

**FINAL REPORT**

**REVIEW OF BEL'S OBJECTIONS TO THE PUC'S INITIAL DECISION - 2024 FTRP**

**SUBMITTED TO:**

**BELIZE PUBLIC UTILITIES COMMISSION**

**SUBMITTED BY:**

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# INTRODUCTION

## BACKGROUND:

Every four years the Public Utilities Commission of Belize (PUC) conducts a “Full Tariff Review Period (FTRP)” proceeding to help determine electricity tariffs for electric customers. The FTRP evaluates the Belize Electricity Limited (BEL) utility’s filing and arrives at an annual revenue requirement for BEL for each of the four years looking forward. From there, the PUC determines the “Mean Electricity Rate (MER)” that consumers pay for the consumption of electricity. The PUC also conducts annual reviews to determine any reconciliations needed for revenue and certain expense variations (actual vs forecast) and to change any ratemaking parameters that may affect tariffs.

The PUC is now conducting its current FTRP for the 2024- 2028 period that runs from November 1, 2024, to June 30, 2028. BEL submitted its filing to the PUC on March 22, 2024<sup>1</sup>. The PUC issued an interim Order on April 12 and posed several questions for BEL to respond to<sup>2</sup>. BEL submitted its responses to the PUC on April 17, 2024<sup>3</sup>. The PUC issued its initial decision on June 29, 2024<sup>4</sup>. The PUC made numerous adjustments to BEL’s proposal. BEL filed its objections on July 24, 2024, to the PUC’s initial Order<sup>5</sup>. The PUC is expected to issue its final decision soon.

## SCOPE OF THE INDEPENDENT REVIEW

When the utility files objections to the PUC initial decision, per Belize Electricity Byelaws<sup>6</sup>, the PUC must hire an independent expert to review the objections and provide a recommendation. As a result of the RFP process the PUC conducted, Dr. Raj Addepalli was appointed as the Independent Expert (IE). This report has been prepared by IE.

IE has been asked to respond in its report to the following objections raised by BEL.

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<sup>1</sup> See BEL’s FTRP filing at <https://www.puc.bz/bel-rate-case-submission-for-ftp-2024-2028/>

<sup>2</sup> See PUC Interim Order at <https://www.puc.bz/interim-order-bel-2024-full-tariff-review-proceedings/>

<sup>3</sup> See BEL Responses to PUC questions at <https://www.puc.bz/bel-responses-to-questions-as-per-puc-interim-order-of-april-12-2024/>

<sup>4</sup> See PUC Initial Decision at <https://www.puc.bz/initial-decision-on-bels-2024-2028-ftp/>

<sup>5</sup> See BEL’s objections at <https://www.puc.bz/bel-objection-to-pucs-initial-decision-in-respect-of-bels-rate-case-submission-for-ftp-2024-2028/>

<sup>6</sup> Pursuant to Section 23 and 24 of the Electricity (Tariffs, Fees and Charges) Byelaws, as amended, the PUC.

- (a) **PUC's Initial Decision to disallow full recovery of Cost of Power associated with the deployment of the 21-MW TM2500 gas turbine in San Pedro per the PUC's "Final Decision – consent to purchase refurbished 21 mw mobile gas turbine for San Pedro, Ambergris Caye" dated December 22, 2023.**
  - (i) Failure of Generation Procurement Process administered and spearheaded by the PUC.
  - (ii) The TM2500 is a superior solution to alternatives.
- (b) **Generation and Dispatch Plan and estimates of energy supply costs underlying the PUC Initial Decision.**
  - (i) The Recent Events require an Acceleration of the Plan to Install In-Country Renewables backed up by Firm Capacity.
  - (ii) The Recent Events have drastically increased COP in the current period and is expected to persist into the near future, causing a substantial financial burden on the Company given current rates.
- (c) **OPEX allowance amounts proposed in the PUC's Initial Decision.**

The OPEX allowance increases proposed by the PUC are arbitrary and account for inflation only.
- (d) **Parameters proposed for return in the PUC's Initial Decision**
  - (i) The lower limit of the ROR cannot be set at less than the Weighted Average Cost of Capital.
  - (ii) The Target ROR will not allow BEL to cover all its costs given the cap on OPEX.
  - (iii) The Regulated Asset Value will be understated because of Disallowances by the PUC.
- (e) **PUC'S regulatory account balance accumulated within the FTP 2020-2024.**
  - (i) The Regulatory Balance amount (in favour of BEL) determined by the PUC understated due to errors in the accounting for the transactions.
  - (ii) The PUC does not have the authority to change ROR parameters within an FTP.
  - (iii) The PUC must give BEL the benefit of the doubt that CAPEX that was not approved by the PUC but still spent was used in the best interest of Customers.
  - (iv) The PUC has a duty to ensure that BEL recovers all its reasonable costs.
- (f) **Penalties imposed by the PUC for delays in completing the Caye Caulker submarine interconnection.**
  - (i) The Penalties imposed by the PUC are arbitrary and actually counter-productive to BEL's efforts to deliver safe, reliable, and sustainable energy solutions to its Customers.

The scope of the Independent Expert also states that it shall not make any determination as it relates to:

- 1) new information that was known to BEL at the time of its FTRP Submission and which differs in a material respect from that provided to the PUC prior to arriving at its Initial Decision
- 2) new information which became known to BEL after the time of its FTRP Submission; and
- 3) statutory interpretation that is the exclusive jurisdiction of the PUC or the High Court of Belize to determine.

## **APPROACH OF THE INDEPENDENT REVIEW**

The independent review will be objective and unbiased. Clearly, the regulatory framework of Belize will be followed, and any international best practices will be presented where necessary and appropriate. It is understood that the PUC will use this report among other inputs in making its final decision on the FTRP.

The IE reviewed all the relevant public documents relevant to the objections. Further, the IE spoke to both the PUC staff and BEL staff. The IE posed several clarification questions to both. This report has been prepared based on the document review and discussions with the two parties<sup>7</sup>.

The objections of BEL are grouped into the following groups of issues and discussed further:

- 1) Cost of Power (COP)
- 2) Operating Expenses (OPEX)
- 3) Rate of Return (ROR)
- 4) Performance Penalties and
- 5) Regulatory Balancing Account

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<sup>7</sup> The author acknowledges the support provided by Mr. Tillett at the PUC and Mr. Westby at BEL for arranging meetings with their teams and responding to inquiries.

## **COST OF POWER**

### **BEL OVERALL OBJECTION:**

- 1) BEL disagrees with the PUC's Initial Decision to disallow full recovery of Cost of Power (COP) associated with the deployment of the 21-MW TM2500 gas turbine in San Pedro per the PUC's "Final Decision – consent to purchase refurbished 21 MW mobile gas turbine for San Pedro, Ambergris Caye" dated December 22, 2023, as it believes the TM2500 is a superior solution to alternatives.
- 2) BEL asserts that recent events have drastically increased the COP in the current period compared to the PUC determination.

