</b>						
San Pedro Substation Standardization	-	3,553,340	-	-	-	3,553,340
Corozal Substation Standardization	153,760	-	3,300,000	-	-	3,453,760
Transmission Line Upgrade Project (Fiber Glass Poles)	-	1,081,000	1,081,000	-	-	2,162,000
Belize City Substation Upgrade Project	1,967,693	-	-	-	-	1,967,693
Replacement of Transmission Line Structures Country-Wide	933,760	397,341	130,634	131,940	133,260	1,726,935
Other Substation Standardization & Redundancy	647,180	145,345	70,000	70,000	-	932,525
BELCOGEN Project	1,288,011	36,900	-	-	-	1,324,911
Belmopan 22kV Sub Upgrade	630,000	-	-	-	-	630,000
Chan Chen - BELCOGEN OPGW Installation	325,000	-	-	-	-	325,000
Spanish Lookout Interconnection	-	200,000	-	-	-	200,000
<b>NEW CUSTOMER CONNECTIONS</b>						
PUC Allocation for New Customers and Universal access	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	25,000,000
<b>DISTRIBUTION SYSTEM RELIABILITY IMPROVEMENT</b>						
Standards & Safety	2,334,381	2,534,371	2,028,467	1,701,242	1,744,654	10,343,115
Replacement of Rotten & Burnt Poles	1,854,919	2,079,624	1,551,216	1,316,047	1,287,885	8,089,691
Belmopan Feeder #4 Separation	308,000	257,000	105,000	85,000	-	308,000
Meters and Meter Seals Replacement	1,142,760	-	-	-	-	1,142,760
<b>OPERATIONS SUPPORT</b>						
Specialized Work Equipment	1,469,723	914,180	450,000	400,000	350,000	3,583,903
<b>STREETLIGHTS</b>						
New & Replacement LED Street Lights	4,840,836	1,126,886	905,508	905,508	905,508	8,684,245
<b>TOTALS</b>	<b>22,896,023</b>	<b>17,325,987</b>	<b>14,621,825</b>	<b>9,609,737</b>	<b>9,421,306</b>	<b>73,427,878</b>

**Schedule 9**  
**FTRP 2024|2028**  
**Belize Electricity Limited (BEL)**

**Approved Project requiring justifications for Full Tariff Period (FTP) September 1, 2024 to June 30, 2028**

	2024	2025	2026	2027	2028	2024-2028
<b>TRANSMISSION SYSTEM EXPANSION</b>						
2nd Submarine Interconnection - Mainland to San Pedro	5,823,000	24,005,010	24,005,010	-	-	53,833,020
Belize District Metropolitan Area Grid Upgrade	636,000	3,450,000	-	19,170,000	16,330,000	39,586,000
New La Democracia-Dangriga 115 kV Interconnection	1,566,500	-	9,860,000	24,140,000	-	35,566,500
Caye Caulker Submarine Interconnection	21,208,986	-	-	-	-	21,208,986
New 115kV Circuit to Belmopan and Substation Upgrade	2,252,320	4,400,000	-	-	-	6,652,320
<b>CONNECTION OF NEW GENERATION</b>						
Utility-Scale Solar PV Interconnections Country-Wide	-	-	2,500,000	2,500,000	2,500,000	7,500,000
Independence Interconnection for GT Plant	-	-	-	2,500,000	-	2,500,000
<b>TRANSMISSION AND SUBSTATIONS UPGRADE</b>						
BELCOGEN Substation Upgrade (New Transformer)	-	-	3,600,000	-	-	3,600,000
San Ignacio Substation Upgrade (New Transformer)	-	-	3,420,000	-	-	3,420,000
Chan Chen Substation Upgrade (New Transformers)	-	-	3,300,000	-	-	3,300,000
Independence Substation Upgrade (New Transformer)	-	3,150,000	-	-	-	3,150,000
Dangriga Substation Upgrade (New Transformers)	-	3,000,000	-	-	-	3,000,000
<b>DISTRIBUTION SYSTEM RELIABILITY IMPROVEMENT</b>						
Reliability Improvement for Distribution Operations	4,687,062	4,489,596	2,689,627	1,727,296	1,463,391	15,056,972
Placencia Submarine Replacement	374,000	3,280,000	-	-	-	3,654,000
<b>GRID MODERNIZATION</b>						
Smart Grid (Country-wide Rollout AMI)	1,990,000	3,980,000	7,960,000	7,960,000	11,940,000	33,830,000
Redundant Telecommunications Infrastructure	2,786,275	1,170,948	1,962,824	136,664	136,664	6,193,375
GIS & Field Service Management System	962,749	874,154	597,200	97,200	147,200	2,678,503
Other Grid Modernization Projects	455,192	100,000	100,000	150,000	-	805,192
<b>INFORMATION TECHNOLOGY &amp; CYBERSECURITY</b>						
Digital Work Environment	-	-	-	-	-	-
Cybersecurity & Business Continuity Projects/Programs	1,150,000	400,000	400,000	400,000	-	2,350,000
OT System & Network Upgrades	1,151,390	445,002	518,088	844,234	426,056	3,384,770
Digital Customer Service	775,196	295,196	65,000	50,000	40,000	1,225,392
Computer Hardware	2,203,606	680,220	432,480	432,480	177,000	3,925,787
Computer Software	3,775,730	2,032,090	1,171,640	734,555	1,406,640	9,120,655
<b>OPERATIONS SUPPORT</b>						
New Vehicle & Upgrades	2,012,083	2,957,024	4,861,706	4,861,706	4,861,706	19,554,225
<b>TOTALS</b>	<b>53,810,089</b>	<b>58,709,240</b>	<b>67,443,575</b>	<b>65,704,135</b>	<b>39,428,657</b>	<b>285,095,697</b>

