
# BWS BUSINESS PLAN
# REVIEW REPORT

## 201p-20нл

# ***BWS Business Plan Review Report 2015-2020***
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# 1 Executive Summary

This document and its submission to the Public Utilities Commission (PUC) seeks to commence the third Full Tariff Review Proceeding in accordance with the Water and Sewerage (Tariff) Byelaws (Statutory Instrument No. 67 of 2002) and its amendments (Statutory Instruments 102 of 2004 and 89 of 2008), and the procedures and programme as set out. In making this submission the business/licensee, Belize Water Services Limited, has included proposals relating to income, operating expenses and investment for consideration by the PUC for the Second Full Tariff Period which will run from April 1, 2015 to March 31, 2020.

Belize Water Services Limited (BWS) is the regulated monopoly water and sewerage utility for the country of Belize, a company struggling to ensure its viability. BWS, which was vested with the Assets and Liabilities of the Water and Sewerage Authority ("WASA") in March 2001, has gone through the transformation from a Statutory Body to a private company owned by a trans-national water company and then to majority Government ownership. Due to the renewed Government ownership and constraints in price increases based on social and political considerations, the company has focused on improving efficiency and controlling cost. BWS has been, and will continue to be, challenged to improve its revenues and therefore its cash flow and profitability due to conflicting requirements of its different stakeholders.

The company has had significant achievements in efficiency. Annual water loss volume has been reduced by 23% over the period; Non-Revenue Water loss by length of mains has reduced by 29%. BWS continues to be lauded for its efforts and its efficiency, and acknowledged as the leader in water loss reduction techniques in the Caribbean region. Other efficiency improvements attained over the period include:

- Employees per 1000 Customers reduced by 2.5%
- 24-hour service response to customer calls
- Collection Efficiency ratio of 98%

Even more significant, BWS has, by negotiation, obtained additional cash input required to perform much needed capital investment for the Business Plan period. This has resulted in the addition of 148 miles of additional water mains and 4,145 new physical connections, while replacing over 120 miles of aged water mains.

BWS is proud to have been at the forefront in assisting Belize to attain the UN millennium 2015 goal of having 99 % of the nation's population with access to potable water. Even more impressive is that this feat was achieved two years early.

The parameters driving this Full Five-Year Business Plan for the company are geared towards ensuring that the company can meet the investment needs of population growth, handle emergency/disaster situations, provide fair return to shareholders and ensure the overall viability of BWS. It is worth noting with regard to the latter, that several of the lending institutions have expressed scepticism as to the company's viability given the socio-political constraints on tariffs and the changes in tariffs and revenues experienced historically.

Given the level of capital expenditure required, the need to continue perform significant overdue and preventative maintenance, the mandate to provide dividends to shareholders and the necessity of covering normal operating costs, BWS requires an estimated initial increase in average tariff of 5%, with some adjustment expected in future years. This also assumes some supplementary increases in other charges and a continued growth in the customer base and overall sales volume. It is understood that the tariff basket and other charges will be subject to review, analysis and discussion with the PUC before the issuing of the Final Decision.

BWS provides water and related services to an estimated 230,000 Belizeans, about two-thirds of the country's population. This Full Tariff Review Proceeding is critical to the viability of the company and to the development of the nation. Water is not only an Essential Service, but also a Social Good; the Socio-economic welfare of our Nation requires development of this vital infrastructure and service. BWS due to stringent and efficient measures taken have derived some cash savings; despite this its current revenues are inadequate to finance the required expansion to meet its commitments, therefore BWS has looked to lending institution to cover a major part of the capital required for these investments. This however means that sufficient future revenues must be available to cover the additional debt servicing.

As the company moves forward into this third full business plan period, the most fundamental issue is the requirement to balance the needs of all stakeholders, including providing affordable improvements and expansion in the water and wastewater services in Belize, while ensuring both the medium and long term viability of the company. Should there be constraints in revenue, these would force reductions in expenditures which would be detrimental to the company and to the overall welfare of the nation.

BWS therefore requests that all critical parameters and assumptions included in this Business Plan Report be fully evaluated and that the impact of decisions on the customer base, and the society as a whole, be fully appraised.

# 2 Introduction

## 2.1 Background

Belize Water Services Limited (BWS) is a private regulated company which is the national water and sewerage utility for the country of Belize. BWS provides water to the nine major municipal areas of the country and a number of adjacent villages[1], and sewerage services to three of the municipal areas. In recent years, the Caye Caulker Village and the Placencia Peninsula have been added to BWS's areas.

BWS was formed in January 2001 and vested with the assets and liabilities of the former Water and Sewerage Authority in March 2001. BWS has a 25-year operating license, effective from March 23, 2001 through to March 31, 2026. BWS has gone through two major transformations from a Statutory Body to a private company owned by a trans-national water company (2001), and then to majority Government ownership (October 2005).

Driven by the renewed Government ownership and constraints in price increases based on social and political considerations, the company has focused on improving its efficiency in order to control costs and deliver expected service levels. BWS has been, and will continue to be, challenged to improve its cash flow and profitability due to conflicting requirements of its different major stakeholders. Over the last few years, BWS has been forced to engage in major water infrastructure replacement works in all the major municipalities due to street infrastructure projects. Additionally the company has extended services to new villages and/or areas. These investments, even though subsidised, have placed significant financial impact on the company's cash flow placing additional financial challenges on an already cash-strapped company.

As a result of the 2010-2015 FFBP review, a Tariff increase of 12.2% was awarded in 2010. However, this was followed up by a 7.2% reduction in 2012. Most recently, in 2014, the company was awarded a 6.9% increase. When compared to the 2010 tariffs, this effectively provided a 4.1% increase for 2012/13 and 2013/14 and an 11.3% increase for 2014/15. It must be noted that even though the company continues to experience increases in prices for the services and products it must purchase, there is no automatic adjustments for costs increases due to inflation or otherwise.

The effect of these cost increases and capital expenditure requirements is to reduce available cash, putting the company in a position where it is unable to fund adequate maintenance of existing assets, unable to invest in customer-requested service expansions, and unable to provide the regulated rate of return to shareholders. This position also puts the Company and the entire customer base at risk, as the company is unable to hold adequate cash to expedite recovery in the event of a major disaster.

The main items of focus of this Full Tariff Review Proceeding (FTRP) for the company are:

[1] A large percent of the rural villages have independent Water Boards running Rudimentary Water Systems

- To meet investment needs of population growth and additional service areas
- To provide security of supply, including improved continuity, to all service areas
- To meet quality standards for all services provided
- To adequately maintain and protect existing assets to optimise their service life
- To allow the company to be able to handle emergency/disaster recovery
- To allow fair return to shareholders who have invested hard earned funds
- To help ensure the viability of BWS - lending agencies have been sceptical based on the low profitability and cash position over the last FFBP period.

## 2.2 Purpose of Plan

During the current 2010-2015 Full Five-year Business Plan (FFBP) period, BWS has revamped its strategic business plan using the Balanced Scorecard Methodology. This process included redefining the company's Mission, Vision, Customer Value Proposition and Core Values. The company is now in the process of aligning business units and business processes to achieve operational excellence, service excellence, business growth and development and a team culture, in order to create a positive impact on operations and results throughout the company.

This proposed Full Five-Year Business Plan (FFBP) builds on the Strategic Business Plan (SBP) which included analysis of the current socio-economic environment and a review of past performance and anticipated future efficiencies to establish the support the assumptions, strategies and initiatives. This proposed Business Plan is being submitted to the Regulator, the Public Utilities Commission (PUC) for review and approval in order to guide the activities and parameters of operations for the next five years.

The final approved Business Plan will be used by the company's Strategic Management Team as a guideline to plan and execute business strategies. It will also be utilised by the Regulator, Board and Management to review performance. It should benefit the organisation by providing a clear direction, by streamlining planning and budgeting for Capital and Operating expenditures, and will be used to drive future strategic initiatives aimed at reaching the specified targets.

## 2.3 Business Plan Methodology

This Business Plan was developed utilising strategic management tools and approaches with input from key stakeholders, BWS' Board, Management and employees, who were all engaged in numerous activities. Research included a survey of a statistically significant portion of the customer base, interviews and/or discussions with BWS customers, prospective customers, lenders and potential lenders, shareholders, Government representatives and private developers. It also included reviews of current regulations, various internal and external documents, correspondence, reports, systems and procedures and international water and wastewater practice and technologies.

As part of the preparation for this third Full Five-year Tariff Review Proceeding (FTRP), a survey of customers was conducted in March 2014 to determine level of satisfaction with

the service offered by BWS and other parameters to analyse the effectiveness of BWS operations for consideration in the FTRP. At completion, responses were obtained from 1,567 customers. Using the Customer base of 51,600 customers, as at March 31, 2014, this gives the survey a confidence level in excess of 95%, with a margin of error of less than 2.4%. Appendix III contains a full report of this survey and some of the results are quoted in subsequent sections of this report.

This Business Plan development, building on BWS' Strategic Business Plan, included analysis of the water utility industry, BWS' current capabilities and future direction, and the external dynamics that impact on the company. The Plan includes several key objectives to help BWS achieve its stated mission ***"To improve the lives of consumers by delivering quality and cost-effective water and wastewater services in an environmentally responsible manner while promoting employee excellence, fulfilling our social responsibility and providing a fair return to our shareholders."***

**Figure – BWS Strategy Map**


As shown above, the top level objective of the company's SBP strategy map is to ***"ensure affordable rates"***. This map is shown in section 2.4.

Other key objectives include, among others, the following:

1. Improve Resources and Knowledge and Skills
2. Improve Quality and Reliability, Efficiency and Reduce NRW
3. Improve Health and Safety
4. Increase Customer Base and Improve Customer Satisfaction
5. Improve Stakeholder, Community and Social Relations

BWS has identified various initiatives within its SBP to help with the successful implementation of these objectives. Execution of a number of initiatives is already underway, resulting in positive feedback from customers, staff and other stakeholders.

## 2.4 Structure of Business Plan Review Document

The structure of this document is designed to fulfil a number of requirements, which collectively summarises the historical activities of the business during the second Full Business Plan period, together with defining the rationale, direction and strategy of BWS, as the company moves forward into this critical third Full Business Plan period.

The first full five-year business plan period commenced in April 1, 2004, in accordance with the Byelaws and Statutory Instruments, which were established in conjunction with the privatisation of water and sewerage services in Belize. The original five year period was extended by one year in 2008 due to the number of critical business issues that were unresolved. This extended 6-year period expired on March 31, 2010. The second Full Business Plan period, from April 2010 to March 2015, is now nearing completion.

This document the third Business Plan Review Report and its associated appendices identify the actual results of the business during the second business plan period. Where appropriate this report makes comparison between the actual results of the period and the projections and assumptions made within the approved Business Plan, April 2010 through to March 2015, as per the PUC's Final Decision of 2010, 2012 and 2014.

## 2.5 Programme of Business Plan Review Process

Taking into account the historical performance of the business and the issues identified during the second Full Business Plan period, this report also documents and outlines the plan for the next five years of operation, commencing in April 2015. In doing so, a rationale and future strategy for the business has been defined; this encompasses growth, demand and income projections, operating costs and future capital investment. It is recognised and acknowledged that these future operational parameter assumptions and investment proposals will be thoroughly reviewed by the Public Utilities Commission (PUC), as part of the Business Plan Review procedure. All monetary figures within this document are in Belize Dollars and multiples thereof (thousands or millions) unless explicitly stated otherwise. Production and consumption volumes are quoted in U.S. Gallons or multiples thereof.

The programme of the review shall be undertaken as defined within the Water and Sewerage (Tariffs) Byelaws (Statutory Instrument 67 of 2002) as amended by Statutory Instruments 102 of 2004 and 89 of 2008, the activities associated with which shall be concluded by April 2015.

**Programme for Full Tariff Review Proceedings**

| Item No. | No. of Days for Event | Prior Event | End Date | Event Description |
|---|---|---|---|---|
| **A** | - | **-** | **17-Nov-14** | Public Notice & BWS Submission of Business Plan Document (Clause 15 and 16 of Byelaws) (5mths before April 1) |
| **B.1** | 10 | **A** | 27-Nov-14 | Meeting with BWS and Public |
| **B.2** | 30 | **A** | 17-Dec-14 | Interested Parties Comments submission deadline |
| **C** | 15 | **B.2** | **02-Jan-15** | ***PUC to publish Initial decision (Clause 19)*** |
| **D** | 15 | **C** | 17-Jan-15 | The Licensee or interested party may object to the Initial Decision(Clause 20) |
| **E.1** | 15 | **C** | **17-Jan-15** | ***Where there is no objection, the PUC shall deliver a final decision adopting its initial decision (Clause 21)*** |
| ***OR*** | | | | |
| **E.2** | 15 | **D** | 01-Feb-15 | In the event of an objection being lodged (see item c2 above), then the PUC shall select an Independent Expert (see Clause 22(1)) |
| **F** | 14 | **E.2** | 15-Feb-15 | In the event that an Independent Expert cannot be agreed upon, the International Chamber of Commerce shall appoint one (Clause 22 (3)) |
| **G** | 30 | **F** | **17-Mar-15** | The Independent Expert shall submit a written report (Clause 23(1)) |
| **H.1** | 20 | **G** | 06-Apr-15 | Licensee & Interested Parties may submit comments (Clause 24) |
| **H.2** | 15 | **H.1** | 21-Apr-15 | PUC to hear Comments which challenge the IE's report (Clause 24) |
| **I** | 50 | **F** | **06-May-15** | ***The PUC shall publish its Final Decision, which may incorporate the Independent Expert's determination of any element of the Licensee's proposal. (Clause 25)*** |
| **Maximum Duration** | **170** | | | |

# 3 Analysis and Evaluation

## 3.1 Environmental Analysis

### 3.1.1 Governance

At privatisation in 2001, approximately 83% of the shares of the company were bought by an Anglo-Dutch multi-national company, Cascal BV. Cascal's management immediately commenced streamlining the former public entity into an efficient private company. This included staff cutbacks and the utilisation of modern Information Technology products including more up-to-date Accounting and Customer Billing systems, and hand-held meter reading devices

In October 2005, the Government of Belize finalised an agreement to repurchase Cascal's shares and resumed majority ownership of the company. The Government ownership creates additional uncertainty both externally and internally for BWS. BWS is a private company trying to operate as efficiently to ensure adequate profitability in order to cover operating costs and perform adequate investments to improve service and reach. Yet, the company remains very aware of the social nature of its core business which often mandates that projects be prioritised other than by just economic returns and that rates should be kept affordable to customers, despite the cash and investment needs of the company.

### 3.1.2 Regulatory Control and Constraints

The Public Utilities Commission (PUC), as the statutory regulator, is responsible for the oversight of the water and wastewater industry including the setting of tariffs. However, due to various constraints, the company is not generating sufficient revenues to provide funds to perform required Capital Investments or the profits required to meet a reasonable rate of return to shareholders. The Government, as majority shareholder, has had to assist by 'granting' large sums for capital investment and by foregoing its dividends to facilitate a reasonable return to the 7.3% minority shareholders.

### 3.1.3 Shareholder Considerations

BWS has generated profits annually over the second Business Plan period and declare small dividends. During this period, the Government, as majority shareholder, opted to have its portion of dividends allotted to the 17.3% minority shareholders, thereby providing a six-fold improvement in dividends to minority shareholders, thereby making the adjusted dividend received by the minority shareholders on par with market rates of return.

The table below shows the summary of BWS' profit and dividends with a breakdown of the extent of the grant to the minority stakeholders.

**Table: BWS Profits and Dividends Paid**

| Year: | 2010/11 | 2011/12 | 2012/13 | 2013/14 |
|---|---|---|---|---|
| Profit | 5,456.9 | 5,390.6 | 2,359.7 | 2,961.1 |
| Total Dividend Declared | 1,007.1 | 1,009.9 | 505.0 | 505.1 |
| **Dividend % of Original Shares** | **1.7%** | **1.7%** | **0.8%** | **0.8%** |
| Minority shareholders' portion | 174.2 | 174.7 | 87.4 | 87.4 |
| GOB Dividend portion | 832.8 | 835.2 | 417.7 | 417.7 |
| Total Paid to Minority | 1,007.1 | 1,009.9 | 505.0 | 505.1 |
| Minority Dividend paid % | **10%** | **10%** | **5%** | **5%** |

It is not certain, and therefore not assumed, that the continued granting of dividends to minority shareholders will continue.

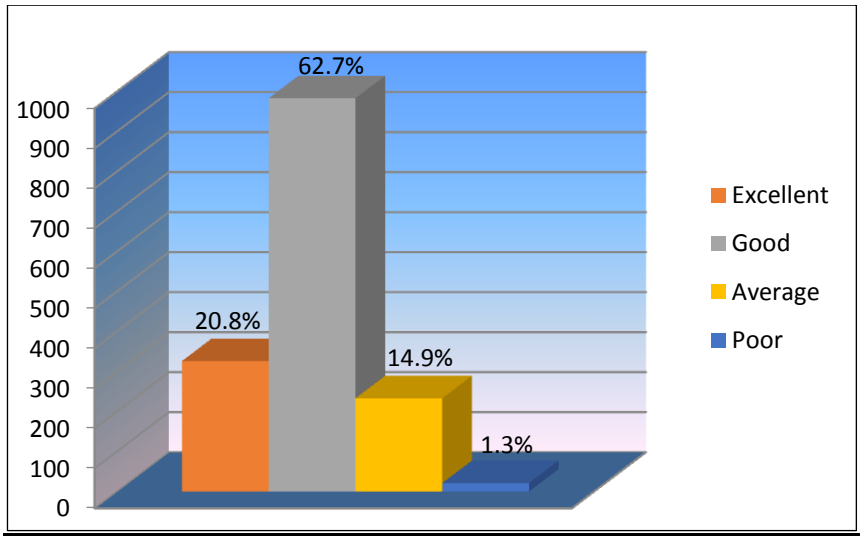
Of concern is the fact that the Company has been unable to meet its commitments without the assistance from 'special' stakeholders. In one Management Letter, the external auditors, Castillo, Sanchez and Burrell warned as follows: "***We recommend that strategies be implemented to review current financial performance and that such performance and dividend determination be based on key performance indicators. Based on current financial indicators BWSL may choose to conserve cash for immediate use, capital investment and unforeseen contingencies prior to determining dividend payment from accumulated earnings.***"

### 3.1.4 Customer Considerations

Customers' concerns are of primary concern to this utility. Customers have repeatedly and vociferously indicated that they demand high service levels but at affordable prices. Customer issues and concerns are key drivers for the Business Plan and are embodied in subsequent sections of this report.

It is worth noting though that BWS has endeavoured, as much as possible, to meet reasonable demands and requirements of customers, given the constraints described within this document. The success of these efforts is highlighted in the level of satisfaction as shown by the comparative results of the March 2014 survey and summarised in the chart below. A detailed report of the survey is attached as Appendix III.

**Chart: Survey response- Satisfaction with BWS Service**

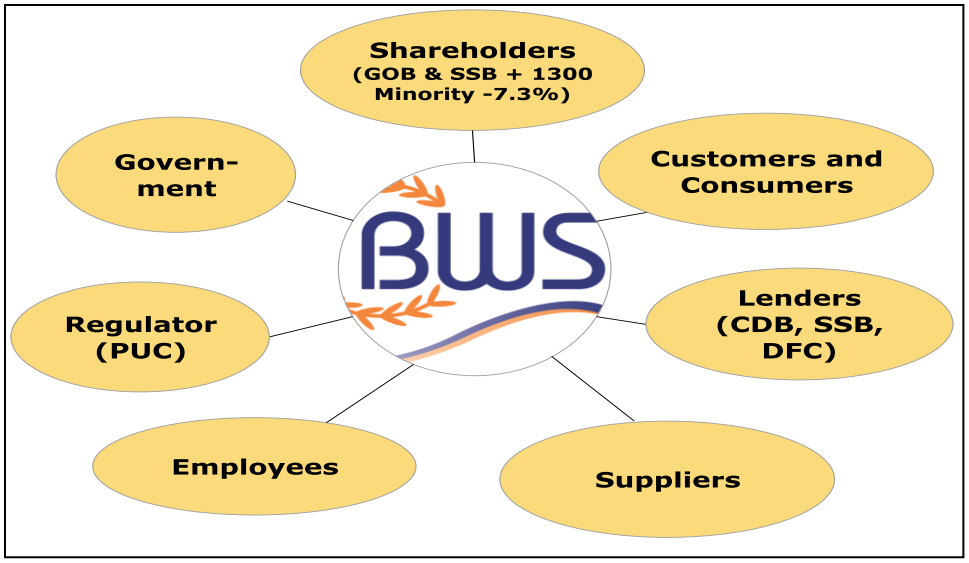



### 3.1.5 Other Stakeholders Considerations

BWS, as a critical utility providing a product/service that is essential for human existence, has a number of other stakeholders as shown in the diagram below. During this FFBP period, water discolouration caused by iron and manganese in the San Ignacio/Santa Elena water system, the media and the public have been highlighting some of the concerns of consumers in particular, and of the public, in general.

However, other key stakeholders, including the Lending Institutions, Suppliers, and Employees, also have concerns to ensure that the company is financially viable and able to meet its commitments and obligations to them into the foreseeable future.

**Chart: BWS Key stakeholders**

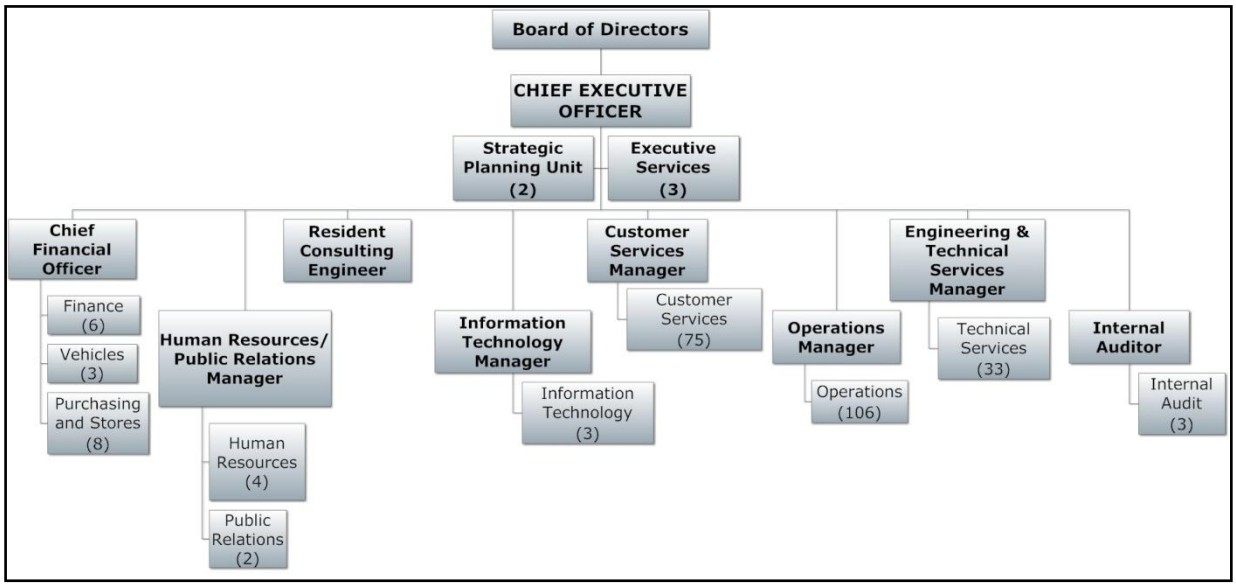


## 3.2 Organisational Analysis

### 3.2.1 Organisational Structure

The Company currently has a top-level organisational structure as per the diagram below. The permanent staff count of each department is included as a number in parentheses. Below each departmental manager are varying levels of junior managers, technicians, supervisors, foremen or senior clerks, and line workers or clerks. The current total full-time staff complement is 257.

**Chart - Top Level Organisation Chart of BWS**




The Operations and Customer Services departments have staff in each of the nine branch offices (see section below). All other departments are based at headquarters in Belize City.

### 3.2.2 Operational Locations

BWS operates nine (9) offices, thirteen (13) water distribution systems and three (3) sewerage systems dispersed across the country of Belize. BWS is directly responsible for the water production in all but one of the thirteen water systems - the exception being San Pedro Town, Ambergris Caye, where water is provided by a supplier on a long term contract, using a reverse osmosis desalination plant.

## Map of BWS Service Areas

The table below provides a summary of key features by service location.

**Table - BWS Service Areas – Customers, and type of Water Treatment**

| Service Area | Number of Water Connections | Number of Sewerage Connections | Type of Water Extraction |
|---|---|---|---|
| Belize City | 19,291 | 7,820 | River intake |
| Caye Caulker | 488 | - | Reverse Osmosis |
| Hattieville* | | - | Well |
| Corozal | 4,552 | - | Well |
| Orange Walk | 4,562 | - | Well |
| Belmopan | 6,117 | 1,561 | River & Well |
| San Ignacio | 5,607 | - | Well |
| Benque Viejo* | 1,785 | - | Well |
| Dangriga | 2,756 | - | River & Well |
| Placencia & Seine Beight | 991 | | |
| Punta Gorda *Including Eldridge/Forest Home** | 2,055 | - | Well |
| San Pedro | 3,229 | 883 | Reverse Osmosis |
| **Total (2014)** | **51,433** | **10,264** | |
| **The water system now includes additional villages including Placencia and Seine Bight, added June 2013.** | | | |

**Hattieville, Benque Viejo, and Eldridge/Forest Home are small service areas, and do not have BWS offices. These areas are serviced by Belize City, San Ignacio, and Punta Gorda respectively, with a collection agent employed at each location to facilitate bill payments.*

## 3.3 Services

As shown above, BWS continues to expand its operations since it now owns and operates fourteen disparate water production and thirteen distribution systems as well as three sewage collection and treatment systems. These systems deliver water services along over 830 miles of mains to over 52,000 customers and sewerage services along 82 miles of mains to over 10,000 of these customers. Excluding the Government accounts, which are inclusive of schools and other public facilities, BWS supplies water to approximately 52,250 residences thereby providing potable water into the homes of some 230,000 people, or about two-thirds of the population of Belize.

BWS provides the following services to customers and consumers:

- Piped potable water (tap water) in all service areas
- Sewerage disposal and treatment in three service areas
- Quality Monitoring – a dedicated laboratory performs frequent periodic checks for quality and also investigates any potential threats.
- Other related services – these include connections, disconnections, leak checks, and leak and fault repair.

## 3.4 Achievements/Accomplishments

BWS has achieved some significant accomplishments during the second FFBP period with regard to improving cost control, efficiency and service. These include:

BWS has achieved some significant accomplishments during the last few years with regard to improving cost control, efficiency and service. These include:

- Water loss (NRW) reduced by 23% equating to over 100 million gallons per year; NRW by length of mains has reduced by a staggering 29%
- Water system expansions countrywide including 148 miles of water distribution mains and 4,145 service connections
- Replacement of over 120 miles of aged water mains, and other aged-assets, including reservoirs, water treatment plant buildings and equipments
- Installed Backup electricity supply, duty and standby pumps and chlorination units
- Implementing various additional customer initiatives including extended hours of operations, the 24-hour call centre response and quicker response to customer requests including same-day reconnections and transfers,.
- Implementing immediate customer follow-ups on high readings to inform of possible leaks and providing more proactive leak detection for customers
- An upgraded Job Tracking System to monitor and track customer complaints and faults and to monitor BWS responsiveness
- Maintain high collection efficiency ratios (98%+)
- Streamlined meter reading routes for more efficient reading and bill delivery systems
- SMS Text messaging utilised to provide customers with bill reminders, shut-off notices and interruption notices, besides electronic bill copies e-mailed to customers

- Additional Payment collections points introduced including On-line payments via partnership agreements with various banks and other established collection agents.
- Introduction of automated Human Resource Management System to facilitate management of staff related activity and benefits system and to improve HR business functions.
- Partnering with international water utilities to incorporate industry best practices
- Proactive partnering with Government and private developers to expand the water distribution networks
- Increased training sessions for staff and management to improve efficiency and productivity.

## 3.5 SWOT Analysis

The following analysis captures the key strengths and weaknesses within the company, and describes the opportunities and threats facing BWS as it attempts to achieve its vision and goals.

| | Enablers | Pains |
|---|---|---|
| Internal | **Strengths** | **Weaknesses** |
| | 1. Relatively large & recognized company within the country<br>2. Established customer base and Guaranteed market (Regulated Monopoly)<br>3. Qualified, committed and dynamic Management and Staff<br>4. Commitment and support of Board of Directors, Government and Shareholders<br>5. Collaborative relationship and support of the Workers' Union<br>6. Focus on efficiency, including an effective NRW reduction strategy<br>7. Reliable Services and Good Quality Product<br>8. Production Capacity supports future growth<br>9. Functional Systems, Procedures and Processes | 1. Revenue and Cash Flow constraints<br>2. Insufficient infrastructure, especially Sewer<br>3. Some Employees' low ethical standards, negative attitudes and lack of focus<br>4. Weak corporate brand and image<br>5. Relatively little Marketing and Public Relations experience<br>6. Constrained by Regulatory Environment<br>7. Constrained by Socio-Political considerations<br>8. Lack of proper implementation of, and adherence to, Policies and Procedures<br>9. Not Enough Skilled Personnel<br>10. Insufficient Planning<br>11. Poor Communication<br>12. Outdated and/or insufficient Equipment |
| External | **Opportunities** | **Threats** |
| | 1. Population and Housing growth<br>2. Economic development in Tourism, Industry and Commerce<br>3. Government's commitment to expand potable water services can open new service areas<br>4. Increased demand for bottled water<br>5. Demand for Sewerage facilities increasing due to environmental consciousness<br>6. Demand for untreated water for agricultural purpose<br>7. Demand for other water-related services<br>8. Increasing failure of, and dissatisfaction with, Rural Water Systems<br>9. Regional demand for NRW Expertise<br>10. Ever improving Information and Communication Technology [ICT]<br>11. Globalization | 1. Loss of skilled and experienced employees<br>2. Customers' and prospects' use of other sources<br>3. Customers' and prospects' negative perception<br>4. Regulatory framework imposition or unfavorable changes<br>5. Water Theft/Illegal Connections<br>6. Vandalism/Theft of company assets<br>7. Contamination of water sources/supplies<br>8. Possible depletion or damage to water sources<br>9. Unwillingness/Inability of customers to pay for true cost of services<br>10. Dependence on third party suppliers<br>11. Natural Disasters<br>12. Economic Downturn<br>13. Unregulated Plumbing Practices<br>14. Improper land developmental planning |

# 4 BWS Activities and Issues during 2nd FFBP

## 4.1 Overview

During the second Full Tariff Period (2010-2015), the company has faced a number of significant challenges on many fronts, including operational, commercial and financial. These extended from water production/treatment requirements and sewerage effluent quality to the financial difficulties of maintaining the debt servicing obligations while trying to execute multiple investment projects and the challenge of managing inadequate cash flows.

The business has implemented a number of initiatives designed to improve customer satisfaction and drive commercial efficiencies. While those that mandated contributions from Developers for expansions and more stringent measures to control customer delinquency and water theft have not necessarily been popular decisions, they have been required for the survival of the company and to help to provide a solid commercial foundation moving forward.

A number of such commercial issues remain, some of which are outside the control of the company. These specifically relate to the current regulations which essentially define and control the actions that can be taken within the connections policy and in dealing with illegal connections. BWS is proposing some changes to these regulations to help facilitate the company in conducting its day to day business. These are attached as Appendix V.

The poor and often deteriorating condition of many of the existing assets and the costs associated with the necessary repairs and maintenance has been a major concern due to the shortage of cash to properly address this problem. This fact has led to an increased amount of capital works being required over the next five years, in order to rectify the deteriorating condition of many key infrastructure components. This situation has existed since the first 3-year Transitional Business Plan (TBP) for 2001-2004; however, due to lack of cash resources which has mandated curtailing expenditures during the fourteen years since, the condition of the existing infrastructure remains a key concern.

Although some of the more major deteriorating assets are underground, such as the Belmopan Sewer system, the Corozal and Orange Walk water distribution systems, some are above ground and very visible. These latter include Dangriga Water Treatment Plant, our Belmopan office building (which had to be evacuated) several storage reservoirs, our now defunct well rig and our aging fleet of vehicles. This situation requires that the company invests significantly in replacement and refurbishment of existing assets, in order to maintain standards of service and reduce increases in operating expenses moving forward.

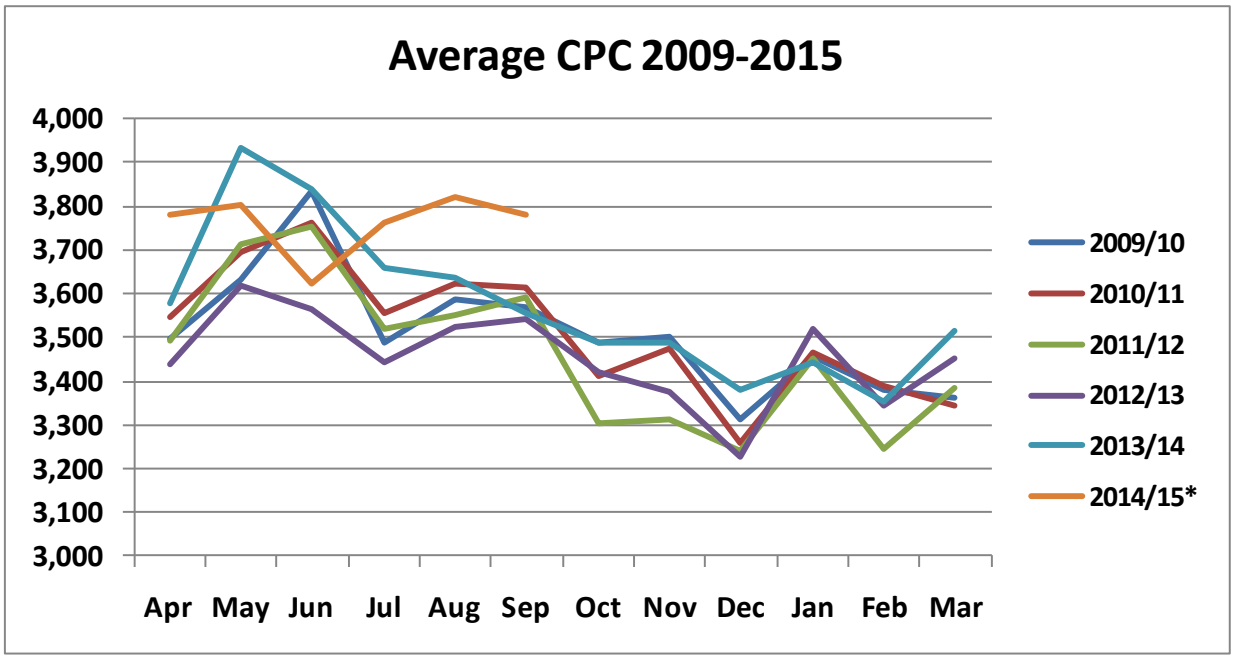
The remainder of this section of the report provides more details on specific issues and events throughout the second full business plan period. These form a basis for some of the rationale embodied in subsequent sections of this report.

## 4.2 Customer Consumption and Behaviour Patterns

The consumption pattern of the customer base shows a strong seasonality. During the rainy months, customers generally consume significantly less, implying that they use rainwater or well-water during those months of the wet season, either instead of water supplied by BWS, or as a supplement. This can vary considerably month on month (by as much as 15%), making the Company's revenues variable depending on the level and extent of rainy and dry seasons.

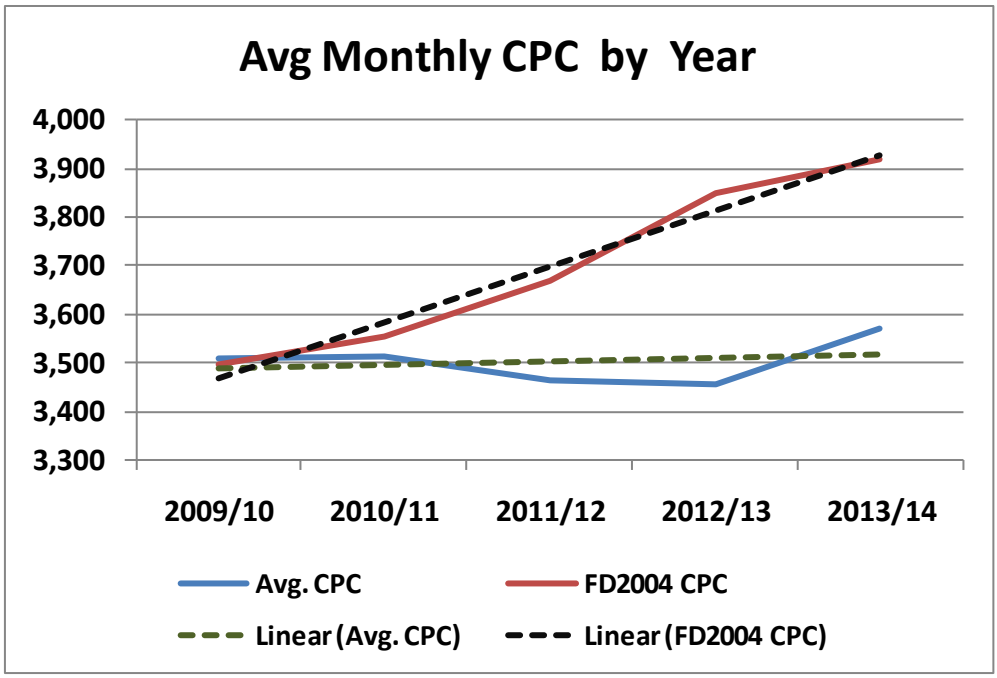
Of even more concern is the fact that the consumption ratios per connection are extremely low relative to other developing and developed countries. However, the previous historical declining trend in average consumption per customer (CPC) has levelled off during this FFBP period. To date, in this 2014/15 Fiscal Year, the average consumption has been higher than recent years, partly due to an extended dry season and partly due to the massive replacement of mains countrywide contributing to increased pressures and to the direct removal of an unknown quantity of illegal connections as old infrastructure was completely abandoned (especially in Belize City).

The Chart below highlights both the seasonality and the trend of average CPC.




The trend in CPC by year is highlighted in the next chart below, which compares the average actual monthly CPC against the figures in the approved 1st FFBP (2004)[2]. The trend has levelled off, there is however, a risk of decline as the Company invests more to reach new customers who, generally, are further away, consume less, and fall into the lowest tariff band. Additionally, years with heavy or extended rainy seasons show much lower average consumption.

[2] This was the only Business Plan issued by the PUC that had details for connections and consumption




With respect to customer connections, the company has been extremely busy as it partnered with the Government and Private Developers, in extending water infrastructure. The company has also initiated partnership with other utility companies in Belize to openly improve planning and development, sharing relevant data with respect to areas of expansion. This has resulted in the customer count increasing to 51,433 active customer connections at March 2014, exceeding the FFBP target of 50, 047. However, the level of growth in connections has resulted in major customer relocations from urban settings which has resulted in lower revenues and earnings, as the bulk of new connections are in lower tariff areas.

Additionally, the continued high incidence of water theft (illegal connections) experienced, further reduces the company's revenue and increases its cost of operations, since monitoring must be stepped up. Thankfully, while this still exists within our service areas, the major infrastructure works being carried out have helped to remove many of these connections. The disconnected customer numbers continue to be high as many customers do not pay unless disconnected. This group also becomes part of those that forces the company to perform additional checks due to possible illegal connection activity or transfers to other location leaving behind a possible bad debt or write off, increasing the company overall cost. Bailiffs and collectors remain challenged by these evasive customers often find it difficult to find these disconnected customers who have fallen under the radar.

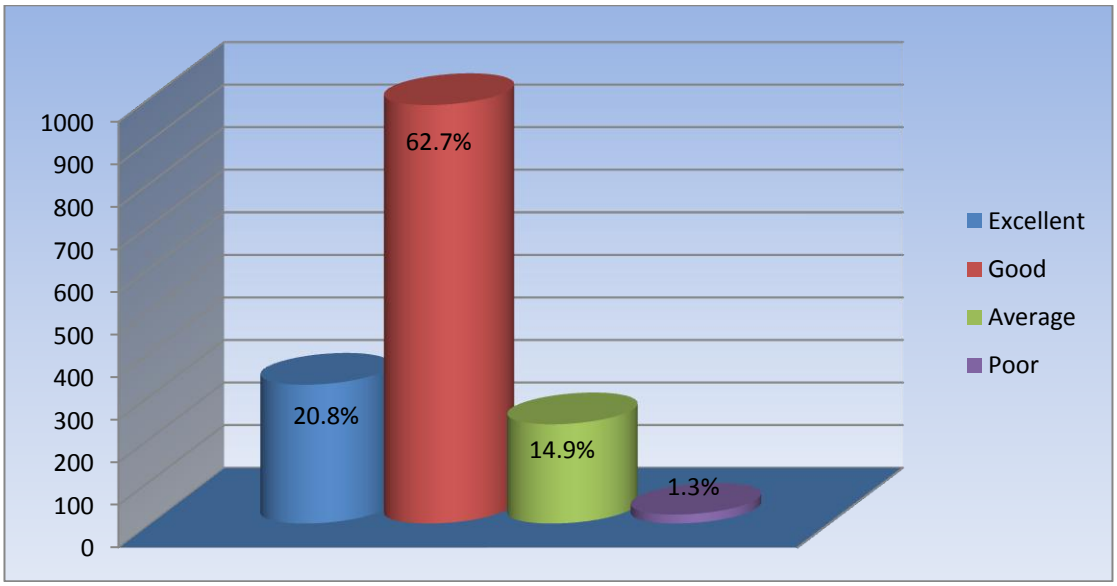
Despite these challenges, the company continues in its efforts to remain vigilant by implementing new or improved procedures to ensure proper identification of all new customers and the proper utilisation of security deposits approved regulated policy of the extra deposit to mitigate higher risk.

## 4.3 Operations and Standards of Service

An important component of our quality of service is the reliability of our water supply. Therefore, customers' impressions concerning the reliability of water supply were sought. Eighty-four (84%) of our customers surveyed indicated that the reliability of their water supply was good to excellent, while 15% felt it was average.

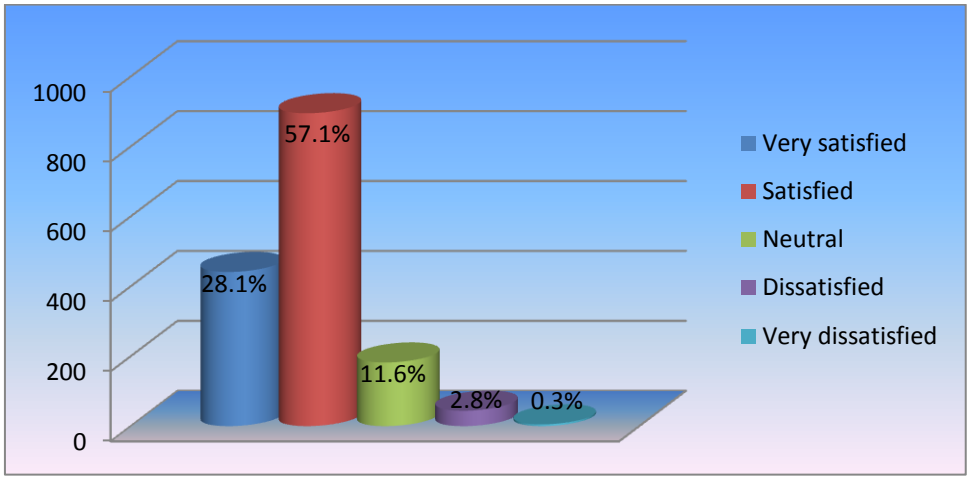
Another quality attribute investigated by the survey was the frequency of service interruptions. Eighty-three (83%) of our customers described interruption of water supply at their premises as infrequent or never. In cases where water interruptions were experienced, seventy-three (73%) of customers expressed that it lasted for four hours or less.

**Chart: Survey response- Satisfaction with Continuity of Service**




As part of ongoing efforts to improve service levels, pressure has also been increased in all the water systems across the country. Indeed, a number of customers have commented that they are now saving on electricity costs as they no longer need to use pumps to get water up to the higher floors of their premises. Customers' satisfaction level with regard to the water pressure was tested in our customer survey; as the graph below indicates, 85% of the BWS respondents were satisfied or very satisfied with their water pressure. Furthermore, 90% stipulated that they rarely (75%) or never (15%) experienced low pressure.

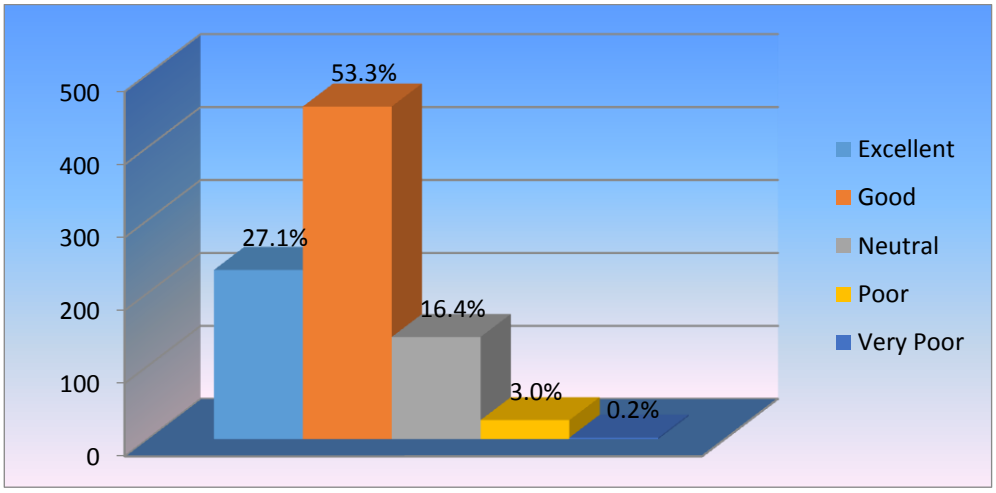
**Chart: Survey response- Satisfaction with Water Pressure**



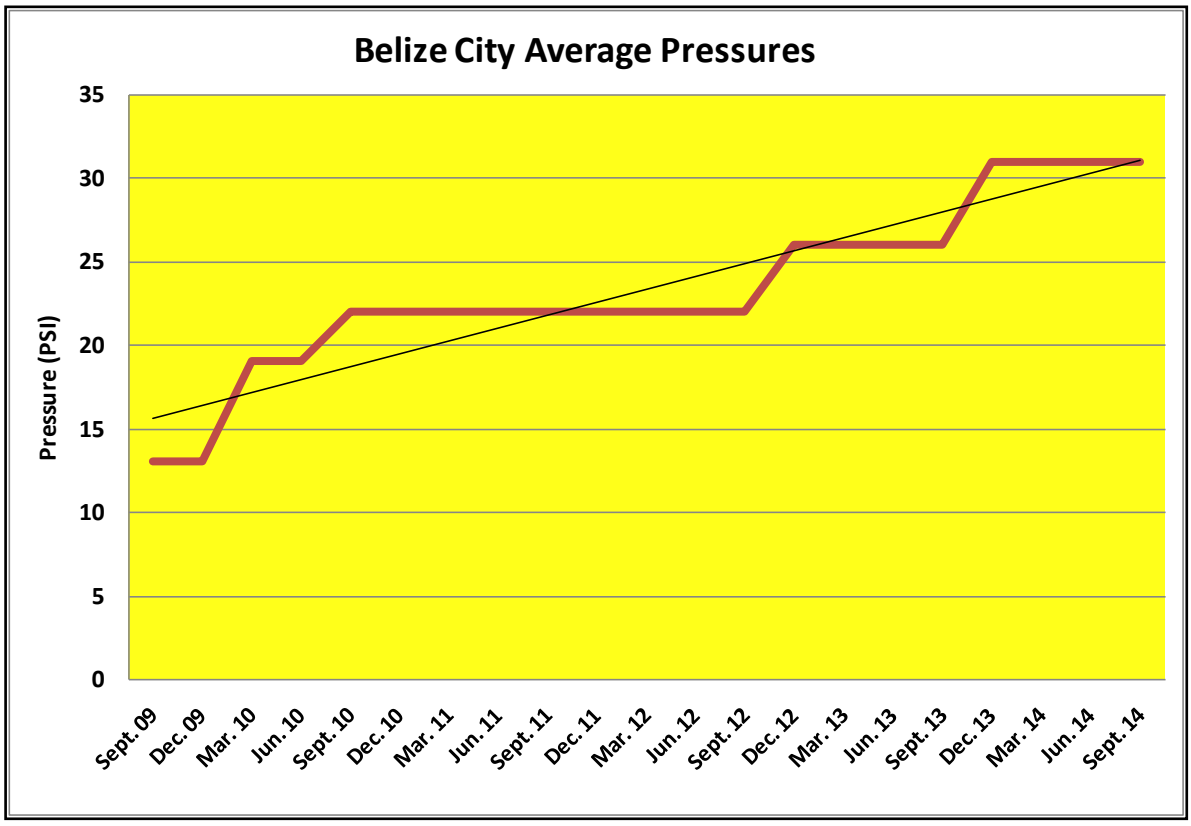

The increase in water pressure, while pleasing to customers, mandated that the company exercise even greater efforts to control water losses (also referred to as Non-Revenue Water or NRW) as the pressure increases put further strain on the aging infrastructure. The company has continued its strategic investment in replacement of aged infrastructure, pressure management, district meter zones (DMZs), increased leakage detection and repair and expedited removal of illegal connections.