### **BEL INITIAL SUBMISSION:**

In its initial filing, BEL lists in Table VII (page 15) all the major capital projects it proposes to undertake. Among them is the generation project "San Pedro Mobile GT," (Mobile GT) at an estimated cost of \$44 million. In Section 3.6 Cost of Power, it includes the mobile GT in its schedule Table X: Schedule of Generation Capacity Additions, starting in 2024. However, in Table XI: Production (Dispatch) Outlook, the output (MWh) from the mobile GTs is shown to be zero for 2024-2026.

Table XI also projects the annual COP cost to rise from about \$190 million in 2024/25 to about \$201 million in 2027/28, for a total FTRP cost of about \$778 Million over the FTRP period.

### **PUC DETERMINATION:**

The Commission divided the BEL proposed capital investments into three groups: those that are allowed for cost recovery (listed in Schedule 8 of the Initial Decision), those that BEL needs to provide further justification (Schedule 9) and those that are excluded (Schedule 10). The mobile GT project is listed in Schedule 10 with the comment that "Generation Capital is recovered in the PPA or via Capacity Charge as approved by the PUC."

The PUC elaborates further on this topic stating (paragraph 56 of the Initial Decision): "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.”

Regarding the total COP cost issue, the Commission used its own modeling of resources and dispatch and arrived at a total COP estimated cost of \$854 million for the 2024/28 period (see Table 4 in Paragraph 58). It accepted some of BEL assumptions but changed some, resulting in a higher estimated COP total cost than BEL’s.

### **BEL OBJECTION FILING:**

- a) In its objection filing, BEL recites the history of the generation procurement process in Belize. It argues that the mobile GT generation is superior to the alternatives being proposed by the PUC.
- b) Additionally, it updated the generation resource and dispatch for the FTRP 2024-28 considering change in assumptions such as higher purchase costs from CFE, its expected solar pricing etc. As a result, now BEL projects the total COP cost to be around \$973 million as opposed to the \$778 million in its initial filing and the \$854 million estimated by the PUC.

### **ANALYSIS:**

#### **MOBILE GT ISSUE:**

It is worth noting that there were a few PUC decisions on this matter prior to this FTRP. The PUC in its FTRP-2020 Final Decision approved \$39 million for the 2<sup>nd</sup> (redundant) Submarine Cable from the Mainland to Ambergris Caye, based on the expected contraction of the cable headroom in the existing submarine cable. When BEL did not commence Consent proceedings (per s. 52 of the Electricity Act), in a subsequent ARP-2021, the PUC escalated the issue and imposed a penalty regime. In September 2023, BEL made a filing to the PUC for provision of

temporary supply via a Mobile GT in San Pedro be approved. The December 2023 Decision by the Commission considered and concluded the September 2023 request.

In its 2023 December decision<sup>8</sup>, the PUC considered BEL proposal for the mobile GT, and the comments received on the proposal and ordered BEL to use an open competitive method to lease or purchase appropriately sized containerized units, amounting to no more than 5 MW, that can be deployed in San Pedro, Ambergris Cay.

Later, in the Least Cost Expansion Plan (LCEP) adopted by the PUC on March 12 2024<sup>9</sup>, this topic was addressed. According to the LCEP decision, on January 20, 2024, BEL wrote to the PUC indicating that: "...the original request for the 21 MW Plant in San Pedro was made pursuant to data analysis demonstrating sustained spikes in demand for electricity with the potential to exceed energy supply capacity and BEL's further assessment that the procurement processes for new generation cannot be completed in time to bridge the gap in power supply. BEL takes this opportunity to inform the PUC that the Company is furthering its analysis in the context of the Least Cost Expansion Plan (LCEP) to affirm that the 21 MW mobile gas turbine can achieve similar or better technical and economic performance as the gas-to-electricity plant options originally contemplated in the LCEP. BEL therefore retracts its original request for approval of the acquisition of the gas turbine until further notice." The Commission in response noted that it will await BEL's further analysis before deciding on this matter (see page 17).

Considering these two recent Commission decisions, it is unclear why this issue is once again raised in the FTRP proceeding with no new information per se since the last two decisions. As mentioned in the LCEP decision, the Commission seems to be open to receiving further analysis from BEL justifying the mobile GT investment. BEL should take advantage of it and file supporting evidence as soon as possible to allow the Commission to judge the issue on its own merits. Given

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<sup>8</sup> PUC Order dated December 22, 2023, "Final Order: Consent to Purchase one refurbished 21 MW Mobile Gas Turbine at the cost of approximately \$30 million Belize dollars."

<sup>9</sup>PUC Order: "Final Determination and Order; Belize Electricity Limited; Least Cost Expansion Plan," dated March 12, 2024



the annual reconciliation process available for COP costs, it is not essential that it be determined in this FTRP at this time. But the sooner the better.

### **UPDATED COP COSTS:**

In the first instance, the terms of the Independent Expert (IE) review do not allow new information which became known to BEL after the time of its FTRP Submission to be considered. It appears that the reason for the change in the COP costs in this objection filing in July 2024 is due to BEL's observation of changes in costs of certain generation inputs since its initial filing. Further, BEL has not provided specific evidence in how it arrived at its new COP estimate. The PUC and other stakeholders must have an opportunity to review the new BEL update before passing judgment on it. Hence, this report will not opine on the merits of the updated COP costs. That said, it should be noted that this cost element is typically reconciled annually for variance in forecast vs actual, unless there are some specific issues that the PUC raises. It is anticipated that BEL will rely on the annual review process to address any variations in COP costs from the forecasts embedded in the tariffs.

It is also unclear whether the PUC and BEL are using the same modelling methodology and assumptions to forecast COP costs. Clearly, if the methodology or assumptions differ, they could lead to different forecasts. There must be a process to agree upon the methodology well ahead of filing COP costs in FTRPs or other reviews.

### **CONCLUSION AND RECOMMENDATION:**

As mentioned in the LCEP decision, the Commission seems to be open to receiving further analysis from BEL justifying the mobile GT investment. BEL should take advantage of it and file supporting evidence as soon as possible to allow the Commission to judge the issue on its own merits.

Based on the terms of reference for the IE review, the updated COP costs by BEL for the FTRP cannot be considered in this review as it is new information submitted after the Initial PUC decision. The two parties must agree on a common methodology in future COP cost forecasting exercises. If there is a difference in assumptions, they must be clearly articulated.

## **OPERATING EXPENSES (OPEX)**

### **BEL OVERALL OBJECTION:**

The OPEX allowance increases proposed by the PUC are arbitrary and account for inflation only.

