Review of WASCO’s Tariff Application to the National Utility Regulatory Committee

Institutional and Organizational Strengthening of WASCO
Saint Lucia and Regional Water Utilities

Saint Lucia

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| Consultant | JOINT VENTURE  
CONSULAQUA Beratungsgesellschaft mbH - Como Consult GmbH  
CONSULAQUA Beratungsgesellschaft mbH Hamburg  
Ausschläger Elbdeich 2, D-20539 Hamburg, Germany  
Como Consult GmbH,  
Winterstraße 4-8, D-22765 Hamburg |
| Contacts for this report | Jan Willem Overbeek  
j.w.overbeek@gmail.com  
De Jong, Cornelis  
cornelis.dejong@consulaqua.de  
Maume, Antje  
antje.maume@como-consult.de |
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<tr>
<td>CAH</td>
<td>CONSULAQUA Hamburg Beratungsgesellschaft mbH</td>
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<td>CARICOM</td>
<td>Caribbean Community and Common Market</td>
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<td>CARPHA</td>
<td>Caribbean Public Health Agency</td>
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<td>CATS</td>
<td>Caribbean Aqua-Terrestrial Solutions</td>
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<td>CAWASA</td>
<td>Caribbean Water &amp; Sewerage Association Inc.</td>
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<tr>
<td>CD</td>
<td>Capacity Development</td>
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<td>Como</td>
<td>Como Consult GmbH</td>
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<td>CS</td>
<td>Customer Services</td>
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<tr>
<td>GIS</td>
<td>Geographic Information System</td>
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<tr>
<td>GIZ</td>
<td>Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH</td>
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<tr>
<td>HM</td>
<td>Hydraulic Modelling</td>
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<td>HR</td>
<td>Human Resources</td>
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<td>HW</td>
<td>HAMBURG WASSER</td>
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<td>ISO</td>
<td>International Organisation for Standardisation</td>
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<tr>
<td>KPI</td>
<td>Key Performance Indicator(s)</td>
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<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<td>NRW</td>
<td>Non-Revenue Water</td>
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<tr>
<td>NURC</td>
<td>National Utilities Regulatory Commission</td>
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<tr>
<td>O&amp;M</td>
<td>Operation and Maintenance</td>
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<tr>
<td>OD</td>
<td>Organisational Development</td>
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<tr>
<td>PC</td>
<td>Project Coordinator</td>
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<td>SOP</td>
<td>Standard Operating Procedure(s)</td>
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<td>STA</td>
<td>Strategic Alliance for Water Loss Reduction</td>
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<tr>
<td>ToR</td>
<td>Terms of Reference</td>
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<td>ToT</td>
<td>Training of Trainer(s)</td>
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<td>WASCO</td>
<td>Water and Sewerage Company Inc.</td>
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1 INTRODUCTION

The project “Institutional and Organizational Strengthening of WASCO Saint Lucia and Regional Water Utilities” started on the 1st of November 2018 and will have a duration of 13 months. It is carried out by a joint venture between CONSULAQUA Hamburg and COMO Consult from Germany. The firms VAG and SEWERIN are involved as sub-consultants for the project.

The project is part of the Caribbean Aqua-Terrestrial Solutions (CATS) programme, which is implemented in collaboration between the Caribbean Public Health Agency (CARPHA) and the “Gesellschaft für Internationale Zusammenarbeit” (GIZ) of Germany. The programme’s donor agency is the German Federal Ministry of Economic Cooperation and Development.

Activity A.2.3 of the ToR for the project is formulated as follows:

“Review of arrangements for meeting legal obligations to the Water Utility Regulator, particularly in relation to tariff increases and identification of potential improvements and strategy for application of new tariffs”.

This report presents the results of this task and consist of

i) A description of the legal basis and rationale for regulation of water tariffs in Saint Lucia, and

ii) A review of WASCO’s Triennial Tariff Adjustment Application for the period September 1, 2019 to August 31, 2022, which was submitted to the National Utilities Regulatory Commission (NURC) in April 2019.

iii) Recommendations for strengthening the capacity of WASCO for submitting tariff applications.