In our recent survey the quality of the in-field workmanship was rated as good or excellent by 85% of our customers, whilst the field crew resourcefulness in carrying out their task obtained a rating of good to excellent at 84%. Eighty (80%) of our customers' indicated that the time it takes to respond to customer complaint was good to excellent.

**Chart: Survey response- Response to Customer Complaints**



The graph below shows the pressure improvements in Belize City over the FFBP period, and is typical of the improvements made to most systems.




The company has also implemented significant improvements in customer response. These include continued same-day reconnections, same-day connections where there is an existing meter, and faster response to leaks, high-bill complaints, faulty meters, connection requests, and other customer requests.

The improvements made in our service have been recognised by our customers. This was indicated by the comparative top-ranking received by BWS with the other utility provider in the country. As the table on the next page indicates, BWS received high ranking in all categories.

**Table – Summary of Survey Results**

| Dimensions & Attributes | Commercial Quality of Services Rating | | |
|---|---|---|---|
| | BWS | BEL | BTL |
| | | | |
| **How would you rate the customer service delivered in the following areas?** | | | |
| The knowledge of the customer service representative who dealt with you? | 89% | 91% | 92% |
| The time it took for someone to resolve your complaint? | 85% | 88% | 87% |
| The level of the courtesy of the customer service representative who dealt with you? | 89% | 90% | 86% |
| The helpfulness of the customer service representative who dealt with you? | 89% | 90% | 87% |
| The quality of information provided by the customer service representative who dealt with you: | 89% | 90% | 87% |
| **In Field: Has a Field staff visited your premises?** | | | |
| Courtesy of field staff? | 87% | 87% | 95% |
| Quality of field staff workmanship? | 85% | 84% | 94% |
| Time taken to respond to customer complaint? | 80% | 80% | 89% |
| Field crew resourcefulness in carrying out their assigned task? | 84% | 83% | 92% |
| **Cashier: How would you rate CASHIER services in the following areas?** | | | |
| The level of courtesy of the cashier? | 91% | 86% | 88% |
| The cashier was knowledgeable who dealt with you? | 90% | 87% | 87% |
| The time it takes to pay your bill? | 83% | 80% | 73% |
| The Cashier was helpful who dealt with you? | 90% | 88% | 85% |
| | | | |

## 4.4 Condition of Existing Assets

The status of the existing assets was identified in the first Five-year Business Plan as having a significant influence on the operational cost of the company. This continues to be so in the second FFBP period despite some works having been completed. Below are some of the problems which have been identified with some of the main working assets of the company.

### 4.4.1 Production/Water Treatment Plants

The Belize City and Belmopan Plants were extensively refurbished and renovated during the second FFBP period. Even though some works have commenced on the rebuilding of the Dangriga Water Treatment Plant, significant work is still outstanding at this plant.

The San Ignacio system now requires a full-fledged water treatment plant designed to remove the higher levels of iron and manganese in the source water.

Below are some pictures showing the improved condition of some components of the Dangriga plant.

**Pictures - New distribution motors/pumps, manifold, retaining wall and electrical control panel**

**Pictures - New generator and intake raft with pump**

Additionally major emphasis was placed on auxiliary electricity supply for production points which also coincides with the Disaster Preparedness Plan. Generators are still needed in Caye Caulker, Corozal, Teakettle, Forest Home/Elridge and Placencia/Seine Bight along with replacement for existing generators in San Pedro and Belize City.

Below are photos of generator buildings equipped with generators in Orange Walk and Punta Gorda.


**Pictures – Generator Building in Orange Walk and Punta Gorda**

### 4.4.2 Water mains and Service Connections

During this second FFBP period, the number of leaks located and repaired by the business was an average of approximately 670 per month or a decrease of 33% from the first FFBP. It is expected that this average will reduce even further in the next 5-year period as continued emphasis will be placed on replacement of aged infrastructure and replacement of key components identified from a points of leak assessment conducted. This assessment has already resulted in some changes in materials and installation practices.

State-of-the-art leak detection equipment was purchased and being utilized to locate previously undetected leaks. Reliability of leak detection and asset location equipment will be of higher importance since many municipalities are concreting street surfaces.

Identification and removal of illegal connections and yard-to-yard connections[3] was also a major focus during the last five years, but there still remains a significant number in the field. This situation will need to be corrected during the next business plan period. However, because come expansion continues to occur without proper streets or road infrastructure, there is the social and political pressure to utilise such connections and, in fact, customers continue to exhort some pressures and make private arrangements for such connections.

The photographs below show fractures on some of the aged water mains in Corozal and yard-to-yard connections in Belize City. The leaks caused by such fractures are often difficult to detect because of geographic conditions or locations.

[3] These are connections where one or more properties are connected to a service line that supplies an initial property, rather than being connected to a main line

**Pictures – Old and Inferior Infrastructure**

**Storage Reservoirs**

It was recognised in the First Full Business Plan that the operational performance of the business required the replacement of a number of elevated storage tanks. A significant sum was invested in the replacement of these tanks in Dangriga, Orange Walk and Corozal. The elevated tank in Belmopan was demolished due to high cost to repair and was replaced with new Ferro-concrete 500,000 US gallons underground storage reservoir.

**New Belmopan Reservoir**

Additionally major repairs were conducted on the elevated tank in Punta Gorda but will eventually need replacement. The ground-level San Ignacio Main Reservoir is still in dire need of replacement along with a full treatment plant to address the Iron and Manganese problem in the source water at that location.

The 500,000 gallon reservoir at Southside Belize City has been de-commissioned due to extensive leaks. The photographs below highlight problems with the reservoirs in San Ignacio, Corozal, Orange Walk and Southside Belize City.

**Leaking and deteriorating main reservoir in San Ignacio**

**Leaking and deteriorating reservoir in Corozal**

**Leaking reservoir in Orange Walk**

**Southside Reservoir - Belize City**

**Leaks at the Southside Reservoir - Belize City**

### 4.4.3 Sewer Systems

***Belize City***

Even though significant emphasis was placed on upgrading of sewer pumping stations, cleaning of mains and rehabilitation of manholes, the present system is in need of major infrastructural upgrades for added treatment capacity in order to improve water quality discharge parameters. Investment will be required to expand the lagoon field to include two more facultative ponds and a third pond for additional cleaning Which is the most economically feasible option for improvement.

The photos below show the improvement made to the sewer infrastructure in Belize City.

***Belmopan***

Major infrastructure improvement has been done to the Belmopan wastewater treatment facility. This facility has been upgraded to improve effluent quality and to provide for additional treatment volumes as a result of proposed sewer expansion projects. The recent upgrades include the construction and operation of three gravity fed wastewater treatment facultative ponds that have been integrated onto the primary treatment process of the existing wastewater treatment facility. This include the bar screens for solids removal and the grit channels for removal of sand and other fine settleable matter. The sedimentation tank has also been added to the treatment process where the settled wastewater flows directly into the first sewer pond as opposed to the drying beds.



**Pictures – New Sewerage Lagoons in Belmopan**

Future plans include the construction and operation of two additional anaerobic ponds that will assist in the overall treatment process. Thereafter for wastewater will go from the primary process then on the pond system (secondary process). The sedimentation tank will eventually be abandoned. Tertiary treatment will also be added and will include the addition of an ultraviolet unit that will be installed at the final outfall to disinfect the treated effluent.

Maintenance and upgrade have commenced on the pumping stations and manholes but major works is still needed on the sewerage collection system. This system was implemented during the 1970's, is suffering from severe deterioration including collapsing; it now requires significant refurbishment.

***San Pedro***

Present development near the wastewater treatment ponds has completely jeopardized the treatment efficiency of this system. Further development within the general area is contemplated and as such additional mangrove buffer zones needs to be preserved. No infrastructural improvement has been carried out in terms of its treatment capacity to improve discharge parameters.

Sewer pumping stations were fitted with duty and standby pumps and check valves and faulty piping replaced.

The photo below shows the improvement made to the sewer infrastructure in San Pedro.

In the event of a station failure, there is no bypass system in place to move the wastewater. The design however has been completed.

Plans are underway for the installation of additional sewer pumping station and to connect piping previously installed on the main street in sewer zone 1.

***General Sewerage Expansion***

The existing systems still only cover the more centralised areas of each municipality. For social and environmental reasons, the sewer systems should be extended to all areas of these vastly expanded municipalities. Such expansion, which would include expansion of the treatment processing facilities, would require tens of millions of dollars and, as a result, have been excluded from the Capital Investment contained in this business plan, as they would only be feasible with of grant funding. Further, due to the extensive concreting of streets, any such sewer expansion would have to include even more expensive restoration of streets.

## 4.5 Investment Undertaken

Despite the operational and commercial challenges, BWS focussed on ensuring that critical capital investment was undertaken. Such investments, along with projects with Developer contributions, formed the basis for investment undertaken during the period. Utilising this approach, the company invested some $64 Million over the past five years on installation of new assets and refurbishment of aged infrastructure to increase our customer base and to ensure reliability of supply.

Listed below is the investment value by year and a listing of some of the major projects.

| Year | Investment Value | Projects Included |
|---|---|---|
| **2009/10** | **$9,400,000** | Completion of the Caye Caulker water system project. |
| | | Extension of water main in Punta Gorda, Belize City (Belama Phase IV), Belmopan (Mountain View subdivision), San Ignacio and Benque Viejo Town. |
| | | Upgrades of water main in Belize City on Neal Pen Road, Buttonwood Bay and St. Joseph Street. |
| | | Improvements to Water Treatment Plants and Wells. |
| | | Replacement of mobile equipment and vehicles. |
| | | Refurbishments and maintenance of Distribution Systems, Plants, Buildings and Compounds. |
| **2010/11** | **$13,600,000** | Commission of Reverse Osmosis Plant and Distribution System for Caye Caulker. |
| | | New Water Main and distribution system for Cotton Tree. |
| | | Expansion and improvements in all the Production and Distribution Systems. |
| | | Improvements in buildings and compounds (including overdue maintenance works). |
| | | Replacement of mobile equipment and vehicles. |
| | | Expansion of mains and an underwater crossing of Beaver Dam Creek to connect St. Matthews/Frank Eddy System. |
| | | Refurbishments of the distribution system in St. Matthews. |
| | | Installation of 10” transmission line to Burrell Boom Village. |
| | | Replacement of corroded and leaking galvanized pipe connections on Neal Pen Road and Collect Canal in Belize City. |
| | | Installation of 12” transmission line in Belmopan to allow the transfer of extra water to main storage reservoir which will improve supply to Belmopan. |
| **2011/12** | **$11,100,000** | Expansion of Cotton Tree, St. Matthews, Franks Eddy and smaller expansions in each service area countrywide. |
| | | Replacement of mains and service lines in Belize City. |
| | | Replacement of mains and service lines in Dangriga. |

| Year | Investment Value | Projects Included |
|---|---|---|
| | | Improvements in production and distribution systems, buildings and compounds (including overdue maintenance works). |
| | | Replacement of mobile equipment and vehicles. |
| | | Collaboration with Fire Department on the installation of new fire hydrants. |
| | | Replacement of old transmission lines and galvanized pipe in Belize City. |
| **2012/13** | **$14,400,000** | Major water main extensions were done in several parts of the country including Belize City, San Ignacio, Belmopan and Corozal. |
| | | Construction of water reservoir in Belmopan |
| | | Refurbishment of buildings in San Pedro and Belize City |
| | | Replacements of water mains and service upgrades in Belize City to accommodate the Belize City Council Street Infrastructure Project |
| | | Installation of transmission main lines on Loma Luz Boulevard, San Ignacio |
| | | Installation of water mains and service upgrades on Young Bank Road, Cayo District. |
| | | Expansion of water mains and service upgrades for Chan Pine Ridge and Orange Walk Town. |
| | | Expansion of water mains and service upgrades for Copper Bank Ferry Crossing, Corozal District |
| | | Expansion of water mains and service upgrades for St. Matthews and Franks Eddy |
| **2013/14** | **$15,300,000** | Major water main extensions were done in several parts of the country including Belize City, San Pedro, San Ignacio, Dangriga and Corozal |
| | | Installation of New Filtration gallery in San Ignacio |
| | | Refurbishment of Dangriga Water Treatment Plant |
| | | Replacement of aged water mains and service upgrades |
| **Total** | **$63,800,000** | |

While this $63.8 million investment might seem significant, much more investment is required and must be made within the next FFBP period to connect new customers, to maintain or meet quality standards and to replace/refurbish the aged infrastructure in order to ensure continuity of service and to avoid even larger expenditures in the future.

## 4.6 Other Financial Issues

During the course of the second FFBP, BWS continued to face cash flow shortages, with the possibility of running out of cash and being unable to meet its operational costs and debt-servicing obligations. The company has curtailed or deferred a number of urgently needed capital investments. Realising the critical nature of the company's operations, the Board of Directors and Management engaged several of the key stakeholders in negotiations to attempt to resolve this situation without any increase in tariffs.

These negotiations achieved significant cash savings and/or cost reductions as follows:

- An extended moratorium (to March 2015) on two Caribbean Development Bank loan repayments by the Government of Belize, with these payments being made by the Government. **This resulted in total cash of almost $12.2 million** over the FFBP period, which was utilised primarily to finance much needed capital investment.
- An agreement by the Government to forego all dividends relating to its shares in BWS until 2015, but to have its dividends pro-rated to the minority shareholders. **This allowed the company to declare and pay lower overall dividends over the FFBP period**

- Negotiations with Government, Municipal Councils and private developers to assist with partial funding of replacement infrastructure and expansion infrastructure
- Negotiations with IFI's for several small grants and some loan funds to finance water and sewer expansion and improvement projects.

With the cash realised from the above negotiations, the company was able to meet all its operational and remaining financial commitments and to perform some capital investments, primarily in the expansion and improvements of water systems.

**Unfortunately, the Government has indicated that is unable to continue to offer the same level of financial support beyond these agreements. The company must earn enough cash to meet all its commitments in the new Business Plan period.**

# 5 Performance over the last FFBP Period

## 5.1 Financial Performance

### 5.1.1 Comparison to PUC Final Decision

The company's audited financial statements (see Appendix II) show profits over the last few years, albeit with a noticeable decline after the first two years due to the 7.2% tariff reduction in 2012. The table below provides a summary of BWS financial performance over the FFBP period and a comparison to the PUC approved Final Decisions[4] of 2010 and 2014.

**Table– BWS Financial performance vs. FFBP approved Plans (Figures in BZ$'000)**

| Year: | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15* | Total |
|---|---|---|---|---|---|---|
| ***BWS Actual*** | | | | | | |
| Total Revenue | **34,869** | **35,327** | **33,583** | **34,923** | **40,189** | **178,891** |
| Less: Other Income | (1,223) | (1,077) | (769) | (771) | (970) | (4,809) |
| Tariff Basket Revenue | **33,646** | **34,250** | **32,815** | **34,151** | **39,219** | **174,081** |
| Operating Expenses | 21,638 | 23,498 | 24,183 | 24,301 | 27,612 | 121,231 |
| Depreciation | 3,363 | 3,597 | 3,953 | 4,674 | 4,890 | 20,477 |
| Taxes&License Fees | 775 | 788 | 755 | 783 | 909 | 4,010 |
| Finance Charges | 3,635 | 2,054 | 2,333 | 2,204 | 2,094 | 12,319 |
| Total Expenses | **29,412** | **29,937** | **31,224** | **31,962** | **35,505** | **158,039** |
| **Profit** | **5,457** | **5,391** | **2,360** | **2,961** | **4,684** | **20,852** |
| ***PUC FFBP(2010)*** | **2010/11** | **2011/12** | **2012/13** | **2013/14** | **2014/15*** | **Total** |
| Total Revenue | 37,380 | 37,730 | 38,056 | 39,810 | 41,060 | 194,036 |
| Less: Other Income | (1,050) | (1,097) | (1,146) | (1,198) | (1,252) | (5,743) |
| **Tariff Basket Revenue** | **36,330** | **36,633** | **36,910** | **38,612** | **39,808** | **188,293** |
| Operating Expenses | 20,573 | 20,710 | 20,074 | 20,923 | 21,799 | 104,079 |
| Depreciation | 3,170 | 3,123 | 3,277 | 3,503 | 3,590 | 16,663 |
| Taxes&License Fees | 836 | 843 | 850 | 889 | 916 | 4,334 |
| Finance Charges[+] | 3,635 | 2,054 | 2,333 | 2,204 | 2,094 | 12,319 |
| **Total Expenses** | **28,214** | **26,730** | **26,534** | **27,519** | **28,399** | **137,395** |
| **Profit** | **8,116** | **9,903** | **10,376** | **11,093** | **11,409** | **50,898** |
| ***PUC FFBP(2014)*** | **2010/11** | **2011/12** | **2012/13** | **2013/14** | **2014/15*** | **Total** |
| Total Revenue | 37,228 | 37,263 | 34,388 | 35,475 | 40,980 | 185,334 |
| Less: Other Income | (1,223) | (1,077) | (930) | (1,095) | (1,158) | (5,483) |
| **Tariff Basket Revenue** | **36,006** | **36,186** | **33,458** | **34,380** | **39,822** | **179,851** |
| Operating Expenses | 20,573 | 20,710 | 20,074 | 21,523 | 22,425 | 105,303 |
| Depreciation | 3,363 | 3,597 | 3,953 | 3,287 | 3,412 | 17,612 |
| Taxes&License Fees | 829 | 833 | 770 | 791 | 917 | 4,140 |
| Finance Charges[+] | 3,635 | 2,054 | 2,333 | 2,204 | 2,094 | 12,319 |
| Total Expenses | **28,400** | **27,193** | **27,130** | **27,805** | **28,847** | **139,374** |
| **Profit** | **7,606** | **8,994** | **6,328** | **6,575** | **10,975** | **40,477** |

***BWS 2014/14 figures are part actual, part forecast**

[4] The PUC Final Decision do not include finance charges, so BWS figures are used.

There are noticeable shortfalls between the actual figures and the approved Business Plan (FFBP) figures (see table below), and the gap in profit has continued to increase over the period. Whilst the shortfall in Total Revenue for the period has been adjusted for the 2014 Final Decision, no significant adjustment was made with respect to Expenses. The effect is a noticeable difference in Profit, and by extrapolation, in cash available to the company.

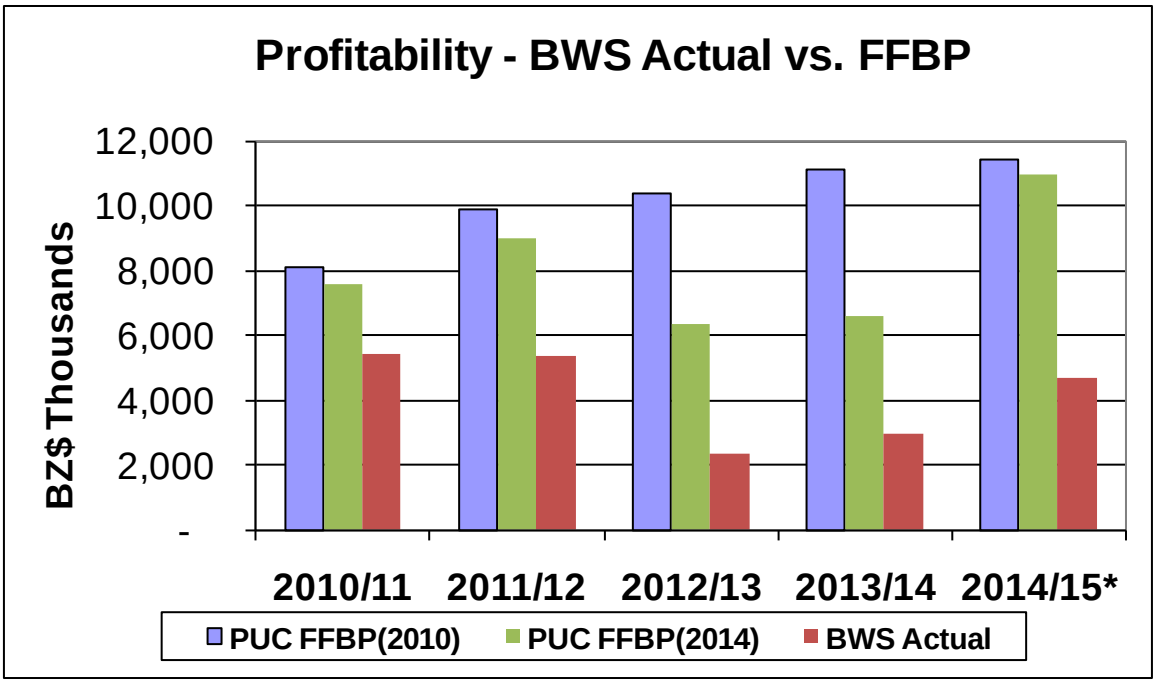
**Table– Comparison of BWS Actuals to PUC FD 2010 and 2014**

| **Comparison to FFBP 2010 Figures** | | | | | | |
|---|---|---|---|---|---|---|
| ***Variance Amount*** | **2010/11** | **2011/12** | **2012/13** | **2013/14** | **2014/15*** | **Total** |
| Total Revenue | (2,511) | (2,403) | (4,473) | (4,887) | (871) | (15,145) |
| Total Expenses | 1,197 | 3,207 | 4,690 | 4,443 | 7,106 | 20,643 |
| **Profit** | (2,659) | (4,513) | (8,017) | (8,132) | (6,725) | (30,045) |
| ***Variance %*** | | | | | | |
| Total Revenue | (7.4%) | (6.5%) | (11.1%) | (11.6%) | (1.5%) | (7.5%) |
| Total Expenses | 4.2% | 12.0% | 17.7% | 16.1% | 25.0% | 15.0% |
| **Profit** | (32.8%) | (45.6%) | (77.3%) | (73.3%) | (58.9%) | (59.0%) |
| **Comparison to FFBP 2014 Figures** | | | | | | |
| ***Variance Amount*** | **2010/11** | **2011/12** | **2012/13** | **2013/14** | **2014/15*** | **Total** |
| Total Revenue | (1,137) | (859) | 125 | 543 | 367 | (960) |
| Total Expenses | 1,012 | 2,744 | 4,094 | 4,157 | 6,658 | 18,664 |
| **Profit** | (2,149) | (3,603) | (3,969) | (3,614) | (6,291) | (19,624) |
| ***Variance %*** | | | | | | |
| Total Revenue | (3.2%) | (2.4%) | 0.4% | 1.6% | 0.9% | (0.5%) |
| Total Expenses | 3.6% | 10.1% | 15.1% | 14.9% | 23.1% | 13.4% |
| **Profit** | (28.3%) | (40.1%) | (62.7%) | (55.0%) | (57.3%) | (48.5%) |

Further, despite continued achievements in improving efficiency, the increasing prices caused by inflation contributed to a growing increase in costs over time. This inflationary cost increase does not appear to have been taken into account in the PUC Decisions, including the mostly retroactive 2014 Final Decision. The company was also challenged to meet not only the demands for expansion but also the multitude of street infrastructure projects across all the municipalities. This has had, and will continue to have, a significant impact on costs.

The net effect of these is a widening gap in costs and therefore a growing shortfall in profit, which, even using the 2014 Final Decision, will accumulate to roughly $19.6 million over the period.

The graph below highlights the difference in profitability (and cash), which is clearly linked to the shortfall in revenue and cost differential. It should be borne in mind that cash generated by profits is required to fund needed investments in assets to facilitate service expansion.




### 5.1.2 Financial Analysis

The table below provides a summary financial analysis over the last Business Plan period.

**Table – BWS Profitability and Ratios**

| *Description* | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15* |
|---|---|---|---|---|---|
| Total Revenue | 34,869 | 35,327 | 33,583 | 34,923 | 40,189 |
| Net Profit | 5,457 | 5,391 | 2,360 | 2,961 | 4,684 |
| Net Assets | 156,291 | 159,032 | 160,029 | 162,129 | 165,082 |
| Total Equity | 96,302 | 100,682 | 102,537 | 104,993 | 111,557 |
| Share Value | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| No. of Shares ('000) | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 |
| Net Profit Margin (%) | **15.65%** | **15.26%** | **7.03%** | **8.48%** | **11.65%** |
| Return on Assets(%) | **3.49%** | **3.39%** | **1.47%** | **1.83%** | **2.84%** |
| Return on Equity (%) | **5.67%** | **5.35%** | **2.30%** | **2.82%** | **4.20%** |
| Earnings per share ($) | **$0.136** | **$0.135** | **$0.059** | **$0.074** | **$0.117** |
| Earnings per $ of shares | **$0.091** | **$0.090** | **$0.039** | **$0.049** | **$0.078** |

*Revenue, Profit, Assets, Equity and Share Value figures in BZ$'000*

BWS' profitability for 2010-15 appears as a "V" shaped curve, due to the effects of the Tariff changes. The 2012/13 Net Profit Margin of approximately 7% is less than one-third of that in the regulated FFBP (see table below) and less than half of the earlier years.

The Return on Assets is even lower (declining from 3.49% to as low as 1.47%) as compared to the FFBP's average projection of over 7% (see table below). Even if using only the original $60 Million of issued shares as the equity base, the total profit for 2012/13 only provides a return of 3.9%, which is woefully inadequate to provide dividends to all shareholders at current market rates.

**Table – FD 2010 Projected Profitability and Ratios**

| *Description* | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15* |
|---|---|---|---|---|---|
| Total Revenue | 37,380 | 37,730 | 38,056 | 39,810 | 41,060 |
| Net Profit* | 8,116 | 9,903 | 10,376 | 11,093 | 11,409 |
| Net Assets | 124,937 | 131,066 | 140,116 | 143,611 | 144,774 |
| Share Value | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| No. of Shares ('000) | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 |
| Net Profit Margin (%) | **21.71%** | **26.25%** | **27.27%** | **27.86%** | **27.79%** |
| Return on Assets(%)* | **6.50%** | **7.56%** | **7.41%** | **7.72%** | **7.88%** |
| Earnings per share ($) | **$0.203** | **$0.248** | **$0.259** | **$0.277** | **$0.285** |
| Earnings per $ of shares | **$0.135** | **$0.165** | **$0.173** | **$0.185** | **$0.190** |

*Revenue, Profit, Assets and Share Value figures in BZ$'000*

Based on the above, it is clear that the revenues, and consequently, the profit stream, are insufficient to fund the required dividend stream to shareholders, let alone the investment requirements of the company and of the nation.

## 5.2 *Customer Accounts*

### 5.2.1 Customer Connections

The table below provides a summary of BWS's key customer related performance indicators as compared to those in the FFBP over the last five years.

**Table – BWS and FFBP Customer Connections**

| *Description* | 2010-11 | 46936 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|
| Beginning Connections | 45,537 | 46,936 | 47,906 | 49,138 | 51,433 |
| New Connections Added | 5,331 | 4,768 | 4,500 | 5,693 | 2,351 |
| Disconnections | 14,486 | 16,732 | 14,389 | 13,989 | 5,296 |
| Reconnections | 10,554 | 12,934 | 11,121 | 10,591 | 3,808 |
| **Ending Connections** | **46,936** | **47,906** | **49,138** | **51,433** | **52,296** |
| **FFBP Connections** | **47,242** | **48,287** | **49,469** | **50,654** | **52,748** |
| **Difference** | **(306)** | **(381)** | **(331)** | **779** | **(452)** |

As shown above, BWS was consistently below the projected number of connections for the FFBP period until the last year which jumped due to addition of 1,002 connections from the Placencia Peninsula. Another contributing factor to the improvement in connections at the end of the fifth year is a change in internal processes to reduce the number of disconnections for non-payment.

### 5.2.2 Average Customer Consumption

The table below contains the comparison of sales volumes over the last five years, which showed that the company CPC for two of the five years were below the projected amount.

**Table – BWS and FFBP Average Monthly CPC**

| *Description* | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|
| BWS Actual | 3,511.72 | 3,227.51 | 3,261.42 | 3,611.03 | 3,852.78 |
| FFBP Projected | 3,424.49 | 3,413.70 | 3,401.47 | 3,387.06 | 3,613.77 |
| **Shortfall** | **87** | **(186)** | **(140)** | **224** | **239** |

### 5.2.3 Water Sales Volumes

The table below shows the shortfall when actual sales volume figures are compared to those contained in the approved FFBP over the last five years.

**Table – BWS and FFBP Sales volumes (Millions of Gallons)**

| *Description* | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | Total |
|---|---|---|---|---|---|---|
| BWS Actual | 1,948.20 | 1,967.00 | 2,016.30 | 2,169.00 | 2,284.31 | 10,384.81 |
| FFBP Projected | 1,948.28 | 1,975.13 | 2,020.43 | 2,110.14 | 2,203.62 | 10,257.61 |
| **Shortfall** | **(0)** | **(8)** | **(4)** | **59** | **81** | **127** |

### 5.2.4 Water Sales Revenue

The comparative figures for the five-year period are shown in the table below.

**Table – BWS and FFBP Water-related Sales Revenue**

| *Description* | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | Total |
|---|---|---|---|---|---|---|
| BWS Actual | 33,867 | 34,469 | 32,938 | 34,907 | 39,383 | 175,564 |
| FFBP Projected | 35,406 | 35,798 | 33,200 | 33,955 | 38,082 | 176,441 |
| **Shortfall** | **(1,539)** | **(1,329)** | **(262)** | **952** | **1,301** | **(877)** |

### 5.2.5 Other Customer related issues

During the reviewed period, the company managed to reduce the number of disconnections and reconnections being performed. However, there was noticeable increase in the number high bill complaints, and requests for discounts due to leaks within customers' premises, as well as a variety of other customer related requests and inquiries.

Although the number of illegal connections found has decreased in the last few years (see table below), the need to put in place regulatory mechanisms for handling these situations is of foremost importance for the company, especially given the increased number and level of threats being experienced by the employees who handle these cases.

**Table – Illegal Connections Found and Removed**

| *Description* | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|
| Number of IC's | 392 | 354 | 352 | 352 | 160 |

Managing customer requests and in the most efficiently and cost effective manner is a major component of the work performed by the company. The table below highlights the consistent increase in the number of jobs processed annually based on customer requests. Notable is that majority of these jobs are billing related jobs.

**Table – Customer Jobs and Requests processed**

| Branch | No. of Customers | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 6 months to Sep 14 2014-15 |
|---|---|---|---|---|---|---|
| Belize City | 19,291 | 97,585 | 104,086 | 96,430 | 87,682 | 41,354 |
| Belmopan | 6,117 | 24,665 | 25,318 | 27,871 | 29,318 | 11,769 |
| Caye Caulker | 488 | 1,244 | 1,372 | 1,736 | 1,240 | 779 |
| Corozal | 4,552 | 13669 | 13,878 | 13,710 | 11,934 | 5,835 |
| Dangriga | 2,756 | 9305 | 9,018 | 10,898 | 11,030 | 2,859 |
| Orange Walk | 4,562 | 13,750 | 14,825 | 16,645 | 17,443 | 8,403 |
| Placencia* | 991 | - | - | - | 4,924 | 3,410 |
| Punta Gorda | 2,055 | 9011 | 9,663 | 10,745 | 10,437 | 1,717 |
| San Ignacio&BV | 7,392 | 21233 | 20,759 | 20,610 | 21,066 | 10,483 |
| San Pedro | 3,229 | 18568 | 13,293 | 13,126 | 22,549 | 9,762 |
| **Total** | **51,433** | **209,030** | **212,212** | **211,771** | **217,623** | **96,371** |
| | | | | | **Ratios of Jobs per Customer for 2013-14 =** | **4.2** |

***Placencia operations commenced June 2013***

## 5.3 Operational Performance

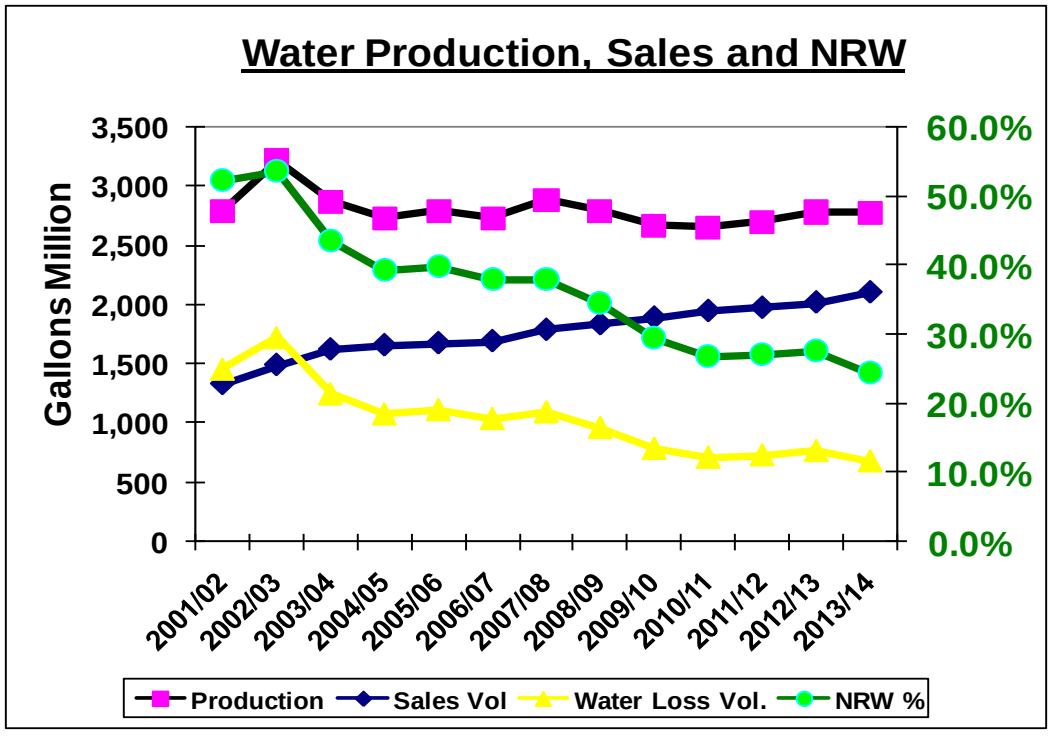
The table below provides a summary of BWS' key operational performance indicators as compared to those in the FFBP over the last five years.

**Table – BWS Production and NRW vs. FFBP (M Gals)**

| *Description* | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|
| **BWS Actual** | | | | | |
| Production | 2,659.36 | 2,706.56 | 2,788.79 | 2,786.81 | 2,830.16 |
| Sales | 1,948.46 | 1,975.13 | 2,020.25 | 2,105.34 | 2,230.57 |
| Water Loss: | 710.91 | 731.43 | 768.54 | 681.47 | 599.59 |
| NRW % | 26.73% | 27.02% | 27.56% | 24.45% | 21.20% |
| **FFBP** | | | | | |
| Production | 2,660.70 | 2,668.60 | 2,682.50 | 2,700.40 | 2,720.40 |
| Sales | 1,921.20 | 1,957.90 | 1,996.50 | 2,036.20 | 2,076.40 |
| Water Loss: | 739.50 | 710.70 | 686.00 | 664.20 | 644.00 |
| NRW % | 27.80% | 26.60% | 25.60% | 24.60% | 23.70% |

Projection based on YTD data as at September 2014

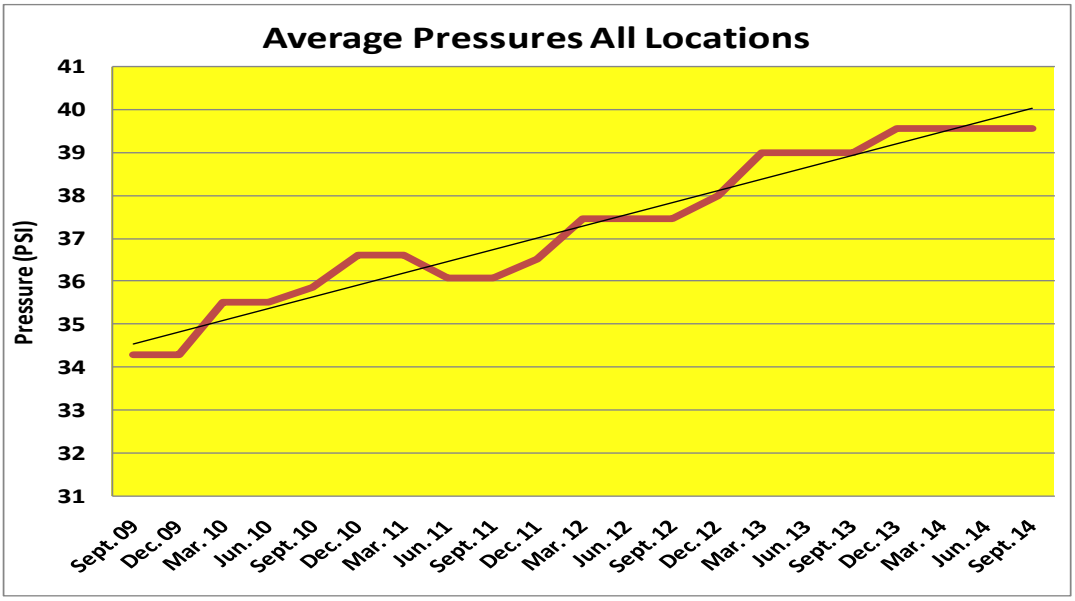
The chart below highlights the significant improvements in NRW improvements which have resulted in water loss volume being reduced by 36.9% since 2004.




The company has gone to great efforts to improve efficiency of operations in almost every area and process with a view to improving customer satisfaction, response times, and reducing costs.

Improvement in pressure was a welcome boon to customers, especially those in hilly terrain or previously under-pressured systems.

**Chart – BWS Average Country-wide Pressure Improvements**




Other efficiency improvements over the period include:

- Employees per 1000 Customers reduced by 9%
- Non-direct Operational Expenses reduced by 21%
- Miles of Mains increased by 16%
- Electricity consumption by mile of main reduced by 12%

## 5.4 Key Performance Indicators

The table below shows the Key Performance Indicators (KPI's) as measured and reported by the company in its annual reports. These summarise the performance over the last ten years of operations, including the last.

**Key Performance Indicators**

| Description of KPI | UNIT | 2013/2014 | 2012/2013 | 2011/2012 | 2010/2011 | 2009/2010 | 2008/2009 | 2007/2008 | 2006/2007 | 2005/2006 | 2004/2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **PROFITABILITY** | | | | | | | | | | | |
| Operating Revenue | $' 000 | 34,923 | 33,583 | 35,327 | 34,869 | 31,047 | 29,673 | 28,866 | 27,448 | 27,322 | 25,909 |
| Operations and Maintenance | $' 000 | 24,640 | 24,535 | 23,673 | 21,810 | 18,494 | 19,216 | 18,705 | 16,868 | 16,905 | 16,861 |
| EBITDA | $' 000 | 10,282 | 9,049 | 11,654 | 13,059 | 12,553 | 10,457 | 10,161 | 10,580 | 10,417 | 9,048 |
| EBIT | $' 000 | 5,608 | 5,095 | 8,058 | 9,696 | 9,117 | 7,264 | 7,509 | 7,905 | 7,789 | 6,421 |
| Net Profit (Loss) | $' 000 | 2,961 | 2,360 | 5,391 | 5,457 | 4,878 | 2,069 | 1,693 | 1,863 | 1,919 | 1,010 |
| EBITDA/Net Turnover | % | 29% | 27% | 33% | 37% | 40% | 35% | 35% | 39% | 38% | 35% |
| Earnings Per Share | $ | 0.074 | 0.059 | 0.135 | 0.136 | 0.122 | 0.052 | 0.042 | 0.047 | 0.048 | 0.025 |
| Dividends Per Share[1] | $ | 0.0126 | 0.0126 | 0.025 | 0.025 | 0.025 | 0.078 | 0.078 | 0.033 | 0.000 | 0.000 |
| Retained Earnings (Deficit) | $' 000 | 18,003 | 15,546 | 13,692 | 9,311 | 4,861 | 3,589 | 2,041 | 768 | (755) | (2,674) |
| **LIABILITIES & EQUITY** | | | | | | | | | | | |
| Long Term Liabilities | $' 000 | 43,947 | 44,330 | 47,023 | 47,854 | 49,622 | 53,135 | 62,653 | 62,956 | 66,117 | 65,310 |
| Current Liabilities | $' 000 | 13,189 | 13,162 | 11,327 | 12,136 | 10,971 | 9,182 | 10,553 | 11,676 | 10,407 | 10,907 |
| Total Equity | $' 000 | 104,993 | 102,537 | 100,682 | 96,302 | 90,578 | 84,251 | 77,317 | 76,157 | 74,521 | 72,603 |
| **ASSETS** | | | | | | | | | | | |
| Current Assets | $' 000 | 15,396 | 14,341 | 15,250 | 16,022 | 14,675 | 10,584 | 9,588 | 8,398 | 7,593 | 10,703 |
| Total Net Assets | $' 000 | 162,129 | 160,029 | 159,032 | 156,291 | 151,172 | 146,566 | 150,523 | 150,789 | 151,045 | 148,820 |
| Additions to Assets | $' 000 | 12,124 | 10,906 | 7,294 | 10,113 | 7,059 | 4,742 | 4,212 | 2,746 | 3,907 | 6,097 |
| **BALANCE SHEET STRUCTURE** | | | | | | | | | | | |
| Current Assets/Current Liabilities | No. | 1.17 | 1.09 | 1.35 | 1.32 | 1.34 | 1.15 | 0.91 | 0.72 | 0.73 | 0.98 |
| Gearing (LT Liabilities/Equity) | % | 42% | 43% | 47% | 50% | 55% | 63% | 78% | 83% | 89% | 90% |
| Total Assets/Total Equity | No. | 1.54 | 1.56 | 1.58 | 1.62 | 1.67 | 1.74 | 1.95 | 1.98 | 2.03 | 2.05 |
| Total Assets/Share Capital | No. | 2.70 | 2.67 | 2.65 | 2.60 | 2.52 | 2.44 | 2.51 | 2.51 | 2.52 | 2.48 |
| Return on Assets(EBIT/Avg. Assets) | % | 3.5% | 3.2% | 5.1% | 6.3% | 6.1% | 4.9% | 5.0% | 5.2% | 5.2% | 4.3% |
| **WATER VOLUMES** | | | | | | | | | | | |
| Water Production | MUSG | 2,787.1 | 2,788.8 | 2,706.6 | 2,659.4 | 2,679.1 | 2,800.9 | 2,887.1 | 2,735.1 | 2,792.9 | 2,739.5 |
| Water Sales | MUSG | 2,105.0 | 2,020.4 | 1,975.1 | 1,948.3 | 1,892.5 | 1,841.7 | 1,788.4 | 1,694.3 | 1,677.1 | 1,659.9 |
| Non-Revenue Water Volume | MUSG | 682.1 | 768.4 | 731.4 | 711.1 | 786.6 | 959.2 | 1,098.6 | 1,040.8 | 1,115.8 | 1,079.6 |
| Non-Revenue Water % | % | 24.5% | 27.6% | 27.0% | 26.7% | 29.4% | 34.2% | 38.1% | 38.1% | 40.0% | 39.4% |
| Non-Revenue Water ($M^3$/Conn/Day) | $M^3$ | 0.14 | 0.16 | 0.16 | 0.16 | 0.18 | 0.22 | 0.27 | 0.26 | 0.29 | 0.28 |
| Non-Revenue Water ($M^3$/Km/Day) | $M^3$ | 5.35 | 6.49 | 6.42 | 6.50 | 7.53 | 9.28 | 10.91 | 10.77 | 11.80 | 11.69 |
| **CONNECTIONS** | | | | | | | | | | | |
| Beginning Connections | No. | 49,138 | 47,906 | 46,936 | 45,537 | 44,610 | 43,835 | 42,130 | 40,581 | 39,764 | 38,971 |
| New Connections Added | No. | 5,234 | 4,500 | 4,768 | 1,777 | 1,089 | 3,235 | 1,322 | 2,634 | 2,785 | 2,764 |
| Disconnections | No. | 11,950 | 12,380 | 14,693 | 12,365 | 15,138 | 13,061 | 16,153 | 16,109 | 13,916 | 13,546 |
| Reconnections | No. | 10,591 | 11,120 | 11,089 | 10,548 | 13,145 | 12,937 | 16,536 | 15,024 | 11,948 | 11,575 |
| Ending Connections | No. | 51,433 | 49,138 | 47,906 | 46,936 | 45,537 | 44,610 | 43,835 | 42,130 | 40,581 | 39,764 |
| Ending Sewer Connections** | No. | 10,264 | 10,158 | 10,121 | 10,279 | 10,233 | 10,323 | 10,309 | 10,441 | 10,436 | 10,333 |
| **BILLING** | | | | | | | | | | | |
| Avg. Number of Connections | No. | 50,619 | 48,522 | 47,421 | 46,237 | 45,074 | 44,223 | 42,983 | 41,119 | 40,107 | 39,414 |
| Water Sales Revenue | $' 000 | 34,151 | 32,815 | 34,250 | 33,867 | 29,750 | 29,064 | 28,272 | 26,819 | 25,757 | 24,408 |
| Avg. Usage per Connection Monthly | Gal | 3,465 | 3,470 | 3,471 | 3,511 | 3,499 | 3,471 | 3,467 | 3,434 | 3,485 | 3,510 |
| Avg. Sales per Connection Monthly | $ | 57.50 | 56.32 | 60.68 | 61.09 | 55.00 | 54.77 | 54.81 | 54.35 | 53.52 | 51.61 |
| Avg. Tariff per 1000 Gallons | $ | 16.22 | 16.24 | 17.34 | 17.38 | 15.72 | 15.78 | 15.81 | 15.83 | 15.36 | 14.70 |
| **OPERATIONAL EFFICIENCY** | | | | | | | | | | | |
| Avg. No. of Staff (Permanent) | No. | 251 | 252 | 246 | 238 | 229 | 232 | 228 | 216 | 215 | 210 |
| Staff Per 1000 Connections | No. | 5.0 | 5.2 | 5.2 | 5.1 | 5.1 | 5.2 | 5.3 | 5.3 | 5.4 | 5.3 |
| Total Staff Costs | $'000 | 10,248 | 8,567 | 8,252 | 7,745 | 6,816 | 7,460 | 6,557 | 6,354 | 6,286 | 6,527 |
| Staff Costs/Emp. | $ | 4,083 | 3,400 | 3,355 | 3,254 | 2,976 | 3,216 | 2,876 | 2,942 | 2,924 | 3,108 |
| Revenue/Emp. | $ | 139,135 | 133,267 | 143,607 | 146,507 | 135,576 | 127,901 | 126,605 | 127,074 | 127,079 | 123,376 |
| **COLLECTION EFFICIENCY** | | | | | | | | | | | |
| Overdue Debtors/Trade Debtors | % | 14.0% | 13.4% | 15.0% | 17.4% | 14.2% | 26.6% | 26.5% | 19.7% | 19.2% | 46.3% |
| Bad Debts Write Off/Net Turnover | % | 0.0% | 0.2% | 1.1% | 0.7% | 0.3% | 0.9% | 0.2% | 0.5% | 1.2% | 2.5% |
| **WATER INFRASTRUCTURE** | | | | | | | | | | | |
| Total Length of Mains** | Miles | 821.5 | 763.0 | 734.4 | 704.5 | 673.2 | 666.3 | 648.7 | 622.6 | 609.5 | 595.1 |
| Total Length of Mains** | Km | 1,322 | 1,228 | 1,182 | 1,134 | 1,083 | 1,072 | 1,044 | 1,002 | 981 | 958 |
| Length of Mains/Connection | Ft. | 84.3 | 82.0 | 80.9 | 79.3 | 78.1 | 78.9 | 78.1 | 78.0 | 79.3 | 79.0 |

| KPI Description Note | Key - Units | Key - Units | Key - Units |
|---|---|---|---|
| **=Includes some estimated figures | MUSG = Millions of U.S. Gallons | Gal = US Gallon | % = Percentage |
| [1]See Management report for details | $' 000 = Thousands of Belize Dollars | No. = Number/Count of Units/Ratio | Ft. = Feet |
| | $ = Belize Dollars | $M^3$ = Cubic meters (1$M^3$ = 264.1721Gal) | Km. = Kilometer |

*NB: Some Financial figures for the previous 2 years have been restated (see audited Financial Statements)*

# 6 Strategic Influences and Inputs into Business Plan

## 6.1 Provision of water and sewer services

Due to the extremely high cost of sewerage expansion, the main focus is on water expansion. However some expansion and improvements of sewer systems have been factored in due to both the urgent need for works due to the condition of assets/infrastructure and to improve treatment and effluent quality.