### **BEL INITIAL SUBMISSION:**

In the 2020 FTRP, the Commission approved an OPEX of about \$133 million for the 2020|2024 FTP (about \$33 million per year). In this instant Submission, BEL proposed an OPEX level of about \$194 million for the 2024|2028 FTP (about \$49 million per year). In response to the questions from the PUC, BEL explained that the 46% increase in average annual OPEX is driven by 'payroll expenses, contractor services, and information, technology and cybersecurity expenses, each accounting for 47%, 13% and 6% of OPEX respectively'<sup>10</sup>. Further, it states that the increases in payroll and contractor expenses are a function of labour market prices and increases in work volume. It asserts that its OPEX to MWh sales ratio has been steady over the years and is on the lower end relative to other utilities it compared itself to. It also asserts that the OPEX as % of net fixed assets remained steady for years and could go down in the next FTRP period.

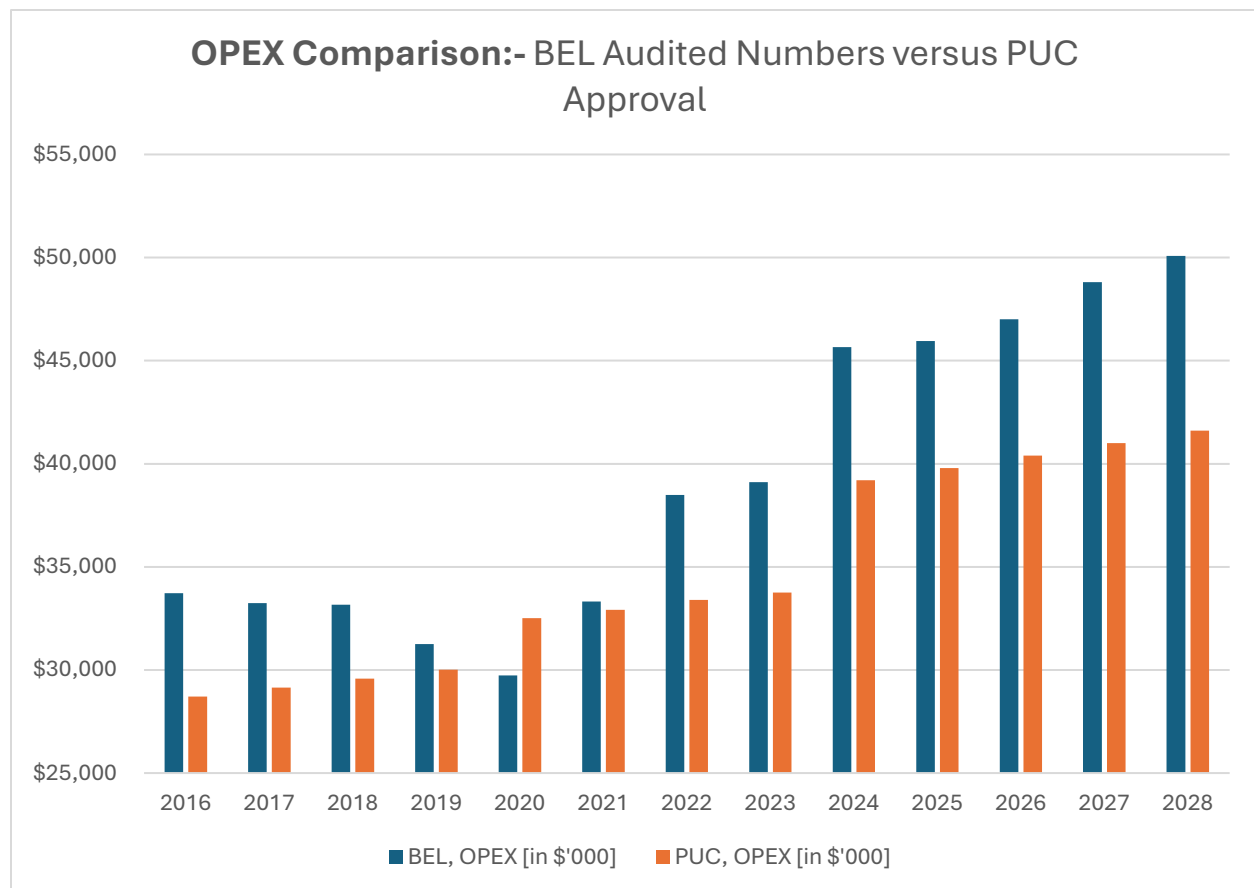
In its response to PUC questions, BEL emphasizes that the volume of work done at BEL is a direct function of the net fixed assets in operation, which has increased by 29% since 2019 and is expected to increase by a further 50% by the end of 2028. It also notes that BEL staff complement has increased by 16% over the past 4 years and is expected to increase by a further 10%-15% over the next four years. It also notes that given the competition for technical skilled labour, it updated its salary scales in 2021, increasing the mid-point by about 16%, based on a consultant study. This resulted in a one-time average base salary increase of 5.1% for non-management employees and 5.6% for management employees. They have further increased pay by about 4.6% annually.

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<sup>10</sup> See pages 7 and 8 of BEL responses to PUC questions.

## PUC DETERMINATION

The PUC analysed historical OPEX proposals by BEL and the PUC determinations for OPEX as shown in the following chart prepared by the PUC staff<sup>11</sup>. It should be noted that the PUC allowed BEL what it asked for in OPEX level in the 2020/24 FTRP.



While BEL underspent OPEX relative to the allowance in 2020 (perhaps due to Covid), it started spending more than the allowance from 2022 and beyond. The PUC reviewed the BEL submission and found that the significant increase in OPEX is driven by these four major cost drivers, which amounts to almost 75% of OPEX projection as follows<sup>12</sup>:

(a) Staff/Payroll Expenses - \$33.7 million

<sup>11</sup> Source: PUC staff power point Presentation: “BEL’s FTRP-2024 Proceedings, Considerations and Issues.”

<sup>12</sup> PUC Initial Decision, Page 15, Paragraph 48.

- (b) Computer hardware and software support - \$5.5 million
- (c) Contract labour and professional fees - \$2.7 million and
- (d) Vegetation management - \$2.5 million

The PUC's initial decision states that the 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 and that this increase in payroll also has a consequential effect other staff costs such as pension contribution, severance, bonuses and other benefits. The Commission states that it had asked BEL to justify this leap in payroll expense; and that the company failed to do so during the Public Hearing and in response to the Discrepancy Note.

The Commission did some benchmarking for the potential OPEX cost increases and noted that:

- (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.

Using the above data, the Commission approved an OPEX in line with the US-EIA inflation rate of 20.6% to increase OPEX for the first year of the 2024-2028 FTP. It applied an escalation rate of 1.5% annually for the remaining FTP for OPEX and to General Expenses Capitalized (GEC).

The PUC also moved the Control Centre related costs as part of COP where they belong functionally.