**Schedule 10**  
**FTRP 2024|2028**  
**Belize Electricity Limited (BEL)**

**Projects excluded from the RAV for Full Tariff Period (FTP) September 1, 2024 to June 30, 2028**

	<b>Disallowed</b>	<b>Item Number</b>	<b>ProjID</b>	<b>Justification for Commission Decision</b>
<b>GENERATION EXPANSION</b>				
Gas Turbine Repowering	20,105,205			Generation Capital is recovered in the PPA or via Capacity Charge as approved by the PUC
San Pedro Mobile GT	44,000,000			
Dispatch & Generation Planning Software	1,919,527			
Generation Projects	934,213			
<b>TRANSMISSION SYSTEM EXPANSION</b>				
Engineering Studies	4,067,616			These items are not Assets
ROW Easement Land Acquisition	1,584,000			
<b>CONNECTION OF NEW GENERATION</b>				
<b>TRANSMISSION AND SUBSTATIONS UPGRADE</b>				
BAPCOL Substation & Interconnections (Upgrade & Expansion)	7,552,850			BEL has removed dispatching of BAPCOL as of 2027
Other Substation Standardization & Redundancy	6,000	466/467	TSSEP #12	Project Management - Not an asset
<b>FACILITIES EXPANSION &amp; UPGRADE</b>				
New Operations Headquarters - John Smith Road	20,205,240			PUC needs a comprehensive report on the use of the existing facilities before considering new construction.
Drive-Thru Cashiering Facility (Coney Drive)	3,197,108			
Construction of New San Ignacio Operations Facility	3,134,208			
Construction of New Independence Operations Facility	2,204,508			
Facilities Renovation	1,143,768			
<b>NEW CUSTOMER CONNECTIONS</b>				
Urban & Peri-Urban Electrification	44,548,412			The Commission decided to approve a special allocation for Regular Line extension (explained in the decision)
Rural Electrification (Standard)	1,300,000			
Rural Electrification (Micro-Grid)	11,208,076			This is considered Capital Contribution and is exempted from RAV
<b>DISTRIBUTION SYSTEM RELIABILITY IMPROVEMENT</b>				
Reliability Improvement for Distribution Operations	117,000	118	MRP #13	Meter Management System - not an asset
<b>GRID MODERNIZATION</b>				
DG & EV Programs	3,000,000			Not a Regulated Activity
Other Grid Modernization Projects	248,000	939	DSPE #21	Grid Modernization Consultancy is not an asset
<b>OPERATIONS SUPPORT</b>				
Specialized Work Equipment	78,619	123	SM #02	Employee Electric Stove program - not a regulated activity
<b>TOTAL</b>	<b>170,554,349</b>			

Schedule 11  
FTRP 2024|2028  
Belize Electricity Limited (BEL)