Regarding the current Tariff Application of April 2019, WASCO has not yet received any response from the NURC. The main reason for this appears to be that the NURC is still awaiting the audited financial reports of WASCO. This report is still under preparation with WASCO’s auditors.

To discuss a preliminary review of WASCO’s Tariff Application and in preparation for this report, the consultant conducted a mini workshop in July 2019 with the members of the Working Group within WASCO who were involved in preparing WASCO’s current Tariff Application. During the workshop, the recent application was reviewed, and the main issues were discussed.

2 LEGAL BASIS AND RATIONALE FOR REGULATION

Like many other water utilities, WASCO has a natural monopoly for potable water and wastewater services. In order to ensure that water and wastewater services are provided in an efficient manner and to protect the interests of consumers, the government has established the National Utilities Regulatory Commission (NURC). The NURC was established by the National Utilities Regulatory Commission Act of 2016, which is regulating water supply services, sewerage services and electricity supply services in Saint Lucia by:

1. Ensuring and promoting the economic regulation of utility supply services;
2. establishing, approving, monitoring and reviewing tariff schemes and tariffs;
3. monitoring and ensuring compliance with standards;
4. ensuring the protection of the interest of consumers in relation to the provisions of the utility supply service;
5. promoting competition and monitoring anti-competitive practices in the utility supply service; and
6. reporting to and advising the Minister with responsibility for Public Utilities on the economic, financial, legal, technical, environmental and social aspects of utility supply services.

As the economic regulator for water supply and sewerage services, the NURC is responsible for establishing, approving, reviewing and monitoring tariff schemes and tariffs in accordance with the Water and Sewerage Act Cap 9.03 as amended by the NURC Act. Section 79 of the NURC Act prescribes three types of tariff reviews in relation to a services licensee engaged in water supply services or sewerage services, as follows:

7. **Annual Tariff Review:** This review is carried out each year within a triennial period between the ninth and eleventh month in each 12-month period following the date of commencement of the service license of that service licensee. In carrying out this review, the service licensee must ensure that the value of the tariff is maintained in real terms.

8. **Triennial Tariff Review:** The triennial tariff review is completed for a triennial period at least 60 days before the end of that triennial period. During a triennial tariff review, the regulator can review the tariff scheme and level of tariffs taking into account the quality and expansion goals set by the NURC and the investment plans of the service licensee for the ensuing triennial period.

9. **Extraordinary Tariff Review:** An extraordinary tariff review can be carried out by the NURC where due to circumstances including changes in regulations or service standards, changes in taxes or operating conditions including *force majeure*, a service licensee experiences what the NURC considers to be a significant variation in its cost structure in relation to what was approved in the previous annual tariff review or triennial tariff review.

To ensure that the licensee provides the regulator with the necessary information to carry out the tariff reviews, NURC has issued the “Minimum filing requirements for Water Tariffs”. This document is attached as Annex 1 to this report and has been the basis for WASCO’s recent Tariff Review Application. The Minimum Filing Requirements provide instructions regarding the process of submitting the Tariff Application and require WASCO to submit the following information:

a. General information about the organization, legal status, history, production capacity, customers information, etc.
b. A business plan: current performance, planned investments, financial forecast of revenues and expenditures, demand and sales forecast.
c. Accounting information: the audited financial reports, including the auditor’s assessment of the various financial reports.
d. The regulatory value of assets: the current value of assets, the opening value, an overview of capital investments, depreciation, data on financing of such investments including loans and subsidies, data on working capital, etc.
e. Allowable Rate of Return Calculations; including calculations regarding the costs of capital
f. Operation and Maintenance Expenditures: an analysis and assessment of the estimated expenditures on operation and maintenance
g. Estimated Revenue Requirement for the next three years to cover expenditures, including the increase over current revenue
h. Proposed Tariff Scheme: presenting tariffs for various categories of customers and service, relative changes as compared to previous years, analysis of cross subsidies and willingness and ability to pay.