### **BEL OBJECTIONS FILING:**

BEL states that the OPEX allowance increases proposed by the PUC are arbitrary and account for inflation only. It claims that the PUC has tied the initial OPEX increases to a US-based inflation index and thereafter at a fixed 1.5% per year with no explanation as to the reason for choosing 1.5%. BEL maintains its position that OPEX annual allowance should be trued up to its estimated 2024 operating expenses and thereafter increased at a rate equal to the rate of increase in the value of net fixed assets (or regulated asset value) or sales. It asserts that this adjustment to OPEX would better provide for actual costs of delivery for this element of VAD.

BEL reiterates that, over the past 15 years, OPEX as a percentage of its net fixed assets has remained constant at an average of 6.47% with a standard deviation of 0.58%, and it asserts that in a capital-intensive industry the costs of operating and maintaining assets are directly proportional to the value of the assets in service. BEL claims that its requested OPEX allowance is well below the global benchmark for comparable electric utilities.

## **ANALYSIS**

First, costs associated with the Control Centre have been moved from OPEX to COP account where they rightfully belong<sup>13</sup>. The PUC used benchmarking from relevant US markets to account for price change in the energy sector over the last several years and increased the starting 2024 OPEX level accordingly. In response to the PUC's April 12, 2024, questionnaire as to why OPEX costs increased, the company stated its net fixed assets went up in the last four years and are expected to go up further in the future. But it appears that BEL has not provided the network representation and associated network datasets to substantiate its claims. Further, the PUC asked for justification from BEL for the significant increase in payroll costs, which account for 75% of increase in OPEX costs. The PUC stated that "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 BEL responded that it is having to pay increased labour costs to be competitive to attract and retain competent technical staff and having to increase the staffing size.

Clearly, the PUC is concerned about an overall increase in costs. It stated 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<sup>14</sup>." Given the nature of the PUC questions considering the cost increases relative to revenue increases, it is expecting detailed granular substantiation from BEL for the significant cost increases, and the BEL responses fell short of the PUC expectations and needs. Regarding labour costs, the PUC expects

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<sup>13</sup> See Paragraph 52 of the PUC Initial Order.

<sup>14</sup> See paragraph 19 (f) of the Initial Order.

productivity improvements from BEL employees going forward, especially given the increased capital expenditure by BEL that should lead to some productivity savings. Typically, with increased capital deployment and increased automation, there should be productivity gains. Further, over time, employees become more productive with increased experience on the job. So, it is very common for regulators to apply a productivity adjustment to labour costs, and it is considered as a best practice.

BEL itself claims that inflation projection for Belize is expected to be very low. In its initial filing, in Section 2.1.2, BEL states that: “Average inflation is also projected to moderate to 1.2 percent over the medium term, improving purchasing power and stimulating consumer demand locally.” Using this best practice of adjusting the labour cost increases to account for productivity, the use of 1.5% as an annual escalation factor going forward is not unreasonable. This is especially true, given the significant raises in labour costs in the last few years.

Of course, BEL needs to be reimbursed O&M allowance in the revenue requirement sufficient to meet its operating expenses to carry out reliable and safe service to its customers, and for modernization of its infrastructure. However, the burden of showing the increases in work volumes and how they translate into higher O&M costs rests on the utility to provide the PUC sufficient evidence to justify the increases. It appears not to have been met. BEL’s use of the metric of O&M costs as a % of its Regulated Asset Value is partially valid on typical O&M costs. Given the record in the case, the RAV itself is in question as to its accuracy, given the disputes on many capital items. Typically, some of the increased work effort will generally be capitalized and included in the asset base for recovery over the asset life.

### **CONCLUSION AND RECOMMENDATION:**

The PUC escalation of OPEX to 2024 using benchmark data is not unreasonable. The escalation rate of 3-6% over 4 years going forward is very reasonable, with the projected inflation and expected productivity savings. In the future, in its FTRP applications, BEL must submit substantial granular evidence to support its increases in O&M costs, both the scope/volume and increased inflation and other drivers. There should be an understanding with the PUC as to the level of detail the PUC considers necessary to justify an increase.

## **RATE OF RETURN**

### **BEL OVERALL OBJECTION:**

The utility objects to three parameters proposed for the return in the PUC's Initial Decision:

- The lower limit of the Rate of Return (ROR) cannot be set at less than the Weighted Average Cost of Capital (WACC).
- The target ROR will not allow BEL to cover all its costs given the cap on OPEX imposed by the PUC.
- The Regulated Asset Value will be understated because of disallowances by the PUC.

### **BEL INITIAL SUBMISSION:**

In its initial 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%. On page 18 of its initial filing, it states that "BEL assumes a required rate of return on equity at 10%, equal to that received by regulated utilities in other jurisdictions....and a cost of debt of 6.5%. It is important to note that while BEL's average effective interest rate is closer to 5.5%, this is reflective of historically low levels of borrowing compared to equity financing (with retained earnings) in a more favorable interest rate environment. Going forward, interest rates are expected to increase for example, in 2023, BEL was offered a loan facility from the Inter-American Development Bank at rates near 7.0%. Applying a weight of 60% of capital provided by debt and 40% provided by equity, BEL estimates its WACC at 8%." However, it wants the ROR to be set at 10%, if BEL's OPEX is not adjusted by the PUC to the level it proposed for 2024/28; to provide for the shortfall in earnings due to understated OPEX allowance by the PUC.

Separately in responses to PUC questions, BEL offers a WACC level of 6.96%, derived by using cost of debt of 5.2%, equity cost of 8% and weights of 37% and 63% respectively for debt and equity<sup>15</sup>.

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<sup>15</sup> See page 10 of BEL responses to PUC questions.

## **PUC DETERMINATION:**

The Commission decided that the ROR target level of 8%, and upper and lower limits of 10% and 6% respectively are reasonable. The Commission accepted BEL's authorized Gearing ratio of 60% and Interest Rate for IDC of 8% as requested, and this is provided for in Schedule 4 of the PUC Order.

## **BEL OBJECTION:**

The utility wants the ROR to be at least equal to the Weighted Average Cost of Capital (WACC), which it states it demonstrated as 6.96%. It is concerned with the target ROR of 8% and the lower limit of 6%, as the PUC did not allow for the level of OPEX it sought and is concerned that its actual ROR will fall below the lower ROR target level and hence will not result in realizing the WACC it believes is necessary. BEL further objects to the PUC disallowance of several capital expenditures for 2024/28 that would effectively reduce the Regulated Asset Value on which it earns the return. The disallowance of the RAV is to the tune of \$91 million in various areas including New Customer Connections (about \$46 million), Facilities Expansion and Upgrade (about \$30 million), Connection of New Generation (about \$7.5 million) and Transmission (about \$6 million).