Reconciliation of Projects for Full Tariff Period (FTP) July 1, 2020 to June 30, 2024

**Total CAPEX Summary**  
**Five Year Business Plan 2020 - 2024**  
(in thousands of Belize Dollars)

Total Summary	PLAN 2020	PLAN 2021	PLAN 2022	PLAN 2023	PLAN 2024	
Generation	4,925	325	-	-	-	5,250
Transmission	27,515	28,822	49,259	30,256	253	136,105
Land	2,500	-	-	-	-	2,500
Substation	12,118	2,205	500	500	593	15,916
Distribution	15,497	10,014	9,405	9,280	9,149	53,345
General Properties	5,417	3,817	585	438	220	10,477
Transportation	2,400	2,574	2,901	2,505	1,878	12,258
Capitalized Interest	3,021	2,277	3,007	2,063	560	10,928
Administrative Cost	2,615	2,654	2,709	2,751	2,793	13,523
<b>Total Capex</b>	<b>71,083</b>	<b>52,363</b>	<b>68,366</b>	<b>47,793</b>	<b>15,446</b>	<b>255,052</b>
PUC confirmed projects that were not done (totals)	15,000	28,475	48,975	30,000	-	122,450
Approved CAPEX Balance (Requiring BEL justification)	56,083	23,888	19,391	17,793	15,446	132,602
BEL CAPEX actuals	34,708	41,781	93,420	86,085		255,995
Un approved CAPEX by PUC	(21,374.94)	17,893.03	74,029.26	68,291.90		138,839
PUC Inflation adjustment (25%) of Approved CAPEX Balance						165,752
CCK Submarine cable Actuals (up to end of 2023)				12,100.00		12,100.00
Total CAPEX approved						177,852.05
Disallowed CAPEX						78,143.13

List of Approved Projects for FTRP 2020 2024	2020	2021	2022	2023	2024	Total
TSI - Maintenance/System Improvement	315	347	284	256	253	1,455
Caye Caulker to San Pedro Link at 34.5 kV	15,000					15,000
2nd submarine cable from Mainland to San Pedro		18,975	18,975			37,950
Tx Lines: (i) 22kV for Westlake to Ladyville, (ii) 115kV for Chan Chen	1,800					1,800
Interconnection 15 MW Solar- BAPCOL		6,500				6,500
Interconnection 25 MW gas-fired P/P in Dangriga		3,000				3,000
2nd Tx Line to Xul-Ha, Mexico from Camalote			30,000	30,000		60,000
Transmission hardening under Worldbank ERCAP	8,200					8,200
34.5kV Tx Lines: (i) BelCoGen to Orange Walk, (ii) Chan Chen to Corozal	2,200					2,200
SSI - System Improvement	-	-	-	-	93	93
SSE - System Expansion	337	-	-	-	-	337
CDB Power VI: Belize City 6.6KV Switchgear, Palloti, Belcogen, Chan-Chen S/S	7,800					7,800
WB-GEF: BAPCOL substation and Substation Control Building Improvements	1,700	1,700				3,400
General reinvestment in S/S	500	500	500	500	500	2,500
SLR - Loss Reduction	1,776	-	-	-	-	1,776
SSSI - Standards & Safety Improvements	5	5	-	-	-	10
System Expansion	4,577	4,577	4,577	4,577	4,577	22,885
Reliability Improvement	4,445	2,210	1,759	1,912	1,683	12,009
Loss Reduction Upgrade primary lines from 6.6kV to 22kV: (i) Placencia, (ii) San Pedro	2,189	-	-	-	-	2,189
Standards & Safety Improvements	2,686	2,127	1,969	1,691	1,789	10,262
Street Lights	1,600	1,100	1,100	1,100	1,100	6,000
Specialized Equipment	714	1,743	181	108	101	2,847
Office Equipment	86	27	24	22	25	184
Computing Equipment	660	1,515	42	6	3	2,226
Communications Equipment	2,031	259	78	42	26	2,436
Land	2,500	-	-	-	-	2,500
Buildings	1,926	273	260	260	65	2,784
Transportation	2,400	2,574	2,901	2,505	1,878	12,258
Interest Charged to Construction	3,021	2,277	3,007	2,063	560	10,928
Administrative Cost	2,615	2,654	2,709	2,751	2,793	13,522
Totals	71,083	52,363	68,366	47,793	15,446	255,051