i. Supporting Documents

3 REVIEW OF WASCO’S TARIFF APPLICATION OF APRIL 2019

Towards the end of 2018, WASCO made an application for a Triennial Tariff Review to the National Utilities Regulatory Commission (NURC). The application is based on the list of minimum filing requirements for the Water Sector, which has been issued by the NURC in 2018. So far, WASCO has not received any feedback on its application. It is understood that the NURC is waiting WASCO’s audited financial statements for 2017 and 2018 before it will complete the review.

As part of this project activity, the consultant reviewed WASCO’s tariff application. A more detailed list of comments and suggestions is provided in Annex 2 of this report, and below follow the most important findings:

a. Reliability of key data: The data on water production and consumption and Non-Revenue Water provided in WASCO’s Tariff Application appear to be very unreliable and are not up to date. The reasons for the lack of reliable data are not clearly explained and in fact this would provide ample justification to propose serious investment in metering and monitoring equipment with regard to WASCO’s production and distribution flows.

b. Expenditure for Operations: There is little justification in the application regarding the real costs of WASCO’s service delivery. WASCO plans to produce about 4,200 million gallons of water per year for the coming years, but it is not clear if the effects of an NRW Reduction Program are considered, how much energy and chemicals are required, and how much staff and materials are needed. From the report it appears that the main basis for budgeting the expenditures of WASCO’s operations is the available budget generated by its anticipated net revenues. The question is whether the requested budget is sufficient to adequately operate and maintain WASCO’s facilities.

c. Investment Budget: An investment schedule based on solid cost estimates for the many proposed measures for performance improvement in the business plan is lacking.

d. Revenues: the annual increase in revenues follows regular tariff increases (every 3 years) for the forthcoming years. There is little justification for this and it is not clear if a reduction in illegal or inactive connections is anticipated.

e. Tariffs: In the report there is no justification for why the new tariffs for water and wastewater are proposed to increase with 5.2% and 13.5% respectively, and there is no analysis on the effects of the new tariff on customers’ ability to pay. Reportedly, a Willingness to Pay Survey was undertaken by WASCO, but the ability to pay was not adequately investigated.
f. The demand forecast: the forecast of the demand for water and wastewater in the report is rather unclear and appears unrealistic.

4 Recommendations for Strengthening WASCO’s Capacity for Preparing Tariff Applications

After discussions with the Working Group that prepared WASCO’s Tariff Application 2019 and based on the review of the report, the Consultant makes the following recommendations to improve the process and strengthen WASCO’s capacity for future applications:

Overall Approach

1. Based on the initial contacts of WASCO with the NURC over the past year and its regulatory mandate, it appears that the NURC is expected to actively assert its role of ensuring the protection of the interest of consumers in relation to the services provided by utilities such as WASCO.

   It will be WASCO’s role to first and foremost demonstrate what operational and investment costs are needed to ensure the adequate and efficient supply of water and wastewater services in accordance with its legal obligations and quality standards.

   Only after the full and justifiable costs are recovered by an adequate tariff, a profit may be declared, and the level of that profit will depend on an evaluation by the Regulator of the interests of the Shareholders vs. the interest of the consumers.

Quality of Data

2. WASCO’s Tariff Application 2019 is very weak on technical data. For this purpose, but also for management and monitoring of the WASCO organization, it is of the utmost importance to improve the quality of technical data. The M&E Report and M&E Tool developed under this project provide clear guidance on the process and on the type of data and performance indicators that are needed. It is strongly recommended that WASCO implements the M&E Strategy and starts using the M&E Tool, which could gradually evolve in a proper Management Information System.