## **ANALYSIS:**

The actual Return on Equity (ROE) can differ from what is built into the revenue requirement. The lower and upper limits of ROR specified in the Order have no practical meaning per se. While certain revenue and expense items are reconciled on an annual basis, there is no reconciliation for actual vs target ROE built into the revenue requirement. The target ROE is only an opportunity for the utility to earn at that level, if all forecasts come true; there is no guarantee that the utility will earn the target ROE. Given the ratemaking and reconciliation mechanisms in place, the utility could earn more or less than the target ROE level depending primarily on how it performs on OPEX relative to the forecast. This is a common international practice in ratemaking. It is supposed to send a signal to the utility to be more efficient and productive to reduce costs (relative to forecast) so it can increase its earnings, while maintaining quality of service.



The PUC decided OPEX allowance based on its evaluation of reasonable expenditure level. In making decisions, the Commission typically must balance many interests including those of the utility and the customers. They have broader 'public interest' standard as a guide. The utility is expected to follow the PUC guidance. If it is not satisfied with the OPEX level, it can petition on the merits of that allowance level<sup>16</sup>. But to ask for an increased ROR based on anticipated utility OPEX spending of more than the PUC allowance for OPEX is not justified. If the utility spends OPEX at levels corresponding to the PUC allowance, it can achieve its earnings, all else equal.

Regarding the disallowance of certain proposed Capex items for 2024/28, the PUC offers justification in its Initial Order as to why it is disallowing these proposed expenditures. The Commission reviewed the need for these expenditures and concluded they should not be incurred. It weighed several factors in reaching its decision. In its objection filing BEL simply listed the elements disapproved by the PUC but failed to identify specifically why it is objecting to the Commission's disallowance of those items. The burden generally lies on the utility to justify its expenditures. Even if the utility believes it justified the need, the PUC in balancing various interests, can scale back on the capex as it sees fit. Clearly when certain proposed capex items are removed, the regulated asset value would be less than what it otherwise could be. That by itself is not a justification to increase the ROR.

## **CONCLUSION AND RECOMMENDATIONS**

BEL suggests using a gearing ratio (debt %) of 60% and cost of debt at 6.5%, ROE @10% to arrive at a WACC of 8%. (Initial filing- Section 3.4, page 19).  $[\.6 \times 6.5\% + .4 \times 10\%]$ <sup>17</sup>. Hence the PUC determination of 8% ROR is not unreasonable and is justified.

The lower and upper ROR levels do not have any practical implications. The reduction of OPEX elements is in the discretion of the PUC as it weighs several competing interests in deciding the level of OPEX that it believes is reasonable and is in the public interest. In the same vein, the PUC has the discretion to disallow certain proposed capex projects based on its analysis.

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<sup>16</sup> It should be noted that in the last FTRP, the PUC pretty much accepted the OPEX forecast of BEL and incorporated that into the revenue requirement.

<sup>17</sup> It should be noted that the actual cost of debt per BEL filing is only 5.2%. If WACC is computed using this cost of actual debt (rather than potential marginal cost), it would be 7.12%

## **PERFORMANCE PENALTY**

### **BEL OVERALL OBJECTION:**

The penalties imposed by the PUC for delays in completing the Caye Caulker submarine interconnection are arbitrary and counter-productive to BEL's efforts to deliver safe, reliable, and sustainable energy solutions to its customers.

### **PUC DETERMINATION:**

In arriving at the Regulatory Account Balance in Schedule I of its Initial Order, the PUC applied a Caye Caulker Penalty of about \$4 million (equivalent to 1% of the ending Regulated Asset Value of 2023). The Commission opined that as the submarine cable projects remain outstanding even though the Commission imposed a penalty against BEL in ARP 2018, it maintains its right to impose the 1% penalty on the RAV as being binding on BEL.

To recite some of the history here, the 2016 FTRP approved \$15 MN in rates for the cable. In the ARP-2018, the PUC found that BEL, after 2 years, had progressed only to the feasibility phase of project maturity, and in its Initial Decision, the Commission intended to impose penalties at the next ARP. Based on the ARP2018 Independent Expert's recommendation, the PUC postponed implementation of a penalty regime by one year. BEL was essentially given one year's grace period to make substantial progress on the project. Subsequently, in late 2018, BEL made a presentation to the Commission outlining how it intended to make substantial progress and shared a Gantt Chart committing to completion by March 2020<sup>18</sup>.

### **BEL OBJECTION FILING:**

BEL claims that it has previously objected to this penalty in previous ARPs on the basis that "...penalty for delays with the Caye Caulker interconnection project is arbitrary and

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<sup>18</sup> See BEL System Planning and Engineering Presentation in October 2018, "San Pedro to Caye Caulker Supply via Submarine Cable (6 miles) and associated Lines and Substations." Slide 13.

disproportional to the anticipated performance outcome and does not fully consider factors outside of BEL's control legitimately excusing delays.”

BEL also questions whether the PUC has statutory authority to enact a penalty of this kind. BEL also states that it carried out an in-depth analysis of the cost savings that would have accrued to customers in general if Caye Caulker had been connected to the grid based on actual consumption, energy supply costs, and available capacity on the grid over the period from January 2021 to June 2024. The analysis, according to BEL, shows that as the cost of interconnection increases, the savings are lower and could become negative. It believes that in all cases, the total penalties imposed by the PUC are disproportionate to the savings that would have been achieved if Caye Caulker had been interconnected to the grid since January 2021<sup>19</sup>.

BEL also claims that Caye Caulker has enjoyed the lowest SAIDI and SAIFI numbers over the past few years, and especially during the load shedding events over the past three months. It also believes that after a 1.7 MW generating unit was deployed in Caye Caulker in 2020 because of rising demand, the case for interconnecting Caye Caulker was no longer as viable, and it decided to revisit the scope of the project and increase the interconnection capacity given the observed growth rate.

BEL believes that the \$15.4 million penalty is unreasonable and disproportionate, and it is being penalized for making decisions in the best interest of consumers.

## **ANALYSIS:**

This issue has been lingering for several years and is not new. To begin with, the PUC has the right to specify the performance it expects from the utilities it regulates, especially as they affect price or service levels. The law includes the phrase “an efficiently operated power system<sup>20</sup>,” that gives the PUC the right to define what an efficiently operated power system is. The use of performance metrics and rewards/penalties for performance is a commonly accepted international norm in many countries. The PUC has also put BEL on notice for years and there is no surprise here. In the 2018 Annual Review Proceeding, the PUC reduced the rate of return

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<sup>19</sup> See BEL Objection Filing, Page 21, Table VIII of the filing: “Caye Caulker Interconnection Savings vs Interconnection Cost.

<sup>20</sup> See S. 7-(4) (a) of the Electricity Act. However, the IE is not rendering a legal opinion.

from 10% to 9% and indicated it would be restored if the utility made progress<sup>21</sup>. So, the PUC expectation of performance and the use of incentives or penalties is not without precedence.

BEL proffers a benefit/cost analysis table showing negative savings now. But, in their 2018 filing on the CCK Connection,<sup>22</sup> BEL indicated the project financial payback will be under 4 years. The PUC accepted their calculations at that time and asked the company to move forward with the project and instituted the performance mechanism.

