



PUBLIC UTILITIES
COMMISSION

PUBLIC UTILITIES COMMISSION

FINAL DECISION
(2022-2025 ANNUAL REVIEW PROCEEDING)

for

Belize Water Services Limited

JUNE 2022

1.0 Legal Framework

1.1 The Public Utilities Commission Act

The Public Utilities Commission Act (No. 39 of 1999) establishes the Public Utilities Commission (the “PUC” or “Commission”) as the economic regulator for the water, electricity, and telecommunications sectors in Belize. The primary duty of the PUC is to ensure that the services rendered by public utility providers are satisfactory and that the charges imposed in respect of those services are reasonable. Specifically, Section 22-(1) of the PUC Act states:

“It shall be the duty of the Commission to ensure that the services rendered by... a public utility provider are satisfactory and that the charges imposed in respect of those services are reasonable and for this purpose, notwithstanding anything to the contrary in any law, the Commission shall have the power –

- (a) to determine and prescribe ... **the standards** which must be maintained in relation to such services;*
- (b) to determine and prescribe... **the rates** which may be charged in respect of utility services.” (Emphasis ours)*

1.2 The Water Industry Act

Section 8 of the Water Industry Act empowers the PUC to exercise any of its functions assigned or transferred to it under the Act or in a manner which it considers is best calculated to–

S8 (1)

- (a) secure that all reasonable demands for water and sewerage are satisfied;*
- (b) secure that licensees are able to finance the carrying on of the activities which they are authorised by their licences to carry on;*
- (c) promote competition in the supply of water and sewerage services;*
- (d) protect the interests of consumers of water and sewerage services supplied by persons authorized by licences to supply such services in respect of–*
 - (i) the prices charged and the other terms of supply;*
 - (ii) the continuity of supply; and*
 - (iii) the quality of the services provided by licensees;*
- (e) promote efficiency and economy on the part of persons authorized by licences to supply water and sewerage services and the efficient use of water supplied to consumers;*
- (f) promote research into and the development and use of, new techniques by or on behalf of persons authorized by a licence to supply water and provide sewerage services;*
- (g) protect the public from dangers arising from the supply of water and sewerage services;*
- (h) secure the establishment and maintenance of machinery for promoting the health and safety of persons employed in the supply of water and sewerage services;*
- (i) conserve water and avoid undue consumption; or*
- (j) prevent misuse or contamination of water supplied by a licensee,*

and the P.U.C. has a duty to take into account, in exercising those functions, the effect on the physical environment of activities connected with the supply of such services by licensees.

- (2) In performing its duty under sub-section (1) (d) (i), the P.U.C. shall take into account, in particular, the protection of the interests of consumers of water in rural areas.*

(3) In performing its duty under sub-section (1) (d) (iii), the P.U.C. shall take into account, in particular, the interests of those who are disabled or are of pensionable age...

1.3 The Rate Setting Methodology

The Water and Sewerage (Tariff) Byelaws, Statutory Instrument No. 67 of 2002 and its amendments Statutory Instruments 102 of 2004 and 89 of 2008, provide for Full Tariff Reviews Proceedings (FTRP) every five years and Annual Review Proceedings (“ARP”) on the basis of exceptional circumstances, which is defined as *“any act, event or circumstance beyond the reasonable control of a licensee, which has a material effect on the financial position of the licensee.”*

1.4 The Licensing Regime

The PUC awards licenses and monitors and enforces compliance with license conditions. Specifically, the Commission grants licenses to persons in the water and wastewater sub-sector for the purpose of:

- (i) **Bulk Water Supply**– extract water from the environment, treat for human consumption, then deliver to persons having a designated service area;
- (ii) **Sewage Treatment Services** - collect and treat wastewater from persons having a designated service area, and from septic service companies, for safe return to the environment;
- (iii) **Retail Water Supply** – operate and maintain storage and distribution infrastructure within a designated service area; for the provision of water of acceptable standards to residential, commercial, agricultural, and industrial users; and for provision of water for fire protection through a network of fire hydrants;
- (iv) **Sewage Collection Services** - collect wastewater from households and businesses, in a designated service area, to send for proper wastewater treatment.

On March 23, 2001 the Belize Water Services Limited was issued an operating license for a period of twenty-five years, inclusive of all licensed utility services stated above.

2.0 Belize Water Services Limited's Application

On May 3, 2022, BWSL made an application on the basis of Exceptional Circumstances to the PUC, for proposed adjustments to Tariffs for the period between August 1, 2022 to March 31, 2025.

The company recognized that its business cycle is in the third year of the current Full Tariff Period (FTP 2020-2025) and during the first two years of the FTP, the economic effect of COVID-19 has significantly reduced revenues, while at the same time causing rising prices of materials and equipment. Specifically, BWSL is reporting the following:

- (i) Revenue shortfalls of \$6.8 million in the first two years of the FTP, when compared to the PUC's FTRP 2020 Final Decision forecast;
- (ii) A sharp decline in cash collections over the past two years from an annual average of 99% to 59%;
- (iii) Double digit price increases in the cost of materials and equipment required for both operational and capital investment.

These conditions exist at a time when BWSL's commitment in furtherance of the Sustainable Development Goals for water and sewerage expansion countrywide require significant investment and financing, currently estimated at \$38.3 million for this financial year and \$95.4 million over the next three years. This will necessitate BWSL raising debt financing of a further \$50 million. The company posits that *"the option to obtain financing is often challenging as lenders are wary of the uncertainty of tariff decisions."*

The Commission holds a different view from BWSL that there exists *"uncertainty of tariff decisions"*. On the contrary, the Commission's records show definitively that the prevailing Rate Setting Methodology ("RSM") and related scrutiny of inputs have been unchanged since the 2010-2015 FTP.

Nevertheless, the Commission asserts that the law ought to be amended to require BWSL to make annual rate review submissions. This will significantly align the interest of the Licensee with that of its ratepayers and enhance BWSL's ability to attract financing for relevant investments.