Despite extensive works, sewerage effluent quality improvement in Belmopan remains a requirement and improvements in Belize City are almost as critical. Additionally, serious deterioration in the existing collection systems and lift stations, mandate that investments be made on all existing sewer systems.

Sewer expansion, though significantly more expensive than water expansion, is becoming more and more needed due to the growing environmental consciousness and the need to for the country to meet more stringent international environmental standards.

Maintaining water quality has become an issue for the San Ignacio/Santa Elena system and may require investment in a sophisticated plant to handle the changing conditions in the raw water. In the Corozal and Orange Walk areas, the 'hardness' in the raw water, which is due to geographic conditions requires more expensive treatment; however, based on a previous the customer survey, consumers in these area are accustomed to the existing hardness level (which does not pose a health risk) and appear unwilling to pay significantly more to improve overall water quality. Nevertheless, BWS plans to attempt to improve the quality for this area by utilizing newer treatment technology.

Furthermore, there is an on-going demand for water expansion to meet the needs of consumers, both within existing service areas and beyond. The Government pledged support to the United Nations Millennium goals of providing access to potable water to 99% of the population by the year 2015 and BWS has contributed significantly to help achieve this goal several years early. However, this has now given the public the perception that the Government and/or BWS will pay for all expansion. There is always strong socio-political pressure to provide service to households in newly developed areas or subdivisions, due to the essential nature of the service.

## 6.2 Capital Investment rationale

Capital Investment is included in the Business Plan to meet the requirements of the core business of providing water and sewer services as stated above and earlier in this report.

Other assets required for supporting the core operations of the business, including buildings and facilities, vehicles and mobile plant, and Information and Communication

Technology (ICT) equipment and software are included to ensure that essential tools and facilities are in place to supplement, support, record and monitor the core operations.

The above issues and the focus of investment during the next five years will of course be the subject of further discussion with the PUC during this review. It is essential that the balance of capital investment priorities between expansion and refurbishment of existing assets is agreed and that all stakeholders in BWS and, in particular, developers are informed as to the priority and regulations agreed between the business and PUC during this review.

With regard to developers, it should be noted that the assumption remains that developers, whether public or private, will contribute significantly to water and sewerage expansion to new developments. Further, where developers wish BWS to take over existing assets, an evaluation of the refurbishments and improvements to bring such systems into proper working condition and up to BWS operating standards will be conducted and the recovery of the necessary costs agreed before BWS will assume responsibility for maintenance and operation.

## 6.3 Connection Growth and Water Demand (CPC)

These are key drivers of the Business Plan forecasts. Based on historical data and known factors, these have been projected to move as per the table below.

| Description | Unit | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|---|---|---|---|---|---|---|
| Water Connections | No. | 54,454 | 55,627 | 56,805 | 57,981 | 59,215 |
| Connection Growth | | 3.2% | 2.2% | 2.1% | 2.1% | 2.1% |
| Avg. Mthly CPC(gals) | Gals. | 3,669.9 | 3,646.2 | 3,688.1 | 3,730.0 | 3,689.3 |
| CPC Change | | 0.7% | -0.6% | 1.2% | 1.1% | -1.1% |
| Sales Volume | M Gals | 2,375.2 | 2,409.9 | 2,489.7 | 2,570.6 | 2,596.0 |
| Volume Movement | | 4.0% | 1.5% | 3.3% | 3.3% | 1.0% |

In general, though there is a continuing growth in number of connections, the forecast based on recent historical data holds average consumption per connection fairly steady. These combine to factor into the total sales volume forecast, which increases steadily each year.

## 6.4 Non-Revenue Water (NRW)

Since the volume of water produced equates to the sales volume plus the water loss volume, the levels of water loss (NRW) play a critical role in determining overall production volume and therefore production related costs. Improvements (i.e. reductions) in NRW generally lead to reductions in all costs relating to production including bulk water purchases (San Pedro), electricity and chemicals. Over the second FFBP, BWS has made significant steps in reducing NRW, partly due to the massive mains replacements done in Belize City and other municipalities as part of the various street rehabilitation and drainage infrastructure projects.

It should, of course, be borne in mind that efforts to reduce NRW themselves have a cost, and more and more, as the NRW levels reduce, the cost of reducing to the next percentage point grows increasingly higher. Eventually, after achieving certain levels of NRW (which vary based on the system size and asset condition), the cost of the NRW programme may outweigh the benefits. It is quite possible that BWS will reach such critical points in some of the water systems within this new FFBP period.

The chart below shows the proposed NRW levels contained in this Business Plan.

***Chart: Projected NRW by location***

| | ACTUALS | | ANNUAL TARGETS | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NRW** | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
| Belize City | 27.4% | 22.4% | 15.0% | 14.5% | 14.2% | 13.9% | 13.5% | 13.1% |
| Hattieville | 46.4% | 51.4% | 30.0% | 28.0% | 24.0% | 22.0% | 20.0% | 18.0% |
| BzC+H'Vlle | **29.0%** | **22.4%** | **15.5%** | **15.0%** | **14.5%** | **14.2%** | **13.7%** | **13.3%** |
| Corozal | 34.3% | 39.9% | 34.0% | 32.0% | 30.0% | 28.0% | 26.0% | 25.0% |
| Orange Walk | 17.3% | 18.3% | 19.0% | 18.0% | 16.0% | 15.0% | 14.0% | 13.0% |
| Belmopan | 19.6% | 26.9% | 25.0% | 23.0% | 21.0% | 20.0% | 18.0% | 17.5% |
| San Ignacio | 16.6% | 20.5% | 18.0% | 17.0% | 16.5% | 16.0% | 15.0% | 14.5% |
| Benque Viejo | 19.0% | 26.3% | 26.0% | 25.0% | 24.0% | 22.0% | 21.0% | 20.0% |
| SanIgnacio+Benqu | **20.2%** | **22.0%** | **20.1%** | **19.1%** | **18.5%** | **17.6%** | **16.6%** | **15.9%** |
| Dangriga | 25.1% | 27.3% | 25.0% | 24.5% | 22.5% | 21.5% | 20.0% | 19.5% |
| Punta Gorda | 24.8% | 24.1% | 27.0% | 25.0% | 23.0% | 21.0% | 19.0% | 17.0% |
| Eldridge/FH | 40.1% | 59.9% | 33.0% | 30.0% | 27.0% | 25.0% | 24.0% | 23.0% |
| Punta Gorda+E/FH | **28.8%** | **30.0%** | **28.2%** | **26.0%** | **23.8%** | **21.8%** | **20.0%** | **18.2%** |
| San Pedro | 15.4% | 18.4% | 14.0% | 12.0% | 10.0% | 9.5% | 9.0% | 8.5% |
| Caye Caulker | 14.2% | 20.9% | 17.0% | 14.0% | 10.0% | 9.0% | 8.5% | 8.0% |
| Placencia | | 21.9% | 19.5% | 18.0% | 17.0% | 15.5% | 15.0% | 14.5% |
| TOTAL: | **26.9%** | **24.4%** | **19.5%** | **18.4%** | **17.2%** | **16.4%** | **15.4%** | **14.8%** |

## 6.5 Operating Costs

Operating Costs projected include, inter alia,:

- Expected increases in the San Pedro Bulk Water purchases (due to inflation) but not increases which may be due to changes in the price of Diesel or Electricity
- Expected increases in general costs due to inflationary effect
- Requirements deemed necessary to deal with overdue maintenance requirements not treated as Capital Expenditure
- Salary increases required due to inflation, staff progression and performance appraisal
- Other known or expected factors, including additional staffing requirements.

## 6.6 Disaster Preparedness and Recovery

Due to the nature and importance of the services offered, BWS must be adequately equipped to provide continuity of service, to properly respond to meet the needs of customers, to recover from emergency or disaster situations, and to provide technical assistance to rural system in restoration of these systems.

In order to achieve this, the company must keep adequate equipment, stores of materials and supplies. Further, management analysis shows that the company should maintain a cash float of at least $3 million to adequately deal with worse-case disasters and emergencies.

## 6.7 Economic Assumptions

Certain economic assumptions, primarily with regard to inflation, foreign exchange, interest rates, insurance rates, electricity costs, and bad debts are embedded within the Business Plan.

### 6.7.1 Inflation

This review has taken into account the inflationary impact of the business over the last business plan period and factors future inflation into costs. The table below shows the inflation rates for Belize as cited by both the International Monetary Fund and the Statistical Institute of Belize. It should be noted that it is not clear how inflation on costs were factored in the PUC Final Decisions during the recent FTRP.

**Table A7. Emerging Market and Developing Economies: Consumer Prices[1] *(continued)***
*(Annual percent change)*

| | Average | | | | | | | | | Projections | | | End of Period[2] | Projections | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996–2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2019 | 2013 | 2014 | 2015 |
| **Latin America and the Caribbean[5]** | **10.2** | **5.4** | **5.5** | **8.1** | **6.1** | **6.2** | **6.8** | **6.1** | **7.1** | . . . | . . . | . . . | **7.8** | . . . | . . . |
| Antigua and Barbuda | 1.8 | 1.8 | 1.4 | 5.3 | –0.6 | 3.4 | 3.5 | 3.4 | 1.1 | 1.1 | 2.0 | 2.5 | 1.1 | 1.4 | 2.0 |
| Argentina[5] | 4.9 | 10.9 | 8.8 | 8.6 | 6.3 | 10.5 | 9.8 | 10.0 | 10.6 | . . . | . . . | . . . | 10.9 | . . . | . . . |
| The Bahamas | 1.6 | 2.1 | 2.5 | 4.7 | 1.9 | 1.3 | 3.2 | 2.0 | 0.4 | 1.4 | 1.9 | 1.4 | 0.8 | 1.4 | 4.4 |
| Barbados | 2.3 | 7.3 | 4.0 | 8.1 | 3.7 | 5.7 | 9.4 | 4.5 | 1.8 | 1.7 | 2.2 | 2.8 | 1.1 | 2.5 | 2.0 |
| Belize | 1.8 | 4.2 | 2.3 | 6.4 | –1.1 | 0.9 | 1.7 | 1.2 | 0.5 | 1.8 | 2.0 | 2.0 | 1.6 | 2.0 | 2.0 |

*Source: IMF World Economic Outlook-October 2014 (Statistical Appendix A7)*[5]

For the five years 2010 through to 2014, the inflation increases are 0.9, 1.7, 1.2, 0.5 and 1.8 respectively; compounded, these combine to **6.2%**. However, while the recent historical inflation rates were fairly mild, the forecast is for average annual inflation of 2.0 over the next five years, which will increase most costs by over 10% by the end of the period.

The impact of historical and forecast inflation on costs has been included within this business plan.

### 6.7.2 Foreign Exchange

This plan assumes that the exchange rate will remain fixed at two Belize Dollars to one United States Dollar (BZ$2 = US$1) and that there will continue to be no difficulties in acquiring required foreign exchange.

The company's access to foreign exchange is a key driver in the context that without being able to obtain adequate quantities of foreign exchange in a timely fashion then operational and investment expenditures will have to be deferred or delayed or, in some cases, acquired locally at higher costs. This will impact negatively on sales and costs as a result of the business not being able to access foreign markets for equipment and services. More dangerous is the risk of not being able to maintain operations and ensure the security of supply to our customers.

### 6.7.3 Interest rates, Insurance costs, Electricity costs and Bad Debts

It is assumed that these costs will remain relatively stable based on recent historical trends. Electricity is viewed as being the most volatile since it is somewhat dependent on oil prices. No forecasts for variations are included in the plan.

### 6.7.4 Licenses, Fees, Taxes and Regulatory Penalties

It is assumed that there will be no significant increases in licenses, fees, or rates of taxes, duties etc. imposed by legislation. Additionally, it is assumed that there will be no statutory or regulatory penalties arising from the company's operations.

[5] Available at IMF website at http://www.imf.org/external/pubs/ft/weo/2014/02/pdf/text.pdf

### 6.7.5 Cost Increases due to economic factors

In the event of significant movements in foreign exchange rates, inflation, interest rates, electricity costs, bad debts or other costs during the course of the upcoming five year business plan period, then BWS will seek to recover these cost increases via an Annual Review Proceeding as defined under the Water and Sewerage (Tariff) Byelaws.

# 7 Summary of Proposed Business Plan

## 7.1 Financial

The full Business Plan forecast financial statements are contained in Appendix VI – Business Plan Outputs. The key financial forecasts are outlined in the tables below.

**Table - Summary of Revenue, Expenses, Profits**

| | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|---|---|---|---|---|---|
| **Revenue** | **44,130** | **44,777** | **49,726** | **51,437** | **51,901** |
| **Operating Expenses** | **(28,225)** | **(29,771)** | **(30,383)** | **(31,151)** | **(31,790)** |
| **Non-Operating Expenses** | **(9,099)** | **(11,226)** | **(13,609)** | **(15,628)** | **(15,707)** |
| **Profits** | **6,806** | **3,780** | **5,734** | **4,658** | **4,404** |

**Table – Cash Flows including Dividends**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| *Amounts in BZ$ '000* | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
| **Opening Cash Balance** | **5,311** | **7,718** | **7,129** | **3,730** | **5,295** |
| **Receipts** | | | | | |
| Operating Revenues | 43,587 | 44,574 | 49,476 | 51,203 | 51,695 |
| Loan Drawdowns | 11,250 | 15,150 | - | - | - |
| Interest Income | 8 | - | - | - | - |
| Other | 14,238 | 28,031 | 4,636 | 2,422 | 3,411 |
| **Total Receipts** | **69,083** | **87,755** | **54,112** | **53,625** | **55,106** |
| **Payments** | | | | | |
| Operating costs | (30,495) | (31,071) | (32,423) | (33,016) | (34,074) |
| Taxes | (764) | (777) | (864) | (893) | (901) |
| Capital Expenditure | (27,873) | (49,368) | (14,504) | (6,295) | (8,606) |
| Loan (redemption) | (4,971) | (4,640) | (5,906) | (6,226) | (6,306) |
| Interest | (2,070) | (1,985) | (3,816) | (5,632) | (5,498) |
| Dividends | (505) | (505) | - | - | - |
| *Rounding Differences* | 2 | 2 | 2 | 2 | 2 |
| **Total Payments** | **(66,676)** | **(88,344)** | **(57,511)** | **(52,060)** | **(55,383)** |
| **Closing Cash Balance** | **7,718** | **7,129** | **3,730** | **5,295** | **5,018** |

The dividends shown include only dividends to the minority shareholders (17% of shares) as the Government has given a formal undertaken to forego its dividends through to 2015, but the 2015 payments for the 2015 dividend will be made in FY 2015/16.

## 7.2 Capital Investment

The table below contains a summary of the proposed capital investment contained in the proposed Business plan. These include water production and distribution, Sewerage collection and treatment, Buildings, Facilities and security, Vehicles and mobile plant, Information and Communication Technology systems. Appendix IV contains a detailed list of the Capital Expenditure items.

**Table - Summary of CapEx by Category and Year**

| NO. | Component | *Expressed in BZD '000* | | | | | |
|---|---|---|---|---|---|---|---|
| *NO.* | *Component* | *2015-16* | *2016-17* | *2017-18* | *2018-19* | *2019-20* | *Total* |
| 1 | Development Capex | 20,475 | 39,585 | 8,915 | 5,320 | 22,375 | 96,670 |
| 2 | Water Network Expansion - Water | 3,289 | 2,910 | 2,952 | 2,146 | 1,784 | 13,081 |
| 3 | New Services Connection - Water | 662 | 675 | 689 | 703 | 720 | 3,450 |
| 4 | Non-Revenue Water | 114 | 117 | 119 | 121 | 125 | 596 |
| 5 | Buildings/Facilities | 1,550 | 2,145 | 2,180 | 1,790 | 10,405 | 18,070 |
| 6 | Pipeline and Valve Replacement | 5,685 | 5,010 | 3,835 | 3,415 | 3,140 | 21,085 |
| 7 | Raw water resources | 2,725 | 1,805 | 905 | 290 | 360 | 6,085 |
| 8 | Renewal of Mains and Services | 1,345 | 538 | 581 | 594 | 638 | 3,695 |
| 9 | Reservoir and Boosters | 1,050 | 900 | 350 | 1,050 | 2,200 | 5,550 |
| 10 | Fencing and Security | 812 | 337 | 127 | 127 | 127 | 1,530 |
| 11 | Sewer Cost Paid By BWS | 55 | 55 | 70 | 70 | 85 | 335 |
| 12 | Sewer System Expansion Paid by BWS | 100 | 250 | 250 | 250 | 250 | 1,100 |
| 13 | Collection and Treatment Works Sewage | 215 | 2,865 | 3,375 | 735 | 30,685 | 37,875 |
| 14 | Water Quality | 465 | 320 | 280 | 290 | 250 | 1,605 |
| 15 | Water Treatment Works- Electrical | 905 | 680 | 25 | 25 | 25 | 1,660 |
| 16 | Water Treatment Works - Production | 685 | 1,323 | 500 | 3,150 | 15,700 | 21,358 |
| 17 | IT Capex | 2,893 | 787 | 727 | 377 | 447 | 5,231 |
| 18 | Vehicle Capex | 4,178 | 664 | 720 | 460 | 660 | 6,682 |
| 19 | Other Capex | 85 | 120 | 135 | 70 | 85 | 495 |
| | Grand Total | 47,288 | 61,085 | 26,735 | 20,984 | 90,061 | 246,153 |
| | Contribution/Loans | 18,325 | 37,175 | 8,000 | 2,300 | - | 65,800 |
| | BWS Input | 28,963 | 23,910 | 18,735 | 18,684 | 90,061 | 180,353 |

*Figures in BZ$ '000*

BWS expects that a portion of the cash required to fund this proposed **$246 million in Capital Expenditure** will come from GOB/Developers Contribution ($39.4 Million) and that the company will be able to obtain some loan funding ($26.4 Million).

BWS realises that, especially in the current economic climate, such levels of Capital Expenditure cannot be supported by tariff alone. However, even with projected estimates for Contributions and Loan Funding, **significant amounts of Capital Expenditure remains to be funded over the five-year period**.

In an effort to keep the tariffs affordable over the next Full Business Plan period, the company is proposing to reduce Capital Expenditure to approximately **$108 million** with only **$30 million** being directly funded from the proposed revenues and the remainder, hopefully, being funded by new loans, grants or developers' contributions.

## 7.3 Operational

The key operational elements of the Business Plan are outlined in the table below.

**Table –Volumes, NRW, Connections and CPC**

| Description | Unit | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|---|---|---|---|---|---|---|
| **WATER VOLUMES** | | | | | | |
| Water Production | M Gals | 2,897.9 | 2,900.3 | 2,971.7 | 3,040.6 | 3,055.4 |
| Water Sales | M Gals | 2,375.2 | 2,409.9 | 2,489.7 | 2,570.6 | 2,596.0 |
| Non-Revenue Water | % | 18.0% | 16.9% | 16.2% | 15.5% | 15.0% |
| **CUSTOMER RELATED** | | | | | | |
| Ending Connections | No. | 54,454 | 55,627 | 56,805 | 57,981 | 59,215 |
| Avg. Mthly CPC(gals) | Gals. | 3,669.9 | 3,646.2 | 3,688.1 | 3,730.0 | 3,689.3 |

## 7.4 Proposed Regulatory Changes

BWS proposes to reduce the current high number of disconnections by utilising technology to provide efficient reminder services for all those customers who have adequate security deposits, but charge a late fee or finance charge when payments are not made by the due date. This avoids a major inconvenience caused to customers and is a frequent request made from them as it avoids the annoyance of being denied service which customers rely upon. Also this would be substantially less costly than disconnection to residential customers while saving the company from performing tens of thousands of unnecessary (disconnection/reconnections) jobs annually.

The company has recommended some regulatory changes to assist with this as well as some of the problems identified earlier in this report. A number of other changes to the regulations are proposed to facilitate the company in performing its functions. These are intended to help to facilitate customers, or to assist in reducing costs, or to add marginally to revenue. These are detailed in Appendix V and summarised briefly below.

1. Classification of Customers – to allow for the following classifications: Residential, Government, Essential Services, Commercial, Other
2. Infrastructure Costs – to differentiate natural progression from Special Development Areas
3. Security Deposits – to allow some changes to these
4. Late Fees and Finance Charges – to allow the use of these to reduce the requirement for disconnections
5. Optional Services and Fees – to allow the company to perform services by agreement with customers
6. Backflow Prevention devices – to allow for the use of these to protect the supply from inflow from other sources
7. Commercial Abstraction licenses – to define clear rules with regard to abstraction within service areas

8. Water Theft – to modify the regulations to simplify the processing of cases
9. Leaks – to modify the regulations to reduce the processing time for residential leak complaints
10. Licensing and certification of Plumbers – to allow for the implementation of proper plumbing standards that will help protect customers.

BWS is therefore requesting the PUC's consideration for these proposals for regulatory changes to be employed to help to further alleviate the company's position so it can better meet its obligations to stakeholders.

## 7.5 Proposed Tariff changes

The Business Plan forecasts indicate the need for tariff increases in order to provide sufficient revenues to support the business requirements.

BWS is not presenting a sample tariff basket as part of this Business Plan. However the company has data available with respect to customer consumption by customer type, location and type of service, as well as costs on production, distribution and other service related costs.

However, based on the forecast growth in the customer base and overall sales volume, this Business Plan extrapolates the necessity for an initial average tariff increase of 5% in April 2015 and a subsequent increase of 7.5% in April 2017, after the bulk of the proposed Capital Expenditure is completed.

It is accepted that the final tariff basket and other charges will be subject to review and discussion with the PUC before the issuing of the Final Decision.

BWS will make all data required for the detail tariff analysis available to the PUC.

The overall effect of the requested tariff changes will be, along with projected growth, to increase the company's revenues sufficiently to cover all required costs, cash commitments and still fund much needed Capital Investment.

## 7.6 Main Targets

Some of the main targets identified as part of this Business Plan are listed below. These and other targets are expected to be finalised in conjunction with the PUC as part of the Review process.

**Table – Main Targets identified in Business Plan**

| *Description* | *Unit* | *2015/16* | *2016/17* | *2017/18* | *2018/19* | *2019/20* |
|---|---|---|---|---|---|---|
| **Revenues** | $'000 | **44,130** | **44,777** | **49,726** | **51,437** | **51,901** |
| **Costs** | $'000 | **37,324** | **40,997** | **43,992** | **46,779** | **47,497** |
| **Profits** | $'000 | **6,806** | **3,780** | **5,734** | **4,658** | **4,404** |
| **Dividends** | $'000 | **505** | **505** | **-** | **-** | **-** |
| **Available Cash** | $'000 | **7,718** | **7,129** | **3,730** | **5,295** | **5,018** |
| **Capital Expenditure** | $'000 | **27,873** | **49,368** | **14,504** | **6,295** | **8,606** |
| **New Long Term loans** | $'000 | **11,250** | **15,150** | **-** | **-** | **-** |
| **Sales Volume** | M Gals | **2,375.2** | **2,409.9** | **2,489.7** | **2,570.6** | **2,596.0** |
| **Production Volume** | M Gals | **2,897.9** | **2,900.3** | **2,971.7** | **3,040.6** | **3,055.4** |
| **Overall NRW%** | % | **18.0%** | **16.9%** | **16.2%** | **15.5%** | **15.0%** |
| **Customer Count** | No. | **54,454** | **55,627** | **56,805** | **57,981** | **59,215** |

# 8 Summary and Conclusion

## 8.1 Summary

BWS is a responsible utility, managing the provision of products and services essential for the welfare, health and general wellbeing of the consumers and population within its service areas. The primary product, water, is not only an Essential Service, but also a 'social good'. The socio-economic welfare of the consumer base, and in fact, of the country, requires development of the infrastructure necessary to support provision of these services.

BWS is an efficient company, fast becoming a model for water utilities in the region, in terms of operations. However, the company is extremely cash short due to the fact that its revenues have been inadequate to provide sufficient financings to meet all its obligations plus provide for required expansion. The Company plans to continue to improve its efficiency of operations but needs additional revenue to perform capital investment to meet its mandate and its commitments.

The outcome of this Full Tariff Review Proceeding is critical to the long-term viability of the Company and to its performance over the course of the next five years.

## 8.2 Conclusion

As the company moves forward into this third full business plan period, the most fundamental issue is the requirement to balance the needs of all stakeholders, including providing affordable improvements and expansion in the water and wastewater service in Belize, while ensuring both the medium and long term viability of the company.

Should there be constraints in revenue, these would force reductions in capital expenditures which would be detrimental to consumers and prospective consumers and to the overall welfare of the nation.

BWS therefore requests that all critical parameters and assumptions included in this Business Plan Report be fully evaluated and that the impact of decisions on the customer base, and the society as a whole, be appraised holistically.

# Appendices

**Appendix I – PUC Decisions relating to Second FFBP 2010-2015**

**Appendix II – Audited Financial Statements 2013/14**

**Appendix III – March 2014 Customer Survey Report**

**Appendix IV– Proposed Capital Expenditure Listing**

**Appendix V – Description of Proposed Regulatory Changes**

**Appendix VI – Business Plan Outputs**

# Appendix I – PUC Decisions relating to Second FFBP 2010-2015

Appendix I.1 - April 2010 Final Decision FFBP 2010-2015

Appendix I.2 - March 2011 Final Decision Annual Tariff Review

Appendix I.3 – April 2012 Final Decision Annual Tariff Review

Appendix I.4 – April 2014 Final Decision Annual Tariff Review

**Appendix I.1 - April 2010 Final Decision FFBP 2010-2015**

PUBLIC UTILITIES
COMMISSION

# PUBLIC UTILITIES COMMISSION

## FINAL DECISION
## (2009 FULL TARIFF REVIEW PROCEEDING)

**for**

**Belize Water Services Limited**

**March 2010**
**(Amended April 2010)**

## Legal Framework

The Public Utilities Commission Act (No. 39 of 1999) establishes The Public Utilities Commission (PUC) 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 (defined in the PUC Act) are satisfactory and that the charges imposed in respect of those services are reasonable. The PUC has the power to fix the rates and the Quality of Service Standards for a public utility provider. The PUC also awards licenses and monitors and enforces compliance with license conditions. On March 23, 2001 the PUC issued an operating license for a period of twenty-five years to Belize Water Services Limited (BWSL). The Water and Sewerage (Tariff) Byelaws, Statutory Instrument No. 67 of 2002, passed on June 1, 2002 provides for Full Tariff Reviews Proceedings (FTRP) and Annual Review Proceedings (ARP).

## Annual Review Proceedings

SI 67 of 2002 also provides for an 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..."

## Annual Price Adjustments

On April 17, 2004, the PUC issued its Final Decision of the First FTRP, which among other determinations, provided for Annual Price Adjustments (APA) for Notified Items. Notified Items are defined as "unavoidable cost incurred by a Licensee proved to the satisfaction of the PUC and are cost due to factors outside of a licensee's control being one or a combination of inflation, interest cost, electricity power cost and bad debt cost."

The Final Decision also stated that adjustments for notified items would be made in accordance with procedures and methodologies established through governing Byelaws, which in this instance is the Water and Sewerage (Tariffs) (Amendment) Byelaws, Statutory Instrument No. 102 of 2004, passed on June 12, 2004.

## Application by Belize Water Services Limited

On October 1, 2009, the Belize Water Services Limited (BWSL) made an application to the PUC for an average Adjustment to Tariffs of 25%, various increases in Fees and Charges, and for approval of a Business Plan for the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015.

In its Initial Decision made and issued on November 17, 2009, the PUC approved an average increase of 10.6% to the approved Tariffs existing at that time, to be levied on consumers for services provided during the FTP.

BWSL objected to the Initial Decision of the PUC, and an Independent Expert was retained to review the Initial Decision and the application made by BWSL. The Independent Expert recommended a reduction in the expansion programme for BWSL and an average increase of 17.2% to the approved Tariffs.

In March, 2010, BWSL made a submission of proposed tariffs for the newly commissioned Caye Caulker Water System. Based on the allowance of the *Final Decision (2009 Full Tariff Review Proceeding) for Belize Water Services Limited* to include rates for new systems commissioned during the FTP, the PUC received the BWSL submission for review. On April 1, 2010, the Commission issued a public notice to inform the general public that it was reviewing the BWSL submission for approval of rates for the Caye Caulker Water System, invited comments from interested parties, and conducted a public hearing in Caye Caulker on April 19, 2010.

## Decision of the Commission

**BELIZE:**

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***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 2000, the Water Industry Act 2001, Chapter 222 of the Laws of Belize, the Water and Sewerage (Tariffs) Byelaws, and all other powers thereunto the Commission enabling.***

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

**BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION**

**Decisions and Order.** 2. (1) In respect of the application made October 1, 2009, by the Belize Water Services Limited (BWSL) for adjustments to the approved Tariffs, Fees and Charges in its Full Tariff Review Proceeding (FTRP) Submission for the Full Tariff Period (FTP) of April 1, 2010 to March 31, 2015, the Commission hereby makes the following Decisions and Order:

***(a)*** The Commission hereby approves the Rate Setting Methodology (RSM) contained in Schedule 1, which is to be applied over the Full Tariff Period (FTP);

***(b)*** The Commission hereby approves the Regulated Asset Value (RAV) for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 2, which is to be applied over the Full Tariff Period (FTP);

***(c)*** The Commission hereby approves a Target Rate of Return ($ROR_{ATP}$) of 10.0% and a lower limit for Rate of Return ($ROR_{LL}$) of 8.0%, for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP), subject to the Rate Setting Methodology (RSM) approved in Decision ***(a)*** above;

***(d)*** The Commission hereby approves the Tariff Basket Revenue (TBR) and the Return, Depreciation, Operational Expenditure (OPEX), Taxes/Licence Fees, Annual Corrections (AC) and RSA Recovery components of the Tariff Basket Revenue (TBR), and Other Income and Forecast Consumption for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 3;

*(e)* The Commission hereby approves the Tariffs to be applied during each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 4, and hereby orders the Belize Water Services Limited (BWSL) to levy the said Tariffs in respect of the water and sewer services it is licensed to provide.

**Amend-ment.**

3. This Order may be amended at any time during an Annual Tariff Period (ATP) within the Full Tariff Period (FTP) to include Tariffs for any water distribution system or sewerage collection and disposal system that may be commissioned by the Belize Water Services Limited (BWSL) during such ATP, subject to the following:

*(a)* The characteristics of the water distribution system or sewerage collection and disposal system that may be commissioned warrant that specific Tariffs be determined for such system;

*(b)* Any such amendments shall be made in accordance with Section 13 of the Water Industry Act and Section 32 of the Public Utilities Commission Act.

**MADE** by the Public Utilities Commission this 30th day of March, 2010.

**(JOHN P. AVERY)**
*Chairman, Public Utilities Commission*

# Schedule 1

## Public Utilities Commission (PUC)

### Rate Setting Methodology (RSM) for Water Sector

**General**

The Rate Setting Methodology (RSM) scripted herein and currently employed by the Public Utilities Commission (PUC – the Commission) for the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015, is a hybrid model made up of revenue-capped and price-capped items.

The RSM determines the Tariff Basket Revenue (TBR - the total revenue to be derived by a Licensee from water and sewer rates, tariffs, fees and charges) and the subsequent rates, tariffs, fees and charges for the provision of water and sewer services to be applied for each Annual Tariff Period (ATP) of the 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 sewer services for each ATP of the FTP.

The Tariff Basket Revenue (TBR) is represented arithmetically as follows:

| | |
|---|---|
| OPEX | $ |
| Return | $ |
| Depreciation | $ |
| Taxes/Licence Fees | $ |
| Annual Correction (AC) | $ |
| RSA Recovery | $ |
| Less: Other Income | $ |
| Tariff Basket Revenue (TBR) | $ |

Based on prescribed percentage allocation of cost/revenue components and forecast sales (demand) for each class of customers (type of service), a Tariff Schedule is approved. The approved Tariffs are set to realize the cost/revenue components of the TBR allocated to each class of customers, based on the allocations approved by the Commission.

## Cost/Revenue Components of TBR and Approved Rates/Tariffs

The different cost/revenue components of the TBR are described and determined as follows:

### OPEX:

**OPEX** is price-capped; therefore, no Annual Correction (AC) is applied to this item.

**OPEX** is set for each Annual Tariff Period (ATP) of the corresponding Full Tariff Period (FTP) during a Full Tariff Review Proceeding (FTRP) and may be reviewed and revised in any Annual Review Proceeding (ARP) during the FTP.

**OPEX** includes, but is not limited to, the following cost items:

a) Customer Care/Billing/Collections
   Meter reading, bill preparation and delivery, collections, disconnections, reconnections, complaints, inspections, applications, etc.
b) Transmission and Distribution
   Operations, maintenance, project planning & design, dispatch/control, emergency servicing, etc.
c) Sewerage Collection and Disposal
   Operations, maintenance, project planning & design, emergency servicing, etc.
d) Purchase of Water from independent producers
e) Finance/Administration
   Executive, general expenses, public relations, management fees, finance & accounting, purchasing and stores, etc.

### Return:

**Return** is revenue-capped; therefore, an Annual Correction (AC) is applied to this item.

**Return** for any given Annual Tariff Period (ATP) is calculated as follows:

$$Return_{ATP} = RAV_{ATP} \times ROR_{ATP}$$

Where:
$Return_{ATP}$ = **Return** for an ATP of the FTP
$RAV_{ATP}$ = approved Regulated Asset Value for an ATP of the FTP
$ROR_{ATP}$ = approved Rate of Return (%) for an ATP of the FTP

**Return** is determined and approved for each Annual Tariff Period (ATP) of the corresponding Full Tariff Period (FTP) during a Full Tariff Review Proceeding (FTRP) and may be reviewed and revised in any Annual Review Proceeding (ARP) during the FTP.

A Rate of Return ($ROR_{ATP}$) is determined and approved for each Annual Tariff Period (ATP) of the corresponding Full Tariff Period (FTP) during a Full Tariff Review Proceeding (FTRP) and may be reviewed and revised in any Annual Review Proceeding (ARP) during the FTP.

A lower limit for Rate of Return ($ROR_{LL}$) is determined and approved for the corresponding Full Tariff Period (FTP) during a Full Tariff Review Proceeding (FTRP) and may be not reviewed and revised in any Annual Review Proceeding (ARP) during the FTP. The Rate of Return ($ROR_{ATP}$) to be applied during any FTRP or ARP in the determination of **Return** for any ATP of the FTP shall not be lower than $ROR_{LL}$.

The lower limit for Rate of Return ($ROR_{LL}$) shall not be less than the Weighted Average Cost of Debt (WACD) of the Licensee, based on debt procured by such Licensee in accordance with the Licence granted to such Licensee or based on prevailing market interest rates, provided that the Licensee shall use its best efforts to procure debt on the most favourable available terms.

**Depreciation:**

**Depreciation** is revenue-capped; therefore, an Annual Correction (AC) is applied to this item.

**Depreciation** is calculated as the sum of the annual depreciation of assets represented in the Regulated Asset Value (RAV), based on approved depreciation schedules for such assets.

**Depreciation** is determined and approved for each Annual Tariff Period (ATP) of the corresponding Full Tariff Period (FTP) during a Full Tariff Review Proceeding (FTRP) and may be reviewed and revised in any Annual Review Proceeding (ARP) during the FTP.

**Annual Correction (AC)**

**Annual Correction (AC)** is neither revenue-capped nor price-capped, but is applied to revenue-capped items where there are any previous surpluses or deficits in revenues for revenue-capped items.

**Annual Correction (AC)** is calculated as the sum of the surpluses or deficits in approved revenues for revenue-capped items for the immediately previous Annual Tariff Period (ATP).

**Annual Correction (AC)** is determined and approved for each Annual Tariff Period (ATP) of the corresponding Full Tariff Period (FTP) during a Full Tariff Review Proceeding (FTRP) and any Annual Review Proceeding (ARP) during the FTP.

**Taxes/Licence Fees:**

**Taxes/Licence Fees** is revenue-capped; therefore, an Annual Correction (AC) is applied to this item.

**Taxes/Licence Fees** for any given Annual Tariff Period (ATP) is calculated as follows:

$$\text{Taxes/Licence Fees}_{ATP} = (TBR_{ATP} + OI_{ATP}) \times (TR + LFR)$$

Where:

$\text{Taxes/Licence Fees}_{ATP}$ = **Taxes/Licence Fees** for an ATP of the FTP

$TBR_{ATP}$ = Tariff Basket Revenue for an ATP of the FTP

$OI_{ATP}$ = Other Income for an ATP of the FTP

TR = The legal tax rate, being 1.75%
LFR = The legal annual licence fee rate, being 0.5%

**Taxes/Licence Fees** is determined and approved for each Annual Tariff Period (ATP) of the corresponding Full Tariff Period (FTP) during a Full Tariff Review Proceeding (FTRP) and may be reviewed and revised in any Annual Review Proceeding (ARP) during the FTP.

## RSA Recovery

**RSA Recovery** may be considered revenue-capped since it usually seeks to recover a fixed cost over a reasonable period of time, but there is no Annual Correction (AC) applied to this item.

**RSA Recovery** is determined and approved by the Commission for any relevant Annual Tariff Period (ATP) during which there exists any outstanding balance in any approved Rate Stabilization Account (RSA) operated or maintained by a Licensee. There is no formula for **RSA Recovery.**

## Other Income

**Other Income** represents other sources of revenues for a Licensee, provided by charging various approved fees and charges for water and sewer services.

## Regulated Asset Value (RAV)

The Regulated Asset Value (RAV) is the approved book value of assets owned and operated by the Licensee and are directly utilized in the provision of water and sewer services, less any contributed capital. The RAV is used to determine the revenue requirements for the Depreciation and Return components of the Tariff Basket Revenue (TBR).

In the determining the Regulated Asset Value (RAV), the following general rules are applied:

***a)*** Assets are not allowed in the Regulated Asset Value (RAV) until commissioned and put in service. For ease of calculation and for simplicity, only 50% of the book value of assets commissioned and put in service during a calendar year is included in the approved Regulated Asset Value (RAV) for the said year.

***b)*** The Licensee is allowed to capitalize interest during construction (IDC) and all costs directly associated with construction work in progress (WIP).

***c)*** Assets that are acquired as a result of contributed capital are not allowed in the Regulated Asset Value (RAV).

***d)*** General Expenses Capitalized (GEC), an accounting treatment whereby a portion of general expenses is routinely capitalized and included in assets, are not allowed in the Regulated Asset Value (RAV).

***e)*** Routine maintenance to maintain an asset's capacity and asset life is not allowed in the Regulated Asset Value (RAV). Such expenses are covered in the OPEX component of the TBR.

***f)*** Contributed Capital is any funding received by a Licensee from any developer or other legal source, and which is intended as a contribution to the full cost of any investment in assets made by a Licensee.

***g)*** The gross value of a fixed asset may only be modified to reflect subsequent expenditure intended to enhance the asset, and where that expenditure results in one of the following:

***i)*** A significant extension of the life of the asset, beyond the life assumed in the depreciation rate that is applied to the asset, in which case the appropriate adjustment should also be made to the asset life of the asset.

***ii)*** A significant improvement in the capacity of the asset, beyond the recorded rated capacity of the asset at the time that it was acquired.

## Schedule 2

## Belize Water Services Limited (BWS)
## Approved Regulated Asset Value (RAV) for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

**Regulated Asset Value (RAV) as at March 31/April 1 of each year - $'000:**
**All Branches except Caye Caulker**

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | Totals - FTP |
|---|---|---|---|---|---|---|
| Starting RAV | 126,793 | 124,937 | 131,066 | 140,116 | 143,611 | |
| Depreciation | 3,170 | 3,123 | 3,277 | 3,503 | 3,590 | 16,663 |
| Work In Progress | 17,670 | 8,165 | 7,016 | 3,686 | 3,916 | 40,453 |
| Additions | 5,725 | 11,333 | 12,918 | 7,591 | 5,351 | 42,916 |
| Contributed Capital | 4,410 | 2,081 | 591 | 593 | 597 | 8,272 |
| Ending RAV | 124,937 | 131,066 | 140,116 | 143,611 | 144,774 | |

**Regulated Asset Value (RAV) as at March 31/April 1 of each year - $:**
**Caye Caulker Branch**

| Year | 2,011 | 2,012 | 2,013 | 2,014 | 2,015 | Totals - FTP |
|---|---|---|---|---|---|---|
| Starting RAV | 1300,000 | 1240,200 | 1209,195 | 1178,965 | 1149,491 | |
| Depreciation | 59,800 | 31,005 | 30,230 | 29,474 | 28,737 | 179,246 |
| Work In Progress | 0 | 0 | 0 | 0 | 0 | 0 |
| Additions | 0 | 0 | 0 | 0 | 0 | 0 |
| Contributed Capital | 0 | 0 | 0 | 0 | 0 | 0 |
| Ending RAV | 1240,200 | 1209,195 | 1178,965 | 1149,491 | 1120,754 | |

## Schedule 3

## Belize Water Services Limited (BWS)
## Approved Tariff Basket Revenue (TBR) and Components for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

**Approved Tariff Basket Revenue (TBR), Revenue Components and Forecast Consumption for each ATP of the FTP - $'000:**
**All Branches except Caye Caulker**

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | Totals - FTP |
|---|---|---|---|---|---|---|
| Revenue Components of TBR: | | | | | | |
| OPEX | 20,573 | 20,710 | 20,074 | 20,923 | 21,799 | 104,078 |
| Return | 12,587 | 12,800 | 13,559 | 14,186 | 14,419 | 67,551 |
| Depreciation | 3,170 | 3,123 | 3,277 | 3,503 | 3,590 | 16,663 |
| Annual Corrections | 0 | 0 | 0 | 0 | 0 | 0 |
| RSA Recovery | 0 | 0 | 0 | 0 | 0 | 0 |
| Taxes/Licence Fees | 836 | 843 | 850 | 889 | 916 | 4,334 |
| Less: Other Income | 1,050 | 1,097 | 1,146 | 1,198 | 1,252 | 5,743 |
| Tariff Basket Revenue | 36,116 | 36,380 | 36,613 | 38,303 | 39,473 | 186,884 |
| Forecast Consumption ('000 gallons) | 1975,601 | 2048,349 | 2125,798 | 2208,388 | 2294,220 | 10652,356 |
| Average Tariff ($/1000 gallons) | 18.28 | 17.76 | 17.22 | 17.34 | 17.21 | 17.54 |

**Appoveded Tariff Basket Revenue (TBR), Revenue Components and Forecast Consumption for each ATP of the FTP - $:**
**Caye Caulker Branch**

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | Totals - FTP |
|---|---|---|---|---|---|---|
| Revenue Components of TBR: | | | | | | |
| OPEX | 726,356 | 744,515 | 763,128 | 782,206 | 801,761 | 3817,966 |
| Return | 127,010 | 122,470 | 119,408 | 116,423 | 113,512 | 598,823 |
| Depreciation | 59,800 | 31,005 | 30,230 | 29,474 | 28,737 | 179,246 |
| Annual Corrections | 0 | 0 | 0 | 0 | 0 | 0 |
| RSA Recovery | 0 | 0 | 0 | 0 | 0 | 0 |
| Taxes/Licence Fees | 21,019 | 20,670 | 21,010 | 21,363 | 21,729 | 105,791 |
| Less: Other Income | 52,000 | 19,245 | 10,499 | 10,866 | 11,246 | 103,856 |
| Tariff Basket Revenue | 882,185 | 899,414 | 923,277 | 938,600 | 954,493 | 4597,970 |
| Forecast Consumption (gallons) | 22353,812 | 22912,657 | 23485,474 | 24072,611 | 24674,426 | 117498,979 |
| Average Tariff ($/1000 gallons) | 39.46 | 39.25 | 39.31 | 38.99 | 38.68 | 39.13 |

**Schedule 4**

## Belize Water Services Limited (BWS)
## Approved Water and Sewer Tariffs, Fees and Charges for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

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

| Service Classification: | Water Only | Water and Sewer | Water and Sewer | Water Only |
|---|---|---|---|---|
| **Branches:** | **Mainland** | **Belize, Belmopan** | **San Pedro** | **Caye Caulker** |
| **Consumption Blocks:** | | | | |
| 0 - 1,000 | 8.62 | 10.34 | 25.27 | 23.00 |
| 1,001 - 2,000 | 13.79 | 17.81 | 29.87 | 26.45 |
| 2,001 - 3,000 | 14.94 | 19.54 | 32.17 | 29.03 |
| 3,001 - 4,000 | 15.51 | 20.68 | 34.46 | 31.86 |
| 4,001 - 5,000 | 16.08 | 21.83 | 36.76 | 34.97 |
| 5,001 - 6,000 | 17.24 | 22.98 | 43.66 | 38.37 |
| 6,001 - 7,000 | 18.38 | 23.55 | 51.70 | 42.12 |
| 7,001 - 8,000 | 18.95 | 24.13 | 57.44 | 46.22 |
| >8,000 | 19.54 | 24.70 | 63.19 | 50.73 |
| Minimum Bill for Consumption less than 1,000 US Gallons | 8.62 | 10.34 | 25.27 | 23.00 |

**Schedule 4 (Cont'd)**

## Belize Water Services Limited (BWS)
## Approved Water and Sewer Tariffs, Fees and Charges for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

**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 | 637.50 |
| | Government | 637.50 |
| | Essential Services | 637.50 |
| | Others | 637.50 |
| Water Connection Fee (Caye 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 (Caye Caulker) | Residential | 50.00 |
| | Commerical | 250.00 |
| | Government | 250.00 |
| | Essential Services | 250.00 |
| | Others | 250.00 |

# Appendix I.2 - March 2011 Final Decision Annual Tariff Review


# PUBLIC UTILITIES COMMISSION

## FINAL DECISION
## (2011 ANNUAL REVIEW PROCEEDING)

## for

## Belize Water Services Limited

## March 2011

## Legal Framework

The Public Utilities Commission Act (No. 39 of 1999) establishes The Public Utilities Commission (PUC) 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 (defined in the PUC Act) are satisfactory and that the charges imposed in respect of those services are reasonable. The PUC has the power to fix the rates and the Quality of Service Standards for a public utility provider. The PUC also awards licenses and monitors and enforces compliance with license conditions. On March 23, 2001 the PUC issued an operating license for a period of twenty-five years to Belize Water Services Limited (BWSL). The Water and Sewerage (Tariff) Byelaws, Statutory Instrument No. 67 of 2002, passed on June 1, 2002 provides for Full Tariff Reviews Proceedings (FTRP) and Annual Review Proceedings (ARP).

## Annual Review Proceedings

SI 67 of 2002 also provides for an 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...". In its Final Decision for the 2009 FTRP, the Commission ordered that ARP's become mandatory. The Byelaws are currently being amended to reflect this position.