The PUC staff compiled the following table based on COP data<sup>23</sup>.

<b>Caye Caulker Energy Costs: (kWh x RCOP) versus (Cost to Run Generators)</b>				
	2021	2022	2023	2024
CC Demand (kWh)	9,186,579	12,209,042	14,111,795	12,499,110
RCOP (\$/kWh)	0.2052	0.2372	0.2565	0.2421
CC COP (\$/kWh)	0.4052	0.6987	0.5916	0.5883
AT RCOP (\$)	763,953	2,023,177	2,141,304	1,780,112
AT CC COP (\$)	3,722,133	8,530,522	8,349,057	7,353,732
Delta (\$)	2,958,181	6,507,346	6,207,753	5,573,620

The table shows the cost with reference cost of power with the line vs the cost of power with local expensive generation on the island. It shows that the line would have saved customers about \$3 million in 2021, \$6.5 million in 2022, \$6.2 million in 2023 and about \$5.6 million in 2024. This table appears to show that the penalty level of about \$4 million is less than the lost savings to customers in 2022-2024

The next question is whether the performance level or penalty level are reasonable, and the PUC basis for imposing the 1% of RAV penalty level. The performance metric is essentially completing

<sup>21</sup> See 2018 Annual Review Order, dated April 30, 2018, Page 12, item (f): “At the conclusion of the last FTRP, the PUC impressed upon BEL that it considered the interconnection of Caye Caulker to the National Grid of utmost priority due to the obvious benefits to both BEL and consumers. BEL was requested to complete the proposed interconnection within 2 years of the FTRP, being June 30, 2018. The PUC is not satisfied with the progress made in this regard. Consequently, the PUC reduced the Rate of Return (RoR) for 2019-20 to 9%. Where BEL has made progress satisfactory to the PUC in executing the interconnection by the next ARP, the PUC will restore the RoR for 2019-20 to the target value of 10%.”

<sup>22</sup> BEL System Planning and Engineering Presentation in October 2018, “San Pedro to Caye Caulker Supply via Submarine Cable (6 miles) and associated Lines and Substations.” Slide 12.

<sup>23</sup> Source: PUC staff

the line, and it is unambiguous. The PUC calculated the penalty level based on expected consumer savings in the initial and later years after the project is in place that would not otherwise be realized if the project is not in place. It estimated in the early years the savings would be in the range of \$2.4MN and grows annually with load growth. Rather than peg the penalty to *ex-post* savings that is a judgement on how to dispatch, the Commission implemented a fixed figure that has a comparable value. The 1% of RAV, which was higher than the anticipated savings, was assumed to be an even bigger incentive for BEL to perform.<sup>24</sup> In any event, the table presented above seems to suggest that the lost customer savings are greater than the penalty level.

BEL claims that customers have not suffered any harm, especially after it deployed a 1.7MW generating unit on Caye Caulker. If true, it is good to note that customers have nor suffered reliability problems. But the PUC decision for implementing the performance mechanism in the first instance was based on expected customer savings. Customers did not suffer reliability problems later is no justification to void the performance mechanism put in place prior to that period.

## **CONCLUSION AND RECOMMENDATION:**

The PUC is justified in implementing performance mechanisms to incentivize the utility to act if it believes to be in the customers' interest. In this case, the PUC relied on a study produced by BEL and accordingly implemented the performance mechanism. The fact that some parameters may have changed in later years does not void the PUC right to implement and execute the incentive mechanism.

Going forward, it would be ideal if there is a meeting of the minds among parties on rewards/penalties for any new performance parameters. While the motivation for the performance metrics is to motivate the utility, it would be helpful if the utility also buys into it. That said, to motivate the utility to perform, the Commission has the right to impose performance metrics and incentives/penalties on metrics that it believes are in the public interest.

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<sup>24</sup> Source: PUC staff

## **REGULATORY ACCOUNTING BALANCE**

### **BEL OVERALL OBJECTION:**

BEL asserts that the Regulatory Balance amount within the FTP 2020/24 determined by the PUC is understated due to errors in the accounting for the transactions. It also asserts that the PUC does not have the authority to change the Rate of Return parameters within an FTP; the PUC must give BEL the benefit of the doubt that the CAPEX that was not approved by the PUC but still spent by BEL was used in the best interest of customers and that the PUC has a duty to ensure that BEL recovers all its reasonable costs.

### **PUC INITIAL ORDER DETERMINATION:**

In its Initial Order, the PUC denied \$78 million dollars that were spent on CAPEX by BEL for the FTP 2020/24 that were not approved by the PUC or justified by BEL in the PUC view. The Commission also ruled that the Regulatory Account Balance of \$31,032,023 in Schedule I of the BEL filing cannot be allowed (paragraph 63 of the Order). It affirmed its previous decision in ARP 2023 that BEL ought to have objected at the stage of the Initial Decision.

It further 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 I.”

### **BEL OBJECTION FILING:**

1) The Regulatory Balance amount (in favour of BEL) determined by the PUC understated due to errors in the accounting for the transactions.

BEL states that it previously brought to the PUC's attention the need to revisit and revise the Regulatory Account Balance (RAB) due to errors in the accounting for the corrections in response to the PUC's Initial Decision on the 2023 ARP in May 2023 and then again in December 2023 during the amendment proceedings.

2) The PUC does not have the authority to change ROR parameters within an FTP.

BEL challenges the PUC's decision to change regulatory parameters (Target ROR) within the FTP 2020/24. BEL claims its expert advises that it is prohibited by Regulation. If the originally approved ROR in 2020 is to be restored in the last two years of the previous FTP, the RAB would increase.

3) The PUC must give BEL the benefit of the doubt that CAPEX that was not approved by the PUC but still spent was used in the best interest of Customers.

The PUC has determined that \$78.1 M of capital expenditures from FTP 2020/24 should not be registered in the RAV as those expenditures 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".

BEL states that the established practice has been for the PUC to review and assess BEL's Fixed Asset Register as the basis for what passes through into the RAV and that for years the PUC accepted this as the norm. BEL asserts that it asked PUC in January 2022 to specify any changes in the level of reporting that is required for rate proceedings, but the PUC continued to rely on the Fixed Asset Register as the source documentation for decisions on the RAV.

BEL opines that the PUC should at a minimum request that BEL provide evidence of the expenditures and the reasons for those expenditures and apply the "used and useful" criterion to assessing whether they should be included in the RAV.

4) The PUC has a duty to ensure that BEL recovers all its reasonable costs.

BEL objects to the PUC's assertion that BEL should have objected the Initial Decision in ARP 2023 to trigger a review. It believes that the costs underlying the corrections are verifiable costs subject to recovery under the law and the PUC is legally mandated to pass these costs through the rates unless BEL specifically waives its right to claim recovery.