In summing up its ARP-2022 Application, BWSL concludes that *"The company is therefore requesting minimal adjustments to the tariffs and charges, with the intention to keep rates the same or even lower for residential and low consumption non-residential customers. However, some increases are requested for non-residential customers. These are expected to provide an increase of 5% in revenue to help the utility maintain operations and perform some level of capital investment for the remaining three years of this Full Tariff Period."*

According to BWSL, the Mean Water Rate (MWR) over the current 2020|25 FTP will likely accelerate beyond \$18.37 per 1,000 gallons. The company is therefore asking for an increase in tariffs such that revenue yields rise at least 5%.

BWSL proposes to change the Tariff Structure to include the following:

- 1) Simplifying the residential tariffs by reducing the consumption blocks from 8 blocks to 4 blocks (not including 0 – 1,000 gallons) while keeping the average tariffs the same;
- 2) No changes to the monthly 1,000 gallon minimum for all customers;
- 3) Block 1 for both residential and non-residential customers is discounted below average cost to provide for an “affordable” tariff level for low consumption customers;
- 4) A special senior citizen’s discount on residential rates for consumption under the national household average of 3,000 gallons per month;
- 5) For non-residential customers only, a fixed monthly charge based on the size of the water meter
- 6) For non-residential customers only, simplifying the tariffs by reducing consumption blocks from 8 blocks to 2 blocks (not including 0 – 1,000 gallons);
- 7) In order to minimize tariff increases, a revised schedule of miscellaneous charges is recommended for approval. This aims to recover a more significant portion of the actual cost from non-residential customers benefitting directly from the service requested. Again, based on affordability, charges to residential customers are recommended to remain the same;

The proposed tariff, as shown in Tables 1, 2 and 3 below, are designed to provide an average increase of 5% on overall revenues.

Table 1: Proposed Residential Tariffs

Usage From	Usage up to	Mainland Water only	Mainland Water & Sewer	Ambergris Caye	Caye Caulker
0	1000	8.72	10.47	25.57	23.46
1001	3000	14.29	18.27	31.13	26.60
3001	5000	15.88	20.56	41.93	35.46
5001	8000	18.26	24.11	50.64	42.55
8001	-	19.76	24.99	63.93	51.75
<i>Senior Citizens to receive 10% discount on consumption up to 3000 gallons</i>					

Table 2: Proposed Non-Residential Tariffs

Usage From	Usage up to	Mainland Water only	Mainland Water & Sewer	Ambergris Caye	Caye Caulker
0	1000	8.72	10.47	25.57	23.46
1001	8000	17.31	22.69	47.16	39.71
8001	-	19.96	25.24	64.57	52.27

Table 3: Proposed Non-Residential Service Fee

Meter Size	Mainland Water Only	Mainland Sewer	Ambergris Caye	Caye Caulker
5/8-Inch	\$5.00	\$6.50	\$10.00	\$10.00
3/4-Inch	\$5.00	\$6.50	\$10.00	\$10.00
1-Inch	\$8.50	\$11.00	\$16.50	\$16.50
1.5-Inch	\$16.50	\$21.50	\$33.50	\$33.50
2-Inch	\$26.50	\$34.50	\$53.50	\$53.50
3-Inch	\$58.50	\$76.00	\$116.50	\$116.50

3.0 The Commission's Deliberations

The Commission has reviewed and considered BWSL's Submission, and the issues are discussed in detail below:

3.1 Determination of Exceptional Circumstances

In its FTRP 2020 Final Decision, the Commission had determined that BWSL sales growth would be between 2.5%-3.0% in any given year of the FTP.

The Commission notes the decline in sales in ATPs 2020|21 and 2021|22 as a result of the reduction in the consumption of water by non-residential consumers in the face of the COVID-19 pandemic.

As previously stated, the company, in its ARP-2022 filing, reports the following:

1. Shortfalls in Returns of some \$6.8 million over the last two years of the Full Business Plan Period (2020-2025) when compared to the PUC Final Decision 2020.
2. Increases in the costs of materials, equipment and services required for both operational and Capital Investment.
3. Sharp decline in cash collections over the past two years from an annual average of 99% to 59%.

The Commission holds the view that all the above stated matters would fall within the definition of Exceptional Circumstances as contemplated in Statutory Instrument 67 of 2002. As such, the PUC has decided that it can review BWSL's Submission.

3.2 The Rate-Setting Methodology

The Commission proposes to regulate BWSL's Tariff under a hybrid model made up of both revenue and price caps for the Full Tariff Period (FTP) of April 1, 2020, to March 31, 2025.

The RSM determines the Tariff Basket Revenue ("TBR"), defined as the total revenue to be derived by a Licensee from the application of approved water and wastewater tariffs, and the subsequent tariffs to be levied for the provision of water and wastewater services for each Annual Tariff Period ("ATP") of the Full Tariff Period ("FTP") and which are expected to give rise to the approved TBR for each ATP of the FTP.

The TBR is intended to provide for the full recovery of the reasonable costs incurred by a Licensee in the provision of water and wastewater services for the FTP.

The TBR is the sum of the high-level Regulated Values and is represented arithmetically as follows:

OPEX	\$
Return	\$
Depreciation	\$
Taxes/Licence Fees	\$
Annual Corrections (AC)	\$
<i>less:</i> Other Revenues	\$
Tariff Basket Revenue (TBR)	\$

In its ARP-2022 Initial Decision, the Commission has implemented a refinement of the RSM for BWSL (*as compared with RSM approved in the 2020 FTRP*), in order to:

- (a) create a more open regulatory environment;
- (b) to better segregate the four licensed businesses undertaken by BWSL, i.e., water production & supply, wastewater treatment & disposal, wastewater treatment and desludging and delivery;
- (c) to afford the Commission more robust tools to set and monitor performance by the Licensee; and
- (d) to provide BWSL with the appropriate latitude to execute relevant business activities to carry out its licence obligations effectively and efficiently.