Where the Commission issues an Initial Decision with respect to an Annual Review Proceeding (ARP), and no objections are made by any relevant licensee or any interested party representing users of at least 10% of the annual quantity of water supplied by a relevant licensee in the preceding year, the Commission is required to adopt the Initial Decision as its Final Decision.

## Annual Price Adjustments

On April 17, 2004, the PUC issued its Final Decision of the First FTRP, which among other determinations, provided for Annual Price Adjustments (APA) for Notified Items. Notified Items are defined as "unavoidable cost incurred by a Licensee proved to the satisfaction of the PUC and are cost due to factors outside of a licensee's control being one or a combination of inflation, interest cost, electricity power cost and bad debt cost."

The Final Decision also stated that adjustments for notified items would be made in accordance with procedures and methodologies established through governing Byelaws, which in this instance is the Water and Sewerage (Tariffs) (Amendment) Byelaws, Statutory Instrument No. 102 of 2004, passed on June 12, 2004.

## Application by Belize Water Services Limited

On December 31, 2010, the Belize Water Services Limited (BWSL) made an application to the PUC for an Annual Review Proceeding (ARP) in which it proposed no adjustments to the business plan, the regulated parameters, or the rates, tariffs, fees and charges approved in the BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION (AMENDED) made and issued by the PUC on March 30, 2010, and amended April 28, 2010, in respect of the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015.

# Decision of the Commission

**BELIZE:**

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***DECISION 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 2000, the Water Industry Act 2001, Chapter 222 of the Laws of Belize, the Water and Sewerage (Tariffs) Byelaws, and all other powers thereunto the Commission enabling.***

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**Short title.** 1. This Decision may be cited as the:

**BELIZE WATER SERVICES LIMITED 2011 ANNUAL REVIEW PROCEEDING FINAL DECISION**

**Decisions.** 2. (1) In respect of the application made December 31, 2010, by the Belize Water Services Limited (BWSL) for an Annual Review Proceeding (ARP) for the determination of regulated parameters and rates, tariffs, fees and charges and for the Annual Tariff Period (FTP) of April 1, 2011 to March 31, 2012, the Commission hereby makes the following Decisions:

***(a)*** The Commission approves no adjustments to the Schedules, regulated parameters, rates, tariffs, fees and charges, nor to the business and investment plans approved in relation to the BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION (AMENDED) made and issued by the PUC on March 30, 2010, and amended April 28, 2010, in respect of the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015;

***(b)*** The rates, tariffs, fees and charges approved in the BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION (AMENDED) in respect of the Annual Tariff Period (ATP) of April 1, 2011, to March 31, 2012, remain in effect.

**MADE** by the Public Utilities Commission this 2nd day of March, 2011.

**(JOHN P. AVERY)**
*Chairman, Public Utilities Commission*

# Comments Related to Final Decision
# Issued by the Commission in Respect of the 2011 Annual Review Proceeding (ARP) for Belize Water Services Limited (BWSL)

**Approved Business Plan, Regulated Parameters, and Rates, Tariffs, Fees and Charges**

In its Final Decision in relation to the 2009 Full Tariff Review Proceeding (FTRP) for BWSL (issued March 30, 2010, and amended April 28, 2010), the Commission approved a business and investment plan for BWSL and determined the regulated parameters and rates, tariffs, fees and charges to be applied over the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015. The 2011 ARP submission was made December 31, 2010, approximately nine (9) months after that Final Decision was issued.

Consequently, the Commission had only eight (8) months of information and data to evaluate the performance of BWSL with respect to the approved business and investment plans and to evaluate the performance of the approved regulated parameters and rates, tariffs, fees and charges.

The Commission reviewed the application by BWSL and observed the following:

a) Investments:
   i) BWSL, for various reasons, has failed to meet the schedule of the investment plan approved by the Commission;
   ii) The delays and circumstances responsible for such failure are not all the result of any actions or inaction of BWSL, and the Commission at this time expects that BWSL will be able to accelerate its investments over the FTP and get back on the approved schedule. This situation will continue to be evaluated and will be addressed, as necessary, in any future revisions to the approved Business Plan during a subsequent Annual Review Proceeding (ARP).

b) Operational Expenditures (OPEX):
   i) BWSL's performance for this item appears to be on target.

c) Regulated Parameters and Rates, Tariffs, Fees and Charges
   i) Consumption appears to be on target with respect to the approved Forecast Consumption;
   ii) Application of the approved rates, tariffs, fees and charges have resulted in a Tariff Basket Revenue (TBR) that is pro-rated to be approximately 9% or $3.31 million less than the amount approved by the Commission for the ATP of April 1, 2010, to March 31, 2011 (approved TBR - $36.998 million; pro-rated TBR - $33.688 million);
   iii) As a consequence of consumption being on target but the TBR lagging, the Average Tariff for the evaluation period was $17.17 per 1000 gallons as compared to the approved Average Tariff of $18.52 per 1000 gallons for the ATP (approximately 7.3% less).

d) Conclusion:

The regulated parameters and rates, tariffs, fees and charges were determined based on the business and investment plans approved for BWSL for the current FTP. The failure of BWSL to keep up with the approved plans would ordinarily result in downward adjustments to some regulated parameters and subsequently the rates, tariffs, fees and charges, all else being equal. However, there occurred a natural downward adjustment to the TBR and the Average Tariff as a result of the consumption patterns of consumers, rendering any adjustments to the approved regulated parameters and rates, tariffs, fees and charges unnecessary at this time. This, along with the fact that the evaluation period and the associated data are severely limited, resulted in the Commission not approving any adjustments to the regulated parameters and rates, tariffs, fees and charges for the upcoming ATP.

# Appendix I.3 – April 2012 Final Decision Annual Tariff Review


# PUBLIC UTILITIES COMMISSION

## FINAL DECISION
## (2012 ANNUAL REVIEW PROCEEDING)

## for

## Belize Water Services Limited

## March 2012

## Legal Framework

The Public Utilities Commission Act (No. 39 of 1999) establishes The Public Utilities Commission (PUC) 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 (defined in the PUC Act) are satisfactory and that the charges imposed in respect of those services are reasonable. The PUC has the power to fix the rates and the Quality of Service Standards for a public utility provider. The PUC also awards licenses and monitors and enforces compliance with license conditions. On March 23, 2001 the PUC issued an operating license for a period of twenty-five years to Belize Water Services Limited (BWSL). The Water and Sewerage (Tariff) Byelaws, Statutory Instrument No. 67 of 2002, passed on June 1, 2002 provides for Full Tariff Reviews Proceedings (FTRP) and Annual Review Proceedings (ARP).

## Annual Review Proceedings

SI 67 of 2002 also provides for an 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...". In its Final Decision for the 2009 FTRP, the Commission ordered that ARP's become mandatory.

## Application by Belize Water Services Limited

On December 23, 2011, the Belize Water Services Limited (BWSL) made an application to the PUC for an Annual Review Proceeding (ARP) in which it proposed no adjustments to the business plan, the regulated parameters, or the rates, tariffs, fees and charges approved in the BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION (AMENDED) made and issued by the PUC on March 30, 2010, and amended April 28, 2010, in respect of the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015.

## Decision of the Commission

**BELIZE:**

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***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 2000, the Water Industry Act 2001, Chapter 222 of the Laws of Belize, 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 2012 ANNUAL REVIEW PROCEEDING FINAL DECISION**

**Decisions.** 2. (1) In respect of the Annual Review Proceeding (ARP) for the Belize Water Services Limited (BWSL) for the determination of regulated values and rates, tariffs, fees and charges and for adjustments to approved Business Plan for the remaining Annual Tariff Periods (ATP) of the current Full Tariff Period (FTP), the Commission hereby makes the following Decisions and Order:

***(a)*** The Commission hereby approves a Target Rate of Return ($ROR_{ATP}$) of 8.0% for each remaining Annual Tariff Period (ATP) of the current Full Tariff Period (FTP);

***(b)*** The Commission hereby approves the Annual Corrections (AC) for the Annual Tariff Period (ATP) of April 1, 2010, to March 31, 2011 as contained in Schedule 1;

***(c)*** The Commission hereby approves the Regulated Asset Value (RAV) for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 2;

***(d)*** The Commission hereby approves the Tariff Basket Revenue (TBR) and the Return, Depreciation, Operational Expenditure (OPEX), Taxes/Licence Fees, Annual Corrections (AC) and RSA Recovery components of the Tariff Basket Revenue (TBR), and Other Income and Forecast Consumption for each remaining Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 3;

***(e)*** The Commission hereby approves the Tariffs to be applied during each remaining Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 4, and hereby orders the Belize Water Services Limited (BWSL) to levy the said Tariffs in respect of the water and sewer services it is licensed to provide;

***(f)*** All other regulated values, rates, tariffs, fees and charges approved in the BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION (AMENDED) in respect of the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015, remain in effect.

**MADE** by the Public Utilities Commission this 23rd day of March, 2012.

**(JOHN P. AVERY)**
*Chairman, Public Utilities Commission*

## Schedule 1

## Belize Water Services Limited (BWS)
## Approved Corrections for the Annual Tariff Period (ATP) of April 1, 2010, to March 31, 2011

**Approved Corrections for the Annual Tariff Period (ATP) of April 1, 2010, to March 31, 2011 - $:**
**All Branches except Caye Caulker**

| | |
|---|---|
| **Approved Average Tariff - $/1000 Gal** | **18.41** |
| **Realized Average Tariff - $/1000 Gal** | **17.28** |
| **Approved Tariff Basket Revenue - $** | **35855,502** |
| **Realized Tariff Basket Revenue - $** | **33646,004** |
| **Variance (Total Corrections) - $** | **2209,498** |

## Schedule 2

## Belize Water Services Limited (BWS)
## Approved Regulated Asset Value (RAV) for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

**Regulated Asset Value (RAV) as at March 31/April 1 of each year - $'000:**
**All Branches except Caye Caulker**

| Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Starting RAV | | 126,399 | 126,587 | 128,737 | 133,736 |
| Depreciation | | 3,160 | 3,165 | 3,218 | 3,343 |
| Work In Progress | | 7,089 | 11,077 | 8,092 | 7,602 |
| Additions | | 5,155 | 6,841 | 9,083 | 9,584 |
| Contributed Capital | | 1,807 | 1,527 | 865 | 1,190 |
| Ending RAV | 126,399 | 126,587 | 128,737 | 133,736 | 138,787 |

## Schedule 3

## Belize Water Services Limited (BWS)

## Approved Tariff Basket Revenue (TBR) and Components for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

**Approved Tariff Basket Revenue (TBR), Revenue Components and Forecast Consumption for each ATP of the FTP - $'000:**
**All Branches except Caye Caulker**

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | Totals - FTP |
|---|---|---|---|---|---|---|
| **Revenue Components of TBR:** | | | | | | |
| OPEX | 20,573 | 20,710 | 20,074 | 20,923 | 21,799 | 104,078 |
| Return | 12,595 | 12,649 | 10,213 | 10,499 | 10,901 | 56,857 |
| Depreciation | 3,138 | 3,160 | 3,165 | 3,218 | 3,343 | 16,024 |
| Annual Corrections | 0 | 0 | 709 | 736 | 765 | 2,209 |
| RSA Recovery | 0 | 0 | 0 | 0 | 0 | 0 |
| Taxes/Licence Fees | 772 | 841 | 770 | 797 | 830 | 4,010 |
| Less: Other Income | 1,223 | 1,278 | 1,335 | 1,395 | 1,458 | 6,688 |
| Tariff Basket Revenue | 35,856 | 36,082 | 33,595 | 34,778 | 36,180 | 176,491 |
| Forecast Consumption ('000 gallons) | 1947,501 | 2019,214 | 2095,562 | 2176,977 | 2261,588 | 10500,841 |
| Average Tariff ($/1000 gallons) | 18.41 | 17.87 | 16.03 | 15.98 | 16.00 | 16.81 |

## Schedule 4

## Belize Water Services Limited (BWS)
## Approved Water and Sewer Tariffs, Fees and Charges for Annual Tariff Period (ATP) April 1, 2012, to March 31, 2013

**Approved Tariffs for ATP - $/1000 US Gallons:**

| **Service Classification:** | **Water Only** | **Water and Sewer** | **Water and Sewer** | **Water Only** |
|---|---|---|---|---|
| **Branches:** | **Mainland** | **Belize, Belmopan** | **San Pedro** | **Caye Caulker** |
| **Consumption Blocks:** | | | | |
| 0 - 1,000 | 8.00 | 9.60 | 23.45 | 23.00 |
| 1,001 - 2,000 | 12.79 | 16.53 | 27.72 | 26.45 |
| 2,001 - 3,000 | 13.86 | 18.13 | 29.85 | 29.03 |
| 3,001 - 4,000 | 14.40 | 19.19 | 31.98 | 31.86 |
| 4,001 - 5,000 | 14.93 | 20.26 | 34.12 | 34.97 |
| 5,001 - 6,000 | 16.00 | 21.32 | 40.51 | 38.37 |
| 6,001 - 7,000 | 17.06 | 21.85 | 47.98 | 42.12 |
| 7,001 - 8,000 | 17.59 | 22.39 | 53.31 | 46.22 |
| >8,000 | 18.13 | 22.92 | 58.64 | 50.73 |
| Minimum Bill for Consumption less than 1,000 US Gallons | 8.00 | 9.60 | 23.45 | 23.00 |

# Appendix I.4 – April 2014 Final Decision Annual Tariff Review


# PUBLIC UTILITIES COMMISSION

## FINAL DECISION
## (2014 ANNUAL REVIEW PROCEEDING)

**for**

**Belize Water Services Limited**

**April 2014**

## Legal Framework

The Public Utilities Commission Act (No. 39 of 1999) establishes The Public Utilities Commission (PUC) 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 (defined in the PUC Act) are satisfactory and that the charges imposed in respect of those services are reasonable. The PUC has the power to fix the rates and the Quality of Service Standards for a public utility provider. The PUC also awards licenses and monitors and enforces compliance with license conditions. On March 23, 2001 the PUC issued an operating license for a period of twenty-five years to Belize Water Services Limited (BWSL). The Water and Sewerage (Tariff) Byelaws, Statutory Instrument No. 67 of 2002, passed on June 1, 2002 provides for Full Tariff Reviews Proceedings (FTRP) and Annual Review Proceedings (ARP).

## Annual Review Proceedings

SI 67 of 2002 also provides for an 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...". In its Final Decision for the 2009 FTRP, the Commission ordered that ARP's become mandatory.

## Application by Belize Water Services Limited

On December 31, 2013, the Belize Water Services Limited (BWSL) made an application to the PUC for an Annual Review Proceeding (ARP) in which it proposed adjustments to the business plan, the regulated parameters, and the rates, tariffs, fees and charges approved in the BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION (AMENDED) made and issued by the PUC on March 30, 2010, and amended April 28, 2010, in respect of the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015.

In its submission, BWSL proposed capital expenditure of some $25,679,000 for the Annual Tariff Period (ATP) of April 1, 2014, to March 31, 2015, and other data, analysis, forecasts and projections to support a requested average increase in existing tariffs of some 16.25%.

## 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 2000, the Water Industry Act 2001, Chapter 222 of the Laws of Belize, 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 2014 ANNUAL REVIEW PROCEEDING FINAL DECISION**

**Decisions.** 2. (1) In respect of the Annual Review Proceeding (ARP) for the Belize Water Services Limited (BWSL) for the determination of regulated values and rates, tariffs, fees and charges and for adjustments to approved Business Plan for the remaining Annual Tariff Period (ATP) of the current Full Tariff Period (FTP), the Commission hereby makes the following Decisions and Order:

*(a)* The Commission hereby approves the Annual Corrections (AC) for the Annual Tariff Periods (ATP) of the period April 1, 2010, to March 31, 2013, as contained in Schedule 1;

*(b)* The Commission hereby approves the Regulated Asset Value (RAV) for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 2;

*(c)* The Commission hereby approves the Tariff Basket Revenue (TBR) and the Return, Depreciation, Operational Expenditure (OPEX), Taxes/Licence Fees, Annual Corrections (AC) and RSA Recovery components of the Tariff Basket Revenue (TBR), and Other Income and Total Consumption for each Annual Tariff Period (ATP) of the Full Tariff Period (FTP) as contained in Schedule 3;

*(d)* The Commission hereby approves the Tariffs to be applied during Annual Tariff Period (ATP) of April 1, 2014, to March 31, 2015, as contained in Schedule 4, and hereby orders the Belize Water Services Limited (BWSL) to levy the said Tariffs in respect of the water and sewer services it is licensed to provide;

***(e)*** All other regulated values, rates, tariffs, fees and charges approved in the BELIZE WATER SERVICES LIMITED 2009 FULL TARIFF REVIEW PROCEEDING FINAL DECISION (AMENDED) in respect of the Full Tariff Period (FTP) of April 1, 2010, to March 31, 2015, remain in effect.

**MADE** by the Public Utilities Commission this 28th day of April, 2014.

**(JOHN P. AVERY)**
*Chairman, Public Utilities Commission*

## Schedule 1

## Belize Water Services Limited (BWS)
## Approved Annual corrections for Annual Tariff Periods (ATP)of April 1, 2010, to March 31, 2013

**Approved Annual Corrections:**

| ATP (Year) | 10-11 | 11-12 | 12-13 | Totals |
|---|---|---|---|---|
| Actual Consumption - '000 US gals | 1948,280 | 1975,129 | 2020,434 | 5943,843 |
| Actual TBR - $'000 | 33,867 | 34,250 | 32,815 | 100,932 |
| Actual Avg Tariff - $/1000 US gals | 17.38 | 17.34 | 16.24 | |
| Approved TBR - S'000 | 35,612 | 35,942 | 33,297 | 104,851 |
| Approved Average Tariff - $/1000 US gals | 18.28 | 18.20 | 16.48 | |
| Variance: | | | | |
| TBR - $'000 | 1,745 | 1,692 | 482 | 3,919 |
| Avg Tariff - $/1000 US gals | 0.79 | 0.78 | 0.19 | |

## Schedule 2

## Belize Water Services Limited (BWS)

## Approved Regulated Asset Value (RAV) for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

**Regulated Asset Value (RAV) as at March 31/April 1 of each year - $:**

| | | | | FTP | | | | |
|---|---|---|---|---|---|---|---|---|
| **Year** | **07-08** | **08-09** | **09-10** | **10-11** | **11-12** | **12-13** | **13-14** | **14-15** |
| **Starting RAV** | | 138367,178 | 126795,974 | 122162,913 | 119230,594 | 118369,614 | 117402,399 | 121846,794 |
| **Depreciation** | | 3190,610 | 3436,040 | 3362,899 | 3596,554 | 3953,304 | 3287,267 | 3411,710 |
| **Additions** | | 3459,010 | 4370,141 | 5519,364 | 7070,056 | 10077,951 | 15036,949 | 15927,980 |
| **Work in Progress** | | | | | | | 9093,286 | 5929,474 |
| **Contributed Capital** | | 11819,185 | 5465,161 | 4156,500 | 4070,760 | 6923,085 | 7305,287 | 4555,287 |
| **Ending RAV** | 138367,178 | 126795,974 | 122162,913 | 119230,594 | 118369,614 | 117402,399 | 121846,794 | 129807,777 |

## Schedule 3

## Belize Water Services Limited (BWS)

## Approved Tariff Basket Revenue (TBR) and Components for Full Tariff Period (FTP) April 1, 2010, to March 31, 2015

**Approved Tariff Basket Revenue (TBR), Revenue Components and Forecast Consumption for each ATP of the FTP - $'000:**

| ATP (Year) | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | Totals |
|---|---|---|---|---|---|---|
| Return | 12069,675 | 11880,010 | 9430,881 | 9569,968 | 10066,183 | 53016,717 |
| Depreciation | 3362,899 | 3596,554 | 3953,304 | 3287,267 | 3411,710 | 17611,734 |
| OPEX | 20572,928 | 20709,701 | 20073,641 | 21522,507 | 22424,537 | 105303,314 |
| Corrections | | | | | 3919,248 | 3919,248 |
| Gross TBR | 36005,502 | 36186,265 | 33457,826 | 34379,742 | 39821,678 | 179851,013 |
| Taxes/Licence Fees | 828,771 | 832,932 | 770,129 | 791,350 | 916,612 | 4139,793 |
| Less: Other Income | 1222,564 | 1077,145 | 930,468 | 1095,149 | 1157,930 | 5483,256 |
| Net TBR | 35611,710 | 35942,052 | 33297,487 | 34075,943 | 39580,359 | 178507,550 |
| | | | | | | |
| Total Consumption - '000 gals | 1948,280 | 1975,129 | 2020,434 | 2171,577 | 2280,156 | 10395,575 |
| Average Tariff - $/1000 gals | 18.28 | 18.20 | 16.48 | 15.69 | 17.36 | 17.17 |

## Schedule 4

## Belize Water Services Limited (BWLS)

## Approved Water and Sewer Tariffs for Annual Tariff Period (ATP) April 1, 2014, to March 31, 2015

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

| | April 1, 2014 - March 31, 2015 | | | |
|---|---|---|---|---|
| **Service Classification:** | **Water Only** | **Water and Sewer** | **Water and Sewer** | **Water Only** |
| **Branches:** | **Mainland** | **Belize, Belmopan** | **San Pedro** | **Caye Caulker** |
| **Consumption Blocks:** | | | | |
| 0 - 1,000 | 8.55 | 10.26 | 25.07 | 23.00 |
| 1,001 - 2,000 | 13.67 | 17.66 | 29.63 | 26.45 |
| 2,001 - 3,000 | 14.82 | 19.38 | 31.90 | 29.03 |
| 3,001 - 4,000 | 15.39 | 20.51 | 34.18 | 31.86 |
| 4,001 - 5,000 | 15.95 | 21.65 | 36.46 | 34.97 |
| 5,001 - 6,000 | 17.10 | 22.79 | 43.30 | 38.37 |
| 6,001 - 7,000 | 18.23 | 23.36 | 51.28 | 42.12 |
| 7,001 - 8,000 | 18.80 | 23.93 | 56.97 | 46.22 |
| >8,000 | 19.38 | 24.50 | 62.67 | 50.73 |
| Minimum Bill for Consumption less than 1,000 US Gallons | 8.55 | 10.26 | 25.07 | 23.00 |

# Appendix II – Audited Financial Statements 2013/14

# *Belize Water Services Limited*

***Financial Statements for the Years Ended March 31, 2014 and 2013 and Independent Auditors' Report***

**BELIZE WATER SERVICES LIMITED**

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Castillo Sanchez & Burrell, LLP
40 A Central American Blvd
P.O. Box 1235
Belize City
Belize

Tel: +501 227 3020/5666
Fax: +501 227 5792
www.CSB-LLP.com
info@CSB-LLP.com



# INDEPENDENT AUDITORS' REPORT

**To the Board of Directors and Shareholders of**
**Belize Water Services Limited:**

## Report on the Financial Statements

We have audited the accompanying financial statements of Belize Water Services Limited, which comprise the statements of financial position as at March 31, 2014 and 2013, the statements of profit or loss and other comprehensive income, statements of changes in equity and statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory notes.

## Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards. This responsibility includes: designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

## Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Belize Water Services Limited as of March 31, 2014 and 2013 and of its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards.

Castillo Lumley & Farrell, LLP

**Chartered Accountants**
**June 20, 2014**

**BELIZE WATER SERVICES LIMITED**

**STATEMENTS OF FINANCIAL POSITION**
**MARCH 31, 2014 AND 2013**

| **ASSETS** | **Notes** | **2014** | Restated 2013 | Restated 2012 |
|---|---|---|---|---|
| CURRENT ASSETS: | | | | |
| Cash and cash equivalents | 2f, 2g, 3 | **$ 4,297,676** | $ 4,263,200 | $ 4,730,202 |
| Trade receivable | 2f, 2h, 4 | **2,223,513** | 1,986,906 | 2,273,192 |
| Other receivable | 2f, 2h | **1,038,951** | 927,178 | 807,232 |
| Prepayments | 2i | **420,286** | 448,831 | 1,083,834 |
| Materials and supplies | 2j, 5 | **7,415,854** | 6,639,267 | 6,355,245 |
| Total current assets | | **15,396,280** | 14,265,382 | 15,249,705 |
| NON-CURRENT ASSETS: | | | | |
| Fixed assets | 2k, 6 | **146,732,224** | 145,763,534 | 143,782,773 |
| Total non-current assets | | **146,732,224** | 145,763,534 | 143,782,773 |
| **TOTAL ASSETS** | | **$162,128,504** | $160,028,916 | $159,032,478 |
| **LIABILITIES AND EQUITY** | | | | |
| CURRENT LIABILITIES: | | | | |
| Trade payable | 2L | **$ 3,653,651** | $ 3,177,733 | $ 1,656,937 |
| Interest payable | 2m | **209,963** | 227,670 | 251,175 |
| Taxes payable | 2m | **53,069** | 50,139 | 51,321 |
| Dividends payable | 2s | **572,835** | 576,331 | 1,079,936 |
| Other payable | 2m, 7 | **188,844** | 207,013 | 90,689 |
| Accrued expenses | 2m | **652,021** | 1,341,030 | 1,168,770 |
| Security deposits | 2n | **2,843,375** | 2,644,294 | 2,492,364 |
| Current portion of long term debt | 2p, 8 | **5,014,852** | 4,937,605 | 4,535,688 |
| Total current liabilities | | **13,188,610** | 13,161,815 | 11,326,880 |
| NON-CURRENT LIABILITIES: | | | | |
| Deferred income | 2o | **9,784,850** | 6,723,066 | 4,194,793 |
| Long term debt | 2p, 8 | **34,161,875** | 37,606,937 | 42,828,383 |
| Total non-current liabilities | | **43,946,725** | 44,330,003 | 47,023,176 |
| Total liabilities | | **57,135,335** | 57,491,818 | 58,350,056 |
| EQUITY: | | | | |
| Share capital | 9 | **60,000,001** | 60,000,001 | 60,000,001 |
| Contributed capital | 10 | **11,714,281** | 11,714,281 | 11,714,281 |
| Capital reserve | 11 | **15,276,362** | 15,276,362 | 15,276,362 |
| Retained earnings | | **18,002,525** | 15,546,454 | 13,691,778 |
| Total equity | | **104,993,169** | 102,537,098 | 100,682,422 |
| **TOTAL LIABILITIES AND EQUITY** | | **$162,128,504** | $160,028,916 | $159,032,478 |

The financial statements on pages 3 to 6 were approved and authorized for issue by the Board of Directors on July 30, 2014 and are signed on its behalf by:

Director

Director

Restated (See Note 23)

The notes on pages 7 to 32 are an integral part of these financial statements.

**BELIZE WATER SERVICES LIMITED**

**STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME**
**YEARS ENDED MARCH 31, 2014 AND 2013**

| | Notes | 2014 | 2013 |
|---|---|---|---|
| CONTINUING OPERATIONS | | | |
| OPERATING REVENUES: | 2q | | |
| Measured water income – net | | **$34,151,347** | $32,814,587 |
| Income on charges, fees and penalties | | **771,463** | 768,617 |
| Total operating revenues | | **34,922,810** | 33,583,204 |
| OPERATING EXPENDITURES: | 2r | | |
| Depreciation | 6 | **4,674,477** | 3,953,304 |
| Materials and other external costs | 12 | **9,040,726** | 8,087,030 |
| Other operating charges | 14 | **7,053,717** | 7,880,543 |
| Staff costs | 13 | **8,546,020** | 8,566,980 |
| Total operating expenses | | **29,314,940** | 28,487,857 |
| OPERATING PROFIT | | **5,607,870** | 5,095,347 |
| Interest income | | **78,073** | 95,415 |
| Other income | | **59,886** | 66,436 |
| Gain on disposal of fixed assets | | **31,936** | 22,860 |
| PROFIT BEFORE FINANCE CHARGES AND TAX | | **5,777,765** | 5,280,058 |
| Financial expenses | 8 | **(2,203,962)** | (2,332,526) |
| Business tax | 17 | **(612,674)** | (587,833) |
| **PROFIT FOR THE YEAR** | | **2,961,129** | 2,359,699 |
| **OTHER COMPREHENSIVE INCOME** | | **-** | - |
| **TOTAL COMPREHENSIVE INCOME** | | **$ 2,961,129** | $ 2,359,699 |
| **EARNINGS PER SHARE** | 15 | | |
| From continuing operations: | | | |
| Basic and diluted | | **$0.07** | $0.06 |

Restated (See Note 23)
The notes on pages 7 to 32 are an integral part of these financial statements.

**BELIZE WATER SERVICES LIMITED**

**STATEMENTS OF CHANGES IN EQUITY**
**YEARS ENDED MARCH 31, 2014 AND 2013**

| | Share Capital | Contributed Capital | Capital Reserve | Retained Earnings | Total |
|---|---|---|---|---|---|
| **April 1, 2012** | **$60,000,001** | **$11,714,281** | **$15,276,362** | **$13,691,778** | **$100,682,422** |
| ***Comprehensive income:*** | | | | | |
| Profit for the year | - | - | - | 2,359,699 | 2,359,699 |
| Other comprehensive income | - | - | - | - | - |
| **Total comprehensive income** | - | - | - | 2,359,699 | 2,359,699 |
| ***Transactions with owners of the Company recognized directly in equity:*** | | | | | |
| Dividends declared | - | - | - | (505,023) | (505,023) |
| **Total transactions with owners of the Company** | - | - | - | (505,023) | (505,023) |
| **March 31, 2013** | **60,000,001** | **11,714,281** | **15,276,362** | **15,546,454** | **102,537,098** |
| **April 1, 2013** | **60,000,001** | **11,714,281** | **15,276,362** | **15,546,454** | **102,537,098** |
| ***Comprehensive income:*** | | | | | |
| Profit for the year | - | - | - | 2,961,129 | 2,961,129 |
| Other comprehensive income | - | - | - | - | - |
| **Total comprehensive income** | - | - | - | 2,961,129 | 2,961,129 |
| ***Transactions with owners of the Company recognized directly in equity:*** | | | | | |
| Dividends declared | - | - | - | (505,058) | (505,058) |
| **Total transactions with owners of the Company** | - | - | - | (505,058) | (505,058) |
| **March 31, 2014** | **$60,000,001** | **$11,714,281** | **$15,276,362** | **$18,002,525** | **$104,993,169** |

The notes on pages 7 to 32 are an integral part of these financial statements.

**BELIZE WATER SERVICES LIMITED**

**STATEMENTS OF CASH FLOWS**
**YEARS ENDED MARCH 31, 2014 AND 2013**

| | **2014** | Restated 2013 |
|---|---|---|
| OPERATING ACTIVITIES: | | |
| Profit for the year | **$ 2,961,129** | $ 2,359,699 |
| Adjustments for: | | |
| - Depreciation | **4,674,477** | 3,953,304 |
| - Gain on disposal | **(31,936)** | (22,860) |
| - Provision for doubtful debts | **-** | 344,576 |
| - Provision for obsolete materials and supplies | **19,674** | 161,708 |
| - Interest income earned | **(78,073)** | (95,415) |
| - Business tax expense | **612,674** | 587,833 |
| - Financial expenses | **2,203,962** | 2,332,526 |
| Operating profit before working capital changes | **10,361,907** | 9,621,371 |
| Increase in accounts receivable | **(361,603)** | (113,337) |
| Decrease in prepayments | **28,545** | 635,003 |
| Increase in materials and supplies | **(796,261)** | (445,730) |
| (Decrease) increase in accounts payable and accrued expenses | **(32,179)** | 2,137,693 |
| Cash provided by operations | **9,200,409** | 11,835,000 |
| Interest received | **91,296** | 30,516 |
| Business tax paid | **(609,744)** | (589,015) |
| Financial expenses paid | **(2,221,669)** | (2,532,414) |
| Net cash provided by operating activities | **6,460,292** | 8,744,087 |
| INVESTING ACTIVITIES: | | |
| Additions to fixed assets | **(12,124,258)** | (10,604,377) |
| Contributions to fixed assets | **6,413,585** | 4,394,812 |
| Proceeds from disposal of fixed assets | **99,442** | 111,495 |
| Net cash used in investing activities | **(5,611,231)** | (6,098,070) |
| FINANCING ACTIVITIES: | | |
| Dividends paid | **(508,554)** | (1,008,628) |
| Proceeds from long term debt | **1,799,822** | 273,766 |
| Repayment of long term debt | **(2,105,853)** | (2,378,157) |
| Net cash used in financing activities | **(814,585)** | (3,113,019) |
| NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS | **34,476** | (467,002) |
| CASH AND CASH EQUIVALENTS, APRIL 1 | **4,263,200** | 4,730,202 |
| CASH AND CASH EQUIVALENTS, MARCH 31 | **$ 4,297,676** | $ 4,263,200 |

Restated (See Note 24)
The notes on pages 7 to 32 are an integral part of these financial statements.

## 1. GENERAL

Reporting entity – Belize Water Services Limited (the "Company") was incorporated by the Government of Belize on January 22, 2001 as the successor company to the Water and Sewerage Authority ("WASA"). Belize Water Services Limited was vested with the Assets and Liabilities of WASA on March 23, 2001. The Company is majority owned by the Government of Belize.

The Company's registered office is #7 Central American Boulevard, Belize City, Belize.

## 2. SIGNIFICANT ACCOUNTING POLICIES

a. Statement of compliance – The financial statements have been prepared from records maintained in the financial accounting system of the Company, in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

b. Basis of preparation – The financial statements have been prepared on the historical cost basis. Historical cost is generally based on the fair value of the consideration given in exchange for assets.

c. Functional and presentation currency – The financial statements are presented in Belize dollars which is the Company's functional currency.

d. Foreign currency transactions/translation – Transactions in foreign currencies during the year are translated into Belize dollars at the rates ruling on the dates of the transactions. Foreign currency balances outstanding at the balance sheet date are translated at the rates ruling on that date. Gains or losses on ordinary foreign exchange transactions are included in the results of operations.

e. Changes in accounting policies – The accounting policies adopted are consistent with those used in the previous financial year except that the Company has adopted the following standards, amendments and interpretations which did not have a significant effect on the financial performance or position of the Company. Some, however, give rise to additional disclosures or changes to the presentation of the financial statements.

**Adoption of New Standards, Amendments and Interpretations Effective from April 1, 2013:**

*IFRS 13 Fair Value Measurement*
IFRS 13 provides guidance on how to measure fair value under IFRS when fair value is required or permitted, as well as introducing additional disclosure requirements for:

- Items measured at fair value in the statement of financial position
- Items where fair value is required to be disclosed in the notes to the financial statements.

The guidance provided by IFRS 13 has not had any material effect on the fair value measurements undertaken by the Company.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

e. Changes in accounting policies (continued) –

*IAS 1 Presentation of Items of Other Comprehensive Income – Amendments to IAS 1*
The amendments to IAS 1 introduce a grouping of items presented in other comprehensive income (OCI). Items that could be reclassified (or recycled) to profit or loss at a future point in time (e.g., net gain on hedge of net investment, exchange differences on translation of foreign operations, net movement on cash flow hedges and net loss or gain on available-for-sale financial assets) now have to be presented separately from items that will never be reclassified (e.g., actuarial gains and losses on defined benefit plans and revaluation of land and buildings). In addition, changes to the names of certain financial statements were made.

The amendment had no financial impact on the Company's financial statements; however changes were made to the presentation of the Statement of Changes in Equity and the name Statement of Profit Or Loss and Other Comprehensive Income is now being used.

*IAS 19 Employee Benefits (Revised)*
The IASB has issued numerous amendments to IAS 19. These range from fundamental changes such as removing the corridor mechanism and the concept of expected returns on plan assets to simple clarifications and re-wording. The amended standard will impact the net benefit expense as the expected return on plan assets will be calculated using the same interest rate as applied for the purpose of discounting the benefit obligation.

The amendment had no financial impact on the Company's financial statements.

*IFRS 1 Government Loans*
Addresses how a first-time adopter would account for a government loan with a below-market rate of interest when transitioning to IFRSs. The amendments mirror the requirements for existing IFRS preparers in relation to the application of amendments made to IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance* in relation to accounting for government loans.

The amendment had no financial impact on the Company's financial statements.

**Standards issued but not yet effective**

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below. The Company intends to adopt these standards, if applicable, when they become effective.

*IFRS 9 Financial instruments (classification and measurement)*
IFRS 9, as issued reflects the first phase of the IASB's work on the replacement of IAS 39 and applies to classification and measurement of financial assets and financial liabilities as defined in IAS 39. The standard was initially effective for annual periods beginning on or after January 1, 2013, but Amendments to IFRS 9 Mandatory Effective Date of IFRS 9 and Transition Disclosures, issued in December 2011, moved the mandatory effective date to January 1, 2015. The release of IFRS 9 (2013) on November 19, 2013 contained consequential amendments which bring into effect a substantial

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

e. Changes in accounting policies (continued) –

overhaul of hedge accounting; it removed the mandatory effective date of IFRS 9 'January 1, 2015' and permits an entity to apply the requirements on the presentation of gains and losses on financial liabilities designated as 'fair value through profit or loss' without applying the other requirements. When all projects are completed an effective date will be added. However, IASB has tentatively decided that the mandatory effective date will be no earlier than annual periods beginning on or after January 1, 2017.

The Company will quantify the effect of the last two phases when the final standard becomes effective.

*IFRS 10, IFRS12 and IAS 27 Amendments to Investment Entities*
Amends IFRS 10 Consolidated Financial Statements, IFRS 12 Disclosure of Interests in Other Entities and IAS 27 Separate Financial Statements to provide 'investment entities' (as defined) an exemption from the consolidation of particular subsidiaries and instead require that an investment entity measure the investment in each eligible subsidiary at fair value through profit or loss in accordance with IFRS 9 Financial Instruments or IAS 39 Financial Instruments: Recognition and Measurement, additional disclosures on investment entities and requires an investment entity to account for its investment in a relevant subsidiary in the same way in its consolidated and separate financial statements (or to only provide separate financial statements if all subsidiaries are unconsolidated). The amendment is effective for annual periods beginning on or after January 1, 2014.

The amendment had no financial impact on the Company's financial statements.

*IAS 19 Employee Benefits: Employee Contributions (Amendment).*
Amends IAS 19 Employee Benefits to clarify the requirements that relate to how contributions from employees or third parties that are linked to service should be attributed to periods of service. In addition, it permits a practical expedient if the amount of the contributions is independent of the number of years of service, in that contribution, can, but are not required, to be recognised as a reduction in the service cost in the period in which the related service is rendered. The amendment is effective for annual periods beginning on or after January 1, 2014.

The amendment had no financial impact on the Company's financial statements.

*IAS 32 Offsetting Financial Assets and Financial Liabilities — Amendment to IAS 32*
These amendments clarify the meaning of "currently has a legally enforceable right to setoff". The amendment also clarifies the application of the IAS 32 offsetting criteria to settlement systems (such as central clearing house systems) which apply gross settlement mechanisms that are not simultaneous. The amendment becomes effective for annual periods beginning on or after January 1, 2014.

This amendment is not expected to impact the Company's financial position or performance.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

e. Changes in accounting policies (continued) –

IAS 36 *Impairment of Assets – Recoverable Amount Disclosures for Non-Financial Assets (Amendment)*
Amendment to reduce the circumstances in which the recoverable amount of assets or cash generating units is required to be disclosed, clarify the disclosures required, and to introduce an explicit requirement to disclose the discount rate used in determining impairment (or reversals) where recoverable amount (based on fair value less costs of disposal) is determined using a present value technique. The amendment is effective for annual periods beginning on or after January 1, 2014.

The Company will adopt this amendment when it becomes effective and present requisite disclosures when applicable.

*IAS 39 Financial Instruments: Recognition and Measurement – Novation of Derivatives and Continuation of Hedge Accounting (Amendment).*
Amendment to clarify that there is no need to discontinue hedge accounting if a hedging derivative is novated, provided certain criteria are met. The amendment is effective for annual periods beginning on or after January 1, 2014.

The Amendment will not have an impact on the Company's financial statement.

***IFRIC 21 – Levies***
Provides guidance on when to recognize a liability for a levy imposed by a government, both for levies that are accounted for in accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* and those where the timing and amount of the levy is certain. The amendment is effective for annual periods beginning on or after January 1, 2014.

The Amendment is not expected to have any effect on the Company's financial statements.

**IFRIC 20 *Stripping Costs in the Production Phase of a Surface Mine***
Clarifies the requirements for accounting for stripping costs associated with waste removal in surface mining, including when production stripping costs should be recognised as an asset, how the asset is initially recognised, and subsequent measurement. The Interpretation requires stripping activity costs which provide improved access to ore are recognised as a non-current 'stripping activity asset' when certain criteria are met. The stripping activity asset is depreciated or amortised on a systematic basis, over the expected useful life of activity, using the units of production method unless another method is more appropriate.

The Amendment is not expected to have any effect on the Company's financial statements.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

e. Changes in accounting policies (continued) –

IFRS 14 *Regulatory Deferral Accounts* permits an entity which is a first-time adopter of International Financial Reporting Standards to continue to account, with some limited changes, for 'regulatory deferral account balances' in accordance with its previous GAAP, both on initial adoption of IFRS and in subsequent financial statements. Regulatory deferral account balances, and movements in them, are presented separately in the statement of financial position and statement of profit or loss and other comprehensive income, and specific disclosures are required. IFRS 14 was originally issued in January 2014 and applies to an entity's first annual IFRS financial statements for a period beginning on or after January 1, 2016.

This standard has no impact on the Company's financial statements.

***Annual Improvements 2011-2013 Cycle***

The following improvements are effective for annual periods beginning on or after January 1, 2014. The below amendments are being assessed for adoption; these are not expected to have any material impact on the Company's financial performance or financial position.

*IFRS 1 First-time Adoption of International Financial Standards*
Clarify which versions of IFRSs can be used on initial adoption (amends basis for conclusions only).

*IFRS 2 Share-based Payment*
The improvement amends the definitions of 'vesting condition' and 'market condition' and adds definitions for 'performance condition' and 'service condition'.

*IFRS 3 Business Combinations*
The amendment requires contingent consideration that is classified as an asset or a liability to be measured at fair value at each reporting date.

*IFRS 3 Joint Arrangements*
Clarify that IFRS 3 excludes from its scope the accounting for the formation of a joint arrangement in the financial statements of the joint arrangement itself.

*IFRS 8 Operating Segments*
The amendment requires disclosure of the judgments made by management in applying the aggregation criteria to operating segments; clarify reconciliations of segment assets only required if segment assets are reported regularly.

*IFRS 13 Fair Value Measurement*
This improvement clarify that issuing IFRS 13 and amending IFRS 9 and IAS 39 did not remove the ability to measure certain short-term receivables and payables on an undiscounted basis (amends basis for conclusions only).

Clarify the scope of the portfolio exception for measuring fair value. The exception applies only to financial assets and financial liabilities within the scope of IAS 39 Financial Instruments: Recognition and Measurement or IFRS 9 Financial Instruments.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

e. Changes in accounting policies (continued) –

*IAS 16 Property, Plant and Equipment and IAS 38 Intangible Assets*
This improvement clarify that the gross amount of property, plant and equipment is adjusted in a manner consistent with a revaluation of the carrying amount.

*IAS 24 Related Party Disclosures*
This improvement clarifies how payments to entities providing management services are to be disclosed.

*IAS 40 Investment Property*
Clarifying the interrelationship of IFRS 3 and IAS 40 when classifying property as investment property or owner-occupied property.

The preparation of the Company's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and the disclosure of contingent liabilities, at the reporting date. However, uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amount of the asset or liability affected in the future. These factors could include:

**Judgments**
In the process of applying the Company's accounting policies, management has made the following judgments, apart from those involving estimations and assumptions, which have the most significant effect on the amounts recognised in the financial statements.

- These financial statements have been prepared on a going concern basis, which assumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future. These financial statements do not include adjustments that would be necessary should the Company be unable to continue as a going concern.

**Estimates and assumptions**
The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

*Initial recognition and measurement*
Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of the financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of the financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

f. Financial instruments – Financial assets and financial liabilities are recognized when an entity becomes a party to the contractual provisions of the instrument.

*Financial assets*
Financial assets are classified into the following specified categories: financial assets 'at fair value through profit or loss' (FVTPL), 'held-to-maturity' investments, 'available-forsale'(AFS) financial assets and 'loans and receivables.' The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. All regular way purchases or sales of financial assets are recognized and derecognized on a trade date basis.

Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace. The Company classifies its financial assets as loans and receivables.

*Effective interest method*
The effective interest method is a method of calculating the amortized cost of a financial asset or financial liability and of allocating interest income or expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

*Loans and receivables*
Loan and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables include accounts receivable and other assets.

Interest income is recognised by applying the effective interest rate, except for short-term receivables when the recognition of interest would be immaterial.

The Company's financial assets classified as loans and receivable include: cash and bank balances and accounts receivables. Refer to Note 21.

*Impairment of financial assets*
Financial assets are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

Objective evidence of impairment could include:

- Significant financial difficulty of the issuer or counterparty; or
- Breach of contract, such as a default or delinquency in interest or principal payments; or

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

f. Financial instruments (continued) –

- It becoming probable that the borrower will enter bankruptcy or financial reorganisation; or
- The disappearance of an active market for that financial asset because of financial difficulties.

For certain categories of financial assets, such as trade receivables, assets that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. Objective evidence of impairment for a portfolio of receivables could include the Company's past experience of collective payments, an increase in number of delayed payments in the portfolio past the average credit period of 60 days, as well as observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets carried at amortised cost, the amount of the impairment loss recognised is the difference between the asset's carrying amount and the present value of estimated future cash flow, discounted at the financial asset's original effective interest rate.

For financial assets carried at cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognised in the profit or loss.

For financial assets measured at amortised cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised.

*Derecognition of financial assets*
The Company derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Company neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Company recognises its retained interest in the asset and associated liability for amounts it may have to pay.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

f. Financial instruments (continued) –

If the Company retains substantially all the risks and rewards of ownership of a transferred financial asset, the Company continues to recognise the financial asset and also recognises a collateralized borrowing for proceeds received.

On derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in the other comprehensive income and accumulated in equity is recognised in profit or loss.

On derecognition of a financial asset other than in its entirety (e.g. when the Company retains an option to repurchase part of the transferred asset), the Company allocates the previous carrying amount of the financial asset between the part it continues to recognise under the continuing involvement, and the part it no longer recognises on the basis of the relative fair values of those parts on the date of the transfer. The difference between the carrying amount and the part that is no longer recognised and the sum of the consideration received for the part no longer recognised and any cumulative gain or loss allocated to it that had been recognised in other comprehensive income is recognised in profit or loss. A cumulative gain or loss that had been recognised in other comprehensive income is allocated between the part that continues to be recognised and the part that is no longer recognised on the basis of the relative fair values of those parts.

*Financial liabilities*
Financial liabilities are classified as either financial liabilities 'at FVTPL' or 'held at amortized cost'. The Company classifies its financial liabilities as other financial liabilities.

*Other financial liabilities*
Other financial liabilities (include borrowings and trade and other payables) are subsequently measured at amortised cost using the effective interest method.

The Company's other financial liabilities included: accounts payable, other payables and accruals, dividends payable and long-term debt. Refer to Note 21.

*Derecognition of financial liabilities*
The Company derecognizes financial liabilities when and only when, the Company's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognized and the consideration paid and is payable is recognised in profit or loss.

g. Cash and cash equivalents – Cash and cash equivalents include cash on hand, deposits held with banks and other short-term highly liquid investments with original maturities of 3 months or less.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

h. Trade and other receivables – Trade and other receivables are recognized when due and are measured on initial recognition at the fair value of the consideration received or receivable. Subsequent to initial recognition, receivables are measured at amortized cost, using the effective interest rate method. The carrying value of accounts receivable is reviewed for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable, with the impairment loss recorded in the income statement.

Accounts receivables are derecognized when derecognition criteria for financial assets have been met.

Short-term provisions are recognized when the Company has a present obligation (legal obligation) and a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

i. Prepayments – Prepayments represent costs paid in advance of their intended use or coverage. Prepayments are expensed in the period the service is delivered.

j. Materials and supplies – Materials and supplies are valued at the lower of cost and net realizable value, cost being determined on the weighted average cost method.

k. Fixed assets – Fixed assets are stated at cost less accumulated depreciation. Additions, major renewals and improvements are capitalized. Maintenance and repairs are charged against revenue in the year incurred.