3. Although the quality of financial data is much better as compared to technical data, it is taking a very long time to audit WASCO’s annual financial reports and obtain approval of the auditor. In fact, this is the main reason why there has not been a response from NURC on WASCO’s Tariff Application for 2019. So, in order to speed up the process, the process of preparing and auditing WASCO’s financial reports needs to be streamlined and accelerated.
The maximum allowable Rate of Return

4. Although the NURC is only recently established and it is not yet clear how it will assess WASCO’s Tariff Application, there are some indications. In the Minimum Requirements for data submission, the NURC asks WASCO to calculate the maximum allowable rate of return, based on a formula as defined by the NURC for this purpose. The maximum allowable RoR for WASCO is calculated at 4.7%. Normally, a rate of return (RoR) is defined as the net profit (or loss) on an investment over a specified time period, expressed as a percentage of the investment made. Therefore, for WASCO to stay below the value of 4.7%, it is important to
   a. clearly establish and present the full value of its operational costs and make these as high as realistically possible. This will reduce the level of net profit and make it easier to justify an increase in tariffs.
   b. increase the value of investments made in the company: this will also reduce the RoR and make it easier to obtain a higher tariff increase.

Currently, it appears that WASCO takes the value of its revenues as the basis for estimating its costs. This is not very clever, certainly if we consider that WASCO actually needs considerably more resources to improve maintenance and bring down its NRW levels and improve its operations.

Operational and Investment Costs

5. The levels and various components of WASCO’s operational costs in the Tariff Application are not clearly justified and although there are plenty of good intentions and plans to improve performance and efficiencies, these efficiency gains are not clearly demonstrated. For example, in the tariff application WASCO states that it wants to significantly reduce NRW, but it does not clarify what the efficiency gains will be and how these will reduce the costs. Therefore, it is recommended that WASCO in the presentation of its operational costs:
   c. clearly estimates and justifies the full operational costs needed for the adequate operation and maintenance of its facilities to provide the services which it is legally bound to deliver;
   d. explains how the proposed plans and investments will contribute to improvements in efficiency and in reducing its future costs (by e.g. reducing NRW, improving energy efficiency, increasing staff productivity, etc.)

Investment Schedule

6. WASCO’s Tariff Application (especially the business plan section) is full of plans and proposed investments needed to improve its performance and to make its infrastructure more resilient for climate change. However, a clear investment schedule is lacking. It is proposed to include in the Tariff Application (and in future business plans) a clear and costed investment schedule, which is linked to specific performance improvements.

Working Group

7. WASCO has established a Working Group for preparing the Tariff Application, consisting of representatives of Strategic Planning, Legal Affairs, Customer Services and the Finance and
Accounts Department. It is recommended that, also after the Tariff Application has been completed, this collaboration is somehow continued with the purpose of overseeing the improved collection and monitoring of key data and the improved planning and preparation and analysis of investment proposals and potential gains in performance and efficiency.

**ANNEX 1: NURC – MINIMUM FILING REQUIREMENTS FOR WATER TARIFFS**

1.0 Background/Introduction

The National Utilities Regulatory Commission (NURC), established by the National Utilities Regulatory Commission Act of 2016, is responsible for the regulation of water supply services, sewerage services and electricity supply services in Saint Lucia.

As the economic regulator for water supply services and sewerage services the NURC is responsible for establishing, approving, reviewing and monitoring tariff schemes and tariffs in accordance with the Water and Sewerage Act Cap 9.03 as amended by the NURC Act. Section 79 of this Act prescribes three types of tariff reviews in relation to a services licensee engaged in water supply services or sewerage services. These types of reviews are as follows: annual tariff review; triennial tariff review; and extraordinary tariff review.

**Annual Tariff Review:** The annual tariff review is carried out annually by the service license within a triennial period between the ninth and eleventh month in each 12-month period following the date of commencement of the service license of that service licensee. In carrying out this review, the service licensee must ensure that the value of the tariff is maintained in real terms.