The Commission reviewed the ARP-2022 Submission and various historical and forecast data, then made certain revisions to the ARP-2022 Submission and forecast data before approving them. The Commission then applied the Rate Setting Methodology that it developed for implementation over the remainder of the Full Tariff Period.

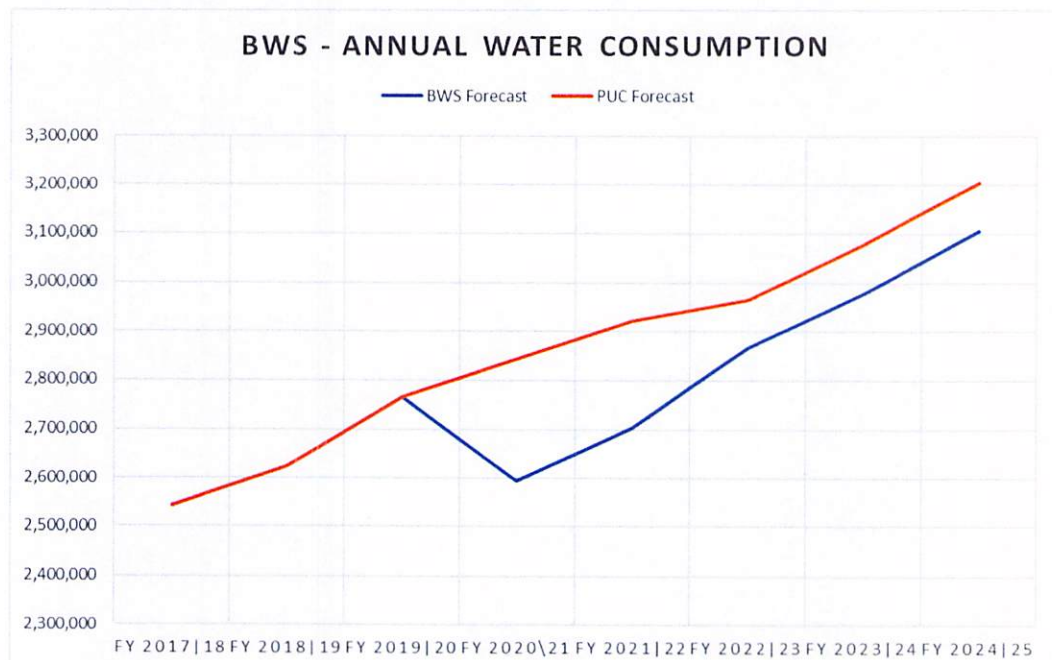
The key determinations on the various cost components which underpin the TBR are as follows:

3.2.1 Water Production and Supply

Forecast of Consumption

BWSL's forecast for consumption of water over the rest of the tariff period differs significantly from that of the Commission (**see Graph 1 below**).

BWSL's growth projection (as shown in blue) took into account the consumption patterns during the pandemic when there was a sharp decline in consumption by the non-residential consumer during the ATP's 2020|21 and 2021|22.



Graph 1

BWSL's shrinking revenues, in the Commission estimation, resulted from the reduction in the consumption of water in the hospitality and agroindustry sectors. Hence, the Commission anticipates that, as tourism traffic and agriculture production increase, it is reasonable to expect that water consumption will return to pre-COVID levels.

In its FTRP 2020 Final Decision, the Commission anticipated an annual volume growth of between 2.5%-3.0%.

Although the Commission typically refrains from reforecasting consumption, it determined, in this instance, that BWSL's forecast ought to be adjusted to remove the outlier years during the pandemic. Instead, the Commission simulated a 2.8% annual growth from ATP 2019|20 to the ATP 2024|25 (depicted in Graph 1 as an orange line).

Assuming that water consumption will return to pre-COVID levels as early as ATP 2022|23, the Commission adjusted BWSL's forecast upwards by 110,000 thousand gallons in ATP 2022|23 and thereafter maintain BWSL's growth for ATPs 2023|24 and 2024|25.

Non-Revenue Water

Non-Revenue Water ("NRW") is derived from the sum of several activities, including losses from leaks and water provided by BWSL that is not assigned to a customer such as hydrants and standpipes. Historically, NRW accounts for approximately 25% of total water produced and supplied.

The Commission calculates the total volume of water produced and supplied by dividing the approved consumption described above by 75%.

3.2.3 Rate of Return

In its Submission, BWSL has provided for a 4% Rate of Return ("ROR") on its total assets. This formula is contrary to acceptable regulatory models as ROR is ordinarily calculated on Regulated Assets, meaning assets that are prudent and useful in the provision of services to the consumer.

The Commission holds the view that BWSL's approach to applying ROR did not comport with Regulatory Accounting Practices and would have led to overcharging, the distortion of capital investment programmes, excess profits for shareholders and high gearing ratios for the company.

It is the opinion of the Commission that the ROR for BWSL should be consistent with the Commission's approach to its Decision for Belize Electricity Limited in its 2022 Annual Tariff Review Proceeding. As such, the Commission decreased the Target Rate of Return from 9.0% to 8.0% for the ATP 2022|23 and to 8.5% for the ATP 2023|24 and 2024|25.

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

- a. The importance of water as a basic necessity.
- b. The role that affordable utility rates play in order to drive Belize's economy in its post Covid-19 recovery efforts. High water rates have a direct impact on the productivity of manufacturers, farmers and the tourism sector.
- c. Access to water in rural areas will no doubt continue to improve agricultural methods, support other income generation ideas and supporting the Government in its goals for universal access to water.
- d. The Government of Belize, as the majority shareholder, has waived its right to dividends for the purpose of keeping water rates affordable.

In its FTRP 2020 Final Decision, the Commission set an upper bound of 5.5% on the cost of debt taken up by the company. This upper bound remains unchanged.