Freehold and leasehold properties, excluding land, are depreciated on the straight-line basis over their estimated useful lives from 25 to 40 years.

Infrastructure assets comprise a network of underground systems. Expenditure on infrastructure assets relating to increases in capacity or enhancement of the network and on maintaining the operating capacity of the network in accordance with defined standards of service is treated as an addition and included at cost and any grants and contributions are amortized over the life of the asset. Infrastructure assets are depreciated over their estimated useful lives of 75 years.

Plant and equipment are depreciated on a straight-line basis over their estimated useful lives from 3 to 10 years.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

k. Fixed assets (continued) -

When items are disposed of, the cost and related accumulated depreciation are removed from the accounts and the resulting gain or loss on disposal is reflected in the results of operations.

An item is derecognized upon disposal or when no further future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the income statement in the year the asset is derecognized.

l. Trade accounts payable – Trade payables represent amounts outstanding to vendors for goods and services obtained. Trade payables are measured on initial recognition at the fair value of the consideration received less directly attributable transaction costs. Subsequent to initial recognition, they are measured at amortized cost using the effective interest rate method.

m. Other payables and accrued expenses – Other payables include payroll liabilities, outstanding interest and other short term obligations incurred by the Company. Other payables and accrued expenses are measured on initial recognition at the fair value of the consideration received less directly attributable transaction costs. Subsequent to initial recognition, they are measured at amortized cost using the effective interest rate method.

n. Security deposits – Security deposits are recognized as a liability upon activation of new customer accounts. Security deposits are applied to accounts in arrears after Management has deemed the account as non-billable after a suitable timeframe has elapsed where the Company has actively pursued collection without recourse. Security deposits not applied to arrears are refunded upon closing of the account.

o. Deferred income – Deferred income includes Government grants received for capital expenditure which have not yet been utilized by the Company. Deferred income is measured on initial recognition at fair value. Subsequent to initial recognition, it is measured at amortized cost using the effective interest rate method.

p. Long term debt – All borrowings and loans are initially recognised at fair value, less directly attributable transaction costs. After initial recognition, they are measured at amortized cost, using the effective interest rate method. Gains and losses are recognised in the income statement when the liabilities are derecognized as well as through the amortization process.

q. Sales determination and revenue recognition – Operating revenue comprises the value of water supplied net of discounts plus income from other related services. Revenue is recognized when earned.

## 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

q. Sales determination and revenue recognition (continued) -

Investment income is accounted for on the accrual basis, except for dividends, which are recognized when received. Interest revenue is recognized when it is probable that the economic benefits will flow to the Company and the amount of revenue can be measured reliably. Interest revenue is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

r. Expenses – Expenses are recognized when incurred.

s. Pension costs – Pension costs are determined based on defined contributions to a Plan that is funded.

t. Dividends – Dividend distribution to the Company's shareholders is recognized as a liability in the Company's financial statements in the period in which the dividends are declared by the Company's Board of Directors.

u. Impairment – At each balance sheet date, the Company reviews the carrying amounts of its tangible and intangible assets for potential permanent impairment. Should a permanent impairment in the value of the assets be identified, it will be written off against earnings in the period such impairment is recognized.

Where an impairment loss is subsequently reversed, the carrying amount of the assets is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss is recorded as income in the period the reversal is recognized.

v. Segment reporting – Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, which is responsible for allocating resources and assessing performance of the operating segments, has been identified as Executive Management.

For management purposes, the Company is organized into business units based on its measured water services reportable in two operating segments as follows:

- Private
- Government of Belize

Segment performance is evaluated sales performance which in certain respects is measured differently from profit or loss in the financial statements. Company operating expenses and taxes are managed on a group basis and are not allocated to individual operating segments.

## 3. CASH AND CASH EQUIVALENTS

| | **2014** | 2013 |
|---|---|---|
| Cash on hand | **$ 12,200** | $ 11,400 |
| Current accounts | **2,305,005** | 2,359,849 |
| Short term fixed deposits | **1,980,471** | 1,891,951 |
| | **$4,297,676** | $4,263,200 |

## 4. TRADE RECEIVABLE

| | **2014** | Restated 2013 |
|---|---|---|
| Trade receivable | **$2,574,816** | $2,457,906 |
| Provision for doubtful debts | **(351,303)** | (471,000) |
| | **$2,223,513** | $1,986,906 |

Provision for doubtful debts consists of the following:

| | | |
|---|---|---|
| Provision, beginning of year | **$ 471,000** | $ 328,000 |
| Charge for the year | **-** | 344,576 |
| Write-offs | **(119,697)** | (201,576) |
| Provision, end of year | **$ 351,303** | $ 471,000 |

## 5. MATERIALS AND SUPPLIES

| | **2014** | Restated 2013 |
|---|---|---|
| Fuel and chemicals | **$ 175,342** | $ 284,385 |
| Office supplies | **85,368** | 189,596 |
| Pipework and appurtenances | **7,190,500** | 6,140,567 |
| Spares and consumables | **98,969** | 221,595 |
| | **7,550,179** | 6,836,143 |
| Less provision for obsolete materials and supplies | **(134,325)** | (196,876) |
| | **$7,415,854** | $6,639,267 |

Provision for obsolete materials and supplies consists of the following:

| | | |
|---|---|---|
| Beginning provision | **$ 196,876** | $ 40,716 |
| Charge for the year | **19,674** | 161,708 |
| Write-offs | **(82,225)** | (5,548) |
| Ending provision | **$ 134,325** | $ 196,876 |

## 6. FIXED ASSETS

| Cost | Freehold and leasehold property | Plant & equipment | Infrastructure | Construction in progress | Total |
|---|---|---|---|---|---|
| Balance, April 1, 2013 | $20,501,906 | $46,411,160 | $106,231,128 | $ 4,306,064 | $177,450,258 |
| Additions | 23,500 | 1,333,094 | 64,660 | 10,703,004 | 12,124,258 |
| Disposal | (1,676) | (575,392) | - | - | (577,068) |
| Contributions | - | - | - | (6,413,585) | (6,413,585) |
| Transfers | 87,564 | 1,135,336 | 3,046,391 | (4,269,291) | - |
| Balance, March 31, 2014 | 20,611,294 | 48,304,198 | 109,342,179 | 4,326,192 | 182,583,863 |
| **Accumulated Depreciation** | | | | | |
| Balance, April 1, 2013 | 1,587,355 | 16,041,663 | 14,057,706 | - | 31,686,724 |
| Additions | 185,669 | 2,780,887 | 1,707,921 | - | 4,674,477 |
| Disposal | - | (509,562) | - | - | (509,562) |
| Balance, March 31, 2014 | 1,773,024 | 18,312,988 | 15,765,627 | - | 35,851,639 |
| **Net Book Value March 31, 2014** | **$18,838,270** | **$29,991,210** | **$ 93,576,552** | **$ 4,326,192** | **$146,732,224** |
| March 31, 2013 | $18,914,551 | $30,369,497 | $ 92,173,422 | **$ 4,306,064** | $145,763,534 |

Contributions represent projects finances by third party developers and the Government of Belize.

## 7. OTHER PAYABLES

| | **2014** | 2013 |
|---|---|---|
| Statutory payables | **$ 94,259** | $ 81,592 |
| Advances and other costs | **94,585** | 125,421 |
| | **$188,844** | $207,013 |

## 8. LONG TERM DEBT

The Company has long term loans as follows:

| | **2014** | Restated 2013 |
|---|---|---|
| Unsecured BZD$16,800,000 Caribbean Development Bank loan #5 guaranteed by the Government of Belize (GOB) repayable by quarterly instalments. The average interest rate on the loan was 2.95% per annum for the year ended March 31, 2014. The loan has varying maturity dates at 2012, 2014, and 2032. | **$ 4,459,172** | $ 5,120,575 |
| Unsecured BZD$27,660,000 Caribbean Development Bank loan #10 guaranteed by GOB repayable by quarterly instalments. Average interest rate on the loan was 3.20% per annum for the year ended March 31, 2014. The loan has varying maturity date at 2019, 2028, 2031. Drawdowns for the current year 2014 totalled $32,583.07. | **14,619,547** | 16,391,237 |
| Unsecured loan of USD$250,000 was signed between Caribbean Development Bank, Government of Belize and the Company on July 15, 2008. The purpose of the loan is for the expansion of the water and sewerage system on Ambergris Caye. The agreement stipulated that if the Bank determines that the project is not feasible, the loan will be converted to a grant. The loan will be repayable in 32 quarterly payments with interest of 2.5% which commenced on July 1, 2011. There were no drawdowns for the current year 2014. | **362,161** | 362,161 |
| Unsecured BZD$9,387,334 Development Finance Corporation (DFC) loan guaranteed by GOB repayable semi-annually inclusive of interest at 8% per annum. The loan matures on September 30, 2015. | **1,023,905** | 1,970,563 |
| Secured BZD$22,000,000 Social Security Board loan. This loan was obtained in January 2007 in order to refinance the previously held Alliance Bank of Belize Limited loan. In December 2008, SSB approved a restructuring of the loan. Under the new terms, the interest rate was reduced from 12% to 8.5% per annum. In addition, the moratorium period on principal payments was extended from December 31, 2009 to December 31, 2010. Commencing in March 31, 2011, interest and principal are paid in quarterly payments of $652,194. The loan is guaranteed by mortgage debenture over fixed and floating assets of the Company. The loan matures on December 31, 2025. | **17,233,342** | 18,700,006 |
| Secured loan with Government of Belize, under the GRT/FM-12724-RG grant from Inter-American Development Bank, for retroactive financing for the Sewer Lagoon in Belmopan signed between the Government of Belize and Belize Water Services Limited for BZ $1,478,666.65 (US$739,333.33) for the "establishing the Belize Wastewater Revolving Fund for the improvement of wastewater management in Belize". The loan is due in equal monthly instalments of $82,148.15 commencing in April 2015. The loan matures on September 30, 2016. No Interest is charged on the loan. The loan has been fully drawn down as at March 31, 2014. | **1,478,600** | - |
| Total long term loans | **39,176,727** | 42,544,542 |
| Less current portion | **(5,014,852)** | (4,937,605) |
| Long term portion | **$34,161,875** | $37,606,937 |

The loans are payable as follows:

| | |
|---|---|
| Within one year | **$ 5,014,852** |
| Within two to five years | **17,440,486** |
| Over five years | **16,721,389** |
| | **$39,176,727** |

## 9. SHARE CAPITAL

| | **2014** | 2013 |
|---|---|---|
| **Authorised:** | | |
| 66,666,666 ordinary shares of $1.50 each | **$100,000,000** | $100,000,000 |
| 1 Special Rights Redeemable Preference Share | **1** | 1 |
| | **$100,000,001** | $100,000,001 |
| **Issued and fully paid:** | | |
| 40,000,000 ordinary shares of $1.50 each | **$ 60,000,000** | $ 60,000,000 |
| Special Rights Redeemable Preference Share | **1** | 1 |
| | **$ 60,000,001** | $ 60,000,001 |

| | **2014** | 2013 |
|---|---|---|
| **Ordinary Shares are held as follows:** | | |
| Government of Belize | **82.59%** | 82.59% |
| Social Security Board | **10.00%** | 10.00% |
| Others | **7.41%** | 7.41% |
| | **100.00%** | 100.00% |

The Special Rights Redeemable Preference Share has the following rights:

As to income
The Special Share shall not be entitled to participate in any dividends or other distributions by the Company.

As to redemption
The holder of the Special Share may require the Company to redeem the Special Share at par at any time by serving written notice upon the Company and delivering the relevant share certificate to the Company. Any redemption shall be subject to the provisions of the Statutes and the articles of the Company.

As to further participation
The Special Share shall not entitle the holder thereof to participate in the profits or assets of the Company beyond such rights as are expressly set forth in the Articles of Association no. 4.

As to voting
The holder of the Special Share shall be entitled to receive notice of, and to attend and speak, at any general meeting or any meeting of any class of shareholders of the Company but the Special Share shall carry no right to vote or any other rights at any such meeting.

As to purchase and transfers
The Company shall not purchase (but may redeem as set out above) the Special Share. The Special Share may be transferred only to a Minister of the Government of Belize or any person acting on the written authority of the Government of Belize.

## 9. SHARE CAPITAL (Continued)

As to appointment of Directors

1) The holder of the Special Share shall have the right from time to time:

   (a) to appoint any person who is not an existing director; or
   (b) to nominate any existing director (with the consent of the director concerned) to be a director of the company ("Government Appointed Director") but so that there shall not be more than two Government Appointed Directors at any time. The holder of the Special Share may remove one or both of the same or terminate the nomination and appoint or nominate another or others in their place.

2) At any time during which the Social Security Board is the holder of Ordinary Shares amounting to 10% or more of the issued share capital of the Company the holder of the special share may appoint any Government Appointed Director as a chairman of the board and at any time thereafter may terminate such appointment by like notice in writing.

## 10. CONTRIBUTED CAPITAL

Represents amounts contributed by the Government of Belize, majority shareholder.

## 11. CAPITAL RESERVE

Upon vesting in March 23, 2001, net assets of WASA totalling $75,276,363 were received as consideration for the shares allotted by the Government of Belize totalling $60,000,001 resulting in a capital reserve of $15,276,362. This capital reserve was transferred to the Company upon formation.

## 12. MATERIALS AND OTHER EXTERNAL COSTS

| | **2014** | 2013 |
|---|---|---|
| Chemicals expense | **$ 905,531** | $ 646,648 |
| Electricity costs | **2,631,108** | 2,241,345 |
| Meter reading costs | **108,466** | 86,417 |
| Plant running costs | **177,786** | 176,385 |
| Water purchases | **5,198,160** | 4,774,527 |
| Obsolete inventory expenses | **19,675** | 161,708 |
| | **$9,040,726** | $8,087,030 |

## 13. STAFF COSTS

| | **2014** | 2013 |
|---|---|---|
| Allowances | **$ 473,894** | $ 442,039 |
| Group health insurance | **568,830** | 576,085 |
| Other staff costs and grants | **367,303** | 367,411 |
| Pension | **273,227** | 271,324 |
| Redundancy costs | **73,617** | 84,538 |
| Salaries and wages | **6,374,072** | 6,515,117 |
| Social security expense | **292,882** | 251,246 |
| Training and recruitment | **122,195** | 59,220 |
| | **$8,546,020** | $8,566,980 |

## 14. OTHER OPERATING CHARGES

| | **2014** | Restated 2013 |
|---|---|---|
| Advertisement and marketing | **$ 86,966** | $ 106,938 |
| Bad debt expense | **-** | 344,576 |
| Collection fees | **253,425** | 233,402 |
| Damages and losses | **3,081** | 28,158 |
| Donation | **36,683** | 183,296 |
| Electricity – office | **250,774** | 215,195 |
| Insurance | **309,910** | 309,105 |
| Licenses and taxes | **328,167** | 315,080 |
| Loose tools | **40,573** | 34,026 |
| Meeting costs | **60,269** | 84,488 |
| Office supplies and sundries | **568,461** | 773,878 |
| Other | **5,703** | 50,210 |
| Professional fees | **107,663** | 83,751 |
| Rent | **45,500** | 66,095 |
| Repairs and maintenance | **3,221,524** | 3,579,060 |
| Security | **1,053,587** | 886,075 |
| Telephone | **374,869** | 360,766 |
| Travel | **306,562** | 226,444 |
| | **$7,053,717** | $7,880,543 |

## 15. EARNINGS PER SHARE

Basic earnings per share are calculated by dividing the profit after tax with the weighted average number of ordinary shares outstanding during the period. Diluted earnings per share are calculated by dividing the profit after tax that is attributable to the shareholders by the dilutive potential of the common shares.

| | **2014** | 2013 |
|---|---|---|
| **Basic earnings per share** | | |
| Profit attributable to Owners of the Company | **$ 2,961,129** | $ 2,359,699 |
| Weighted average number of outstanding ordinary shares | **40,000,000** | 40,000,000 |
| **Basic earnings per share** | **$ 0.07** | $ 0.06 |
| **Diluted earnings per share** | | |
| Profit attributable to Owners of the Company | **$ 2,961,129** | $ 2,359,699 |
| Weighted average number of outstanding ordinary shares | **40,000,000** | 40,000,000 |
| **Diluted earnings per share** | **$ 0.07** | $ 0.06 |

## 16. RELATED PARTY TRANSACTIONS

The following related party transactions occurred during the period.

| **Water Sales** | **2013** | | | **2014** |
|---|---|---|---|---|
| | **Beg. Balance** | **Billed** | **Receipts** | **End. Bal** |
| Government of Belize | $ 212,838 | $6,053,118 | $(6,038,004) | **$ 227,952** |

| **Loans** | **2013** | | | **2014** |
|---|---|---|---|---|
| | **Beg. Balance** | **Drawdown** | **Repayments** | **End. Bal** |
| Social Security Board | $18,700,006 | $ - | $(1,466,664) | **$17,233,342** |

During the period, additional transactions with Government of Belize included $3,336,558 (2013 -$3,540,983) being principal and interest payments made to the Caribbean Development Bank for loan #5 and #10. These loan payments were made to the Caribbean Development Bank by the Government of Belize on behalf of the Company during the period April 1, 2013 to March 31, 2014 and earmarked as contributions to capital expenditures. See also note 20.

**Key management personnel**

The following information is presented only in respect of those employees of the Company who would be considered as key management personnel, as defined under IAS 24 (Related Party Disclosures). At March 31, 2014, the number of key management personnel was 18 (2013 - 15).

## 16. RELATED PARTY TRANSACTIONS (Continued)

**Compensations of key management personnel**
The remuneration of key management during the year was as follows:

| | **2014** | 2013 |
|---|---|---|
| Short-term benefits | **$1,665,319** | $1,840,589 |
| Post-employment benefits | **151,990** | 168,351 |
| | **$1,817,309** | $2,008,940 |

**Loans to key management personnel**
As of March 31, 2014 an amount of $18,437 (2013 - $25,019) was receivable from key managerial personnel as staff loans approved to them. Staff loans for medical purposes bear interest of 5% per annum and all other purposes bear interest at 10% per annum.

## 17. TAXATION

A Business Tax of 1.75% is applied on gross measured water revenues. There is no deferred tax resulting from this business tax.

A General Sales Tax of 12.5% is charged on consumer spending that is collected in stages, at the point of importation of the business purchases and on the sales of the businesses good and services when the goods are sold or services are provided in country. The sale of water is classified as a zero rated item and as such no input tax is collected on such sales. Output tax on purchases and importation are reimbursed to the Company regularly after being carried forward after 4 months as prescribed by the GST Act 49 of 2005.

## 18. COMMITMENTS AND CONTINGENCIES

***Commitments:***
Commitments for capital expenditure at March 31, 2014 totaled $4,335,000 (2013 - $1,245,000). Planned capital expenditure is $11,344,000 (2013 - $12,384,562).

***Contingencies:***
The Company has 2 on-going litigation claims, being Claim No. 200 and Claim No. 260 for unlawful termination. The Company is resisting the claims on the basis that the Claimants dismissals were based on a restructuring of the Company. Should the Company be unsuccessful in its defence the likely award against it would be in the region of $36,081.36.

## 19. PENSION PLAN

Belize Water Services Limited operates a Defined Contribution Plan which receives contribution from BWSL (4% of Gross Salary) and its eligible employees (3% of Gross Salary). The Plan is administered by Independent Trustees and the funds are held separately from those of the Company. During the year under review, the Company contributed $273,227 (2013 - $271,324) to the Plan.

## 20. SIGNIFICANT NON-CASH FINANCING ACTIVITIES

During the period, $3,336,558 (2013 - $3,540,983) being principal and interest payments made to the Caribbean Development Bank loan #5 and #10 on behalf of the Company for the period were forgone by Government of Belize. See also note 16.

The Board of Directors approved a dividend distribution of $505,058 or 5% of original share price for the year ended March 31, 2014 (2013 - $505,023). Dividends are payable to shareholders on record as of March 21, 2014 (2013 - March 31, 2013).

## 21. CATEGORIES OF FINANCIAL INSTRUMENTS

| | **2014** | 2013 |
|---|---|---|
| | **Loans and receivables** | |
| Financial assets : | | |
| Cash and cash equivalents | **$4,297,676** | $4,263,200 |
| Trade receivable | **2,223,513** | 1,986,906 |
| Other receivable | **1,038,951** | 927,178 |
| Total financial assets | **$7,560,140** | $7,177,284 |

| | **Other financial liabilities at amortised cost** | |
|---|---|---|
| Financial Liabilities: | **2014** | 2013 |
| Trade payable | **$ 3,653,651** | $ 3,177,733 |
| Other payables and accrued expenses | **1,103,897** | 1,825,852 |
| Long term debt | **39,176,727** | 42,544,542 |
| Total financial liabilities | **$43,934,275** | $47,548,127 |

## 22. FINANCIAL RISK MANAGEMENT

The Company's activities expose the Company to financial market risk, liquidity risk, credit risk and operational risk. The overall risk management of the Company focuses on ensuring continued business. This is done by:

**Market risk** – It is the risk that the value of a financial asset may be reduced because of changes in interest rates, currency exchange rates, stock prices, and other financial variables, as well as the reaction of market participants to political and economic events, whether by latent losses as well as potential profits. Market risk management's objective is to manage and monitor the risk exposures and at the same time to make sure that they are maintained within acceptable parameters optimizing the risk returns.

## 22. FINANCIAL RISK MANAGEMENT (Continued)

### Capital Risk Management

***Capital management objectives, policies and approach***
The Company has established the following capital management objectives, policies and approach to managing the risks that affect its capital position:

- To maintain the required level of stability of the Company thereby providing a degree of security to policyholders.
- To allocate capital efficiently and support the development of business by ensuring that returns on capital employed meet the requirements of its capital providers and of its shareholders.
- To retain financial flexibility by maintaining strong liquidity and access to a range of capital markets.
- To align the profile of assets and liabilities taking account of risks inherent in the business.
- To maintain financial strength to support new business growth and to satisfy the requirements of the policyholders, regulators and stakeholders.
- To maintain healthy capital ratios in order to support its business objectives and maximize shareholders value.

***Approach to capital management***
The Company seeks to optimize the structure and sources of capital to ensure that it consistently maximizes returns to the shareholders and policyholders.

The Company's approach to managing capital involves managing assets, liabilities and risks in a co-ordinated way, assessing shortfalls between reported and required capital levels on a regular basis and taking appropriate actions to influence the capital position of the Company in the light of changes in economic conditions and risk characteristics. An important aspect of the Company's overall capital management process is the setting of target risk adjusted rates of return which are aligned to performance objectives and ensure that the Company is focused on the creation of value for shareholders.

The primary source of capital used by the Company is equity shareholders' funds and borrowings.

The capital requirements are routinely forecast on a periodic basis, and assessed against both the forecast available capital and the expected internal rate of return including risk and sensitivity analyses. The process is ultimately subject to approval by the Board.

The Company has had no significant changes in its policies and processes to its capital structure during the past year from previous years.

## 22. FINANCIAL RISK MANAGEMENT (Continued)

The Company has enacted appropriate policies to assist expanding its operations to future development within the urban and rural areas in the country of Belize. Developers are required to contribute to set up of infrastructural expansion which eases the financial burden of expansion on the Company's resources. The Company operates under a monopoly license until March 19, 2026 which provides appropriate safeguards against political and economic events.

**Liquidity risk** – The liquidity risk is defined as the risk that the Company may encounter difficulties in obtaining funds to meet its commitments and obligations on time. Ultimate responsibility for liquidity risk management rests with the Board of Directors, who keeps watch on availability of liquid funds.

**March 31, 2014:**

| **Financial assets** | **Within 3 months** | **3 months to 1 year** | **1-5 Years** |
|---|---|---|---|
| | $ | $ | $ |
| Cash and cash equivalents | 4,297,676 | - | - |
| Trade receivable | 2,223,513 | - | - |
| Other receivable | 1,038,951 | - | - |
| | 7,560,140 | - | - |
| **Financial liabilities** | | | |
| Trade payable | 3,653,651 | - | - |
| Other payables and accrued expenses | 1,103,897 | - | - |
| Long term debt | - | 5,014,852 | 22,456,944 |
| | 4,757,548 | 5,014,852 | 22,456,944 |

**Credit risk** – The Company's exposure to credit risk is the risk that a financial loss may take place if a customer fails to meet their obligation arising mainly from credit sales. As at March 31, 2014, the Company's trade receivables are concentrated within the country of Belize. The Government of Belize continues to be the largest customer with an outstanding balance as of March 31, 2014 of $227,116 (2013 - $212,838). The following table outlines the Company's credit risk geographically over the country of Belize:

## 22. FINANCIAL RISK MANAGEMENT (Continued)

| | **2014** | 2013 |
|---|---|---|
| Corozal District | **$ 72,254** | $ 77,711 |
| Orange Walk District | **114,642** | 123,248 |
| Belize District | **1,226,914** | 1,238,032 |
| Cayo District | **409,290** | 397,288 |
| Stann Creek District | **50,575** | 64,513 |
| Toledo District | **46,806** | 50,252 |
| Ambergris Caye and Caye Caulker | **654,335** | 549,935 |
| | **$2,574,816** | $2,500,979 |

**Operation risk** – It is the risk of the potential loss, directly or indirectly, related to the processes of the Company, human resources, technology, infrastructure and other external factors that are not related to credit, market or liquidity risks, such as those arising from legal and regulatory requirements and the application of generally accepted corporate standards.

The objective of the Company is to manage operational risk in order to avoid financial losses and damages to the Company's reputation.

The structure to manage operational risk has been designed to segregate duties among owners, executors, control areas and areas in charge of compliance with policies and procedures. In order to establish such methodology, the Company has assigned resources to strengthen internal control and organizational structure allowing independence among business area, risk control and record keeping. It includes a proper operation segregation of duties in the recording, reconciliation and authorization which is documented through policies, processes, and procedures that include control and security standards.

The Internal Audit Department through its activities makes sure of the compliance with procedures and controls and monitors the severity of the related risks.

The Board of Directors and the Audit Committee jointly have assumed an active role in the identification, measurement, control and monitoring of operational risks and is responsible for understanding and managing these risks.

## 23. RESTATEMENT/RECLASSIFICATION

The following account balances have been restated/reclassified:

1. Caribbean Development Bank (CDB) loan #55 and Inter-American Development Bank (IDB), Loan Contract 2486/OB-CL were incorrectly reflected as long-term debt in the 2012 and 2013 financial statements. Under the loan agreements, these facilities are to be serviced by the Government of Belize and therefore do not represent liabilities of the Company. Cash and cash equivalents have also been restated to reverse funds incorrectly recognized in the Company's current account balance in 2013. These funds were deposited to and maintained in the project bank account operated separately from the Company.

| | **2013** | 2012 |
|---|---|---|
| **Effect on long term debt:** | | |
| Long term debt as previously stated as at March 31 | **$ 38,011,505** | $ 42,970,219 |
| Reversal of CDB loan #55 | **(328,701)** | (141,836) |
| Reversal of IDB 2486/OB-CL | **(75,867)** | - |
| Long term debt restated as at March 31 | **37,606,937** | $ 42,828,383 |

| | **2013** | 2012 |
|---|---|---|
| **Effect on accounts receivable:** | | |
| Accounts receivable as previously stated as at March 31 | **$ 2,957,157** | $ - |
| Reversal of IDB 2486/OB-CL | **(43,073)** | - |
| Accounts Receivable as restated as at March 31 | **$ 2,914,084** | $ - |

| | **2013** | 2012 |
|---|---|---|
| **Effect on cash and cash equivalents** | | |
| Cash and bank as previously stated as at March 31 | **$ 4,295,994** | $ - |
| Reversal of IDB 2486/OB-CL | **(32,794)** | - |
| Accounts Receivable as restated as at March 31 | **$ 4,263,200** | $ - |

2. Funds held in the accounts of the *Detailed Design of Wastewater Collection and Treatment System* project (Inter-American Development Bank Grant No. ATONOC-12456-BL) were recognized as deferred income in the 2013 financial statements. This liability has been reversed since the funds are being maintained in and utilized from the related Project accounts operated separately from the Company.

3. Principal and interest payments of Caribbean Development Bank (CDB) loan #5 and #10 made on behalf of Belize Water Services Limited but for which repayment has been foregone by Government of Belize were previously recorded as contributions offsetting fixed assets; however, since these funds have not yet been utilized in the acquisition of capital assets the company has formally adopted the deferral approach of recognizing these Government assistance consequently the grants have been reclassified as deferred income.

## 23. RESTATEMENT/RECLASSIFICATION (Continued)

| | | **2013** | | 2012 |
|---|---|---|---|---|
| **Effect on deferred income:** | | | | |
| Deferred income as previously stated as at March 31 | **$** | **302,000** | $ | - |
| Reversal of Non-reimbursable Grant No. ATONOC-12456-BL | | **(302,000)** | | - |
| Reclassification of GOB Grants (CDB loan #5 and #10) | | **6,723,066** | | 4,194,793 |
| Deferred income as restated as at March 31 | **$** | **6,723,066** | $ | 4,194,793 |

| | **2013** | 2012 |
|---|---|---|
| **Effect on fixed assets:** | | |
| Fixed assets as previously stated as at March 31 | **$139,671,169** | $139,729,816 |
| Reversal of CDB loan #55 | **(328,701)** | (141,836) |
| Reversal of IDB 2486/OB-CL | **(302,000)** | - |
| Reclassification of GOB Grants (CDB loan #5 and #10) | **6,723,066** | 4,194,793 |
| Fixed assets restated as at March 31 | **$145,763,534** | $143,782,773 |

***  *  *  *  *  ***

# Appendix III – March 2014 Customer Survey Report

# JOINT UTILITY CUSTOMER SATISFACTION SURVEY

# BELIZE WATER SERVICES LIMITED, BELIZE ELECTRICITY LIMITED, AND BELIZE TELEMEDIA LIMITED

**Submitted by: Danalyn Myvett**

**BELIZE CENTRE FOR TRAINING & DEVELOPMENT**

***Experience You Can Trust***


**June 27, 2014**

# Preface

This document is a customer satisfaction survey report for Belize Water Services Limited, Belize Electricity Limited, and Belize Telemedia Limited. The data for this study were collected by BELIZE CENTRE FOR TRAINING & DEVELOPMENT (BCTD). The results of the survey reflect customers' perception of the services provided by the three utilities.

# Table of Content

# Executive Summary

This report discusses the results of a ***Joint Utilities' Customer Satisfaction Survey*** conducted in Belize. In 2013, Belize Water Services Limited, Belize Electricity Limited, and Belize Telemedia Limited jointly embarked on a customer satisfaction survey. These three utilities are publicly controlled entities that were renationalized after a period of being majority owned by private interests. Water services are provided by Belize Water Services Limited (BWS), electricity services by Belize Electricity Limited (BEL), while Belize Telemedia Limited (BTL) is the dominant provider of telecommunications' services. The objective of the survey was to achieve an in-depth analysis of customers' perception of the technical and commercial dimensions of service provided by the three utility companies.

This explanatory study applied an instrument that was designed to capture quantitative data with specific instances of qualitative data gathered for enhancing understanding of particular responses to identified questions. Responses from 1,737 respondents from the six districts of Belize were utilized to assess customers' perceptions of the three utilities' service delivery. Respondents were a composite of residential and business customers in accordance with the customer classification schemes utilized by the utilities. The survey was administered over the period March 17, to April 25, 2014. Experienced enumerators drawn from a pool provided by Statistical Institute of Belize were employed to collect the data and were scrutinized by two supervisors charged with direct responsibilities for monitoring their field work. Engaged personnel all received a one-day training lead by the Consultant that focused on the technical specifics of the questionnaire. Two personnel were trained in the Statistical Package for Social Sciences (SPSS) software and were responsible for digitizing paper responses.

Analysis of the data revealed that 60% of the respondents were female while 51% of those respondents were below the age of 40. Primary or secondary education was the highest level attained by approximately 78% of the residential respondents whereas 15% attained university education. The income reported by 92% of those respondents was below $2,000.00 per month

with 56% of that group earning below $1,000.00 per month. Only 6% of the respondents earned above $5,000.00 per month.

The survey revealed on-line banking to be a service that attracted minimal take-up (15%) and suggests that “Ecare” is not yet perceived by the majority of customers as a service of immediate need. This outlook was reinforced by the low interest shown by respondents for customer care services that were proposed as possible future offerings to be provided over the internet. However, 43% of residential customers expressed SMS as the preferred channel for communicating with them while businesses (57%) favored emails. This change from traditional forms of communication points to an emerging need for a more personal and individualized approach to customer care and is perhaps reflective of lifestyle changes where customers are more mobile and in need of increasingly responsive service delivery. In this regard, the significant proportion (75%) of respondents who indicated that they would like to have cashiering service that collects all utility payments underscores customers’ new expectations.

It was also found that 89% of the survey respondents had a BWS service connection with 31% of them possessing either a tank, a vat, or a drum that is used to contain their secondary source of water. The reliability of water supply was found by 84% of BWS’s respondents as good or excellent. Eighty-three percent (83%) of that group indicated that they infrequently or never experienced interruption of water at their premises while 73% of them indicated that duration of water interruption lasted 4 hours or less. BWS’s respondents (85%) stipulated that the pressure of their water supply was satisfactory or very satisfactory so they reported minimal dissatisfaction (3%) with pressure over the past 12 months. The overall quality of water delivered by BWS was rated by 60% of the respondents as good to excellent, which is an indication that there is room for improvement in this area particularly with regards to taste.

On the commercial side of service, BWS’s customer services obtained high ratings ranging from 85% to 89% for the various items within that attribute. For the dimension measuring image, 83% of respondents felt BWS was a respected company while 71% of the respondents viewed BWS as being active in the community. A very high proportion of BWS’s respondents rated cashiering services for courtesy (91%), knowledge (90%), and helpfulness (90%) as good to excellent. A

lower percentage (60%) of respondents felt that the company provided an adequate number of payment points. In-field personnel courtesy was rated good or excellent by 87% of respondents who were visited by them while 85% had a positive view of their workmanship. Respondents' outlook about BWS credit system was low; however, the billing attribute was rated very high for timely delivery (92%), and bills that were easy to understand (96%).

In measuring the services provided by BEL it was discovered in this survey that the company provides electricity to 98% of the respondents. For the service attribute involving reliability, BEL's service was rated high by 84% of the respondents. The high performance of the technical aspects of BEL service was further highlighted when 89% of BEL's respondents indicated they infrequently or never experienced outages. Furthermore, 93% of BEL's respondents stipulated that they rarely or never experienced voltage fluctuation.

The data analysis revealed that respondents felt BEL customer service is very good. Very high satisfaction were expressed by BEL's respondents regarding the customer service representative knowledge (91%), the level of courtesy (90%), the helpfulness of the customer service representatives (90%), the quality of information provided (90%), and the time it took to have complaints resolved (88%). All areas within the in-field service dimension were rated high. Courtesy of the field staff was rated by 87% of the BEL respondents as good to excellent while 83% of them believed the in-field staff were resourceful in carrying out their tasks. Respondents reported a positive experience of BEL's cashiering service with 88% of them having assessing the helpfulness of the cashiers to be good or excellent. For that service attribute, 73 % of the respondents felt BEL provides an adequate number of payment points. A lower proportion (69%) of respondents expressed they were satisfied that their complaint was solved. A very high percentage (95%) of customers believed BEL delivered its bills on time and that their bills were easy to understand (97%). It was felt that BEL is a respected company that is trustworthy (91%) and conducts itself with high standards (91%). However, a lower proportion (79%) of respondents felt that BEL is involved in the community.

The majority of respondents indicated that they used BTL's DigiCell for national calls (79%), international calls (70%), and SMS (75%). Thirty-three (33%) of the respondents indicated that

they utilize DigiCell service to access internet via their cellular phones. Thirty-one percent (31%) of BTL's respondents acknowledged that they experienced drop calls. The overall quality of mobile data service was rated high by 89% of BTL's respondents; however, only 16% of them indicated that they have DigiCell 4G mobile internet. Customer Support was given high ratings for all aspects. Fixed-line service received the highest (91%). Internet service likewise was rated high in the various dimensions with internet service installation obtaining the highest rating by 88% of BTL's customers.

BTL received very high ratings for its in-field service. Respondents obtained a rating of 95% for courtesy, 94% for workmanship, 92% for crew resourcefulness, and 89% for responding to complaints. BTL's Customer Service was likewise perceived by respondents to be favorable, as between 87% to 92% of them indicated the items within that service attribute to be good or excellent. For the Cashiering dimension, BTL received an average review from respondents for the time it took to pay their bill (73%) and the number of payment points available to customers (76%); regarding resolution of complaints, 83% of BTL respondents expressed they were fairly or very satisfied that their billing complaints were solved. On the matter if BTL's image, it was found that 88% of their respondents felt the company is respected in the community whilst 84% believed that BTL actively worked in the community.

Based on the findings of this study, several potential solutions were proposed to support improvement of the services provided by the utilities. Of greatest significance is the recommendation for the results of this survey to be utilized as a baseline to establish new targets. It also suggested for the three utilities to explore other means through which to collaborate. One immediate area indicated by respondents called for the establishment of joint utility collection points where bills can be paid. Finally, changing customer needs necessitate responsive and flexible utility service providers that can blend customers' needs with identified value propositions.

# Introduction

Belize has a population of 303,422 with 79,272 households (Statistical Institute of Belize, 2010). Belize district is the largest populated center with 87, 23 or 29% of the country's residents with the remaining balance distributed across the other five districts (Statistical Institute of Belize, 2010). The country's residents are supplied water by Belize Water Services Limited (BWS), which is mandated to provide universal access to potable water supply in defined and licensed geographic regions of the country where it is the sole provider. Electricity is partially generated but wholly transmitted and distributed countrywide by Belize Electricity Limited (BEL), while telecommunications solutions are competitively offered by Belize Telemedia Limited (BTL). The three utilities operate in a regulated environment with oversight powers exercised by the Public Utilities Commission charged with the responsibility to set rates and establish quality of service standard. The three utilities jointly agreed to secure the services of a consultant to conduct a customer satisfaction survey.

## Company Background

## Belize Water Services

Belize Water Services Limited is Belize's sole licensed commercial provider of potable water and wastewater services. BWS currently provides access to safe potable water to 99% of the country's population in the urban communities and small percentage of the rural communities. Sewer service is currently provided to approximately 18% of the country's population in Belize City, Belmopan, and San Pedro service areas.

BWS has approximately 734.36 miles of water mains and 12 water systems countrywide; seven of these systems are well sourced, three are river sourced, and two are Return Osmosis plants. BWS's active customer base is comprised of 48,500 customers countrywide where 90% or 43,841 are residential customers and the remaining 4,659 are business customers. BWS continues to seek opportunities for elevating the level of

service that is provided to customers in their quest to be the leading provider of water and wastewater services in the region by 2018.

BWS mission is "to improve the lives of consumers by delivering quality and cost-effective water and wastewater services in an environmentally responsible manner while promoting employee excellence, fulfilling [their] social responsibility and providing and fair return to [their] shareholder". In an effort to ensure that the company is fulfilling its mission, they conducted a number of customer satisfaction surveys. The means of gathering the information were by face to face interviews in their offices countrywide by employees, via telephone, and contracted personnel to conduct field surveys. The surveys included the customer service offered by our representative in the office, cashiering, electronic billing, field services, continuity of service, Read Your Own Meter Program, and the overall performance of the company. Analysis of the data gathered has supported evaluation of the company's performance and served as the basis for development and expansion of their service delivery.

## **Belize Electricity Limited**.

BEL is the primary distributor of electricity in Belize. Serving a customer base of approximately 79,748 accounts, the utility meets its demand from multiple sources of energy including biomass, hydroelectricity, imported energy and diesel fired generation. All major load centers are connected to the country's national electricity system except Caye Caulker.

Since 1998, BEL national electricity grid has been interconnected with Mexican national electricity grid, allowing BEL to optimize its power options. BEL has an installed generating capacity of 28.3 megawatt, and owns 1,806.7 miles of transmission and distribution lines. The Government of Belize and Social Security Board hold a 70.2 % and 26.9% interest in BEL respectively. The remaining shares are owed by just over 1,500 small shareholders.

Continuously improving service delivery to their customers is of significant importance to BEL‘s operations, with customer feedback being an integral component of this effort. Over the past years, BEL has conducted several customer surveys utilizing face-to-face interviews at customers’ premises as the medium for gathering data. Customers countrywide were able to provide feedback on areas such as office service, telephone service, field service, cashier service, and Eservice. Information gathered from those surveys provided for the evaluation of current practices and company performance as well as strategic planning and benchmarking with the goal of improving service to all customers

## Belize Telemedia Limited.

BTL, formerly Belize Telecommunication Limited, is the dominant telecommunications provider in Belize. BTL’s services are multifaceted but its core offerings are Mobile, Wireline, and Internet Data that are classified into a wide range of products, services, and value added features including fixed line telephone service, fixed wireless, national and international calling services, PrePaid services, GSM mobile cellular & GPRS/EDGE, international voice and data roaming, high-speed Internet service, high speed data service, and national and international data networks. Currently, the Mobile customer base is 170,000 with a penetration rate of 52%; the penetration rate for Wireline service is 8% with approximately 25,000 subscribers, and the Internet Data service penetration rate is 3% with a base of 11,000 customers.

BTL serves various market segments and demographics characterized by their own distinctive needs, wants, and expectations. BTL recognizes the importance of acquiring and retaining customers, and, therefore, embraces the concept of “relationship marketing”. As such, customer feedback is vital for enhancing service delivery so annual customer satisfaction surveys have been conducted using a sample from each of the three major service lines. Previous surveys focused on ascertaining customer’s perceptions on customer service, technical expertise, quality, price, advertising, and marketing. Information derived from the surveys allows BTL to evaluate current performance and to determine the path forward for network expansion and services. With broadband and

wireless technologies transforming the industry, BTL is expanding its network into sparsely developed rural areas, and its intent is to continually satisfy the needs of its customers whilst ensuring that Belize remains at the forefront of the telecommunications revolution.

This document discusses the results of a national survey aimed at assessing business and residential customers' satisfaction with the services provided by BWS, BEL, and BTL. The following section discusses the design of the survey research. First, the practical issues, including sample design and field procedures are presented. The paper then discusses, in five separate sections, the results arising from the survey, and it concludes with the principal findings as informed by the study. Appendix A shows a schedule of field activities, Appendix B is the questionnaire used to conduct this survey, Appendix C is a summary of the survey ratings, Appendix D contains the results derived from the qualitative questions used in this survey, and Appendix E provides a list of tables reflecting the responses for the questions utilized in the survey.

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# Methodology

## Sampling Methodology

The 2012 data bases of active customers totaling (323,248) from BWS, BEL, and BTL were used as the joint sample frame from which a pool of one percent (3,232) of customers was drawn and provided to the Consultant to guide selection of the survey sample. Assuming the utilities' information regarding their level of service is accurate, the Consultant deemed a representative sample by utility to be beneficial for the study. The costs and time savings associated with choosing that sample design justified its use.

A two-stage stratification scheme was utilized to select the actual survey sample. For the first stage, the Consultant utilized the stratum by geographic region represented in the pool to determine the sample size by districts. This is appropriate for this study given a presupposed variation in water, electricity, and telecommunication service by geographic region. The second stratum is by type of customer, which for this study were business and residential in accordance with the utilities' customer classification scheme. As such, residential respondents were polled as households.

The survey addressed 1,800 respondents. After invalidly filled questionnaires (based on items non-responses) had been filtered out, 1,737 responses were analyzed with 220 representing business customers and 1,517 representing residential customers and translates into a household sample fraction of 0.2%. As can be seen at Table 1, the sample sizes were larger for the Belize and the Cayo districts due to the higher customer count in those areas. Toledo district had the smallest number of respondents in the survey.

Table 1: Enumeration District

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Belize District | 748 | 43.1% | 43.1% | 43.1% |
| | Cayo District | 342 | 19.7% | 19.7% | 62.8% |
| | Corozal District | 202 | 11.6% | 11.6% | 74.4% |
| | Orange Walk District | 200 | 11.5% | 11.5% | 85.9% |
| | Stann Creek District | 185 | 10.7% | 10.7% | 96.5% |
| | Toledo District | 60 | 3.5% | 3.5% | 100.0% |
| | Total | 1737 | | | |

The survey was administered over the period March 17, 2014 to April 30, 2014. It was implemented by 25 enumerators hired from the pool of enumerators utilized by the Statistical Institute of Belize. The enumerators, while experienced in general survey techniques, required training in the technical aspects of this survey, and so a one-day training was held in Belize City on March 11, 2014. The enumerators were drawn from four of the six districts.

## Questionnaire Design and Implementation

There were five sections in the questionnaire:

- Demographics (Sample Characteristics)
- General
- Water Service Quality
- Electricity Service Quality
- Telecommunications Quality

The last three sections were established to meet the objective stated above concerning the utilities' services while the second section garnered respondents' outlook regarding their potential needs. Each of the utility section measured the technical and the commercial dimensions of service thereby reporting the assessed attributes within two major classes. The technical section was composed of items addressing the service functions while the commercial section dealt with those service attributes surrounding customer relationship and the company image. Selection of the attributes was based upon the utilities' expressed priorities. All sector specific sections included a few qualitative questions as a

follow-up to obtain deeper understanding of the respondents' feedback to particular questions. The questionnaire was designed in consultation with the Joint Utilities' Committee with the aim of maximizing relevance (see Appendix A). Because of the scope of this joint study, the utility specific sections were confined to service dimensions prioritized by each company. BTL opted to provide the telecommunications' questions utilized for this study.

The instrument was tested nationally in a pilot scale survey. The piloted survey used 50 questionnaires to test for possible deficiencies in the instrument. It was conducted by the two supervisors hired for the full survey. That exercise resulted in amendments to the instrument. In the telecommunication section, one question was removed from the questionnaire as many respondents in the pilot test experienced difficulty in understanding it while another was relocated to a point where it served as a follow-up to capture more detailed information from participants about the overall level of service provided by BTL.

The country was divided into six regions according to the established geographic districting and each region was supervised by one of two supervisors both of whom received training in the specifics of the questionnaire. Telephone and personal interviews were the techniques employed for collecting the data via the questionnaire. Two data entry personnel were trained in the Statistical Package for Social Sciences (SPSS) software used to digitize the raw data.

## Limitations of the Study

In attempting to measure current levels of service delivery, some general understanding of the existent targets is required for the attributes being assessed; however, in this instance, those did not fall within the ambit of this consultancy. This report, therefore, does not attempt to make a comparison between the results from this survey and the targets (if any) that were previously established for the service attributes that were measured. Additionally, time and budgetary allocation confined the sample size that was utilized for the survey. Therefore, the study pursued a simple random sample

representative of the combined customer pool provided by the utilities in accordance with the enumeration districts.

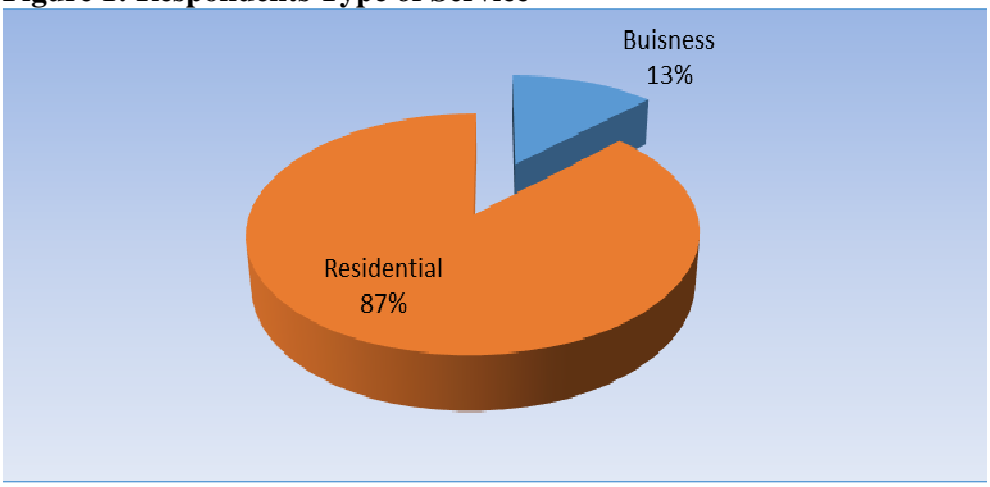
# SURVEY RESULTS

## Demographics

## Type of Service

The three utilities classify their customer base within two major categories so the survey sought feedback from their business and residential customers. Figure 1 shows that 87% of the respondents were residential customers while the business class represented 13% of the survey respondents.