BEL asserts that the PUC's position that it is legally precluded from revisiting its decisions in previous rate proceedings is further undermined by the fact that it previously reversed its decisions.

## **ANALYSIS:**

### **OVERALL REGULATORY ACCOUNTING BALANCE OBJECTION:**

As expected, actual revenues or expenses generally do not turn out as forecasted. There will be positive or negative differences, and the annual reconciliation process is a good tool to address these variances. The PUC has a right to review the variances and allow recovery of only those they consider to be reasonable and allowed by law. Typically, the overall variance left over in a four-year FTP is flowed through into the next FTP on a levelized collection basis. For example, the \$35.4 million from the 2016/20 period was carried into the 2020/24 period on an equal annual instalment basis of about \$8.8 million. The Annual ARPs is where the variances are typically hashed out between the PUC and BEL. Appendix I to this document shows the actual variance vs what the PUC allowed for years 2020/21, 2021/22 and 2022/23<sup>25</sup>. The 2023-24 variance is not yet finalized and is still subject to discussion between the parties.

In 2020/21, it appears that major PUC adjustments were \$2 million in COP and CCK penalty of \$3.86 million. In 2021/22, the adjustments include \$3.8million of COP, \$3.8 million of CCK penalty and \$1.4 million related to ROR. In 2022/23, the adjustments include primarily the CCK penalty of about \$4 million and revenues of (\$1.1) million. These collectively account for about \$20 million<sup>26</sup>. The carryovers from earlier years are not included here.

Just from this data, the three major elements of disagreement appear to be COP costs, CCK penalty and ROR issues. The CCK penalty and ROR issues are explicitly discussed elsewhere in this document.

### **MODIFICATION OF THE ROR:**

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<sup>25</sup> Source: Annex 2 supplied by BEL

<sup>26</sup> The CCK penalty and ROR issues are explicitly addressed in the rest of this review. The specific differences in the historical COP cost adjustments are not addressed as it is beyond the scope of this review. The parties should develop a process to appeal PUC decisions in a timely fashion, if BEL is not satisfied.



The PUC reduced the target ROR midstream in the FTR 2020/24. The Commission articulated its rationale for changing the ROR midstream in the ARP Final Decision as follows<sup>27</sup>:

“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.”

While the PUC may have a legal right to adjust the ROR midstream, it is not a best practice unless there are compelling reasons to modify it. It could send a signal that the regulator can change terms of a long-term agreement without proper justification and could affect investor sentiment negatively. It is possible that the PUC at that time, based on the information available,

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<sup>27</sup> See PUC ARP 2022 Final Decision: page 11; at <https://www.puc.bz/final-decision-arp22-belize-electricity-limited/>

felt it was prudent to reduce the ROR temporarily, balancing various interests it was trying to satisfy.

A modification to the current ROR regime for the PUC to consider going forward would be the institution of an 'excess earnings sharing' mechanism. This mechanism would allow the utility to keep the ROE at the set level but share with customers gains it achieves above the prescribed level. This would continue to provide incentive to utilities to improve efficiency but also allows customers to share in the gains and ameliorates rate impacts.

While a specific base or target ROE will be used in the computation to set the revenue requirement, if the utility earns more than the base ROE level, some of the 'excess ROE earnings' can be returned to customers. For example, if the base ROE is 10%, any excess earnings above the base ROE level can be shared with customers. There could be numerous permutations and combinations for setting the sharing level. Some simple examples:

Option 1:

All excess earnings beyond 10% will be shared 50/50 between utility/customers

Option 2:

Excess earnings between 10% and 14% will be shared 50/50 between utility/customers

All excess earnings above 14% will be shared 25/75 between utility/customers.

Option 3:

Excess earnings between 10% and 12% will be shared 75/25 between utility/customers

Excess earnings between 12% and 14% will be shared 50/50 between utility/customers

Excess earnings above 14% will be shared 25/75 between utility/customers

Excess earnings above 16% will be shared 0/100% between utility/customers

#### **DISALLOWANCE OF CAPEX:**

Clearly the burden must be on the utility to prove that its capital spending is prudent and that the assets deployed are 'used and useful.' It is not the regulator's responsibility to make a case that they are imprudent without an initial filing from the utility.

Here, the company in its initial filing or subsequently did not appear to have made the necessary showing that the \$78M is prudent but in its protest, it claims it could show the proof only if the regulator had asked. BEL states it “is of the view that the PUC should as a minimum request that BEL provide evidence of the expenditures and the reasons for those expenditures and apply the “used and useful” criterion to assessing whether they should be included in the RAV<sup>28</sup>.” It seems from an outsider perspective that there is a communication gap between the utility and the PUC. BEL should immediately submit the necessary information to the PUC to show that the \$78M investment it made is prudent and ‘used and useful’ to the satisfaction of the PUC. The PUC should then determine what amount, if any, should be included in the RAV.

### **RAB RECONCILIATION:**

It is true that PUCs typically do not engage in retroactive ratemaking. But BEL asserts that BEL backed off from its right to formally object to a PUC ruling based on a PUC promise then to evaluate the differences in a joint committee and the PUC reneged<sup>29</sup>. It behoves an independent party to review the history to elicit the truth. Even if BEL is correct, it is unclear why BEL would not avail itself of other opportunities to contest rather than wait until this filing.

To improve the credibility of the regulatory process, it would be good to avoid breaking promises or perceived promises. Utilities typically are entitled to recovery of prudent costs. If the process to determine the reasonableness of the costs broke down (or at least BEL asserts that), then it should be fixed. The PUC should reexamine whether the process really broke down as BEL alleges.

### **CONCLUSION AND RECOMMENDATION:**

While the PUC may have a legal right to adjust the ROR midstream, it is not a best practice unless there are compelling reasons to modify it. The PUC should consider instituting an ‘earnings sharing mechanism’ going forward as discussed above.

The burden to show that assets deployed are used and useful is on the utility. It seems from an outsider perspective that there is a communication gap between the utility and the PUC. BEL

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<sup>28</sup> See 17 of BEL Objection Filing

<sup>29</sup> PUC Staff indicates that the parties failed to agree on the Terms of Reference for hiring an Independent Expert.

should immediately submit the necessary information to the PUC to show that the \$78M investment it made is prudent and 'used and useful' to the satisfaction of the PUC. The PUC should then determine what amount, if any, should be included in the RAV.

To improve the credibility of the regulatory process, it would be good to avoid breaking promises or perceived promises. Utilities typically are entitled to recovery of prudent costs. The PUC should reexamine whether the current process really broke down as BEL alleges.

## **OVERALL CONCLUSIONS AND RECOMMENDATIONS**

The analysis, conclusions and recommendations on each of the specific topics raised in BEL's objection filing are addressed in the five sections above.