3.2.4 Regulated Asset Value ("RAV")

The Regulatory Regime provides for regulated values to be determined by the Commission. RAV directly impacts the depreciation and return components of the Tariff Basket and as such, if RAV is inflated, it will have a direct impact on the final tariff to the consumer.

The Commission reviews and adjusts the RAV to ensure that the consumer pays only for capital assets that were prudent and useful in the provision of services by BWSL, were in service during the period under review, and were not contributed capital.

In the best interest of consumers, the Commission has determined that the following items must be adjusted in determining the RAV:

Capital Investments

The Commission reduced the proposed investments for the remainder of the FTP, being ATPs 2022|23, 2023|24 and 2024|25, from approximately \$95.4 million to \$61 million. Historically, BWSL's capital programme averaged \$15 Million per year. Capital Expenditure is therefore capped at \$20 Million for the 2022|23 and 2023|24 fiscal periods and at \$21 Million for the fiscal year 2024|25.

The Commission will continue to engage BWSL to secure comprehensive information regarding the prioritization of capital projects and to put in place a framework for monitoring their implementation and outputs.

The Commission has concerns for Wastewater treatment, particularly in San Pedro and Belize City. Since BWSL did not provide for these Wastewater Projects in its Submission, the Commission invited the Company to file supplementary documentation for these projects to be included in this ARP. The Commission

anticipates that initial steps will be immediately taken to address these concerns within the approved CAPEX for this period.

Deductions

Consolidated Water Belize Limited (“CWBL”)

As stated in the FTRP 2020 Final Decision: *“The PUC did not include any assets related to CWBL in the RAV, as CWBL remains a separate legal entity at this time. In its submission, BWS indicated that costs associated with CWBL may be considered in the range of \$4.4 - \$4.7 million, including amortization of the sum associated with the buying out of the CWBL contract. The PUC considered the \$5.8 million cost of acquisition of CWBL assets and approved a total cost to BWS of some \$4.85 million to be included in OPEX.”*

BWSL has now integrated the CWBL acquisition into its Fixed Assets, and therefore the Commission looked very closely at the accounting treatment of that transaction.

The Commission noted that in its FY 2019/20 financial statements BWSL recorded growth in Fixed Assets of \$45.1M, but the available financial resources for investing was only \$25.4M. After careful perusal of BWSL’s Financial Statements, the Commission determined that the increase was attributable to the reevaluation of the CWBL purchase.

Other Asset Revaluations

In 2015 BWSL conducted a broader Asset Reevaluation Exercise. The accounting treatment subsequently caused the company’s Fixed Assets to grow by \$14.123M in FY 2015/16 and \$0.687M in FY 2016/17. The Commission has reverted to BWSL’s historical costs in determining the Regulated Asset Value.

Importantly, the Reevaluation Exercise also adjusted the Accumulated Depreciated recorded in the Financial Statements. Again, the Commission reverted to the historical Accumulated Depreciation.

This Commission is of the view that the reevaluation of BWSL’s Asset is for purposes other than establishing the RAV. While in some circumstances, this accounting treatment may be appropriate, there is an important distinction between the value of the physical assets of the Company for conventional accounting purposes and that of establishing the asset base for economic regulation purposes.

The Commission is guided by Section 87(2)(a) of the Water Industry Act, which states that in setting rates, the Commission should *“afford a licensee a reasonable opportunity to recover the reasonable costs of providing service and secure a reasonable rate of return on investments”* (emphasis ours). On that basis, it was determined that any reevaluation for the purposes of increasing the rate base, without expending financial resources by way of investments should be disallowed.

Previous Decisions of the PUC have disallowed approximately \$14.85M in determining the RAV. Most of that deduction arose from leasehold valuations by BWS that exceed \$11 million.

Deductions for Net Capital Contributions

The Commission deducts Net Capital Contributions since third parties financing of BWSL's assets cannot be included in the rate base. Specifically;

1. All Customer contributions are removed from the RAV;
2. All projects that were financed from grants are removed from the RAV. In addition, all GOB funded projects are removed from the RAV;
3. GOB subsidies in the form of Loan Repayments (CDB Loans) are removed from the RAV.

Other Deductions

1. In calculating the RAV the Commission started with the historical costs for approved Fixed Assets (*after disallowances*) and thereafter subtracted the Accumulated Depreciation expense to determine the approved net book value for Fixed Assets.
2. The PUC used a depreciation rate of 2.64% applied to BWSL's historical costs for Fixed Assets to forecast the value for Depreciation in the relevant year, after which, the applicable depreciation for disallowed Fixed Assets is deducted.
3. Only ½ of the additions made in a given financial year is included in the rate base for that year. That is, there is a final 50% deduction of capital additions and transfers in the current year in calculating the RAV.
4. All amortization with respect to Capital Contributions is deducted.

3.2.5 Operating Expenditure

In the FTRP 2020 Final Decision, the Commission had fixed Operating Expenditure. In this ARP- 2022 Initial Decision, BWSL proposes to Operating Expenditure by \$6.2 Million Dollars over the actuals for 2021|2022 fiscal year as shown in Table 1, below.

Period	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
OPEX	29,867,887	30,045,875	30,947,251	32,475,669	33,431,939	34,416,897
Of which,						
Water Production & Supply		9,816,514	10,301,591	11,113,805	11,527,065	12,000,511
Wastewater Treatment & Disposal		1,287,120	1,432,352	1,558,562	1,674,189	1,742,119
Wastewater Treatment Desludging				600,000	600,000	600,000
OPEX - Delivery		18,942,242	19,213,309	19,203,302	19,630,685	20,074,267
OPEX proposed by BWSL		29,356,000	30,055,000	36,470,000	37,824,000	39,243,000

The Commission accepted BWS's proposed annual operating costs for its wastewater treatment facilities but considers that the proper treatment and disposal of effluents is the highest priority.