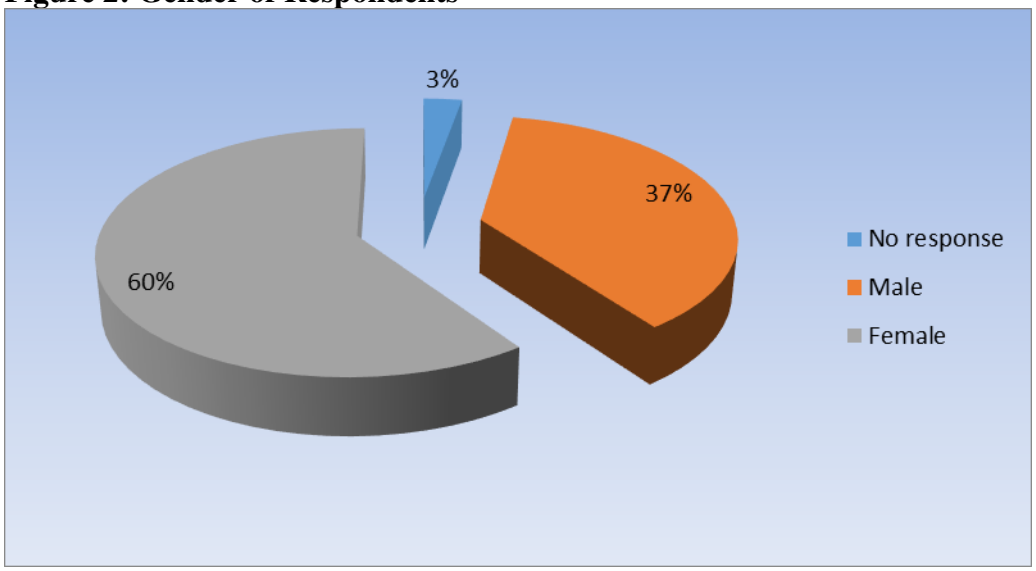
**Figure 1: Respondents Type of Service**




## Gender

The distribution of males and females in the group of respondents is shown in Figure 2. The gender of respondents was skewed towards female with over half (60%) of the respondents being female. This was because most of the fieldwork was carried out during the day, therefore, enumerators contacted households (residential customers) when male residents were at work. Nevertheless, questions regarding service level may have been more accurately answered as respondents who were home during normal working hours most likely experienced utility service levels more fully.

**Figure 2: Gender of Respondents**



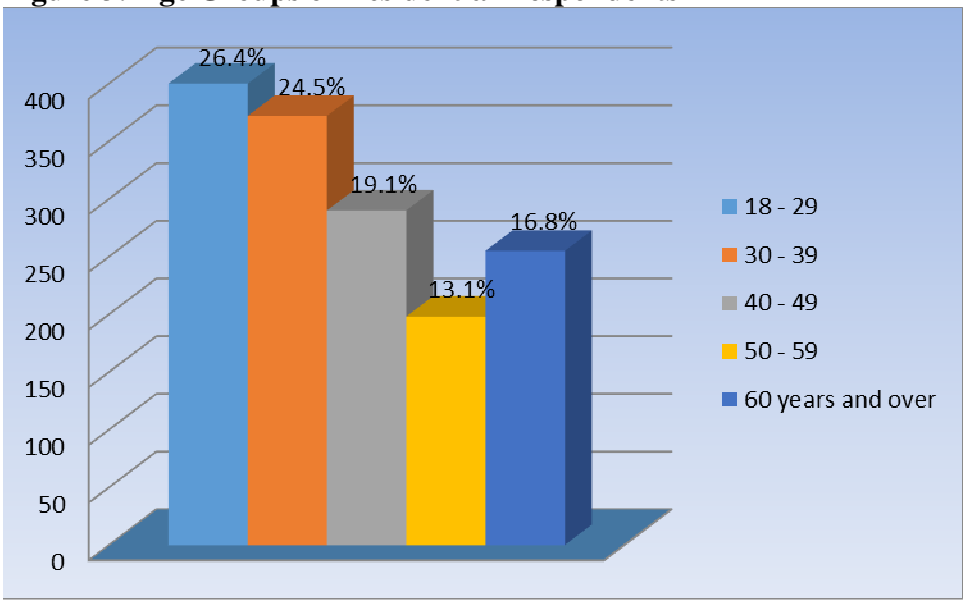

## Business.

***Number of employees***. Fifty-nine percent (59%) of the business respondents reported they have an employee count that ranged between 1 to 5 employees. Those businesses with employees of 25 and above made up 8% of the business respondents.

## Residential

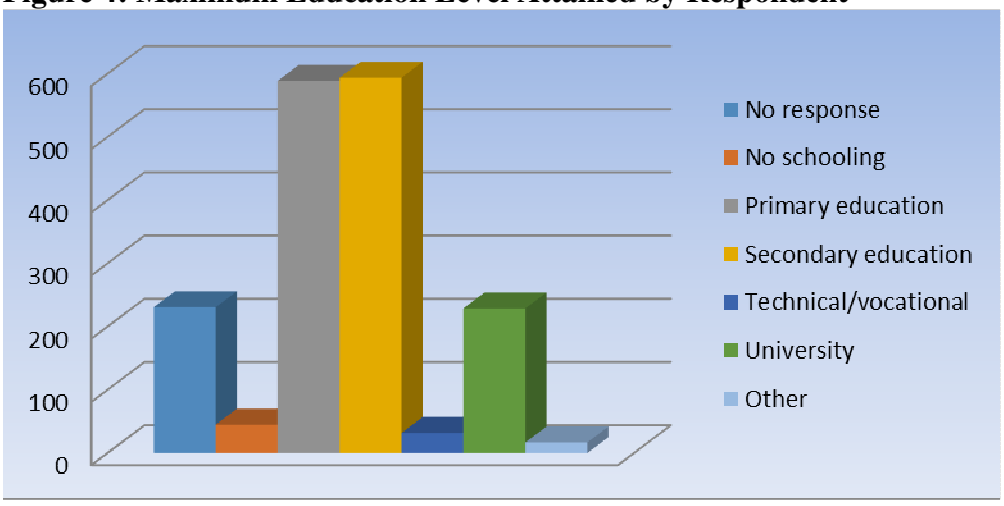
***Age Group of Residential Respondents.*** Figure 3 shows the age groups of the residential respondents that participated in the survey. As enumerators were told to ensure that respondents were adults due to the legal age for contracting, all respondents were above the age of 18. Fifty-one percent (51%) of the residential respondents were below the age of 40 while 49% were 40 years of age and above. Respondents below 30 years of age represented 26% of the residential class and were the largest single age group. The difference between the number of young residential respondents (below 40 years) and the number of more mature respondent (40 years and above) in the sample was 1% and therefore not significant.

**Figure 3: Age Groups of Residential Respondents**



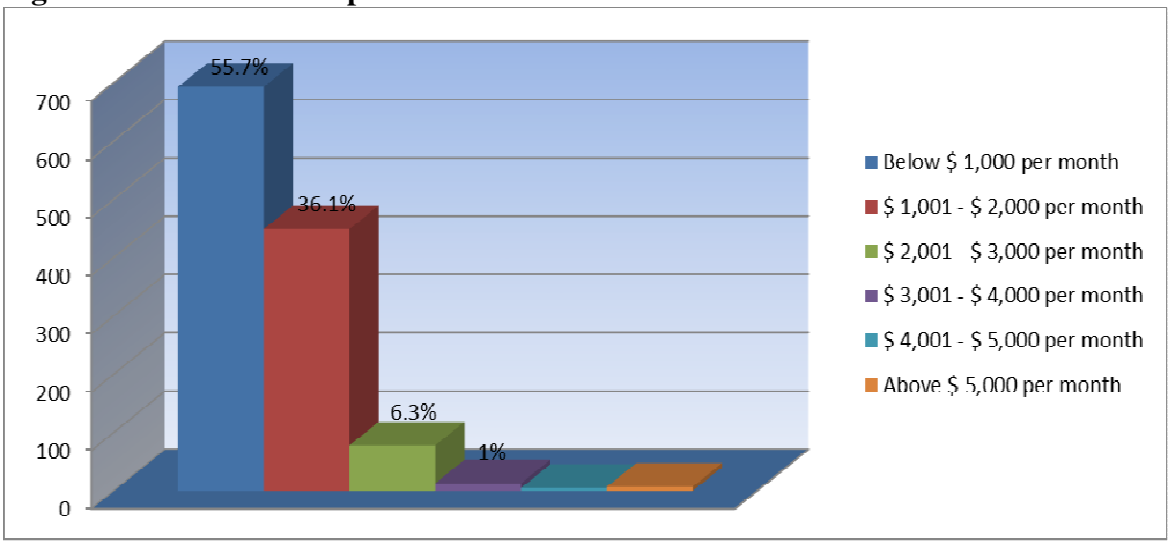

***Education.*** The education levels of the residential respondents in the sample are represented in Figure 3. As can be noted at Figure 4, the majority (78%) of residential respondents in this study had primary or secondary education as their highest level. University graduates made up 15% of the residential respondents.

**Figure 4: Maximum Education Level Attained by Respondent**



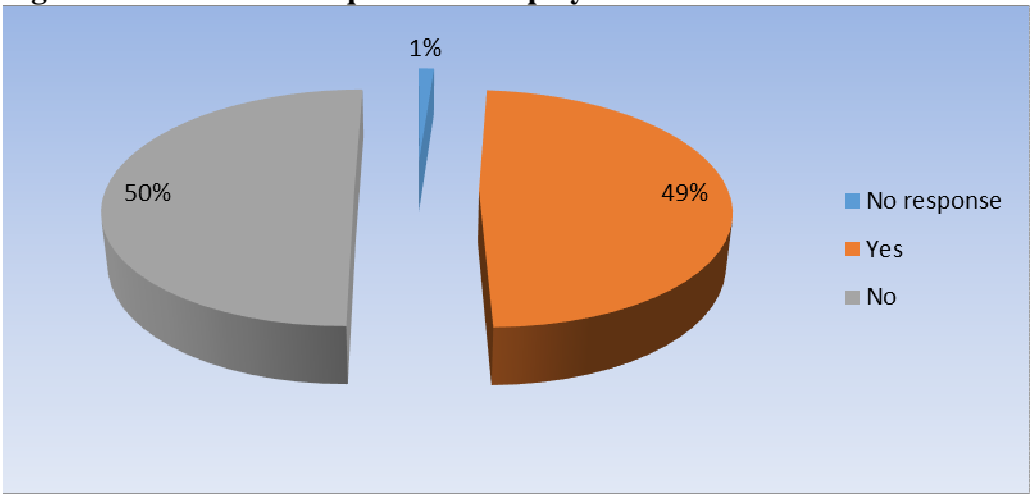
***Income.*** Figure 5 shows a profile of income groups for the residential respondents of this survey. The high proportion of non-reported values, 18%, was anticipated with this type of question given the cultural sensitivity surrounding it. However, 56% of the residential respondents who reported their income declared it to be below $1,000.00 per month. This is consistent with Belize's mean average income reported in 2010 (Statistical Institute of Belize, 2010). Thirty six percent (36%) of those who reported their income were from the tier who earned $1,001.00 to $2,000.00 per month. Only 6% of the residential respondents who reported their income earned above $5,000.00 per month. It is likely that the income measured in this survey is representative of formal earnings and neglects any self-employment in the informal sector, regular transfers, and part time or windfall revenues.

**Figure 5: Residential Respondents' Income Level**




***Employment Status.*** As shown at Figure 6, 50% of the residential respondents in this survey reported they were unemployed. Retirees would be a part of this group as 17% of the residential respondents belonged to the 60 years of age and above group.

**Figure 6: Residential Respondents Employment Status**




## General Section

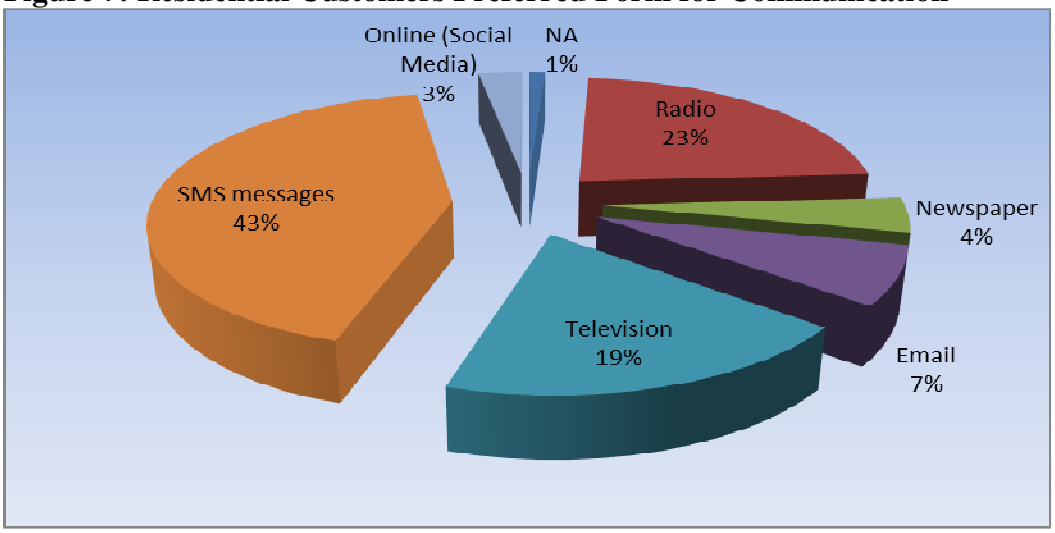
The respondents in this survey were asked to rate a few questions that were generic in nature and common to all three utilities regarding use of existing or future services. Another area of interest investigated in this survey was the use of technology. It is a driving force in the modernization of service delivery so this study also attempted to discern the level of customer willingness towards digital migration for customer care services.

### Preferred Communication Medium.

Figure 7 depicts respondents preferred form for communicating with them. The residential respondents (43%) expressed Short Message Service (SMS) as their primary communication channel followed by radio (23%) with television placing third (19%). On-the-other hand, business respondents (57%) indicated email as their preferred communication method followed by SMS (19%) with Television (7%) placing third (see Appendix E). The majority (58%) of residential customers who preferred SMS were below the age of 40. Preference for traditional communication mediums (radio, television, and newspaper) was indicated by 43% of the respondents. However, the trend

towards more personal and individualize customer service dominated as together residential and business respondents (44%) expressed SMS and email as their preferred modes of communication with the utilities.

**Figure 7: Residential Customers Preferred Form for Communication**




## Combined Cashiering and Late Free

Customers are now more mobile and transient which increases the need for more responsive and flexible service delivery. As such this survey sought to measure respondents' perspectives about joint cashiering and a late fee to avoid disconnection. Seventy-five percent of the respondents expressed a desire for cashiering service that can collect all utilities' payments at one point. Similarly, 75% of the respondents indicated a willingness to pay a late fee for a facility that would allow them to avoid disconnection of service. In particular, 70% of the business respondents expressed their willingness to pay to avoid disconnection. It is expected that income would be related to the willingness to pay for any new or upward changes in utility rates or charges. Yet, 75% of the residential respondents who specified they would be willing to pay to avoid disconnection were unemployed.

## Preferred Form for Receiving Bills

Although electronic billing is a service that is provided by the utilities, customers who sign up for the service continue to receive a monthly statement in the mail. This survey

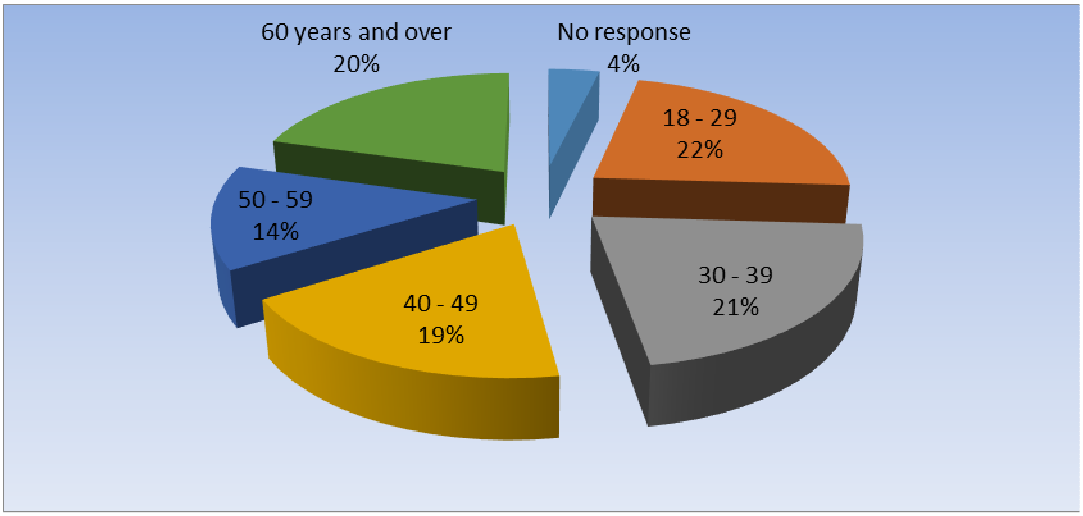
sought to obtain customers' outlook regarding which medium they favor. Eighty-eight percent (88%) of the respondents specified a preference for receiving their bills in the traditional print form.

## Use of Internet for Customer Care Service

The survey attempted to assess customers' interest in using the internet as a means through which customer service can be delivered. Within a range from 53% to 57% residential customers shared that they were unlikely or very unlikely to use the internet to seek customer care services using the internet. Business customers, on the other hand, expressed much greater interest. Within a range from 70% to 77% they indicated they were likely to very likely use the internet for customer care services. Getting general information on service interruptions is the service of greatest interest (77%) for Business customers, while paying bills using a mobile device was the service of least (70%) interest to them. Residential customers expressed the highest interest (29%) in using the internet to access information about their account and the lowest interest (53%) in getting general information on service interruptions.

Seventy-four percent (74%) of the residential respondents who stated their reservation about using the internet to access customer care services were 30 years of age or older as shown at Figure 8. While it may imply that a more mature customer may not be quick to move with technology, the maturity of the respondents is perhaps more a reflection of the age profile of persons who are account holders, and, so, the matter of whether age is a significant factor that influence take up of technology driven services cannot be deduced. It is highly plausible that reservation for using the internet to conduct customer care services is more influenced by economic factors rather than age as respondents were asked about their use of on-line banking and 85% gave a negative response. Thus, this high level may be persuaded by other extenuating factors not involving technology or age. For instance, customers might not be active participants in the financial sector due to economic reasons as 40% of the respondents reported their income level to be below $1,000.00 per month or on-line services may be perceived as too sophisticated as the majority of respondents had a level of education that was high school or less.

**Figure 8: Age Group of Residential Customers Unlikely or Very Unlikely to Use Internet for Customer Care Services**




# Water Service

## Technical Quality of Service

***Water Connection.*** As can be seen in Figure 9, a total of 89% of the respondents stated that they had a BWS service connection. Thirty percent (30%) of those respondents relied upon a secondary source which may be invoked when they experience a BWS disruption of service or it might be put to use on a seasonal basis during the rainy season. Users with piped water as a primary source who applied a secondary source used rainfall (23%), dug well (2.3%) and pond (1.3%) for this need. Rainwater collection serves as a primary or secondary water supply for 25% of the respondents sampled. Less than 1% of the surveyed respondents rely upon their neighbors for water. Figure 10 shows BWS's mains not in the area (66%) as the foremost reason cited by those who did not have piped water.

**Figure 9: BWS Service Connection**

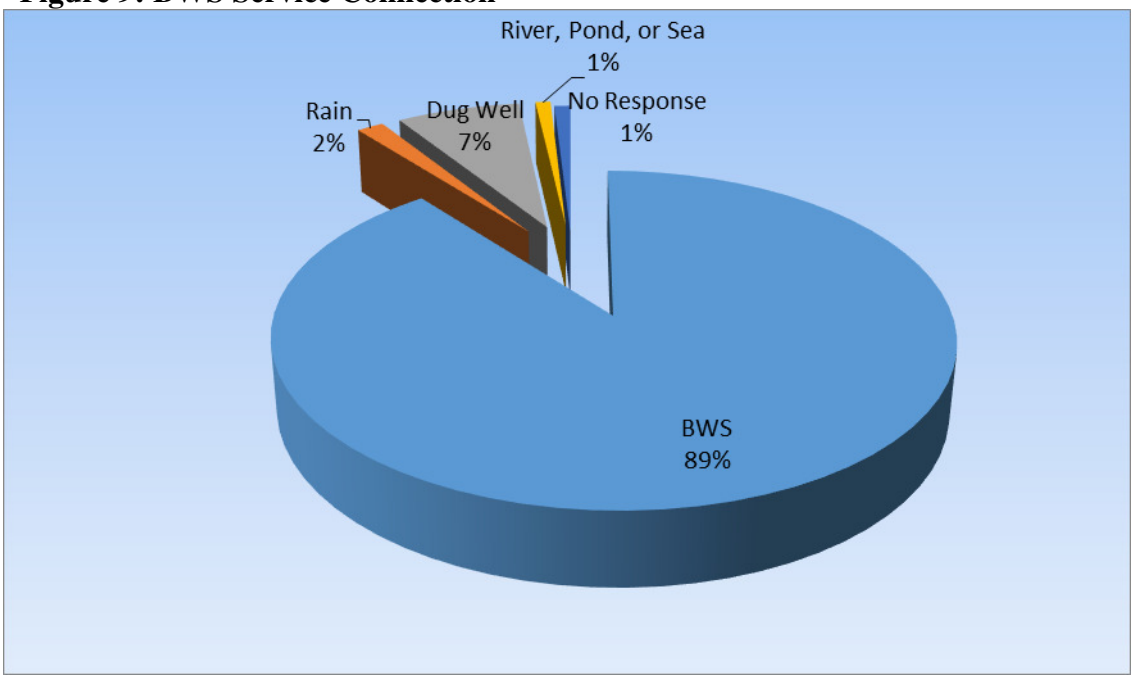
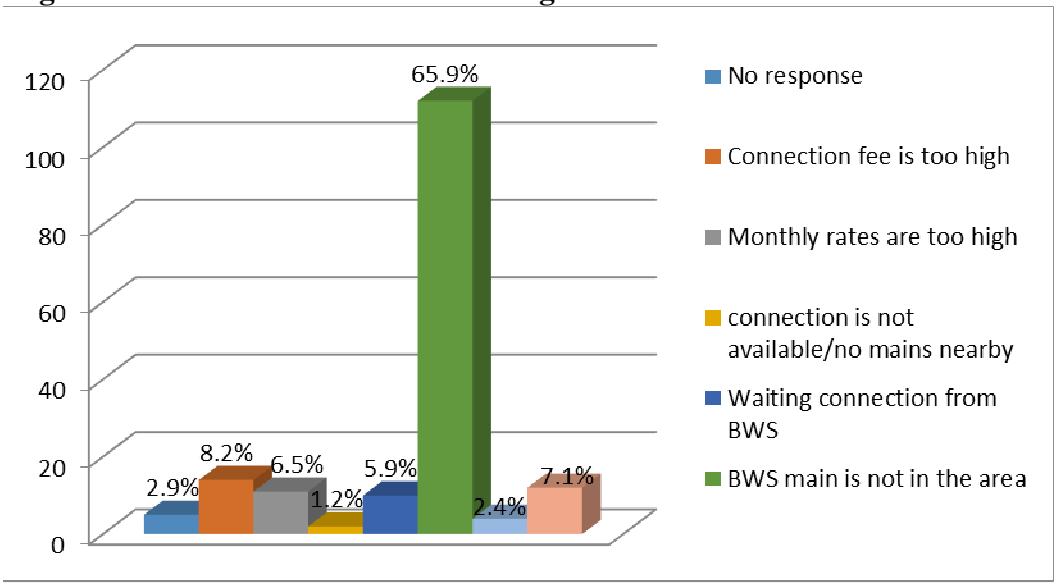



**Figure 10: Main Reason for Not Having In-house Connection**

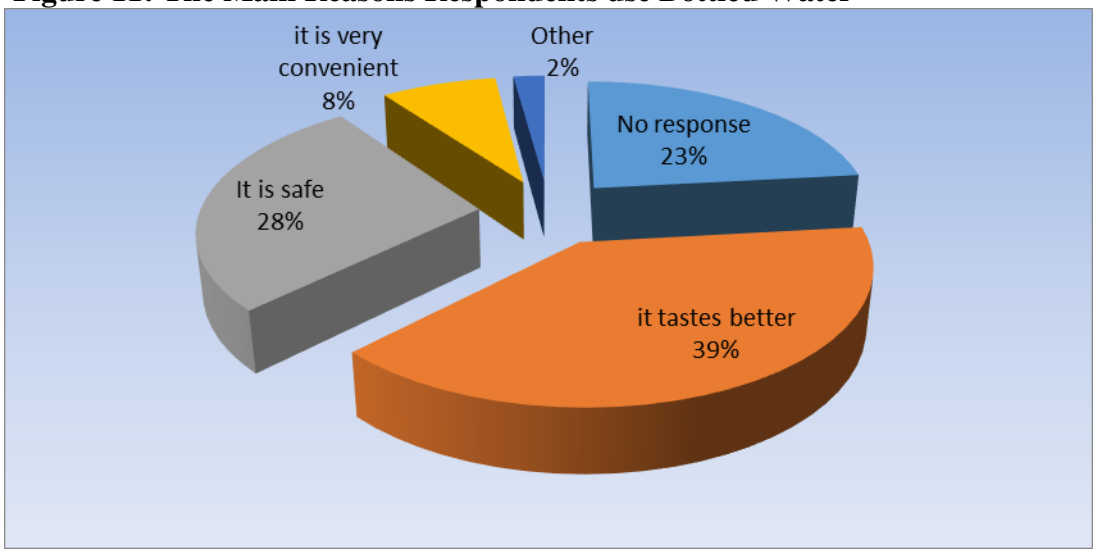



***Water Quality*.** The quality of water is a critical feature of BWS's service, so the survey sought to gain customers' perception of BWS's performance in this area. Fifty percent (50%) of the respondents rated the taste of BWS's water as good or excellent

while 21% said it was poor or very poor. Due to the appearance of bottled water in the market, the survey attempted to enquire whether BWS customers are also consumers of bottled water and the reasons for its consumptions. Seventy-seven percent (77%) of BWS's respondents reported using bottled water. As reflected in Figure 11, 39% of BWS's respondents who use bottled water indicated taste as the main reason for consuming it with safety (28%) being the second highest cause.

The odor of BWS's water was rated as good or excellent by 58% of the respondents. On-the-other hand, 15% of the respondents determined the odor to be poor or very poor. Sixty-six percent (66%) of respondents felt the color of BWS's water is good or excellent.

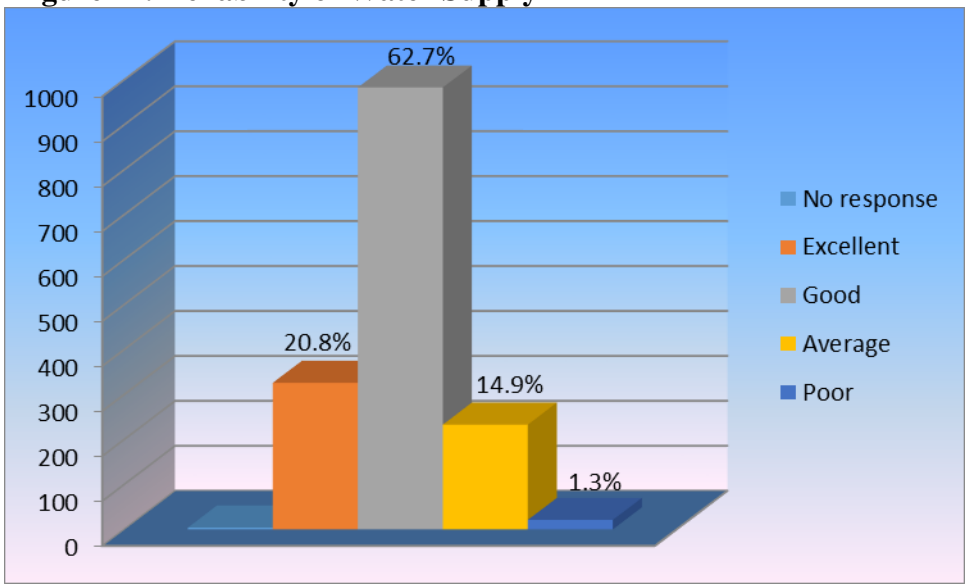
**Figure 11: The Main Reasons Respondents use Bottled Water**




***Reliability of Water.*** Another essential characteristic of quality is the reliability of water supply that is provided by BWS to all major urban centers of Belize. Therefore, customers' impressions concerning the reliability of water supply were sought and only 1% of the BWS's respondents felt that service was poor. As shown at Figure 12, 84% of BWS's respondents to the survey indicated that the reliability of their water supply was good to excellent while 15% felt it was averaged.

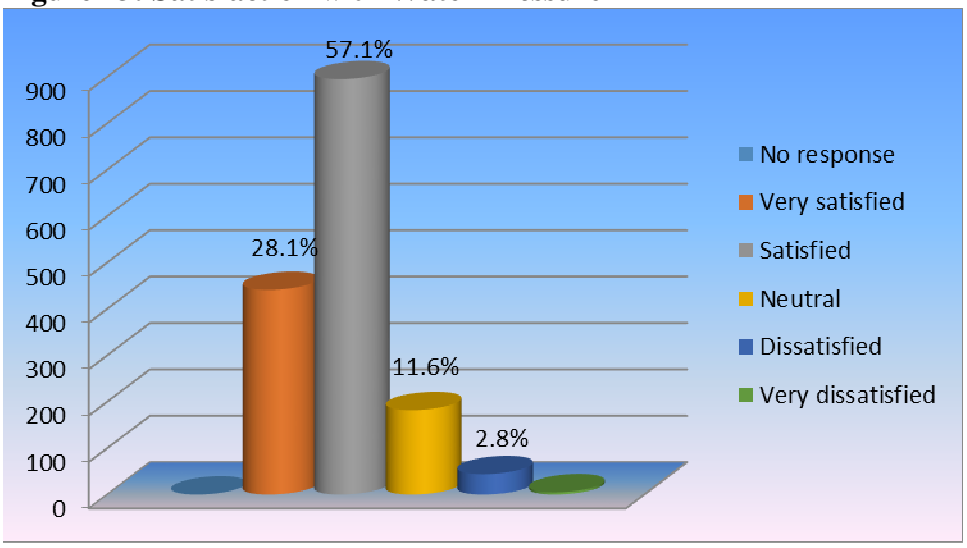
Another quality attribute investigated by the survey was the frequency of service interruptions. The majority (83%) of BWS respondents described interruption of water supply at their premises as infrequent or never. Thirteen percent (13%) of the respondents reported they experienced daily, weekly, or monthly interruption of their supply. In the instances when interruptions were experienced, the majority (73%) of BWS's respondents expressed that it lasted for four hours or less.

**Figure 12: Reliability of Water Supply**



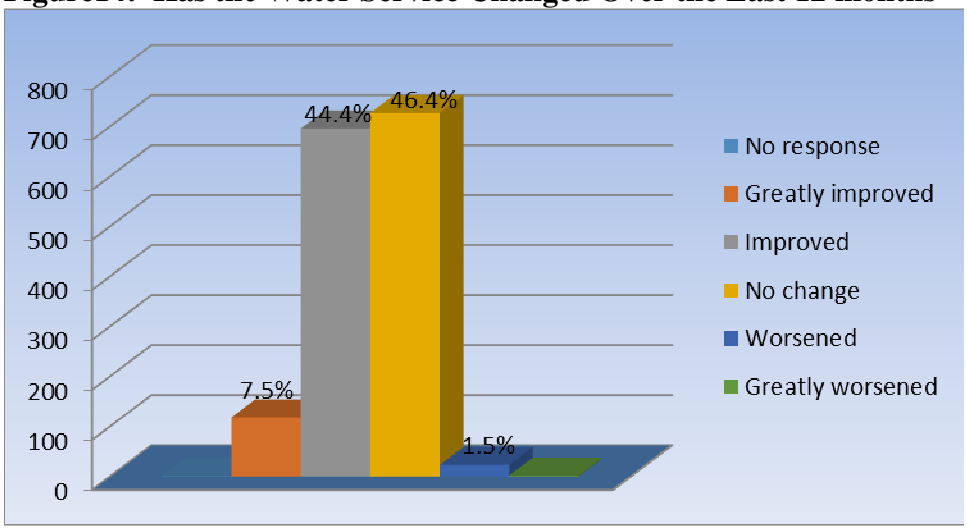

As shown in Figure 13, 85% of the BWS respondents were satisfied or very satisfied with their water pressure. As such, 90% stipulated that they rarely (75%) or never (15%) experienced low pressure.

**Figure 13: Satisfaction with Water Pressure**




Overall, 61% of the respondents rated BWS quality of water to be good or excellent. Similarly, as shown at Figure 14 a low proportion (52%) of respondents expressed the outlook that the water service has improved or greatly improved over the last 12 months. Forty-six percent (46%) felt there has been no change in the service over the last 12 months while 2% expressed that it has worsened or greatly worsened.

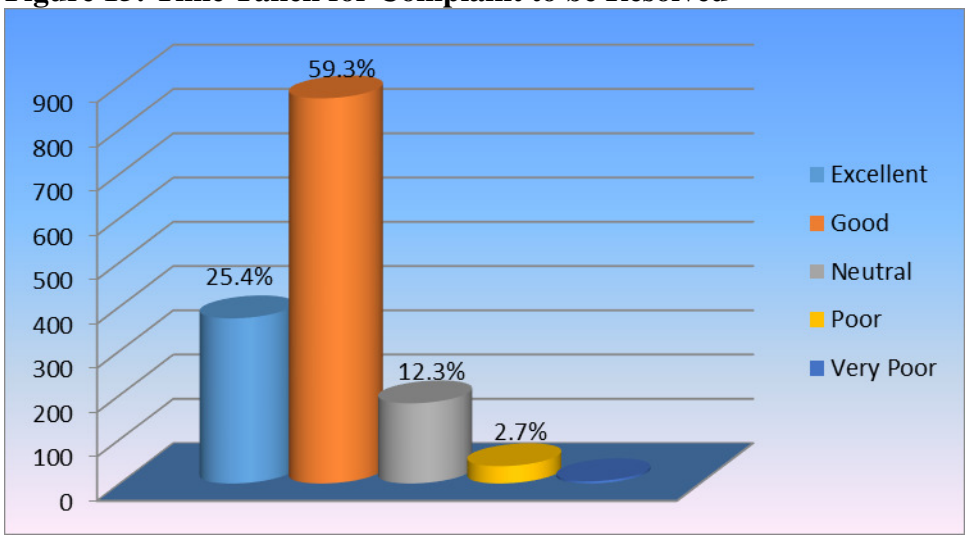
**Figure14: Has the Water Service Changed Over the Last 12 months**



## Commercial Quality

***Customer Service.*** Although current trends in customer service suggest a move towards digital channels, the traditional walk-in mode was expressed as the preferred customer service channel by 54% of the water service respondents. Eighty-nine percent (89%) of those who responded indicated that the knowledge of the BWS's customer service representative who dealt with them was excellent or good. The level of courtesy experienced, the quality of information provided, and the helpfulness of BWS's customer service representative were all rated as good or excellent by 89% of the respondents. Three percent (3%) of the respondents stipulated that the time it took to have their complaint resolved was poor or very poor while 85% of them expressed the outlook that the time it took for their complaint to be resolved was good or excellent as can be seen at Figure 15.

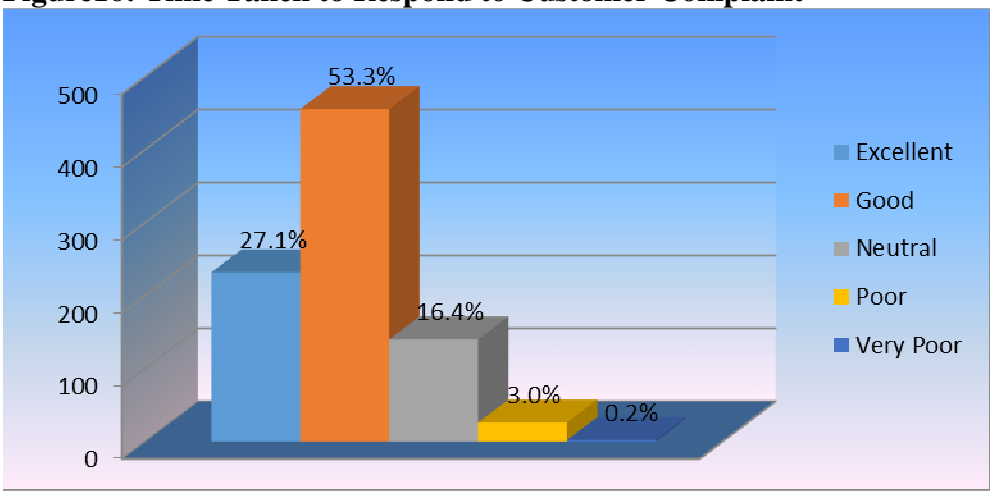
**Figure 15: Time Taken for Complaint to be Resolved**




***In-Field.*** Fifty-five percent (55%) of BWS respondents indicated that a field staff visited their premises. Eighty-seven percent (87%) of the respondents who had an in-field visit rated the field staff level of courtesy as good or excellent. The quality of the in-field workmanship was rated as good or excellent by 85% of the water service respondents while the field crew resourcefulness in carrying out their task obtained a rating of good to excellent from 84% of them. As shown at Figure 16, 80% of respondents with BWS service indicated that the time it took to respond to customer

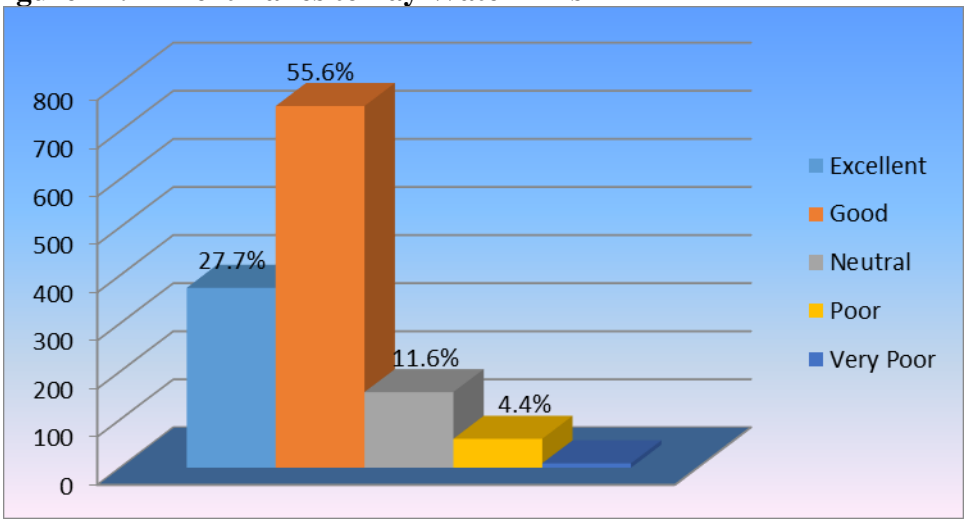
complaint was good or excellent. Only 3% perceived the customer complaint response time was poor.

**Figure16: Time Taken to Respond to Customer Complaint**



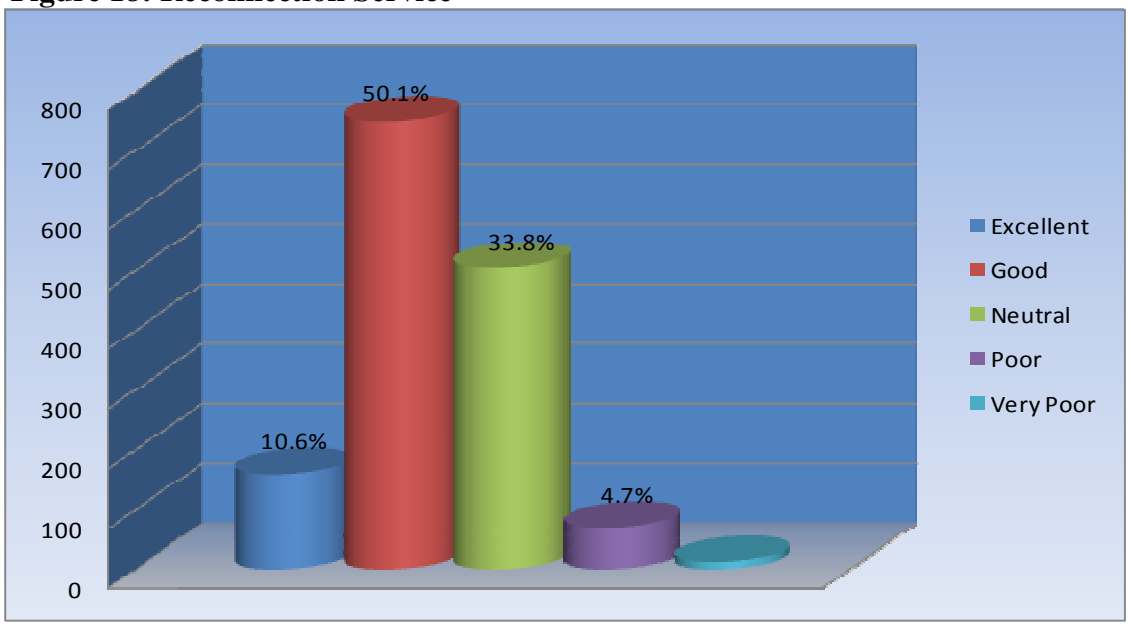

***Cashier.*** Ninety-one percent (91%) of the respondents who utilized BWS's cashier services rated the level of courtesy of the cashier as good or excellent while 90% of them specified that the cashiers who dealt with them was knowledgeable. As shown in Figure 17, 83% of the water service respondents expressed that the time it takes to pay their bills is good or excellent. The majority of respondents (90%) rated BWS's cashier as good or excellent at helping them. In regards to accessing cashier service, 69% of the respondent indicated that BWS provides an adequate number of payment points.

**Figure 17: Time it Takes to Pay Water Bills**



***Credit.*** Respondents were asked to rate BWS credit policy in three areas: reconnection, disconnection notices, and the payment plan program. At Figure 18, 61% of the BWS respondents expressed that the reconnection service was good to excellent while 5% rated this service as poor or very poor. Thirty-four percent (34%) of these respondents were neutral about the service and this may have been influenced by the fact that some of them have never been disconnected. Fifty-six percent (56%) of the BWS respondents rated the disconnection notices as good or excellent while 11 % indicated that they were poor or very poor. Thirty-four percent (34%) rated the notices as neutral. The payment plan was rated as good to excellent by 60% of the BWS respondents, and it may be suggesting that respondents who were disconnected were more likely to be knowledgeable about the payment plan program.

**Figure 18: Reconnection Service**




***Billing.*** Clear, accurate, and timely bills are important to utility services so the survey sought to measure this dimension of service. Only 17% of BWS service respondents indicated that they had a billing complaint within the last 12 months. As depicted at Figure 19, 68% of those who had a billing complaint indicated that they were satisfied or very satisfied that the billing complaint was resolved while 20% of them were

dissatisfied or very dissatisfied. Twelve percent (12%) of the respondents who had a billing complaint gave a rating of neutral.

**Figure19: Billing Complaint was Resolved**

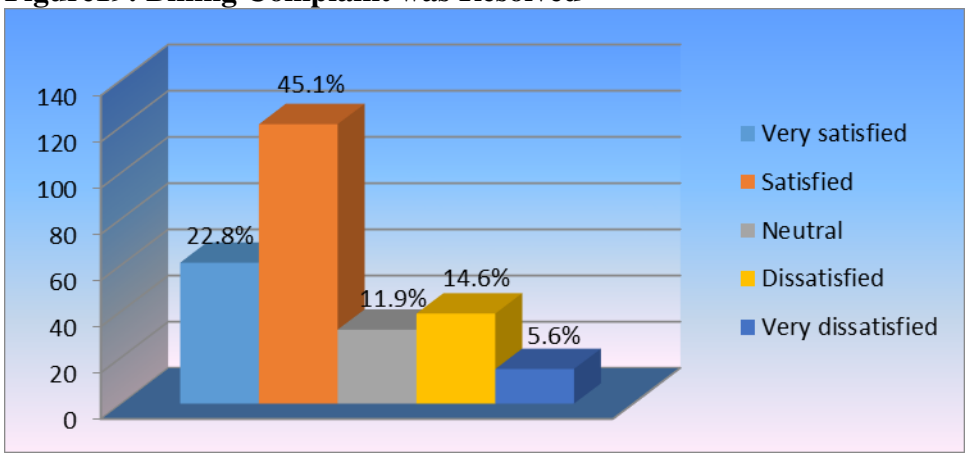
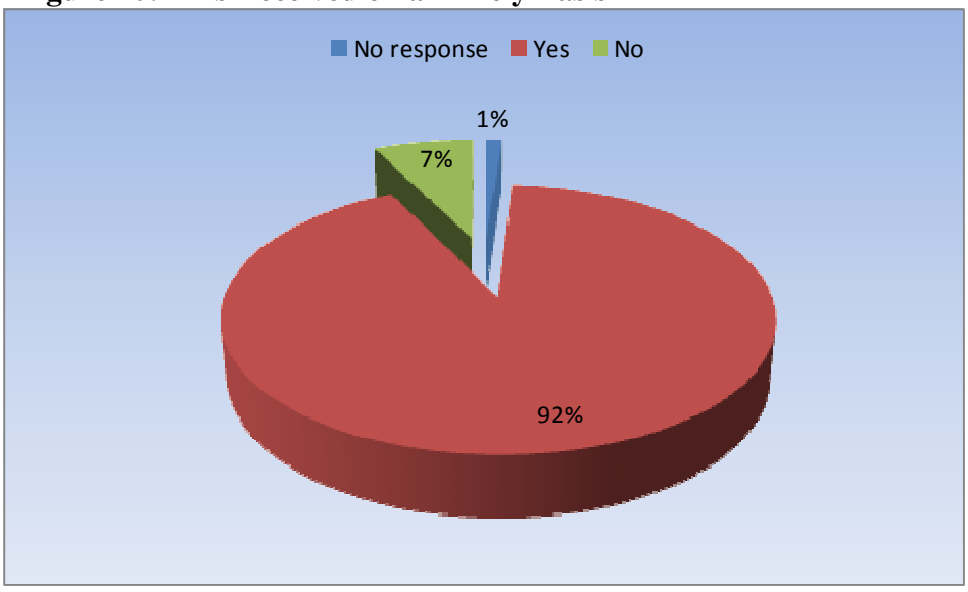



Figure 20 shows 92% of the BWS respondents felt that they received their bills on a timely basis while 96% indicated that their bills were easy to understand.

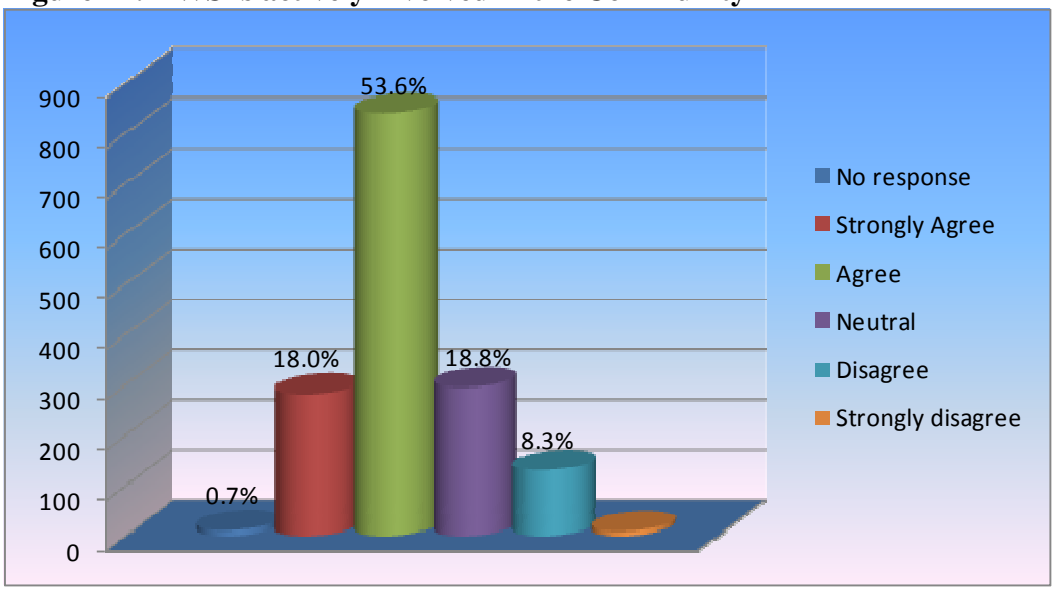
**Figure 20: Bills Received on a Timely Basis**




***Corporate Image.*** The image and reputation of a company is one of the three classes of service attributes that comprise the value proposition provided to customers.