It appears to me that there continue to be major differences between the two parties on the path forward for what the resource mix (generation and transmission) should be, and deployment schedule for those resources should be for the country. This has led to some of the disputes at hand. It would behove both parties to have a robust dialogue at the highest levels to resolve the differences where possible. Afterall, both parties have the same goals- cleaner, affordable and reliable power source and stability in prices for customers. Further, the two parties ideally should use the same methodology in modelling forecasted COP costs. Any differences in assumptions should be articulated and reconciled where possible. Any final differences must be resolved by the PUC.

Further, it seems to me that the number of disputes on capex and opex items appears to be high for such a small power system. An approach should be considered where there is room for periodic constructive dialogue at high levels, and settlement negotiations among the parties that can be held to resolve disputes amicably. A constant process of written appeals and adjudications tend sometimes to harden positions of parties, potentially wasting the energy and resources of both parties.

Some recommendations for the PUC and BEL to consider going forward:

To improve communication between the parties, and for the regulators to be on top of the utility progress in implementing major Capex/Opex programs, there should be quarterly meetings between PUC staff and utility senior management. The purpose of the meetings would be for the utility to explain progress or slippage of projects in the last quarter and what they see coming up for the next quarter and beyond and explain any variances from the budgeted amounts. This would provide the regulators a much better understanding of the progress of various major capital projects and reduces or eliminates surprises during FTRP or ARP reviews.

Further, if they are not already in place, there should be semi-annual filing requirements on major Capex/Opex programs in terms of forecast vs spending levels and an explanation for variance. There should be a clearer understanding of the granularity of data the regulator expects BEL to file to justify its expenses.



**APPENDIX 1- PAGE 1 OF 3**

**2020-2021 PUC Final Decision vs BEL Submission**

	BEL Submission	PUC Final Decision	BEL vs PUC
ATP Reviewed	2020 2021	2020 2021	Variance
VAD Components			
OPEX	32,524,967	32,524,967	-
Return	38,765,031	38,606,111	158,920
Depreciation	17,492,707	17,492,707	-
Net annual Corrections - FTRP	8,842,163	8,842,163	-
ARP 21	-	-	-
ARP 22	-	-	-
ARP 23	-	-	-
Taxes/License fees	4,913,482	4,863,197	50,285
<b><u>Sub-total (VAD)</u></b>	<b><u>102,538,350</u></b>	<b><u>102,329,145</u></b>	<b><u>209,205</u></b>
<b>Ref Cost of Power</b>	<b>120,093,293</b>	<b>118,067,620</b>	<b>2,025,673</b>
Less: Other Income	4,254,659	4,254,659	-
<b><u>Revenue Requirements</u></b>	<b><u>218,376,984</u></b>	<b><u>216,142,106</u></b>	<b><u>2,234,878</u></b>
<b><u>Actual Revenues</u></b>	<b><u>222,913,189</u></b>	<b><u>222,913,189</u></b>	<b><u>-</u></b>
<b>General Correction</b>	<b>(4,536,205)</b>	<b>(6,771,083)</b>	<b>2,234,878</b>
<i>Disallowed Costs (CCK Penalty)</i>	-	<i>(3,860,611)</i>	<i>3,860,611</i>
<b>Total Corrections c/f</b>	<b>(4,536,205)</b>	<b>(10,631,694)</b>	<b>6,095,489</b>
<b>Regulated Account Balance</b>	<b>24,707,389</b>	<b>14,879,337</b>	<b>9,828,052</b>

**APPENDIX 1: PAGE 2 OF 3**

**2021-2022 PUC Final Decision vs BEL Submission:**

	BEL Submission	PUC Final Decision	BEL vs PUC
ATP Reviewed	2021-2022	2021-2022	Variance
VAD Components			
OPEX	33,012,258	33,012,258	-
Return	39,232,153	37,803,242	1,428,911
Depreciation	18,220,765	18,195,859	24,906
Net annual Corrections - FTRP	8,842,163	8,842,163	-
ARP 21	905,702	(338,486)	1,244,188
ARP 22	-	-	-
ARP 23	-	-	-
Taxes/License fees	5,854,316	5,704,429	149,887
<b><u>Sub-total (VAD)</u></b>	<b><u>106,067,357</u></b>	<b><u>103,219,465</u></b>	<b><u>2,847,892</u></b>
Ref Cost of Power	158,424,419	154,610,675	3,813,744
Less: Other Income	4,299,949	4,299,949	-
<b><u>Revenue Requirements</u></b>	<b><u>260,191,827</u></b>	<b><u>253,530,191</u></b>	<b><u>6,661,636</u></b>
<b><u>Actual Revenues</u></b>	<b><u>235,332,346</u></b>	<b><u>236,251,598</u></b>	<b><u>(919,252)</u></b>
<b>General Correction</b>	<b>24,859,481</b>	<b>17,278,593</b>	<b>7,580,888</b>
<i>Disallowed Costs (CCK Penalty)</i>	-	<i>(3,780,324)</i>	<i>3,780,324</i>
<b>Total Corrections c/f</b>	<b><u>24,859,481</u></b>	<b><u>13,498,269</u></b>	<b>11,361,212</b>
<b>Regulated Account Balance</b>	<b>39,819,005</b>	<b>19,873,930</b>	<b>19,945,076</b>



**APPENDIX 1: PAGE 3 OF 3**

**2022-2023 PUC Initial Decision vs BEL Submission**

	BEL Submission	PUC Initial Decision	BEL vs PUC
ATP Reviewed	2022-2023	2022-2023	Variance
VAD Components			
OPEX	33,506,842	33,506,842	-
Return	32,324,815	32,267,789	57,025
Depreciation	16,988,749	16,917,846	70,903
Net annual Corrections - FTRP	8,842,163	8,842,163	-
ARP 21	905,702	(338,486)	1,244,188
ARP 22	(2,268,102)	(5,315,848)	3,047,746
ARP 23	-	-	-
Taxes/License fees	6,618,226	6,518,548	99,677
<b>Sub-total (VAD)</b>	<b>96,918,394</b>	<b>92,398,855</b>	<b>4,519,539</b>
Ref Cost of Power	172,665,417	173,197,865	(532,448)
Less: Other Income	4,854,782	4,854,782	-
<b>Revenue Requirements</b>	<b>264,729,029</b>	<b>260,741,938</b>	<b>3,987,091</b>
<b>Actual Revenues</b>	<b>251,243,157</b>	<b>252,362,945</b>	<b>(1,119,789)</b>
<b>General Correction</b>	<b>13,485,872</b>	<b>8,378,992</b>	<b>5,106,880</b>
<i>Disallowed Costs (CCK Penalty)</i>	-	<i>(4,040,603)</i>	<i>4,040,603</i>
<b>Total Corrections c/f</b>	<b>13,485,872</b>	<b>4,338,390</b>	<b>9,147,482</b>
<b>Regulated Account Balance</b>	<b>45,825,115</b>	<b>21,024,491</b>	<b>24,800,624</b>