Given that the Licensee has upgraded the Belmopan wastewater facility to comply with DOE Effluent Standards and is committed to replicating this approach for Belize City and San Pedro facilities; the Commission has approved an increase in the Operating Expenditure specifically for wastewater of \$600,000 per annum over the remainder of the FTP.

This increase is airmarked for the desludging of wastewater ponds in Belize City and San Pedro, both of which have not been receiving regular treatment and can potentially result in an environmental disaster in the future.

In fixing these values the Commission subtracted the operating costs component of the Cost of Water ("CoW") from the Operating Expense charge.

3.2.6 Cost of Water

Production & Supply of potable water is calculated by dividing of Approved Consumption by 75%; while the volume of effluents to be treated is assumed to be 18.5% of Approved Consumption.

The Commission has disaggregated the costs incurred by BWSL for the provision of wholesale utility services. All costs for the production of bulk water and the treatment of wastewater are captured in a new Regulated Value defined as CoW.

The Commission conducted a simple benchmark analysis of BWSL's operating costs from the three water sources; being groundwater using wells, surface water using standard water treatment technologies and utilizing reverse osmosis.

The analytical work of the Commission showed that:

1. Groundwater sources utilizing wells were the lowest cost having an estimated benchmark OPEX of $\$1.05 \pm \0.35 per 1,000 gallons produced. The northern facilities were within the benchmark, while western facilities and southern facilities were outside the upper limits of the benchmark.
2. Surface water sources utilizing standard water treatment technologies were the 2nd lowest cost having an estimated benchmark OPEX of $\$2.30 \pm \0.65 per 1,000 gallons produced. Belize City and Belmopan were within the benchmark, while Dangriga was outside the upper limits of the benchmark.

3. Reverse osmosis technologies are the highest cost water sources, wherein electricity and membranes are key cost drivers. The Commission's OPEX benchmark for BWSL is \$11:35 ± \$2.25 per 1,000 gallons produced. Both Caye Caulker and San Pedro fluctuate within the benchmark.

3.2.7 Corrections

The Commission calculated Annual Corrections (AC) for the two ATPs for the April 1, 2019 – March 31, 2021 period and determined that there was a surplus on sales revenues of some \$477,561, which is being rebated to customers over the FTP.

BWSL's tariff basket revenues were lower by \$455,708 because the company gave a discount to customers as a relief measure during the worst of the COVID-19 pandemic. The Commission is cognizant that company itself has been negatively affected by the pandemic and therefore agrees to allow the Company to recover \$200,000 of the discounts given. That is, the company is responsible for absorbing \$255,708 in COVID Relief for the ATP 2020|21.

3.2.8 Taxes and Licence Fee

These statutory charges are computed as per current law. Business tax at 1.75% of gross revenues, payable to the government, is included in BWSL's rate. The licence fee levy, payable to the regulator, is proposed to be 1% of sales revenues with effect from ATP 2021|22.

3.2.9 Other Income

Other Revenues represent other sources of income for a Licensee, provided by levying various approved fees and charges for water and wastewater services, such as connection fees, disconnection fees, transfers, etc. Furthermore, revenues to BWSL from third parties utilizing the company's assets, because it is funded by ratepayers, is considered as part of BWSL's revenue base.

The Commission accepted, without adjustments, BWSL's Other Revenues numbers.

3.2.10 Mean Water Rate

The currently approved Mean Water Rate (MWR) is \$17.49 per 1,000 gallons.

The Commission has applied the RSM to the facts and datasets provided by BWSL and has determined that the MWR over the current 2020|25 FTP is

\$17.48 per 1,000 gallons. That is, the company can reasonably grow its business in a manner that will result in a stable MWR. The Commission therefore holds the MWR for the current FTP at \$17.49 per 1,000 gallons.

3.2.11 Other Matters

In BWSL's Submission, the Company proposed to segment its customer base into residential and non-residential customers for the purpose of setting tariffs.

While there may be merit in the proposed tariff differentiation for the two sets of consumers, the Commission holds the view that it cannot, at this point, and without a full Cost of Service Study, make a determination on the proposed tariff structure.

4.0 The Commission's Decisions

After applying the RSM to the approved ARP-2022 Submission and forecast data, the Commission determined that the Mean Water Rate (MWR) is \$17.48 per 1000 gallons for the FTP. Since this MWR deviated very slightly from the MWR approved the **Error! Hyperlink reference not valid.** for the period April 1, 2020 to March 31, 2022, the Commission determined that there should be no changes to the existing and approved Tariffs, Fees and Charges.

The MWR for this FTP 2020-2025 varied insignificantly from the \$17.49 per 1000 gallons that was approved in the **Error! Hyperlink reference not valid.** and is lower than the \$17.74 per 1000 gallons approved in the 2020 FTRP Final Decision.

Based on prescribed percentage allocation of cost/revenue components and forecast sales (demand) for each class of customers (described by type of service and location), a Tariff Schedule is approved. The Approved Tariffs for the remainder of the current FTP remains as per the FTRP 2020 Final Decision.

5.0 Next Steps

Particulars	Owner	Proposed Completion Date
Revise Rate Setting Methodology to include Annual Rate Reviews	PUC	Dec 31, 2022
Complete Codes of Practice	PUC/BWSL	Dec 31, 2022
Develop Comprehensive Project List to be submitted at ARP 2023	BWSL	Jan 2, 2023
Conduct Cost of Service Study	BWSL	Dec 31, 2023

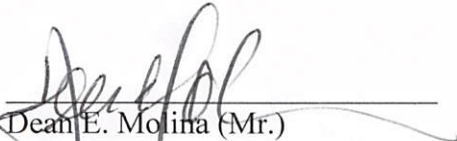
6.0 Conclusions

The Commission expresses its appreciation to the Management of BWSL for the thoroughness of their Submission.