Consequently, this study sought to obtain feedback from customers regarding this matter. In this study, 85% of the BWS respondents agreed or strongly agreed that BWS is a respected company in the community. As shown at Figure 21, 72% of BWS respondents perceived BWS to be actively involved in the community but 81% agreed or strongly agreed that BWS is seen as an organization that will act in the best interest of its customers and resolve problems in a professional manner. Additionally, 92% of the BWS respondents believed BWS is a trustworthy company while 94% indicated that BWS maintains a high standard of business ethics in its day-to-day activities. When asked about the overall level of service provided by BWS, 87% indicted they were satisfied or very satisfied.

**Figure 21: BWS is actively involved in the Community**

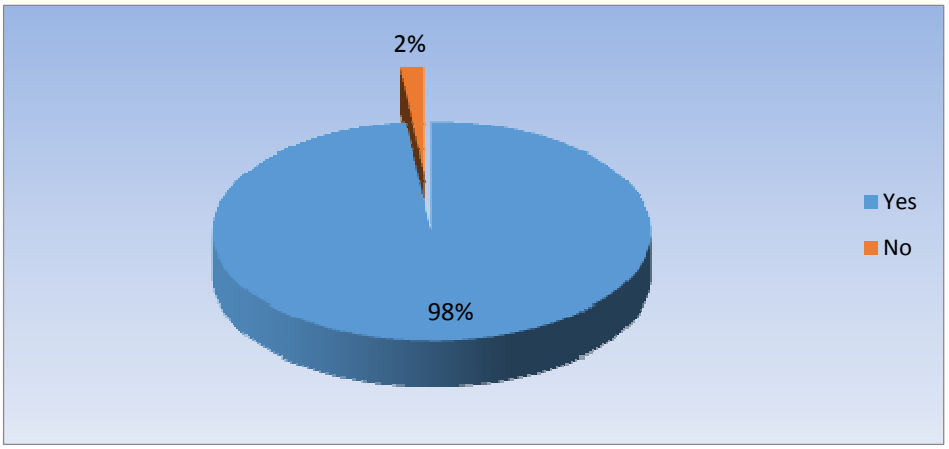



# Electricity Service

## Technical Quality of Service

**Connection**. The evaluation of electricity connection found that the majority of respondents (99%) had electricity supply. As can be observed in Figure 22, 98% of the respondents benefited from a supply provided by BEL.

**Figure 22: Connection to BEL Service**

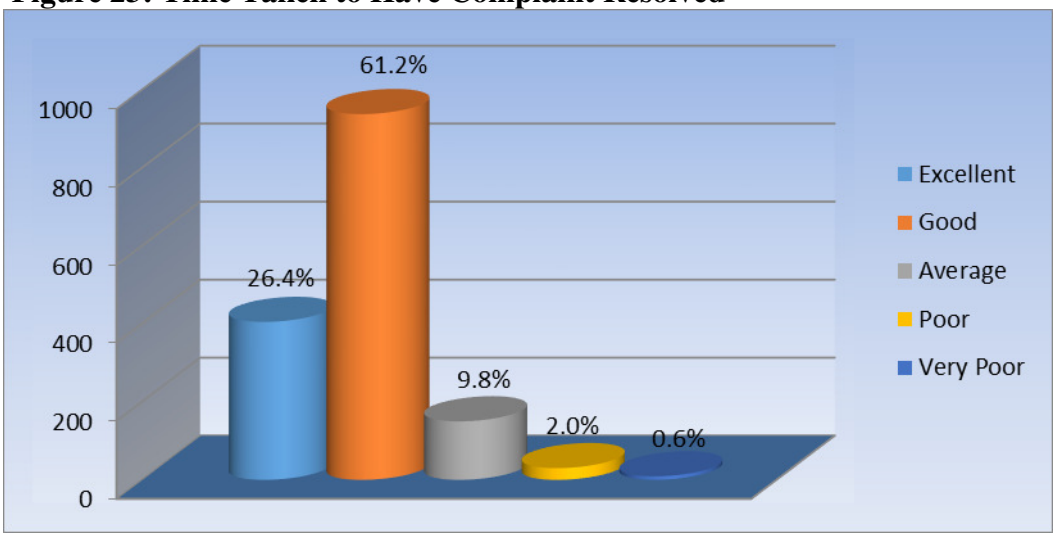



**Reliability.** In regards to the reliability of supply, most respondents, in fact, 84% considered the electricity supply to be good to excellent. Outages were infrequently or never experienced by 89% of the BEL respondents. As a measure of the quality of supply, the survey examined the respondents' experiences with voltage fluctuation. Ninety-three percent (93%) of the respondents rarely or never experienced voltage fluctuations, however, 7% of the respondents do experience voltage fluctuation frequently.

## Commercial Quality of Service

***Customer Service.*** The survey also sought to glean insight into the medium customers most favored for contacting BEL. Fifty-one percent (51%) of the BEL respondents who indicated that they contacted BEL favored the traditional walk-in channel while 33% of them were more inclined to call-in to have their needs addressed. Ninety-one percent (91%) of the respondents who contacted customer service indicated that the knowledge of the customer service representative who dealt with them was good or excellent. When it came to assessing the treatment received from the service provider, 90% respondents stated that the level of courtesy of the customer services representative was good to excellent. As shown at Figure 23, 88% of BEL respondents stated that the time it took to resolve their complaint was good to excellent. Only 3% indicated that the time it took was poor or very poor.

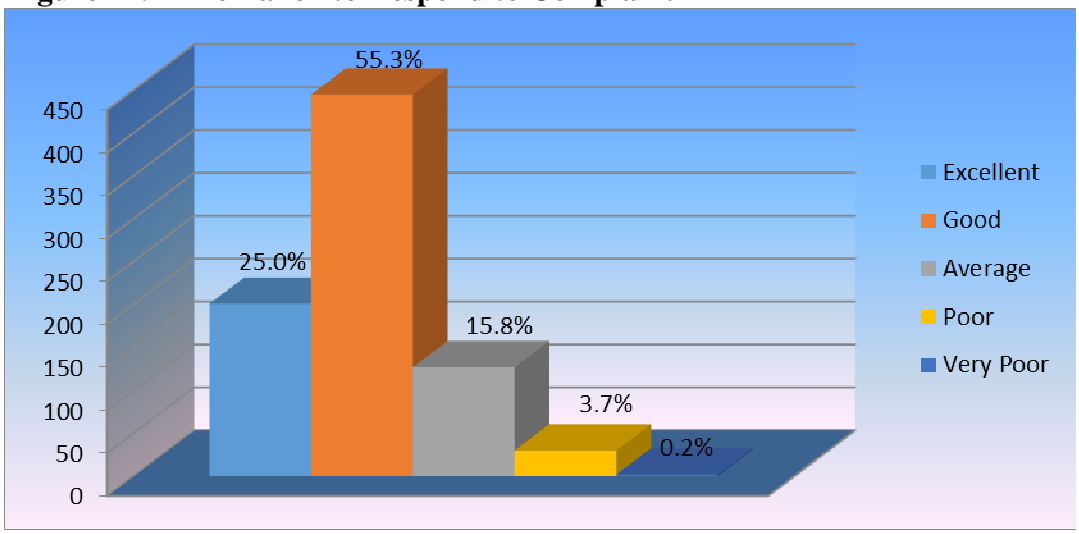
**Figure 23: Time Taken to Have Complaint Resolved**




In this study, 90% of BEL customers who contacted customer service stipulated that both the helpfulness of the customer service representative and the quality of information provided by the customer service representative were good to excellent.

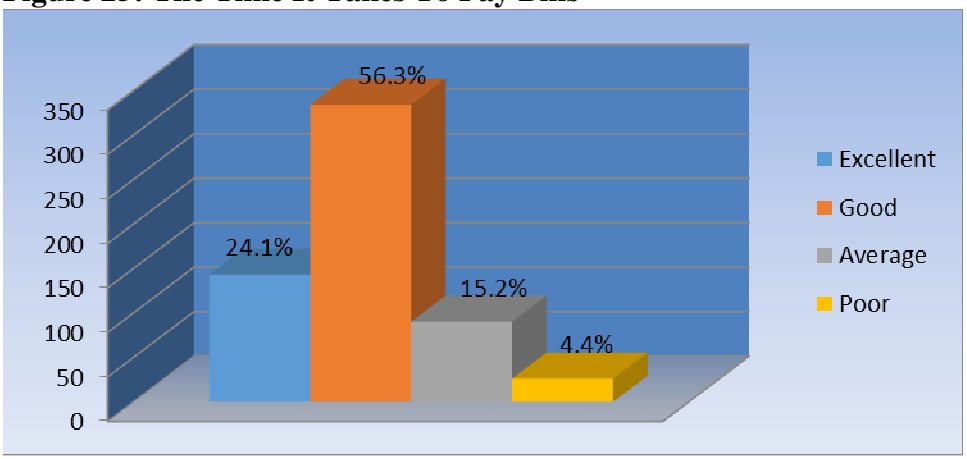
**In-field Staff**. Personnel working outside the office also impact the customer experience so this area was included in the survey. Forty-eight percent (48%) of the BEL respondents indicated that a field staff visited their premises and 87% of that group stipulated that the courtesy of the staff was good to excellent. As shown at Figure 24, it was found that the time taken to respond to a customer complaint was reported by 80% of BEL respondents as good to excellent. And, the field crew resourcefulness in carrying out their task was rated good to excellent by 83% of BEL respondents. With regards to the quality of the work conducted by the field staff, 84% of them indicated that the quality of the field staff workmanship was good to excellent.

**Figure 24: Time Taken to Respond to Complaint**



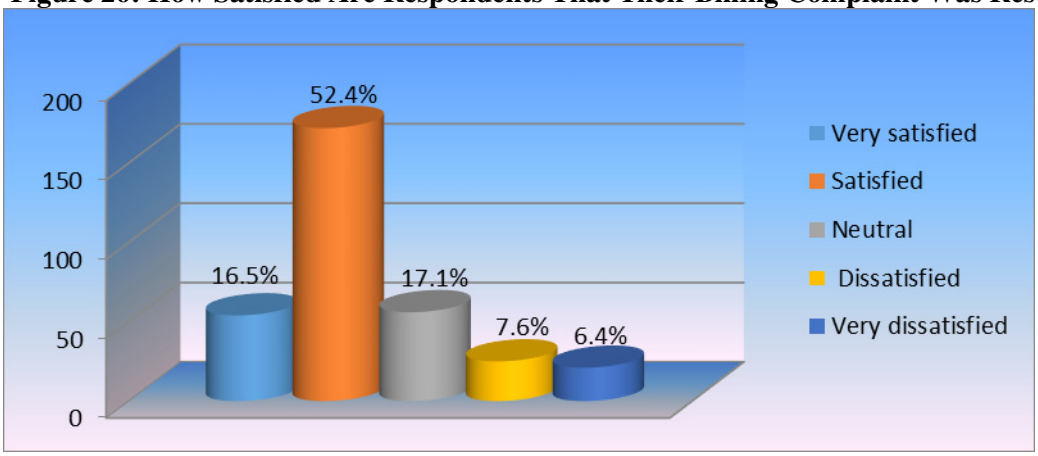

***Cashier.*** Cashier service enables personal contact with customers and influences the purchasing experience. For that reason it was included as an indicator to be measured. Seventy-three percent (73%) of BEL respondents stated that BEL provides an adequate number of payment points for bill payment while 25% of them expressed otherwise. When the courtesy of BEL cashiers was looked at, it was found that 86% of respondents considered the level of courtesy of the cashier to be good to excellent. Eighty-seven percent (87%) rated the knowledge of the cashier as good to excellent while, as can be seen at Figure 25, 80% of respondents felt that the time it takes to pay their bills is good to excellent; only 4% expressed it to be poor. For BEL, 88% of their respondents assessed the helpfulness of their cashiering service to be good to excellent.

**Figure 25: The Time It Takes To Pay Bills**



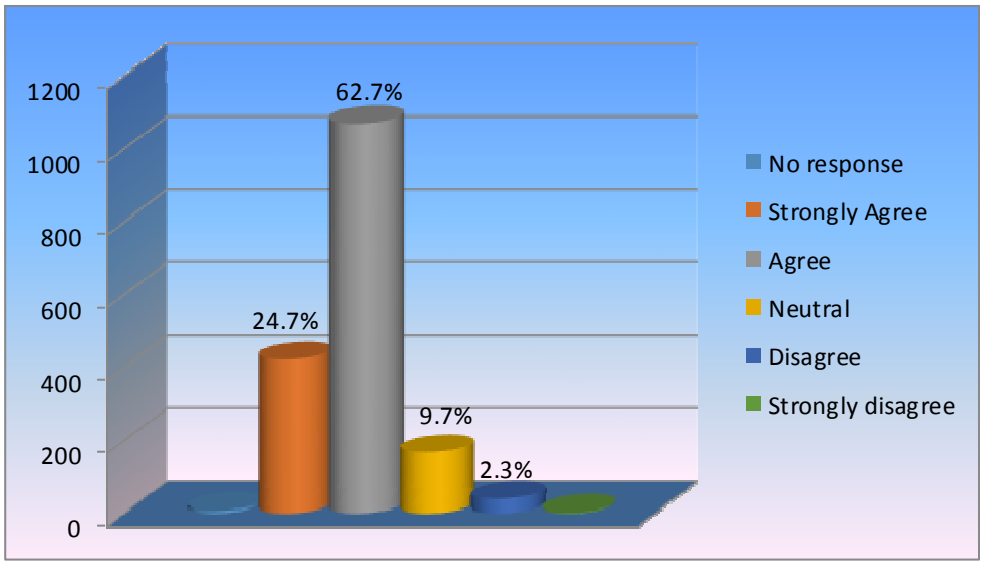
***Billing***. Consumer complaints about their bills are an important indicator of performance and were an area of interest in this study. Nineteen percent (19%) of BEL respondents indicated that they had a billing complaint in the last 12 months. Of those who had a complaint, 69% stated that they were satisfied or very satisfied that their complaint was resolved while, as depicted at Figure 26, 14% stated they were dissatisfied or very dissatisfied about how their billing complaint was resolved while 17% rated their level of satisfaction as neutral. Ninety-six percent (96%) of BEL respondents felt that they received their bills on a timely basis while 97% of them expressed that their bills were easy to understand.

**Figure 26: How Satisfied Are Respondents That Their Billing Complaint Was Resolved**



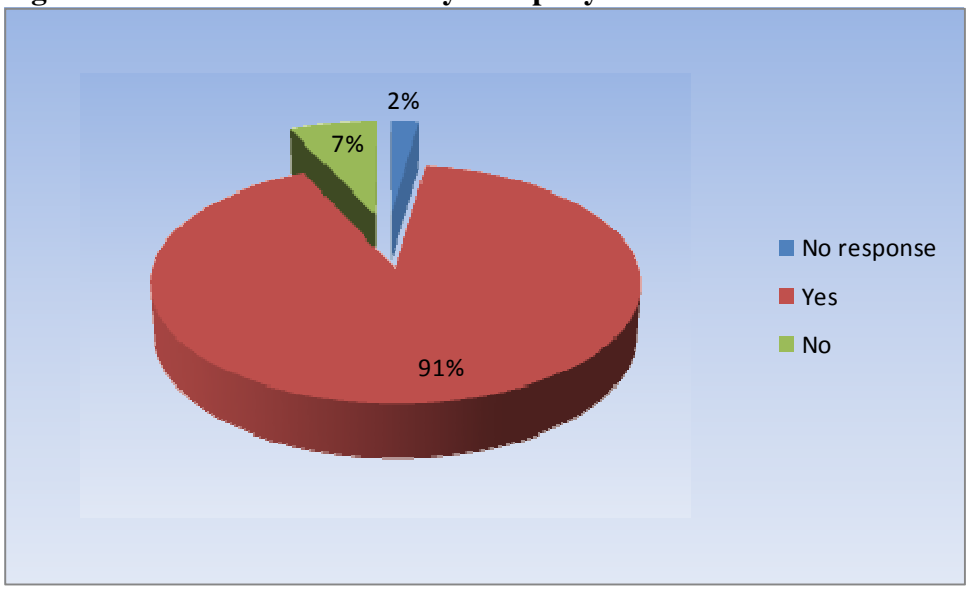

***Corporate Image.*** As depicted in Figure 27, a high proportion (87%) of the respondents agreed or strongly agreed that BEL is a respected company in the community. In regards to BEL's active involvement in the community, 79% of the respondents agreed or strongly agreed that the utility provider actively engages with the community, while 84% stipulated that they agreed or strongly agreed that BEL is seen as a company that will act in the best interest of its customers and resolve problems in a professional manner. Figure 28 shows that a significant proportion (91%) of BEL respondents believed BEL is a trustworthy company. Those who disagreed gave a variety of reasons with strong themes involving rates and billing (31%) (see Appendix E).

**Figure 27: BEL is a Respected Company in the Community**




In regards to how BEL is viewed in its daily operations, 91% of BEL respondents indicated that employees of the utility provider maintain a high standard of business ethics in their day-to-day activities.

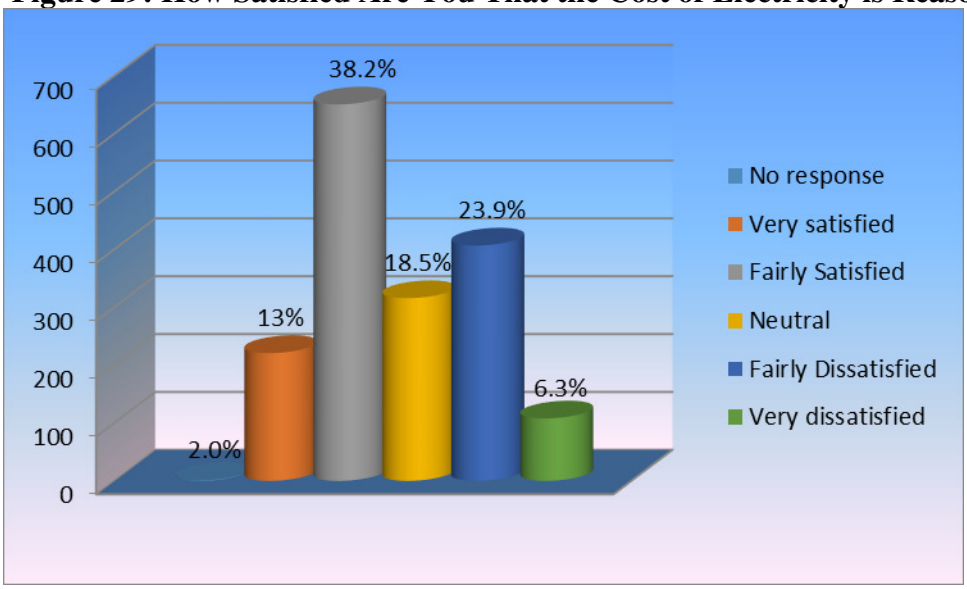
**Figure 28: BEL is A Trustworthy Company**




***Electricity rates***. The price of service is an important attribute, and, for that reason, BEL rates were measured in this study. As can be observed at Figure 29, 51% of BEL respondents were fairly satisfied or very satisfied that the cost of energy is

reasonable. Dissatisfaction with the electricity rates was indicated by 30% of the respondent who shared that they were fairly dissatisfied to very dissatisfied. When asked how satisfied they were that BEL provides good value for money, 56% of the BEL respondents indicated they were fairly or very satisfied and 18% expressed the opposite. The inference is that slightly more respondents are satisfied when assessing the value of the service alongside the price they pay to receive it.

**Figure 29: How Satisfied Are You That the Cost of Electricity is Reasonable**




Based on the analysis, it was found that 72% of the respondents were satisfied or very satisfied with the overall level of service provided by the company. Six (6%) expressed dissatisfaction while twenty-two (22%) of them provided a neutral response regarding that matter which perhaps were impacted by their feels about the cost of electricity.

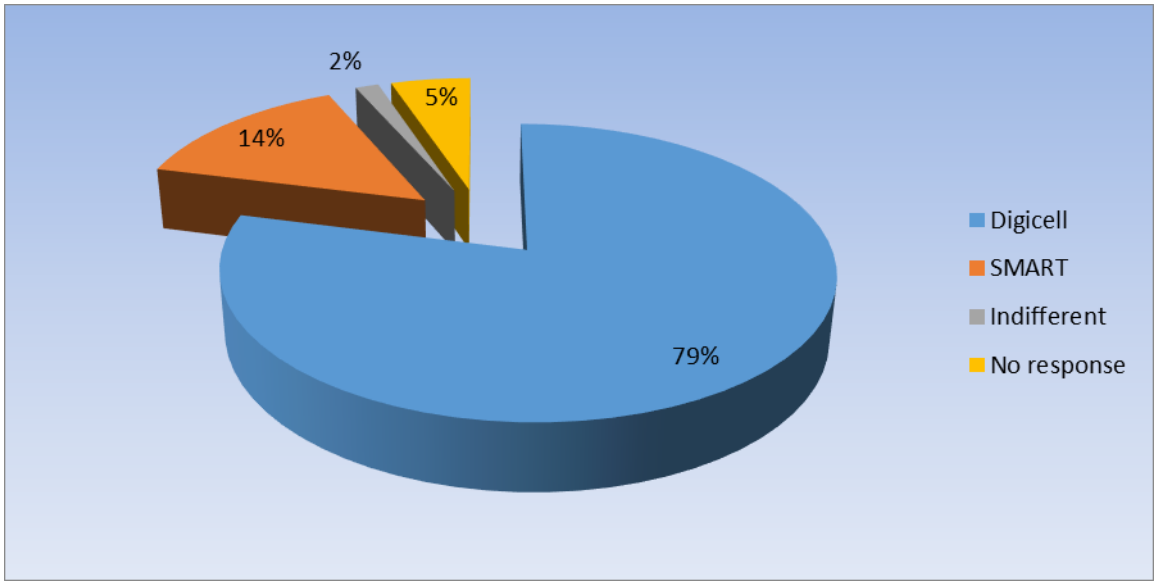
# Telecommunications

## Technical Quality of Services

**Cellular.** BTL provides services in a competitive environment so this survey attempted to obtain respondents' feedback regarding service providers**.** As can be seen at Figure 30, 79% of the respondents indicated that BTL is the cellular provider they used the most for making national calls. In regards to international calls, 70% responded with BTL as their

preferred service provider while 14% used SMART. Those respondents who had internet service indicated that BTL (33%) is their service provider of choice. Six percent (6%) of the respondents shared that they used internet service from SMART. Seventy five percent (75%) of the respondents stated that they used BTL for SMS while 13% used SMART. The reason most (63%) cited for using SMART services is cheaper rates (see Appendix E); however, 16% of SMART users stated that the service is better. Thirty-one percent (31%) of DigiCell respondents declared that they experienced dropped calls when using the service. Forty-seven percent (47%) of those who experienced drop calls indicated that it occurred with national, 9% said international, while 44% shared they experienced it with both.

**Figure 30: Network Cellular Provider Most Used for National Calls**



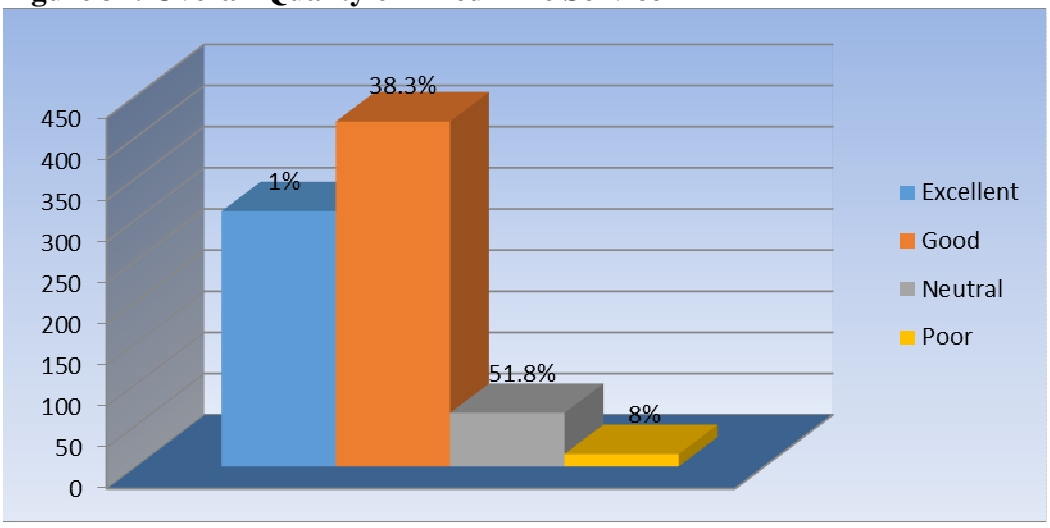

Eighty-six percent (86%) of the respondents who had cellular service stipulated that the overall quality of the mobile data service from the provider they used the most was good to excellent. Only 16% of the BTL cellular customers indicated that they have DigiCell 4G mobile internet service. The make-up of those users were 77% residential and 23% business (see Appendix E). Seven percent (7%) of DigiCell respondents declared that they use their mobile devices to sell Top Up while 9% of SMART users are using their devices to sell Top Up. In regards to mobile banking transactions, 7% of

DigiCell respondents used their mobile device for mobile banking while 8% of SMART respondents are also doing so.

Respondents were asked to rate the knowledge demonstrated by Customer Support when addressing queries/complaints about DigiCell service. For Customer Support via telephone, 83% of the respondents rated the knowledge demonstrated as good to excellent while 4% percent rated it as poor or very poor. Thirteen percent (13%) took a neutral position. In regards to walk-in, 84% of those who do so rated the knowledge as good to excellent, 15% were neutral, and 1% rated their knowledge as poor or very poor.

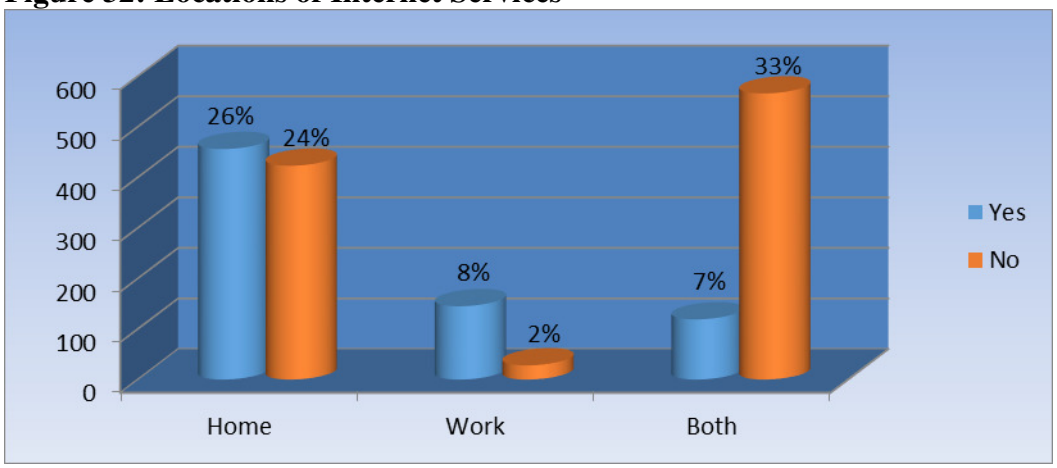
***Fixed Line.*** Forty seven percent (47%) of the respondents had fixed line service from BTL. As shown at Figure 31, 90% of BTL fixed line respondents rated the overall quality of the service as good to excellent. In regards to repairing a fixed line fault 88% of the respondents gave a rating of good to excellent. When asked about completing a recent fixed installation, 91% of those respondents indicated it was good to excellent.

**Figure 31: Overall Quality of Fixed Line Service**




***Internet.*** The analysis of internet users' responses shown at Figure 32 indicated that 26% of the respondents have internet services at home while 8% reported having it at work and 7% have internet both at work and at home while 59% of the respondents do not have internet.

**Figure 32: Locations of Internet Services**



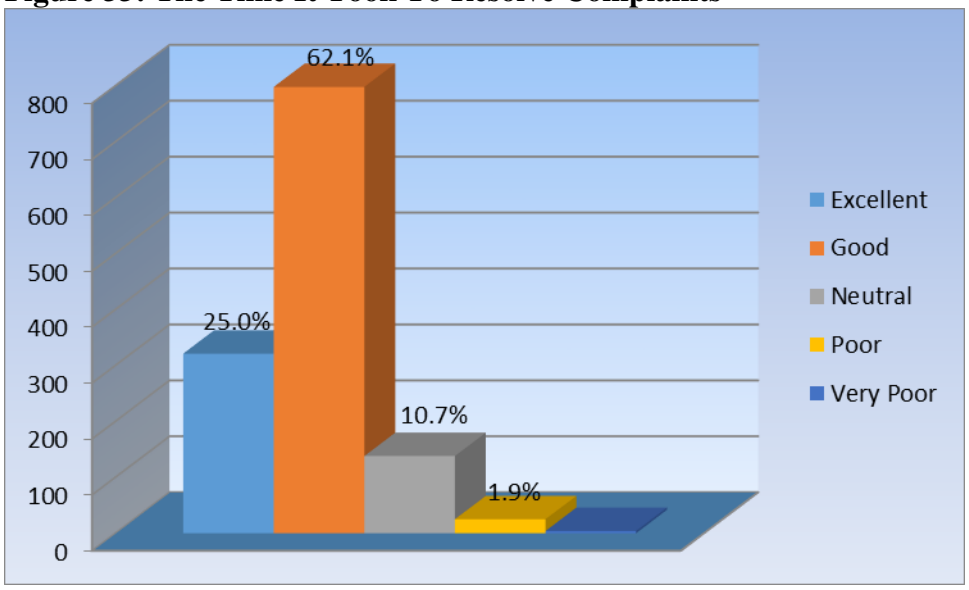

In regards to which internet provider is used the most, 70% of internet respondents indicated BTL, 14% indicated SMART and 7% indicated use of Cable. When asked about BTL turnaround time for completing a recent internet service installation, 88% of those who responded rated it as good to excellent. For repairing a recent fault, 84% of the respondents to that question stated good to excellent. BTL internet respondents rated the overall quality of the service as good to excellent. Eighty percent (80%)of respondents rated the knowledge demonstrated by Customer Support when addressing internet service queries via telephone as good to excellent while the walk-in at Customer Service Centers was given a rating of good to excellent by 83% of the respondents.

## Commercial Quality

***Customer Service.*** The survey sought feedback concerning the medium utilized by respondents for contacting BTL. Fifty-three percent (53%) of the respondents who indicated that they contacted BTL selected call-in as the most frequently used channel followed by walk-in at 43%. When asked about the knowledge of the BTL customer service representative who dealt with them, 92% of those respondents who visited customer service indicated it was good to excellent. Eighty-six percent (86%) of them felt the level of courtesy experienced from the customer service representative who dealt with them was good to excellent. As shown at Figure 33, the time it took for someone to resolve their complaint was rated as good to excellent by 87% of the BTL respondents. Eighty-seven percent (87%) of the BTL respondents rated as good to excellent both the

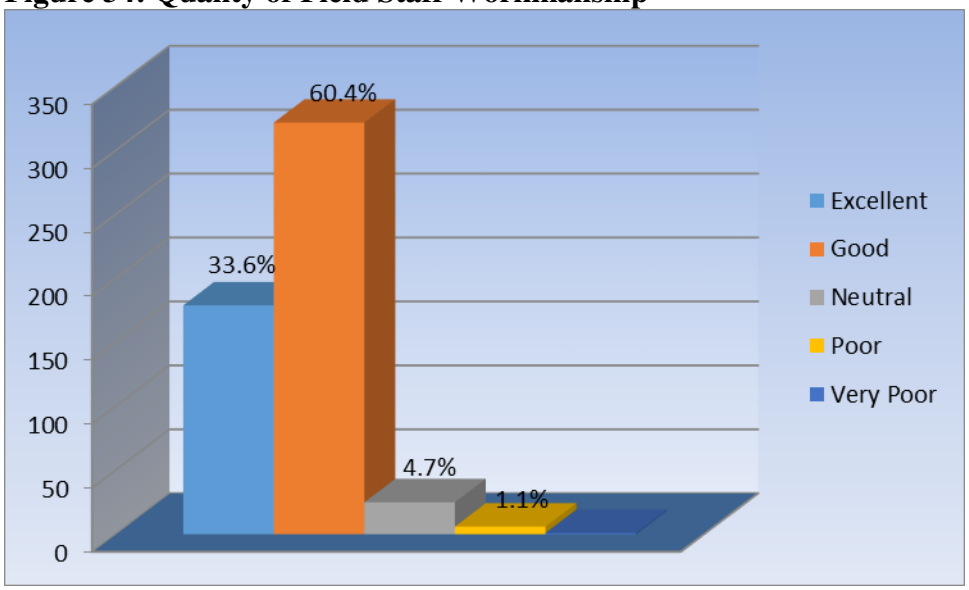
helpfulness of the customer service representative and the quality of information provided by them.

**Figure 33: The Time It Took To Resolve Complaints**



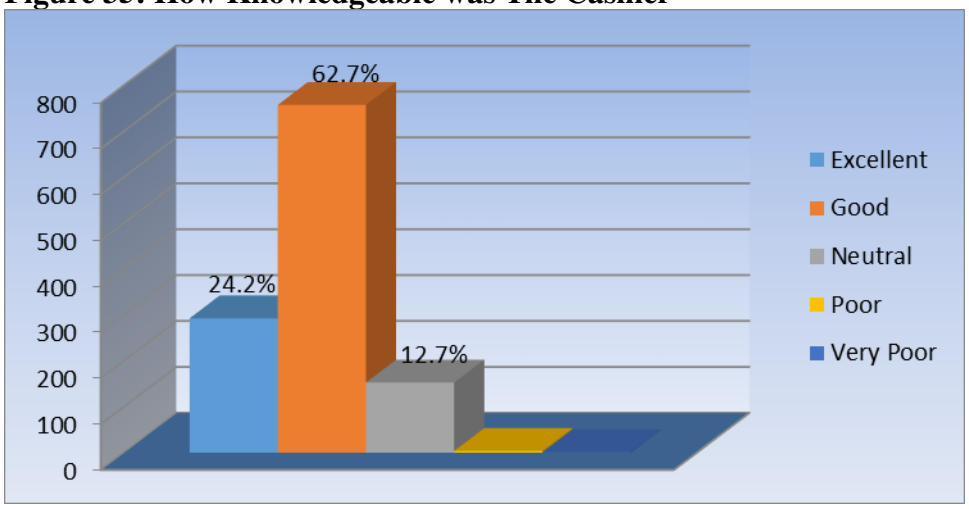

***In-Field.*** Respondents were asked if BTL field staff visited their premises. Forty-one percent (41%) of the BTL respondents indicated that BTL staff had visited them. Ninety-five percent (95%) of those respondents provided a rating of good to excellent for the courtesy of the in-field staff. Figure 34 shows that 94% of those respondents felt the workmanship quality was good to excellent. The field crew resourcefulness at carrying out the assigned task was rated as good to excellent by 92% of the respondents while 89% of respondents rated the response time to customer complaints as good to excellent.

**Figure 34: Quality of Field Staff Workmanship**



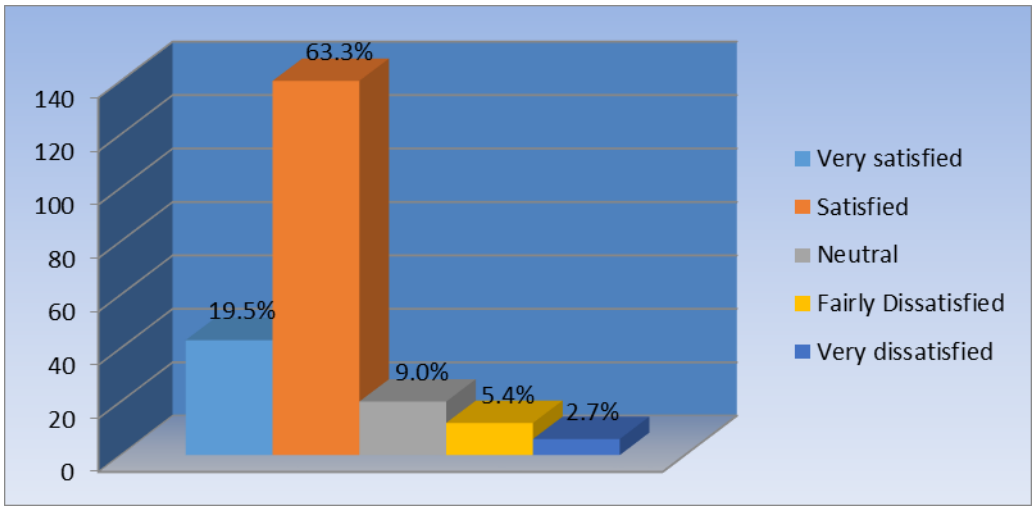

***Cashier.*** Seventy-six percent (76%) of the respondents indicated that BTL provides an adequate number of payment points while 24% held the opposite view. In regards to the time it takes to pay their bills, 73% of the respondents indicated that it is good to excellent. Figure 35 shows that 87% of the respondents felt that the cashiers who dealt with them are knowledgeable and 85% of them stated that the cahiers who dealt with them are helpful. When it came to assessing the level of courtesy of cashiers, it was found that 88% of the respondents felt the level of courtesy of the cashier was good to excellent.

**Figure 35: How Knowledgeable was The Cashier**



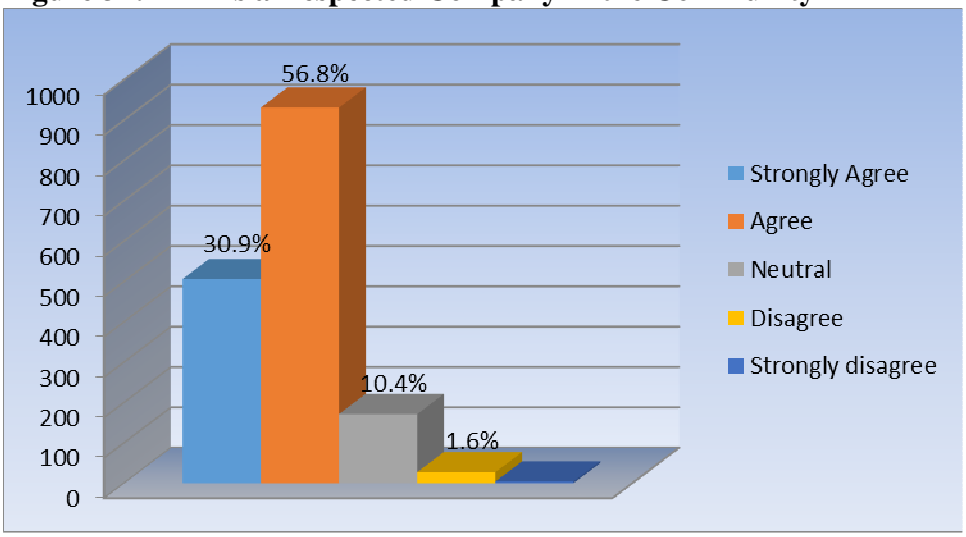
***Billing.*** Utility billing is the medium through which most of the communication between service providers and customers occur so obtaining feedback from customers about this area of service is important. Only 16% of the BTL respondents declared that they had a billing complaint within the last 12 months. As shown at Figure 36, 83% stated that they were satisfied or very satisfied that their billing complaint was resolved.

**Figure 36: Satisfaction That Billing Complaint was Resolved**



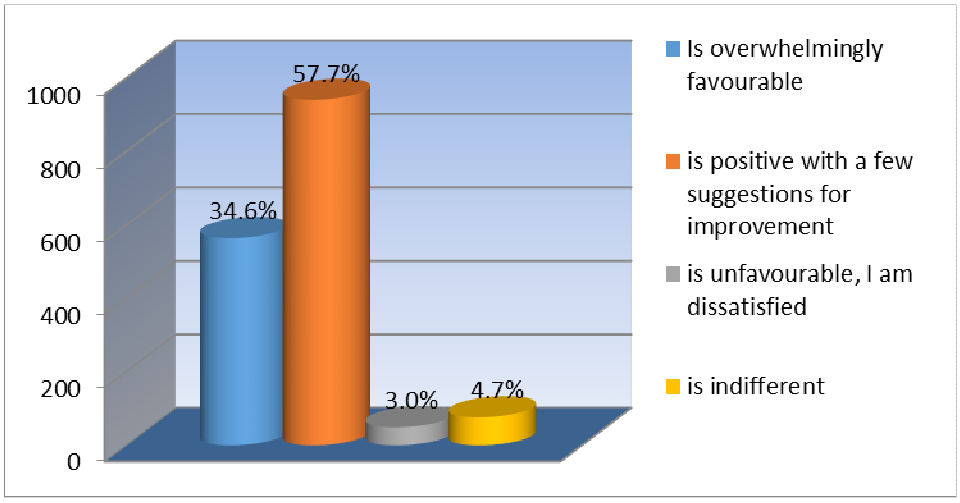

***Corporate Image.*** The image and reputation dimension reflects the intangible factors that can attract or repel customers. For that reason it was included as a dimension to be measured in this study. Depicted at Figure 37 is that 88% of respondents felt BTL is a respected company in the community. Eighty-three percent (83%) of respondents agreed or strongly agreed that BTL is a trustworthy company. In regards to the matter of BTL giving back to the community, it was found that 84% of respondents agreed or strongly agreed with that statement.

**Figure 37: BTL is a Respected Company in the Community**




***Overall feeling about BTL:*** When it came to assessing how respondents felt overall about BTL, it was found that 92% felt positive or overwhelmingly favourable, as can be seen at Figure 38. However, 58% of that group indicated that they had suggestions for improvement of BTL.

**Figure 38: Overall Feeling About BTL**




***Recommendations for BTL.*** Engaging with customers regarding areas of interest that they would like the service provided to consider is important. Therefore, respondents were asked to submit up to two recommendations to BTL.

Thirty-five percent (35%) of the respondents were open to take up the offer and shared their perspectives which covered an array of issues. As such, the top three themes that emerged involved lower rates and charges (41%) for BTL services, the quality of service reception (30%) for mobile, landline, and internet and customer service matters (9%).

# CONCLUSION

Customer satisfaction survey is a market research methodology for measuring the degree to which customers' needs are being met. In the year 2012, BWS, BEL, and BTL decided upon a collaborative approach for measuring customers' perception of service delivery. The principal assumption that underpinned the study is that the three utilities seek to satisfy customers' needs and meet or exceed their expectations.

This survey collected a wide variety of data at a considerable level of detail about the current levels of service experienced by consumers of water, electricity, and telecommunications in Belize. Consequently, this report captures feedback from customers and is a "report card" that provides critical information which can aid future decision making.

The principal findings and their potential solutions are therefore highlighted in this section.

## Principal Findings

1. The customer satisfaction ratings (see Appendix C for a Summary of Performance Ratings) obtained from this study are outcome measures of the utilities' performance regarding strategies that were previously deployed. As such, the results from this survey ought to be utilized to guide decisions about a baseline of service attributes for which new targets will be established based on a blend of what is valued by customers and the value proposition decided upon for each utilities. For example, respondents' concerns about rates (41%), service reception (30%), and the new recharge policy (14%) were recommendations made by respondents for BTL that require consideration while complaints resolution (69%), adequacy of number of payments points (73%), and rates (51%) are areas of concern for BEL, and BWS's overall rating for water quality (60%), credit policies, complaint resolution (68%) indicate the need for attention to be targeted at such critical service attributes. The Balanced Scorecard methodology is an effective tool

that can be utilized to guide the process for formulating a comprehensive set of strategy supportive performance indicators including a management and monitoring system.

2. Customer relationship is one of the major classes of service attributes through which the utilities deliver to customers a premium purchasing/contact experience, which is vital for addressing matters such as billing complaints. This study provides the basis for building a strong customer awareness program or a communication strategy that seek to influence how customers feel about purchasing from BWS, BEL, and BTL. Investing in multiple channels for participation between customers and the three utilities enhances service transparency and lead to increased ownership of development processes. Utilities can develop strategies to inform the public about programs, services, and initiatives; listen to the public; and respond to customers' needs. This is critical for the three utilities as operations are conducted in a renationalized context where the environment is charged with customers sensitive to the public sector ownership model in which a mission driven strategy is favored over a profit driven model. Boosting the communication strategies for the utilities is essential as there is need for additional mechanisms to receive and act on feedback from customers.

3. Consideration can also be given to the formulation of a program for publicly releasing an annual "Customer Report Card" wherein the service delivery performance of each utility, as informed by a customer satisfaction survey, is made available to the public. A participatory performance monitoring system that takes place on a regular basis could help to identify service delivery problems. Additionally, although grievance mechanism are in place, the utilities can take action to promote it with the aim of improving service delivery. The precursor to a program of that kind would necessitate fulfillment of the recommendation described at point 1 of this section.

4. Responses from customers suggest they are not currently willing in large numbers to fully move over to digital customer care services ("eCare"). Many customers, for example, still highly prefer the traditional walk-in channel for customer care, although, in this survey it was found that telecommunications attracted greater use of the call center

service. However, communication flow from the utilities to their customers is one area where that trend is changing. Survey respondents cited email and SMS as the most effective channels for communicating with them. This points to the need for the three utilities to map consumer needs across different channels in order to strike a balance with the mixes of traditional and digital channels for delivery of customer care while bearing in mind the local context with a particular focus on economics as "eCare" entails increased user cost for customers who may not be able to afford the investment. Yet, the cost saving potential and the promise of increased customer satisfaction when customers are able to personally handle their own transactions call for a phased approach to introducing any such change along with building strong customer awareness programs to enhance uptake among the consumer base.

5. Given time, there will be increased demands for more responsive and flexible approaches to service delivery especially when consumers gather more confidence or become more organize to participate in processes that can pressure the utilities to improve service delivery. Respondents indicated a willingness to pay to avoid disconnection, which is the signal of an emerging need for the utilities to conduct an overall review of their credit policies. It is an area that has tremendous potential for impacting the image and reputation of the utilities and ought to become one of the areas given high priority.

6. Changes in customer needs will migrate to other areas of commercial service especially where technology can be a supporting force. Therefore, understanding market needs from the customer perspective and deploying strategic solutions to harness latent opportunities is a valuable approach for the future; for instance, a more in-depth study of a service that would allow customers to pay a fee to avoid disconnection would need to be undertaken to ensure that it is shaped into a sound value-added service that does not trigger an increased level of bad debt or the creation of unsatisfied customers.

7. A comprehensive complaint system is a depository of data from which immediate in-house information can be obtained regarding service quality once it is included as an element of the monitoring system to track not only the number but also the type of

complaints. It is therefore important for BWS, BEL, and BTL to ensure that their complaint systems have the capacity to efficiently provide information. However, customers of service companies frequently do not enter a complaint or cease to do so when they encounter recurring problems. For those reasons, the trend in the service sector is to offer service guarantees. This is a matter worthy of consideration as that approach has become a trend in the utilities' sector albeit primarily forced in by utility regulators. The three utilities may want to proactively explore that type of program as an option to include in its arsenal of new customer programs. Specific service attributes pertaining to the technical quality of service can be those first selected with commercial attributes later introduced under a tier system.