**Triennial Tariff Review:** The triennial tariff review is completed for a triennial period at least 60 days before the end of that triennial period. During a triennial tariff review, the regulator can review the tariff scheme and level of tariffs taking into account the quality and expansion goals set by the NURC and the investment plans of the service licensee for the ensuing triennial period.
Extraordinary Tariff Review: An extraordinary tariff review can be carried out by the NURC where due to circumstances including changes in regulations or service standards, changes in taxes or operating conditions including force majeure, a service licensee experiences what the NURC considers to be a significant variation in its cost structure in relation to what was approved in the previous annual tariff review or triennial tariff review.

Notwithstanding the type of tariff review, one challenge faced by regulators such as the NURC when reviewing rates is the information asymmetry which exists between the regulator and the regulated entity. The utility knows more about its operations and costs and knows more about the effect of price changes or extraordinary occurrences on its cost structure than the regulator. This information asymmetry can however be reduced if the utility provides the regulator with sufficient information for sound decision-making on tariffs.

Although utilities understand this need to provide information to regulators, they may be uncertain as to which information is necessary for making decisions on tariffs. This could result in a utility submitting too much or too little information as is required for sound decision making. In addition to a utility being unaware of the regulator’s information requirements, a utility may also be reluctant to provide information which it thinks may affect its chances at getting its preferred decision during a rate review. To address these challenges, regulators can establish minimum filing requirements to guide utility rate submissions.

This paper proposes minimum filing requirements which can be used by the NURC when conducting triennial water and sewerage tariff reviews.

2.0 Minimum Filing Requirements

2.1 What are Minimum Filing Requirements?

Minimum Filing Requirements are a set of guidelines that prescribe what information should be included in utility rate review applications. The minimum filing requirements ensure that the information submitted for rate review applications is provided in a standardized format agreed to by the parties involved. This typically expedites the rate review process.

2.2 Compliance with the Minimum Filing Requirements

Utility rate review applications are expected to adhere to the minimum filing requirements. Rate review submissions which deviate from the instructions contained in the minimum filing requirements may be accepted only after approval by the Commission. A request for such deviation should be explained and justified by the utility.

3.0 Minimum Filing Requirements for the Triennial Tariff Review

Of the three types of tariff reviews, permitted by the Water and Sewerage Act, the triennial tariff review is the most extensive. Accordingly, a high degree of detailed information is required to adequately undertake a triennial tariff review.
The following guidelines shall be used for submitting an application for a triennial tariff review.

3.1 Instructions

3.1.1 Submission Date: The service licensee shall submit a tariff review application four months prior to the commencement of the triennial period.

3.1.2 Non-Compliance: Upon receipt of the application, staff at the NURC will review the submission for its compliance with the minimum filing requirements. If any information is missing or submitted in a format which inconsistent with the minimum filing requirements, the NURC will inform the licensee and the licensee will be given fourteen days to correct the defects. If a licensee fails to submit a revised proposal within fourteen days, the tariff already agreed for the existing period will continue to apply.

3.1.3 General Guidelines

i. The NURC may require utilities to submit additional information which may not be included in the minimum filing requirements.

ii. Supportive work papers must be made available to the NURC’s staff upon request.

iii. If required data which remains the same has been submitted previously, it may be incorporated by reference.

iv. The NURC requires 10 hard copies of the submission and 10 hard copies of any other information submitted subsequent to the original submission.

v. In addition to the 10 hard copies of the submission, an electronic copy of the submission which is in a form which allows computation for numerical data must be submitted. Processed text must be submitted using Microsoft Word (size 12 Times New Roman Font). Numerical data and computations must be submitted using Microsoft Excel.

vi. A stand-alone, customer friendly, public summary must be prepared and submitted following the acceptance of the licensee’s application by the NURC. This public summary must be presented in a manner that allows customers to understand the licensee’s plan and strategy for the upcoming triennial period. It should include but not be limited to inter alia: proposed tariffs; the dollar amount of the rate change by category of service or customer class; investment plans; plans for improving efficiency and quality; proposed service standards, an explanation on how customer interests have been considered in determining proposed rates and steps taken to maintain overall balance between service levels, the proposed tariff prices and priorities for improvement.