In making its Final Decision, the Commission maintains the following values:

- Making informed decisions.
- Being accountable to all stakeholders.
- Conducting proper consultation with stakeholders.
- Regulating in a fair, transparent and consistent manner.
- Acting with integrity and respect.

The full details of the Commission's remodeling are included in the Notes to Schedules 1 to 7, which, along with the Order, are attached and incorporated into this Initial Decision by Reference.



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

Decision of the Commission

BELIZE:

ORDER made by the Public Utilities Commission (hereinafter referred to as “the Commission”) in exercise of the powers conferred upon it by the Public Utilities Commission Act, Chapter 223 of the Laws of Belize, Revised Edition 2020, the Water Industry Act 2001, Chapter 222 of the Laws of Belize, Revised Edition 2020, the Water and Sewerage (Tariffs) Byelaws, and all other powers thereunto the Commission enabling.

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

**BELIZE WATER SERVICES LIMITED 2022-2025 ANNUAL
REVIEW PROCEEDING FINAL DECISION**

**Decisions
and
Order.**

2. In respect of the application made May 3, 2022, by the Belize Water Services Limited (BWSL) for approval of Regulated Values and Tariffs, Fees and Charges contained in its Annual Review Proceeding (ARP) Submission for the Annual Tariff Period (ATP) of April 1, 2022 to March 31, 2025, the Commission hereby makes the following Decisions and Order:
- (a) The Commission hereby approves the Annual Corrections contained in Schedule 1, which are to be applied over the Annual Review Period 2022|2025;
 - (b) The Commission hereby approves the Regulated Asset Value for each Annual Tariff Period of the Full Tariff Period as contained in Schedule 2;
 - (c) The Commission hereby approves the Cost of Water for each Annual Tariff Period of the Full Tariff Period as contained in Schedule 3;
 - (d) The Commission hereby approves a Target Rate of Return (ROR_{ATP}), Operating Expenses and Gear Ratio for each Annual Tariff Period of the Full Tariff Period as contained in Schedule 4;
 - (e) The Upper Limit Rate of Return (ROR_{UL}) and the Lower Limit Rate of Return (ROR_{LL}) remain the same as approved in the FTRP 2020-25 as contained in Schedule 4;

- (f)** The Commission hereby approves the Tariff Basket Revenue and the Return, Depreciation, Operational Expenditure, Taxes/Licence Fees, Annual Corrections, Other Income, Forecast Consumption and Average Tariff for each Annual Tariff Period of the Full Tariff Period as contained in Schedule 5;
- (g)** The Commission hereby revokes the Order made pursuant to **BELIZE WATER SERVICES LIMITED 2019-20 FULL TARIFF REVIEW PROCEEDING FINAL DECISION**;
- (h)** The Commission approves no adjustments to any prevailing Rates and Tariffs, Charges and Fees and hereby Orders the Belize Water Services Limited to levy the said previously approved Tariffs, Charges and Fees as contained in Schedules 6 and 7;
- (i)** The Commission hereby Orders that on or before January 2, 2023, Belize Water Services Limited shall file an ARP submission for the ATP 2023 to include, but not limited to, the proposed Wastewater Treatment Projects for Placencia, Caye Caulker and North San Pedro Town;
- (j)** The Commission hereby Orders that by September 1, 2022, the Belize Water Services shall commence a Cost-of-Service Study (COSS) in consultation with the Public Utilities Commission.
- (k)** The Commission hereby Orders that by August 30, 2022, the Belize Water Services Limited (BWSL) shall present for the Commission's approval, a detail list of Capital Projects and Works-In-Progress for the ATP 2022 to 2025, which amounts to the total of Capital Expenditure that has been approved in this Decision

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


(DEAN MOLINA)
Chairman, Public Utilities Commission

Schedule 1

Belize Water Services Limited (BWSL)

Annual Corrections for the Annual Tariff Period - April 1, 2019 to March 31, 2021

General Corrections - April 1, 2019 to March 31, 2021

Approved Tariff Basket Revenue - \$	92,903,558
Realized Tariff Basket Revenue - \$	92,981,119
Variance (Total Approved less Total Realized) - \$	-77,561
less: Rebates by BWS for COVID-19 - \$	-255,708
Approved Corrections for ATP's 2019 20 and 2020 21 - \$	-333,269

Schedule 2

Belize Water Services Limited (BWSL)

Approved Regulated Asset Value (RAV) for Annual Review Period (ARP) April 1, 2022, to March 31, 2025

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

Year	Validated 2019	Validated 2020	Validated 2021	Preliminary 2022	Forecast 2023	Forecast 2024	Forecast 2025
Starting RAV	136,276,960	129,696,097	132,969,139	139,656,230	145,248,569	151,715,662	159,667,858
Depreciation	- 5,928,144 -	- 6,230,468 -	- 6,320,302 -	- 7,052,046 -	- 7,395,071 -	- 7,922,802 -	- 8,450,533 -
Work In Progress	13,680,530	16,918,581	15,974,333	13,000,000	20,000,000	20,000,000	21,000,000
Additions	20,062,698	23,859,966	10,564,441	15,974,333	13,000,000	20,000,000	20,000,000
Net Contributed Capital	32,603,303	33,541,844	36,464,700	36,464,700	36,464,700	36,464,700	36,464,700
Ending RAV	129,696,097	132,969,139	139,656,230	145,248,569	151,715,662	159,667,858	170,592,323
Approved RAV by Business Segment		2020	2021	2022	2023	2024	2025
<u><i>Water Production & Supply</i></u>							
Starting RAV	15,120,007	14,878,387	30,295,280	30,492,099	30,301,650	31,581,201	32,785,752
Depreciation	- 617,114 -	- 636,152 -	- 873,703 -	- 1,190,449 -	- 1,220,449 -	- 1,295,449 -	- 1,370,449 -
Additions	375,493	16,053,055	1,070,522	1,000,000	2,500,000	2,500,000	3,600,000
Ending RAV	14,878,387	30,295,280	30,492,099	30,301,650	31,581,201	32,785,752	35,015,303
<u><i>Wastewater Treatment & Disposal</i></u>							
Starting RAV	8,185,494	8,907,952	8,563,894	8,213,086	9,926,754	14,390,422	18,734,091
Depreciation	- 352,201 -	- 354,243 -	- 350,799 -	- 286,332 -	- 336,332 -	- 456,332 -	- 576,332 -
Additions	1,074,659	10,175	-	2,000,000	4,800,000	4,800,000	2,400,000
Ending RAV	8,907,952	8,563,894	8,213,086	9,926,754	14,390,422	18,734,091	20,557,759
<u><i>Concrete, Water & Wastewater Networks</i></u>							
Starting RAV	112,971,458	105,909,759	94,099,975	100,951,046	105,020,165	105,744,039	108,148,015
Depreciation	- 4,958,828 -	- 5,240,063 -	- 5,095,801 -	- 5,575,265 -	- 5,838,290 -	- 6,171,021 -	- 6,508,752 -
Additions	18,612,545	7,796,735	9,493,920	12,974,333	5,700,000	12,700,000	14,000,000
Net Capital Contributions	- 32,603,303 -	- 33,541,844 -	- 36,464,700 -	- 36,464,700 -	- 36,464,700 -	- 36,464,700 -	- 36,464,700 -
Ending RAV	105,909,759	94,099,975	100,951,046	105,020,165	105,744,039	108,148,015	115,019,260