8. Finally, consideration ought to be given to deepen collaboration among the three utilities in areas concerning the commercial aspects of service. It is clear from this study that customers would welcome the opportunity to pay all three utility bills at joint collection points. On-line payment via banks, in a few instances, does meet that requirement; however, as noted by the low participation in the on-line banking service among respondents that medium may not attract a large number of customers. Until such time, other methods ought to be exploited. Joint collection promises benefits to both utility providers and customers as greater efficiency can potentially accrue to service providers while it would satisfy customers' expressed need and therewith legitimize their involvement in market research initiatives conducted by the three utilities.

# Appendix IV – Proposed Capital Expenditure Listing

**BELIZE WATER SERVICES**
**CAPITAL EXPENDITURE 2015-2020**

| District | Description | Loans | Contributions | BWS | Total | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Development Capex** | | | | | | | | | | | |
| SP | San Pedro Northern Ambergris Caye Water and Sewer Expansion Land -GOB Contribution | | 1,500 | | 1,500 | 750 | 750 | - | - | | 1,500 |
| SP | San Pedro Northern Ambergris Caye Water and Sewer Expansion Loan | 44,000 | | 320 | 44,320 | 11,070 | 26,450 | 4,500 | 2,300 | | 44,320 |
| BP | Sewer System Expansion and WWTP upgrade | 8,300 | | 150 | 8,450 | 4,225 | 4,225 | - | - | | 8,450 |
| PL | Placencia Peninsula Water System Upgrades | | | 2,250 | 2,250 | 400 | 500 | 600 | 700 | 50 | 2,250 |
| PL | Placencia Peninsula Detailed Design | 4,000 | | 500 | 4,500 | 2,250 | 2,250 | - | - | - | 4,500 |
| PL | Placencia Peninsula Integrated Water And Sewer Project. | **7,000** | - | 4,000 | 11,000 | | 3,500 | 3,500 | 2,000 | 2,000 | 11,000 |
| PL | Placencia Peninsua Handover | | | 75 | 75 | 75 | - | - | - | - | 75 |
| PG | Repairs to Elridgeville - Forest Home water system | | | 800 | 800 | 400 | 400 | - | - | - | 800 |
| BZ | Gardenia/Biscayne | | 1,000 | 1,200 | 2,200 | 1,000 | 1,200 | - | - | | 2,200 |
| All | Planning and Implementation of Expansion | | | 575 | 575 | 105 | 110 | 115 | 120 | 125 | 575 |
| BZ | Sibun River Water Treatment Plant and associated wroks | | | 20,000 | 20,000 | - | - | - | - | 20,000 | 20,000 |
| All | Funds to purchase BWS lands from Lease to Title Countrywide | | | 1,000 | 1,000 | 200 | 200 | 200 | 200 | 200 | 1,000 |
| | **Subtotal** | **63,300** | **2,500** | **30,870** | **96,670** | **20,475** | **39,585** | **8,915** | **5,320** | **22,375** | **96,670** |
| **Distribution Expansion - Water** | | | | | - | - | - | - | - | | - |
| SI | SI Bypass Transmission Line (Link from JAD to Loma Luz) | | | 400 | 400 | - | 200 | 200 | - | | 400 |
| BZ | Independence Boulevard Previously Chetumal Street Expansion | | | 320 | 320 | 320 | - | - | - | - | 320 |
| SP | SP-12" Transmission Line Extension | | | 900 | 900 | 300 | 300 | 300 | - | - | 900 |
| SP | SP-8" Transmission Extension South Sp | | | 300 | 300 | 300 | - | - | - | - | 300 |
| CC | North caye caulker Expansion | | | 500 | 500 | - | 250 | 250 | - | - | 500 |
| BZ | Belize City to Hattieville Link | | | 900 | 900 | 250 | 250 | 250 | 150 | - | 900 |
| BZ | Boom To Hattieville Link | | | 2,250 | 2,250 | 500 | 500 | 500 | 500 | 250 | 2,250 |
| BZ | BWS Funded Mains - Belize City | | | 2,317 | 2,317 | 437 | 450 | 463 | 477 | 490 | 2,317 |
| BP | BWS Funded Mains - Belmopan | | | 1,013 | 1,013 | 192 | 197 | 203 | 209 | 212 | 1,013 |
| BE | BWS Funded Mains - Benque | | | 344 | 344 | 65 | 67 | 69 | 71 | 73 | 344 |
| CZ | BWS Funded Mains - Corozal | | | 578 | 578 | 109 | 112 | 116 | 119 | 121 | 578 |
| DG | BWS Funded Mains - Dangriga | | | 509 | 509 | 96 | 99 | 102 | 105 | 108 | 509 |
| OW | BWS Funded Mains - Orange Walk | | | 684 | 684 | 129 | 133 | 137 | 141 | 145 | 684 |
| PG | BWS Funded Mains - Punta Gorda | | | 329 | 329 | 62 | 64 | 66 | 68 | 70 | 329 |
| SI | BWS Funded Mains - San Ignacio | | | 1,006 | 1,006 | 190 | 195 | 201 | 207 | 213 | 1,006 |
| SP | BWS Funded Mains - San Pedro | | | 180 | 180 | 34 | 35 | 36 | 37 | 38 | 180 |
| PP | BWS Funded Mains - Placencia Peninsula | | | 218 | 218 | 41 | 42 | 44 | 45 | 46 | 218 |
| CC | BWS Funded Main - Caye Caulker | | | 83 | 83 | 15 | 16 | 16 | 17 | 18 | 83 |
| SP | San Pedro River Crossing | | - | 250 | 250 | 250 | - | - | - | | 250 |
| | **Subtotal** | **-** | **-** | **13,081** | **13,081** | **3,289** | **2,910** | **2,952** | **2,146** | **1,784** | **13,081** |
| **New Service Connections - Water** | | | | | - | - | - | - | - | | - |
| BZ | New Connections Pipeline - Belize City | | | 1,237 | 1,237 | 238 | 243 | 247 | 252 | 257 | 1,237 |
| BP | New Connections Pipeline - Belmopan | | | 328 | 328 | 63 | 64 | 66 | 67 | 68 | 328 |
| CC | New Connections Pipeline - Caye Caulker | | | 55 | 55 | 11 | 10 | 11 | 11 | 12 | 55 |
| BE | New Connections Pipeline - Benque | | | 114 | 114 | 22 | 22 | 23 | 23 | 24 | 114 |
| CZ | New Connections Pipeline - Corozal | | | 285 | 285 | 55 | 56 | 57 | 58 | 59 | 285 |

**BELIZE WATER SERVICES**
**CAPITAL EXPENDITURE 2015-2020**

| District | Description | Loans | Contributions | BWS | Total | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DG | New Connections Pipeline - Dangriga | | | 180 | 180 | 35 | 35 | 36 | 37 | 38 | 180 |
| HV | New Connections Pipeline - Hattieville | | | 145 | 145 | 27 | 28 | 29 | 30 | 31 | 145 |
| OW | New Connections Pipeline - Orange Walk | | | 285 | 285 | 55 | 56 | 57 | 58 | 59 | 285 |
| PG | New Connections Pipeline - Punta Gorda | | | 128 | 128 | 24 | 25 | 25 | 26 | 27 | 128 |
| SI | New Connections Pipeline - San Ignacio | | | 354 | 354 | 68 | 70 | 71 | 72 | 73 | 354 |
| SP | New Connections Pipeline - San Pedro | | | 204 | 204 | 39 | 40 | 41 | 42 | 43 | 204 |
| EL | New Connections Pipeline - Elridge /Forest Home | | | 27 | 27 | 5 | 5 | 5 | 5 | 6 | 27 |
| PP | New Connections Pipeline - Placencia Peninsula | | | 107 | 107 | 20 | 21 | 21 | 22 | 23 | 107 |
| | **Subtotal** | **-** | **-** | **3,449** | **3,449** | **662** | **675** | **689** | **703** | **720** | **3,450** |
| **Non-Revenue Water** | | | | | - | - | - | - | - | | - |
| All | Bulk Meters for DMZ's | | | 398 | 398 | 77 | 78 | 80 | 81 | 83 | 398 |
| All | DMZ Security | | | 107 | 107 | 20 | 21 | 21 | 22 | 23 | 107 |
| All | Remote Monitoring Equipment for DMZ's | | | 90 | 90 | 17 | 18 | 18 | 18 | 19 | 90 |
| | **Subtotal** | **-** | **-** | **595** | **595** | **114** | **117** | **119** | **121** | **125** | **596** |
| **Buildings & Renovation** | | | | | - | - | - | - | - | - | - |
| **BZ** | Main Office Expansion Phase 1 | | | 350 | 350 | 175 | 175 | | | | 350 |
| **BZ** | Main Office Expansion Phase 2 | | | 1,700 | 1,700 | | | | | 1,700 | 1,700 |
| BP | Ops & Stores WTP | | | 290 | 290 | - | 125 | 125 | 10 | 10 | 270 |
| BP | New Office Belmopan | | | 1,510 | 1,510 | - | 750 | 750 | 5 | 5 | 1,510 |
| BZ | Sewer Workshop Addition | | | 150 | 150 | - | 150 | - | - | - | 150 |
| BZ | New Store Building at Mile 10 | | | 2,000 | 2,000 | - | - | | | 2,000 | 2,000 |
| BZ | Main Office refubrishment | | | 250 | 250 | 50 | 50 | 50 | 50 | 50 | 250 |
| BZ | New office at Mile 10 | | | 3,000 | 3,000 | - | - | | | 3,000 | 3,000 |
| BZ | Main Office Compound Refurbishment | | | 80 | 80 | 70 | - | - | - | 10 | 80 |
| BZ | Redevelop Mile 10 Facility | | | 2,500 | 2,500 | | | | | 2,500 | 2,500 |
| BZ | Upgrade Stores BZC HQ | | | 75 | 75 | 5 | 5 | 5 | 30 | 30 | 75 |
| BZ | Meter Lab | | | 225 | 225 | | | 100 | 125 | - | 225 |
| CC | Caye Caulker Mini Lab | | | 35 | 35 | 30 | | | | 5 | 35 |
| CC | Repaint Caye Caulker Building and minor repairing | | | 125 | 125 | 20 | 30 | 20 | 20 | 35 | 125 |
| CZ | New Office Corozal | | | 1,500 | 1,500 | - | - | - | 750 | 750 | 1,500 |
| DG | Refurbish Office Building DG | | | 130 | 130 | 10 | 70 | 10 | 10 | 30 | 130 |
| OW | New Office OW | | | 1,500 | 1,500 | | - | 750 | 750 | - | 1,500 |
| PG | Building Renovation PG | | | 230 | 230 | 150 | 10 | 10 | 10 | 50 | 230 |
| SI | Repaiting and reparing Office Building SI | | | 130 | 130 | 70 | 10 | 10 | 10 | 30 | 130 |
| SP | Operations Office, Storage and Workshop Facility - SP | | | 260 | 260 | 200 | - | - | - | 60 | 260 |
| SP | San Pedro Office Refurbishment | | | 160 | 160 | - | - | 100 | - | 60 | 160 |
| SP | San Pedro Office | | | 1,560 | 1,560 | 750 | 750 | - | - | 60 | 1,560 |
| SP | SP Pumphouse Refurbishment | | | 330 | 330 | 20 | 20 | 250 | 20 | 20 | 330 |
| | **Subtotal** | **-** | **-** | **18,090** | **18,090** | **1,550** | **2,145** | **2,180** | **1,790** | **10,405** | **18,070** |
| **Pipeline & Valve Replacement** | | | | | - | - | - | - | - | - | - |
| BZ | Replacement of Galvanized and Asbestos Mains Burrell Boom | | | 360 | 360 | 120 | 120 | 120 | - | - | 360 |
| BP | Replacement of Galvanized and Asbestos Mains Belmopan | | | 500 | 500 | 100 | 100 | 100 | 100 | 100 | 500 |
| BE | Replacement of Galvanized and Asbestos Mains Benque | | | 375 | 375 | 75 | 75 | 75 | 75 | 75 | 375 |
| CZL | Replacement of Galvanized and Asbestos Mains Corozal | | | 850 | 850 | 170 | 170 | 170 | 170 | 170 | 850 |

**BELIZE WATER SERVICES**
**CAPITAL EXPENDITURE 2015-2020**

| District | Description | Loans | Contributions | BWS | Total | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DG | Replacement of Galvanized and Asbestos Mains Dangriga | | | 750 | 750 | 150 | 150 | 150 | 150 | 150 | 750 |
| PG | Replacement of Galvanized and Asbestos Mains Punta Gorda | | | 125 | 125 | 25 | 25 | 25 | 25 | 25 | 125 |
| BZ | Replacement of Galvanized and Asbestos Mains Hattieville | | | 300 | 300 | - | - | 100 | 100 | 100 | 300 |
| BP | Replacement of thin walled PVC pipes Belmopan and Teakettle | | | 300 | 300 | - | 75 | 75 | 75 | 75 | 300 |
| CZ | Replacement of thin walled PVC pipes Corozal | | | 850 | 850 | 170 | 170 | 170 | 170 | 170 | 850 |
| SI | Replacement of thin walled PVC pipes San Ignacio | | | 600 | 600 | 150 | 150 | 150 | 150 | - | 600 |
| BE | Replacement of thin walled PVC pipes Benque | | | 300 | 300 | 75 | 75 | 75 | 75 | - | 300 |
| CZ | Transmission and Service Line Replacement Projects Corozal | | | 1,950 | 1,950 | 350 | 400 | 450 | 450 | 300 | 1,950 |
| SI | Transmission Line improvements San Ignacio | | | 1,600 | 1,600 | 300 | 300 | 300 | 300 | 400 | 1,600 |
| OW | Upgrade of main lines in Orange Walk & Trans Line | | | 2,000 | 2,000 | 400 | 400 | 400 | 400 | 400 | 2,000 |
| DG | Dangriga Transmission Main Refurbishment & Upgrade | | | 1,000 | 1,000 | 200 | 200 | 200 | 200 | 200 | 1,000 |
| BP | Upgrade Teakettle Camalote Main | | | 1,500 | 1,500 | 300 | 300 | 300 | 300 | 300 | 1,500 |
| PG | PG Transmission Line Upgrade Phase 2 | | | 800 | 800 | 800 | - | - | - | | 800 |
| BZ | Elimination of Galvanized Services Belize City North Side | | | 1,300 | 1,300 | 500 | 500 | 300 | - | | 1,300 |
| All | Replace and install Air valves Countrywide | | | 250 | 250 | 50 | 50 | 50 | 50 | 50 | 250 |
| BZ | Pipeline replacement to support Belize City Council Street Refurbishment Programme | | | 2,500 | 2,500 | 500 | 500 | 500 | 500 | 500 | 2,500 |
| BZ | Relocation, replacement, upgrade mains on Southside of Belize City (Largely used on South Side Povert Alleviation Project) | | | 625 | 625 | 125 | 125 | 125 | 125 | 125 | 625 |
| BZ | Replace 8" and 6" AC mains along Philip Goldson Highway from Haulover to Buttonwood Bay Round About. | | 1,250 | 1,250 | 2,500 | 625 | 625 | | | - | 1,250 |
| BZ | Replace 14" DI Trans Line from Haulover to Button Wood Bay Round About | | 1,000 | 1,000 | 2,000 | 500 | 500 | - | - | - | 1,000 |
| | **Subtotal** | **-** | **2,250** | **21,085** | **23,335** | **5,685** | **5,010** | **3,835** | **3,415** | **3,140** | **21,085** |
| **Raw Water Resources** | | | | | - | - | - | - | - | - | - |
| BZ | New Low Lift Pump Double Run WTP + Rebuild Pump 4 & 5 | | | 300 | 300 | 150 | 150 | - | - | - | 300 |
| BZ | New High Lift Pump Double Run WTP + electrical controls | | | 150 | 150 | 75 | 75 | | | - | 150 |
| BP | Belmopan New Intake pump and works | | | 350 | 350 | 150 | 150 | 50 | - | - | 350 |
| BP | 14" Transmission Line from Intake to Belmopan WTP | | | 500 | 500 | 500 | - | - | - | - | 500 |
| BE | BV-New Transmission from Well To Tank | | | 100 | 100 | 100 | - | - | - | - | 100 |
| CZ | Corozal District New Well - San Andres | | | 150 | 150 | 150 | - | - | - | - | 150 |
| CZ | Calcutta New Well and Upgrade | | | 300 | 300 | | 150 | 150 | | - | 300 |
| CZ | Corozal District Santa Rita Electrical Upgrade | | | 150 | 150 | 75 | 75 | | | - | 150 |
| OW | Orange Walk New well | | | 500 | 500 | 100 | 100 | 100 | 100 | 100 | 500 |
| PG | Develop BDF PG Well #2 | | | 100 | 100 | 50 | 50 | - | - | - | 100 |
| PP | Placencia-New Transmission Line | | | 750 | 750 | - | 375 | 375 | - | - | 750 |
| PP | Placencia-New well Source | | | 1,010 | 1,010 | 750 | 65 | 65 | 65 | 65 | 1,010 |
| SI | SI Infiltration Gallery | | | 250 | 250 | - | - | - | 125 | 125 | 250 |
| SI | Install 15 HP Back-up Pump | | | 60 | 60 | 30 | 30 | | | - | 60 |

**BELIZE WATER SERVICES**
**CAPITAL EXPENDITURE 2015-2020**

| District | Description | Loans | Contributions | BWS | Total | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SI | Install 30 HP at Reservoir | | | 75 | 75 | | 35 | 30 | | - | 65 |
| All | Wellmaster Hose System for wells | | | 50 | 50 | - | 50 | - | - | - | 50 |
| BP | Refurbish Belmopan Intake to prevent silting and leaf build up on pumps | | | 250 | 250 | 100 | 100 | 50 | - | - | 250 |
| DG | New Dangriga Raft & Intake Works | | | 50 | 50 | - | - | - | - | 50 | 50 |
| DG | Dangriga Intake and rear fence including Sheet Piling | | | 500 | 500 | 250 | 250 | - | - | - | 500 |
| BV | Benque Viejo Generator & Trasfer Switch | | | 75 | 75 | 75 | | | | - | 75 |
| SB | Upgrade Elevated Storage + Gen Set & Building | | | 300 | 300 | 150 | 150 | - | - | - | 300 |
| SP | New Radiator Piping & Hoses | | | 20 | 20 | 20 | | | | - | 20 |
| SP | Install New 30 HP With Piping | | | 55 | 55 | | | 55 | | - | 55 |
| CC | Install Backup Flush Pump & Motor | | | 30 | 30 | | | 30 | | - | 30 |
| CC | 125 HP Speed Drive | | | 20 | 20 | | | | | 20 | 20 |
| | **Subtotal** | **-** | **-** | **6,095** | **6,095** | **2,725** | **1,805** | **905** | **290** | **360** | **6,085** |
| **Renewal Mains & Services** | | | | | - | - | - | - | - | | - |
| BZ | Replacement and Upgrade of Transmission and Distribution System BZC | | | 1,380 | 1,380 | 260 | 268 | 276 | 284 | 293 | 1,380 |
| BP | Belmopan Upgrade of Distribution Mains | | | 270 | 270 | 50 | 50 | 55 | 55 | 60 | 270 |
| BE | Upgrade and Replace Benque Distribution Mains | | | 75 | 75 | 15 | 15 | 15 | 15 | 15 | 75 |
| DG | Dangriga Upgrade of Distribution Mains | | | 170 | 170 | 30 | 30 | 35 | 35 | 40 | 170 |
| PG | Upgrade and Replace PG Transmission and Distribution Lines | | | 70 | 70 | 10 | 10 | 15 | 15 | 20 | 70 |
| SI | Upgrade and replacement of mains in Cayo | | | 220 | 220 | 40 | 40 | 45 | 45 | 50 | 220 |
| SP | Upgrade and Replacement of Water Lines San Pedro | | | 625 | 625 | 455 | 40 | 40 | 45 | 45 | 625 |
| SP | Upgrade and Replacement of Water Lines San Mateo | | | 400 | 400 | 400 | - | - | - | - | 400 |
| OW | Upgrade and Replacement of Water Lines Orange Walk Regular | | | 170 | 170 | 30 | 30 | 35 | 35 | 40 | 170 |
| PP | Upgrade and Replacement of Water Lines | | | 145 | 145 | 25 | 25 | 30 | 30 | 35 | 145 |
| CZ | Upgrade and Replacement of Water Lines | | | 170 | 170 | 30 | 30 | 35 | 35 | 40 | 170 |
| | **Subtotal** | **-** | **-** | **3,695** | **3,695** | **1,345** | **538** | **581** | **594** | **638** | **3,695** |
| **Reservoirs & Boosters** | | | | | - | - | - | - | - | | - |
| BE | Benque/Succotz Ground Storage Reservoir | | | 1,500 | 1,500 | - | - | - | - | 1,500 | 1,500 |
| PP | Commission Seine Bight Water Tank | | | 100 | 100 | 50 | 50 | - | - | - | 100 |
| PG | 150k Gal Ground Water Tank & Pump Station | | | 1,000 | 1,000 | - | - | - | 500 | 500 | 1,000 |
| SI | Refurbishment of Main water Storage Reservoir | | | 150 | 150 | 150 | - | - | - | - | 150 |
| SI | Standby Pumps for Santa Cruz and Cahal Pech | | | | - | - | - | - | - | - | - |
| SI | 500k Gal New Ground Storage San Ignacio | | | 1,500 | 1,500 | 750 | 750 | - | - | - | 1,500 |
| DG | 150k Gal New Clear Well | | | 500 | 500 | - | - | 250 | 250 | - | 500 |
| OW | Ground Water Chlorine Treatment Storage for Orange Walk 20K Gallons ( Contact Time Underground Pipe Works) | | | 100 | 100 | 100 | - | - | - | - | 100 |
| CZ | Ground Water Chlorine Treatment Storage for Corozal Santa Rita and Calcutta 20K Gallons ( Contact Time Underground Pipe Works) | | | 100 | 100 | - | 100 | - | - | - | 100 |
| BZ | Ground Water Chlorine Treatment Storage for Hattieville 20K Gallons ( Contact Time Underground Pipe Works) | | | 100 | 100 | | - | 100 | - | - | 100 |
| BP | Storage for Teakettle 20K Gallons ( Contact Time Underground Pipe Works) | | | 100 | 100 | - | | - | 100 | - | 100 |
| SI | San Ignacio Water Reservoir pump upgrade | | | 400 | 400 | - | - | | 200 | 200 | 400 |

**BELIZE WATER SERVICES**
**CAPITAL EXPENDITURE 2015-2020**

| District | Description | Loans | Contributions | BWS | Total | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Subtotal** | **-** | **-** | **5,550** | **5,550** | **1,050** | **900** | **350** | **1,050** | **2,200** | **5,550** |
| **Fencing and security** | | | | | - | - | - | - | - | - | - |
| SP | Surveillance & Alarm System (Reservoir Stn) | | | 40 | 40 | 20 | 20 | | | | 40 |
| PG | Surveillance & Alarm System (Two Pump Stns) | | | 60 | 60 | 30 | 30 | | | | 60 |
| PG | Surveillance & Alarm System (FH/EL) | | | 40 | 40 | 20 | 20 | | | | 40 |
| DG | Upgrade/replace Surveillance Systems (WTP) | | | 40 | 40 | 20 | 20 | | | | 40 |
| CZ | Surveillance & Alarm System (3 Production Stns) | | | 110 | 110 | 22 | 22 | 22 | 22 | 22 | 110 |
| OW | Surveillance & Alarm System (2 Production Stns) | | | 80 | 80 | 40 | 40 | | | | 80 |
| BV | Surveillance & Alarm System (2 Production Stns) | | | 80 | 80 | 40 | 40 | | | | 80 |
| PP | Surveillance & Alarm System (1 Production Stns) | | | 40 | 40 | 20 | 20 | | | | 40 |
| BZ | NEW Surveillance & Alarm System (WTP) | | | 100 | 100 | 20 | 20 | 20 | 20 | 20 | 100 |
| BZ | Surveillance & Alarm System (GR Production Stn) | | | 30 | 30 | 30 | | | | | 30 |
| BZ | NEW Upgraded Surveillance System (Office Compound) | | | 180 | 180 | 40 | 35 | 35 | 35 | 35 | 180 |
| SI | Surveillance & Alarm System (WTP) | | | 40 | 40 | 20 | 20 | | | | 40 |
| BP | Upgrade Surveillance Systems (WTP) | | | 30 | 30 | 30 | | | | | 30 |
| BP | Surveillance & Alarm System (Intake) | | | 30 | 30 | 30 | | | | | 30 |
| BP | Surveillance & Alarm System (Teakettle) | | | 30 | 30 | 30 | | | | | 30 |
| ALL | Upgrade Surveillance Systems (Offices) | | | 250 | 250 | 50 | 50 | 50 | 50 | 50 | 250 |
| BP | Teakettle Old Well New Fence | | | 50 | 50 | 50 | - | - | - | - | 50 |
| CZ | San Andres New Well Site Fence | | | 30 | 30 | 30 | - | - | - | - | 30 |
| BP | Belmopan Intake New Fence | | | 140 | 140 | 140 | - | - | - | - | 140 |
| SI | Cahal Pech Tank Fencing | | | 30 | 30 | 30 | - | - | - | - | 30 |
| SP | San Pedro reservoir Fencing repair | | | 40 | 40 | 40 | - | - | - | - | 40 |
| SP | San Pedro Office Fencing | | | 60 | 60 | 60 | - | - | - | - | 60 |
| | **Subtotal** | **-** | **-** | **1,530** | **1,530** | **812** | **337** | **127** | **127** | **127** | **1,530** |
| **Sewer Costs Paid for By BWS** | | | | | - | - | - | - | - | - | - |
| BZ | Sewer Costs paid for by BWS - Belize City | | | 145 | 145 | 25 | 25 | 30 | 30 | 35 | 145 |
| BE | Sewer Costs paid for by BWS - Belmopan | | | 95 | 95 | 15 | 15 | 20 | 20 | 25 | 95 |
| SP | Sewer Costs paid for by BWS - San Pedro | | | 95 | 95 | 15 | 15 | 20 | 20 | 25 | 95 |
| | **Subtotal** | **-** | **-** | **335** | **335** | **55** | **55** | **70** | **70** | **85** | **335** |
| **Sewer Expansion** | | | | | - | - | - | - | - | | - |
| All | Sewer System Expansion Paid By BWS | | | 1,100 | 1,100 | 100 | 250 | 250 | 250 | 250 | 1,100 |
| | **Subtotal** | **-** | **-** | **1,100** | **1,100** | **100** | **250** | **250** | **250** | **250** | **1,100** |
| **Collection & Treatment Works - Sewage** | | | | | - | - | - | - | - | - | - |
| BZ | Install new lagoon and pipe work | | | 4,500 | 4,500 | - | 2,250 | 2,250 | - | - | 4,500 |
| BZ | Manhole Refurbishment BZ | | | 125 | 125 | 25 | 25 | 25 | 25 | 25 | 125 |
| BZ | New Control Panels other BZ sewer stations (Minor Stations) | | | 250 | 250 | 50 | 50 | 50 | 50 | 50 | 250 |
| BZ | Automatic Control System for S4, S6, N2 and N4 (Major Stations) | | | 800 | 800 | - | 400 | 400 | - | - | 800 |
| BP | Manhole Refurbishment BP | | | 50 | 50 | 10 | 10 | 10 | 10 | 10 | 50 |
| BP | Belmopan New Sewage Treatment Plant & Network Expansion | 30,000 | | 30,000 | 30,000 | - | - | - | - | 30,000 | 30,000 |
| SP | Provision of Tertiary Treatment for SP lagoons | | | 500 | 500 | - | - | - | 250 | 250 | 500 |
| BZ | Prepare Mangrove to provide Tertiary Treatment | | | 200 | 200 | - | - | 150 | 50 | - | 200 |
| BP | Replacement of pitch fibre sewermains Ph 1 | | | 1,050 | 1,050 | | | 350 | 350 | 350 | 1,050 |
| All | Replcement of sewer pumps/motors (mother stns) | | | 400 | 400 | 130 | 130 | 140 | | - | 400 |

**BELIZE WATER SERVICES**
**CAPITAL EXPENDITURE 2015-2020**

| District | Description | Loans | Contributions | BWS | Total | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Subtotal** | **30,000** | **-** | **37,875** | **37,875** | **215** | **2,865** | **3,375** | **735** | **30,685** | **37,875** |
| **Water Quality** | | | | | - | - | - | - | - | - | - |
| BZ | Rockville Sea Quest | | | 90 | 90 | 90 | | | | | 90 |
| All | New & Replacement Equipment for Laboratory | | | 500 | 500 | 100 | 100 | 100 | 100 | 100 | 500 |
| All | Graphite Furnace Atomic Absorption Spect (GFAAS) - Heavy Metals | | | 125 | 125 | 125 | | | | - | 125 |
| All | Field Monitoring Equipment including 20 Automatic Purging Valves | | | 700 | 700 | 140 | 140 | 140 | 140 | 140 | 700 |
| All | Online meters (ph,Turbidity, Conductivity, Chlorine, | | | 50 | 50 | 10 | 10 | 10 | 10 | 10 | 50 |
| CC | New Lab Equipment | | | 60 | 60 | | 30 | 30 | | - | 60 |
| BP | Laboratory Equipment Belmopan | | | 40 | 40 | - | 20 | - | 20 | - | 40 |
| DG | Laboratory Equipment Dangriga | | | 40 | 40 | - | 20 | - | 20 | - | 40 |
| | **Subtotal** | **-** | **-** | **1,605** | **1,605** | **465** | **320** | **280** | **290** | **250** | **1,605** |
| **Water Treatment Works Electrical** | | | | | - | - | - | - | - | - | - |
| All | Lightening and enhanced Earth Protections | | | 125 | 125 | 25 | 25 | 25 | 25 | 25 | 125 |
| SP | Replace San Pedro Generator | | | 250 | 250 | 125 | 125 | - | - | - | 250 |
| BP | Teakettle Generator & Electrical Accessories | | | 140 | 140 | 70 | 70 | - | - | - | 140 |
| BE | Benque Standby Generator | | | 200 | 200 | 100 | 100 | - | - | - | 200 |
| CZ | Corozal Generator (Calcutta) | | | 100 | 100 | 50 | 50 | - | - | - | 100 |
| PL | Generator & Electrical | | | 140 | 140 | 70 | 70 | - | - | - | 140 |
| SB | Generator & Electrical | | | 140 | 140 | 70 | 70 | - | - | - | 140 |
| CC | Generator & Electrical | | | 140 | 140 | 70 | 70 | | | - | 140 |
| PL | Upgrade Placencia System electrics | | | 75 | 75 | 75 | - | - | - | - | 75 |
| SI | San Ignacio Standby Generator | | | 150 | 150 | 150 | - | - | - | - | 150 |
| SI | Upgrade SI electrical installation | | | 200 | 200 | 100 | 100 | - | - | - | 200 |
| | **Subtotal** | **-** | **-** | **1,660** | **1,660** | **905** | **680** | **25** | **25** | **25** | **1,660** |
| **Water Treatment Works Production** | | | | | - | - | - | - | - | | - |
| BZ | New Treated Water Booster Pumps (High Lift) | | | 708 | 708 | - | 308 | - | - | 400 | 708 |
| BP | General Refurbishment and Paint Belmopan WTP | | | 150 | 150 | 150 | - | - | - | | 150 |
| CZ | New San Andres Generator Building including Chlorinator & Electrical Room | | | 100 | 100 | 50 | 50 | | | | 100 |
| BP | New Teakettle Generator Building including Chlorinator & Electrical Room | | | 100 | 100 | 50 | 50 | | | | 100 |
| BE | New Benque Viejo Generator Building including Chlorinator & Electrical Room | | | 100 | 100 | 50 | 50 | | | | 100 |
| SB | New Seine Bight Generator Building including Chlorinator & Electrical Room | | | 100 | 100 | 50 | 50 | | | | 100 |
| PP | New Placencia Generator Building including Chlorinator & Electrical Room | | | 100 | 100 | 50 | 50 | | | | 100 |
| CZ | New Calcutta Generator Building including Chlorinator & Electrical Room | | | 100 | 100 | 50 | 50 | - | - | | 100 |
| DG | Dangriga Intake Works | | | 50 | 50 | - | - | - | - | 50 | 50 |
| DG | Dangriga WTP Building Refurbishment | | | 250 | 250 | 35 | 215 | - | - | | 250 |
| DG | Dangriga WTP New Filters and Pipework | | | 200 | 200 | 200 | - | - | - | | 200 |
| DG | Tube Settlers and Sludge Removal System | | | 300 | 300 | - | - | | 150 | 150 | 300 |
| OW | Water Treatment Plant for Orange Walk | | | 5,000 | 5,000 | - | - | - | 2,500 | 2,500 | 5,000 |
| SI | Water Treatment Plant to remove Manganese and Iron from Source Water SI at current Location | | | 2,000 | 2,000 | - | 500 | 500 | 500 | 500 | 2,000 |

**BELIZE WATER SERVICES**
**CAPITAL EXPENDITURE 2015-2020**

| District | Description | Loans | Contributions | BWS | Total | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SI | Cristo Rey Treatment Plant | | | 12,100 | 12,100 | | | - | - | 12,100 | 12,100 |
| | **Subtotal** | - | - | **21,358** | **21,358** | **685** | **1,323** | **500** | **3,150** | **15,700** | **21,358** |
| | **Other CapEX** | | | | | | | | | | |
| All | **IT Hardware, Network & Software Capex** | | | **5,231** | **5,231** | **2,893** | **787** | **727** | **377** | **447** | **5,231** |
| All | **Vehicles & Heavy Duty Equipment** | | | **5,400** | **5,400** | **4,178** | **664** | **720** | **460** | **660** | **6,682** |
| All | **Operations - Plant and Equipment** | | | **495** | **495** | **85** | **120** | **135** | **70** | **85** | **495** |
| | **Subtotal** | | | **5,231** | **5,231** | **2,893** | **787** | **727** | **377** | **447** | **5,231** |
| | **TOTAL** | **93,300** | **4,750** | **179,099** | **247,149** | **47,288** | **61,085** | **26,735** | **20,984** | **90,061** | **246,152** |

# Appendix V – Description of Proposed Regulatory Changes

# BWS - PROPOSED REGULATORY CHANGES

## Background:

Belize Water Services Limited ("BWS") provides potable water to the nine major municipal areas and adjacent villages, and sewerage services to three of these areas. Over the last six years, BWS has improved its efficiency and implemented improved cost control. These improvements along with the 2004/2005 tariff increases have helped the company to attain some profitability. However, the company is unable to generate enough cash flow from operations currently to meet its asset investment (expansion) and dividend commitments. It is worth noting that minority shareholders have been incessantly agitating for dividends. The regulatory changes proposed below should help to assist the company with earning additional, or collecting outstanding, revenues and cash thereby reducing the quantum of future tariff increases.

## History:

BWS was formed in January 2001 and vested with the assets and liabilities of the former Water and Sewerage Authority in March 2001. BWS has a 25-year operating license, effective from March 2001 through to March 2026. Under the Cascal majority-ownership, Cascal had requested changes to the legal infrastructure and the Government had suggested that Cascal submit proposed draft changes. Since then, BWS, which is now under renewed Government ownership, has been requested to, as much as possible, minimize tariff increases. The Government has promised consider other means of assisting the company to achieve financial viability and the company has been requested to suggest regulatory changes which can assist it with improving efficiency, revenue and collections.

## Regulatory Framework:

The regulations regarding the Water Industry include the Water Industry Act, 2001 ("WIA"), a detailed License issued by the PUC as authorised under the WIA, various Statutory Instruments ("SI's"), and a "Codes of Practice" ("CoP") which was mandated by the WIA and the License, and agreed by the Regulator and the BWS in 2004. There are several areas where the regulations, through silence, ambiguity or original approach, are hindering the efficiency or financial performance of BWS and where appropriate changes in the regulations could assist greatly in improving the performance of the company.

## Suggested Regulatory Changes:

The following items have been identified for regulatory changes to meet the objectives identified. Appendix 1 contains a more detailed explanation of each. Based on legal advice received, the majority of these changes can be implemented by Statutory Instruments initiated by the PUC. The "Recommendations/Conclusions" column was inserted after a review with Mr. Gian Gandhi in November 2007.

| No. | **Short Description**<br>***Current Regulations*** | **Recommended Regulatory Changes** |
|---|---|---|
| 1 | **Classification of Customers**<br><br>*Current Legislation*<br><br>*WIA, SI (existing tariffs – fee & deposit structure) and Codes of Practice* | Currently customers are categorised as either "Residential" or "Non-Residential". BWS recommends some further classifications to include: Residential, Government, Essential Services, Commercial, and Other (e.g. NGOs, Churches, etc.). These will provide some needed flexibility allowing BWS to identify and handle special needs or key customers and will support charging of tariffs and fees to those customers who can afford it. |
| 2 | **Infrastructure Costs**<br><br>*Current Legislation*<br><br>*SI 42/2001 and schedule 2 of SI 67/2002 - (New Property Development) Currently a one time ($150 - Water and $1,695 - Sewerage) infrastructure fee is payable for each connection in newly expanded areas.* | As a result of the overwhelming cost associated with these connections, BWSL would like to repeal SI 42/2001 and amend schedule 2 of SI 67/2002, "New property developments," to place the onus of the infrastructure on the developer. 2 Models are suggested:<br><br>**Natural Progression:**<br>Whenever new streets are created or planned street without mains are filled or refilled, the developer will be responsible to ensure that the water and/or sewerage infrastructure works are put in place to the satisfaction of BWSL.<br><br>Also certain areas like North Ambergris Caye, to be declared **Special Development Area** (SDA) and individual property developers to pay associated costs with option for rebate of portion from subsequent new customers who connect to line funded by their payment. SPA status to be reviewed by PUC as part of each 5-year Business Plan Review. |

| | | |
|---|---|---|
| 3 | **Security Deposits**<br>SI 102/2004 and Codes of Practice under the disconnection Code. This requires $50 deposit for residential customers and $200 deposit to non-residential. Where a customer is disconnected for non-payment to bills more than twice within a 12 month period, the security deposit is increased to 3 times the average monthly bill (rounded up to nearest $10.00) | For new non-residential customers excluding Government: initial deposit should be two times their expected monthly consumption.<br><br>For all customers: Option to reduce "increased" deposits back to 'normal' after a period (12 months) of successful payment history.<br><br>Average customer bill to be based on 12 months consumption due to seasonal nature of consumption (dry season consumption may be several times higher than rainy season). |
| 4 | **Late Fees/Finance Charges**<br><br>The regulations currently do not allow this. At present BWSL' only resort is disconnection and customers are charged a $25 reconnection fee. | For customers whose security deposit are adequate to cover their outstanding bill, once payment is overdue by 7 days, then: Residential Customers: a late fee ($10). All other customers: Late fee ($10) plus Finance Charge (at commercial rates: 2% per month). |
| 5 | **Optional Services and Fees**<br><br>The regulations currently do not allow these. | These are services which customers will initially agree to and which BWSL will provide, possibly for a fee. Examples are:<br>- E-mailed bills instead of hard copy, proposed free with possible charge if customer wishes both<br>- Optional reminders to customers<br>- Optional shut off and turn on of services<br>- Flushing of lines<br>- Relocation of pipes, meters, etc.<br>Fees to be determined by BWSL based on cost plus mark up. |

| | | |
|---|---|---|
| 6 | **Backflow Prevention Devices**<br><br>The regulations are currently silent regarding this, although the Codes of Practice specify that "*where BWSL water supply is connected into a customer storage reservoir, the reservoir is to be installed in such a way as to avoid backflow into the BWSL systems, especially if the reservoir is supplied to another source such as well or rain water*". | There are obvious health and legal aspects to this situation and BWSL feels that the best solution is for standards requiring the installation of backflow prevention devices be prescribed in an SI instituted by the PUC. BWSL be authorized to install backflow prevention devices and charge designated fees where a customer has not performed and installation within a specified time or where the customer requests that BWSL performs the installation. The fee would be dependent on the connection size and could be finalized with input from the PUC. |
| 7 | **Commercial Abstraction Licenses and Charges**<br><br>*No legislation exists, other than those relating to water extraction licenses.* | A new water resource bill is currently being finalised, which would establish a National Water Resources Commission ("NWRC") with responsibility for the protection of this valuable resource including the responsibility of issuing water abstraction licenses. BWS, along with the PUC, should coordinate with the pro-tem NWRC committee, to agree restrictions on the issuing of abstraction licenses within BWS or other (rural) service areas and where licenses are issued for commercial purposes, then the conditions can be placed to mandate connection to the existing supply for water to be used for consumption purposes unless that entity can guarantee water quality. |
| 8 | **Illegal Connections**<br>Water Industry Act 2001 Sections 105(1) and 105 (1 and 2)<br>The legislation indicates that any theft is a criminal offence and that the Licensee (the Company) has to collect any amounts due as a civil debt against the person(s) who tampered or illegally connected.<br><br>The current problem is to prove who committed the act. | The responsibility should shift to the consumer benefiting from the usage. BWSL will assess and bill the usage plus costs. BWSL wishes to ensure that penalties exist (e.g., interest for payments delays). Only in cases of default of payment or if the connection is by non-customers would criminal and civil charges be the course of action.<br>Also to facilitate collections of outstanding debts, to make owners of premises in any event liable for the payment of water usage assessment and charges relating to the detection and removal of illegal connections and to constitute such rates as statutory charges on the premises. |

| | | |
|---|---|---|
| 9 | **<u>Leaks</u>**<br>License (which was granted under Section 15 of the Water Industry Act, 2001) and are embodied in the Leakage Code (Part of the Codes of Practice).<br><br>For Residential Customers: Bills to be adjusted to average bill if leak is not due to negligence. This places the onus on the company to prove that customers are 'negligent' in order to be able to charge them for leaks within their premises. | For Residential Customers: In cases where a residential customer's consumption due to leaks (not caused or left unchecked by clear negligence on the part of the customer or his agent) exceeds a limit of two and a half times their monthly average or 3,000 gallons (whichever is higher) BWSL to absorb the loss above the limit up to a maximum total consumption of five times the monthly average consumption or 6,000 gals (whichever is higher); amounts thereafter to be split 50/50.<br><br>All other customers will be expected to be fully responsible for all plumbing problems within their premises and pay full cost of all correctly metered water. |
| 10 | **<u>Licensing and Certification of Plumbers</u>**<br><br>No regulations exist. | PUC to perform certification and licensing of plumbers, and to charge a fee for such. This will allow for the implementation of proper plumbing standards and will help protect customers from 'unqualified' plumbers. Additionally, it will assist with control over plumbers who persistently part-take in establishing illegal connections.<br><br>This legislation can be modeled on that regarding licensed electricians. |

# Appendix VI – Business Plan Outputs

**BELIZE WATER SERVICES LIMITED**

**Summary of Five Year Business Plan Budget Outputs ($ '000)**

| | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|---|---|---|---|---|---|---|
| | Cur. Yr. | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Total Sales Revenue | $40,189 | $44,130 | $44,777 | $49,726 | $51,437 | $51,901 |
| Total Expenses | $35,505 | $37,324 | $40,997 | $44,037 | $46,824 | $47,542 |
| Profit | $4,684 | $6,806 | $3,780 | $5,689 | $4,613 | $4,359 |
| Cash Balance | $5,312 | $7,719 | $7,128 | $2,392 | $3,956 | $3,678 |
| Cap Ex Proposed | | $47,288 | $61,085 | $26,735 | $20,984 | $90,061 |
| Forced Reduction in Capex | | $18,915 | $12,217 | $10,694 | $14,689 | $81,055 |
| Net CapEx | | $28,373 | $48,868 | $16,041 | $6,295 | $9,006 |
| Third-Party and Loans Funding | | $25,320 | $43,030 | $4,500 | $2,300 | $3,301 |
| BWS Funded CapEx | | $3,053 | $5,838 | $11,541 | $3,995 | $5,705 |

# Belize Water Services Ltd.

## Dashboard Summary

| Bz$ 000's | Budget Year 1 Year End | Budget Year 2 Year End | Budget Year 3 Year End | Budget Year 4 Year End | Budget Year 5 Year End |
|---|---|---|---|---|---|
| Financial Year | 15 | 16 | 17 | 18 | 19 |
| STATEMENT OF INCOME | Mar-16 | Mar-17 | Mar-18 | Mar-19 | Mar-20 |
| Water supply and treatment | 43,901 | 44,544 | 49,488 | 51,194 | 51,653 |
| Contracting, other suppl. and services | 229 | 233 | 238 | 243 | 248 |
| NET TURNOVER | 44,130 | 44,777 | 49,726 | 51,437 | 51,901 |
| Materials and other external cost | (9,331) | (10,241) | (10,561) | (10,884) | (11,143) |
| Staff costs | (9,015) | (9,474) | (9,689) | (9,931) | (10,105) |
| Other operating charges | (9,879) | (10,056) | (10,133) | (10,336) | (10,542) |
| OPERATING EXPENSES | (28,225) | (29,771) | (30,383) | (31,151) | (31,790) |
| EBITDA | 15,905 | 15,006 | 19,343 | 20,286 | 20,111 |
| Depreciation | (6,063) | (7,847) | (8,385) | (8,589) | (8,839) |
| Financial income and expense | (2,051) | (2,380) | (4,158) | (5,936) | (5,754) |
| Taxation | (985) | (999) | (1,111) | (1,148) | (1,159) |
| PROFIT (LOSS) | 6,806 | 3,780 | 5,689 | 4,613 | 4,359 |
| | | | | | |
| BALANCE SHEET | Mar-16 | Mar-17 | Mar-18 | Mar-19 | Mar-20 |
| Tangible fixed assets | 156,680 | 169,881 | 172,959 | 168,423 | 165,346 |
| TOTAL FIXED ASSETS | 156,680 | 169,881 | 172,959 | 168,423 | 165,346 |
| Stocks and work in progress | 7,224 | 7,724 | 7,524 | 7,524 | 7,124 |
| Debtors | 4,737 | 4,289 | 4,342 | 4,361 | 4,369 |
| Cash at bank and in hand | 7,719 | 7,128 | 2,392 | 3,956 | 3,678 |
| TOTAL CURRENT ASSETS | 19,680 | 19,141 | 14,258 | 15,841 | 15,171 |
| TOTAL ASSETS | 176,360 | 189,022 | 187,217 | 184,264 | 180,517 |
| Shareholders' equity | 117,857 | 121,636 | 127,327 | 131,941 | 136,301 |
| Provisions and deferred income | 9,785 | 9,785 | 9,785 | 9,785 | 9,785 |
| Long term liabilities | 38,737 | 48,327 | 42,420 | 36,195 | 29,889 |
| Current liabilities | 9,981 | 9,270 | 7,683 | 6,341 | 4,540 |
| TOTAL SHAREH. EQUITY AND LIABILITY | 176,360 | 189,018 | 187,215 | 184,262 | 180,515 |

# BELIZE WATER SERVICES
# CASH FLOW PROJECTIONS

(Amounts in $'000)

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
| **Opening Cash Balance** | **5,311** | **7,718** | **7,129** | **2,393** | **3,958** |
| **Receipts** | | | | | |
| trading | 43,587 | 44,574 | 49,476 | 51,203 | 51,695 |
| loans | 11,250 | 15,150 | - | - | - |
| interest | 8 | - | - | - | - |
| other | 14,238 | 28,031 | 4,636 | 2,422 | 3,411 |
| **Total Receipts** | **69,083** | **87,755** | **54,112** | **53,625** | **55,106** |
| **Payments** | | | | | |
| operating & overhead costs | (30,495) | (31,071) | (32,423) | (33,016) | (34,074) |
| tax | (764) | (777) | (864) | (893) | (901) |
| capital expenditure | (27,873) | (49,368) | (15,841) | (6,295) | (8,606) |
| loan (redemption) | (4,971) | (4,640) | (5,906) | (6,226) | (6,306) |
| interest | (2,070) | (1,985) | (3,816) | (5,632) | (5,498) |
| Dividends* | (505) | (505) | - | - | - |
| Rounding Differences | 2 | 2 | 2 | 2 | 2 |
| **Total Payments** | **(66,676)** | **(88,344)** | **(58,848)** | **(52,060)** | **(55,383)** |
| **Closing Cash Balance** | **7,718** | **7,129** | **2,393** | **3,958** | **3,681** |