Schedule 3

Belize Water Services Limited (BWSL)

Approved Cost of Water (COW) Parameters and Demand for Annual Review Period (ARP) April 1, 2021, to March 31, 2025

Approved Production and Supply of Water and Wastewater Services and the Associated Costs for each ATP of the FTP:

Year	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	FTP Total
Approved Consumption/Demand - '000 US Gals.	2,755,059	2,594,487	2,709,512	2,874,912	3,027,607	3,214,423	14,576,911
Water Production & Supply - '000 US Gals.	3,613,751	3,484,711	3,624,871	3,989,215	4,116,879	4,265,897	19,492,519
Reference Cost of Production, Bulk Water - \$ Of which, Operating Costs	15,771,119	19,306,878	14,069,195	14,794,568	15,520,609	16,215,005	78,906,465
Depreciation	23,111,660	9,415,514	14,301,591	11,119,665	11,527,065	12,090,511	94,759,465
Return	626,688	74,692	1,082,076	1,267,449	1,257,949	1,392,949	5,963,355
Unit Cost of Water - \$/'000 USG	2,022,215	2,736,482	2,735,719	2,475,314	2,735,596	2,881,545	13,569,665
Unit Cost of Water - \$/'000 USG	4,354	3,807	3,881	3,777	3,770	3,785	3,792
Wastewater Collected and Treated - '000 US Gals.	511,541	679,785	503,385	550,719	571,227	594,688	2,884,784
Reference Cost of Wastewater Treatment - \$ Of which, Operating Costs	2,451,891	2,384,604	2,567,210	3,440,580	4,078,312	4,529,335	17,011,682
Depreciation	1,312,616	1,207,120	1,482,312	2,159,542	2,274,189	2,342,119	9,494,342
Return	393,222	362,511	310,555	311,332	394,332	516,332	1,893,991
Unit Cost of Wastewater Treated - \$/'000 USG	765,283	74,064	816,283	972,687	1,407,792	1,669,904	5,621,689
Unit Cost of Wastewater Treated - \$/'000 USG	4,798	4,691	5,381	6,151	7,460	7,615	6,908
Reference Cost of Water (RCOW) - \$/'000 USG	6,590	6,694	6,181	6,026	6,348	6,419	6,217

Schedule 4

Belize Water Services Limited (BWSL)

Approved Rate of Return (ROR), OPEX and Gearing Ratio (G) for Annual Review Period (ARP) April 1, 2022, to March 31, 2025

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

Period	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ROR Lower Limit	7.5	7.5	7.5	7.5	7.5	7.5
ROR Target Value	9	9	9	8	8.5	8.5
ROR Upper Limit	11	11	11	11	11	11

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

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

Period	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
OPEX	29,867,887	30,045,875	30,947,251	32,475,669	33,431,939	34,416,897
Of which,						
<i>Water Production & Supply</i>		9,816,514	10,301,591	11,113,805	11,527,065	12,000,511
<i>Wastewater Treatment & Disposal</i>		1,287,120	1,432,352	2,158,562	2,274,189	2,342,119
<i>OPEX - Delivery</i>		18,942,242	19,213,309	19,203,302	19,630,685	20,074,267

Approved Gearing Ratio (G)- FTP:	0.5
----------------------------------	-----

Schedule 5

Beize Water Services Limited (BWSL)
 Approved Tariff Basket Revenue (TRR) and Components and Average Tariff for Annual Review Period (ARP) April 1, 2022, to March 31, 2025

Approved Tariff Basket Revenue (TRR), Revenue Components and Forecast Consumption for each ATP of the FTP - \$

ATP (Year)	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	FTP Totals
Consolidated							
Return	11,819,486	12,267,692	12,220,716	11,878,569	11,213,620	14,016,638	64,256,624
Depreciation	6,079,306	6,278,385	6,886,174	7,213,598	7,659,936	8,186,667	36,094,722
CAPEX	29,867,287	30,046,875	30,947,251	31,475,668	31,491,239	34,116,897	161,517,681
Corrections - FTP		-1,471,702	-1,471,702	-1,471,702	-1,471,702	-1,471,702	-7,358,569
- ASP 2022				-111,090	-111,090	-111,090	-333,269
Gross TRR	46,243,973	47,117,250	49,892,140	49,995,095	51,741,238	55,696,891	253,893,409
Taxes/Licence fees	1,014,577	1,094,540	1,308,208	1,413,741	1,491,416	1,556,877	6,961,681
Ass: Other Income	-1,544,769	-1,458,074	-1,556,717	-1,229,913	-1,267,821	-1,366,569	-6,099,153
Net TRR	45,799,942	47,143,716	49,170,691	50,178,833	52,563,778	55,907,200	254,765,927
Total Consumption - '000 gals	2,745,069	2,593,467	2,704,512	2,976,512	3,067,687	3,114,433	14,576,611
Average Water Rate (AWR) - \$/1000 gals	16.53	18.18	18.18	16.86	17.15	17.21	17.48
Consolidate Water & Wastewater Services							
Return - Delivery	11,819,486	9,777,296	9,269,704	8,429,569	9,090,412	9,484,689	45,061,900
Depreciation - Delivery	5,099,446	5,167,932	5,353,138	5,766,778	6,004,656	6,337,397	28,592,286
CAPEX - Delivery	29,867,287	18,042,242	29,213,569	19,293,502	19,610,065	20,074,167	97,068,804
Cost of Delivery	46,786,119	31,987,469	33,817,546	33,440,648	34,715,133	31,896,243	170,667,690
Water Production & Supply		13,308,878	14,093,385	14,794,518	15,520,609	16,215,005	73,906,445
Wastewater Treatment & Disposal		2,394,694	2,567,219	3,462,381	4,078,112	4,539,333	17,001,062
CDW		15,701,492	16,633,595	18,237,149	19,598,922	20,749,339	90,927,907
Taxes/Licence Fees	1,014,577	1,098,540	1,308,108	1,413,741	1,491,416	1,556,877	6,961,681
Revenue Requirements	47,691,386	49,678,692	51,839,249	51,991,317	53,816,091	56,196,499	268,516,688
Average Cost - \$/1000 gals	17.31	19.15	19.17	17.80	18.08	18.19	18.42
Of which,							
Water Production & Supply		5.13	5.20	4.97	5.03	5.04	5.07
Wastewater Treatment & Disposal		0.92	0.95	1.16	1.31	1.41	1.17
Delivery		12.68	12.90	11.70	11.25	11.17	11.71
Taxes/Licence Fees		0.42	0.51	0.47	0.49	0.49	0.49
Corrections	-1,516,706	-1,471,702	-1,471,702	-1,502,791	-1,502,791	-1,502,791	-7,691,778
Other Revenues	-1,544,769	-1,458,074	-1,556,717	-1,229,913	-1,267,821	-1,366,569	-6,099,153
Net TRR	44,779,962	47,143,716	49,170,691	50,178,833	52,563,778	55,907,200	254,765,927
Average Water Rate (AWR) - \$/1000 gals	16.19	18.18	18.18	16.86	17.15	17.21	17.48
Approved Average Tariff - \$/1000 gals				17.46			
PUC decision for ASP 2020-25 is keeping the rate the same as approved on the FTP 2020-25				17.46			

Schedule 6

**Belize Water Services Limited (BWSL)
Approved Water and Sewer Tariffs for Annual Tariff Periods (ATP) of April 1, 2022, to March 31, 2025**

Approved Tariffs for each ATP of FTP - \$/1000 US Gallons:

Service Classification: Branches:	April 1, 2022 - March 31, 2025			
	Water Only Mainland	Water and Sewer Belize, Belmopan	Water and Sewer San Pedro	Water Only Caye Caulker
Consumption Blocks:				
0 - 1,000	8.72	10.47	25.57	23.46
1,001 - 2,000	13.95	18.02	30.22	26.98
2,001 - 3,000	15.12	19.76	32.54	29.61
3,001 - 4,000	15.69	20.92	34.87	32.50
4,001 - 5,000	16.27	22.09	37.19	35.67
5,001 - 6,000	17.44	23.25	44.17	39.14
6,001 - 7,000	18.60	23.82	52.31	42.96
7,001 - 8,000	19.17	24.41	58.11	47.15
>8,000	19.76	24.99	63.93	51.75
Minimum Bill for Consumption less than 1,000 US Gallons	8.72	10.47	25.57	23.46

Schedule 7

Belize Water Services Limited (BWS)

Approved Water and Sewer Tariffs, Fees and Charges for Annual Review Period (ARP) April 1, 2022, to March 31, 2025

Approved Fees and Charges for each ATP of FTP - \$:

Service Classification	Approved Fee/Charge
Reconnection fee (Belize City & Belmopan)	25.00
Reconnection fee (other Areas excluding San Pedro)	25.00
Reconnection fee (San Pedro)	25.00
Transfer of Account	20.00
Transfer of Service (location)	20.00
Transfer New Connection	20.00
Water Connection Fee	Residential 85.00
	Commerical 85.00
	Government 85.00
	Essential Services 85.00
	Others 85.00
Water Connection Fee (San Pedro)	Residential 127.50
	Commerical 697.50
	Government 697.50
	Essential Services 697.50
	Others 697.50
Water Connection Fee (Cayo Caulker)	Residential 100.00
	Commerical 300.00
	Government 300.00
	Essential Services 300.00
	Others 300.00
Sewer Connection Fee (Belize City and Belmopan)	Residential 100.00
	Commerical variable
	Government variable
	Essential Services variable
	Others variable
Sewer Connection Fee (San Pedro)	Residential 150.00
	Commerical variable
	Government variable
	Essential Services variable
	Others variable
Water Infrastructure Fee	Residential 150.00
	All Others 150.00
Sewer Infrastructure	Residential 1,695.00
	All Others 150.00
Security Deposit	Residential 50.00
	Commerical 200.00
	Government 200.00
	Essential Services 200.00
	Others 200.00
Security Deposit (San Pedro)	Residential 50.00
	Commerical 300.00
	Government 300.00
	Essential Services 300.00
	Others 300.00
Security Deposit (Cayo Caulker)	Residential 50.00
	Commerical 250.00
	Government 250.00
	Essential Services 250.00
	Others 250.00