3.2 General Information

3.2.1 Description of Company- (If It has not been filed)

i. Corporate history including dates of incorporation, acquisitions and/ or mergers.

ii. Describe relationship between utility and its parents, subsidiaries and affiliates and furnish a chart(s) which depicts the intercompany relationships.

iii. Provide a statement identifying any significant element of the application which to the applicant’s knowledge represents a departure from prior decisions of the Commission and the associated revenue requirement. This includes proposed accounting changes or accounting changes that have occurred since the last rate review.

3.2.2 Plant Capacity and Service

i. Provide a description of all utility property including an explanation of the system’s operation.

ii. Provide a schedule showing plant in service by major plant categories.
iii. Provide a system map showing pumping stations, treatment facilities, storage tanks, river intakes, standpipes, distribution mains and transmission mains.

iv. Provide a description of the present and projected supply of water for the following 9 years.

v. Provide detailed information on system loses.

3.2.3 Customer Service

i. Present a description of customer services including information on the adequacy of customer information systems and processes.

ii. Provide details on customer base including total number of customers, number of customers by customer class, active and inactive customers.

iii. Provide data on historical sales by customer class (for at least 10 years).

iv. Provide information on total billed customers used in the tariff computation.

3.2.4 Amount and Percentage of rate changes

i. A schedule showing the proposed tariff rates for each customer class should be presented.

ii. A schedule showing the dollar amount of the rate change by category of service or customer class should be presented.

iii. A schedule showing the revenue requirement and percentage change in revenues over current revenues should be presented.

3.3 Business Plan

3.3.1 Licensee Status and Direction

i. Provide details of licensee’s service performance in recent years.

ii. Describe impediments to its performance.

iii. Provide an assessment of the condition of assets including the condition of infrastructure and maintenance practices.

iv. Perform SWOT analysis for the licensee.

v. Discuss growth prospects.

vi. Report performance on key performance indicators and present comparative analysis with other regional utilities. Indicators should include but not be limited to water coverage, sewerage coverage, total water supplied, non-revenue water, service complaints by type, water quality, sewerage clogs, unit operating costs, composition of categories of operating costs as percentage of total costs, debt ratio, return on assets, receivables expressed as number of average days billings, number of staff per thousand customers, labor costs as a percentage of operating costs, cost of contracted services as a ratio of operating costs, average tariff, connection charges.

vii. Identify and discuss issues relevant to the tariff review decision making process.

viii. Highlight key activities and projects that will be undertaken over the triennial period, outputs and milestones to be achieved and constraints and risks which may challenge the attainment of these outcomes.

ix. Highlight other business changes and initiatives.

x. Present expansion goals for the following nine years.

xi. Present quality goals for the following nine years.

xii. Present plans for improving efficiency for the following nine years.

xiii. Present proposed service standards for the following nine years.

xiv. Present targets and measures which will be implemented to decrease system loses.
xv. Outline plans for service improvement for each year of the tariff review period including the operating and capital expenditure needs for supporting such improvement.

xvi. Outline plans for productivity improvement for each year for the following nine years.

xvii. Outline plans for operating and capital expenditure efficiency for the following nine years.

xviii. Outline how consumer interests have been considered in determining the proposed tariffs and the steps taken to maintain overall balance between service levels, the proposed tariff prices and priorities for improvement.

xix. Provide summary of licensee’s overall strategy for the execution of its functions for the triennial period and beyond and state how strategic objectives will be financed.

xx. Provide summary tables on overall strategy, financial projections, asset values, revenue and expenditure.

3.3.2 Planned Investment
i. Outline planned investment for any major expansions or modifications of facilities in the next nine years.
ii. Present a cost-benefit analysis on major planned investment.
iii. Provide details on how planned investment will be financed.

3.3.3 Financial Forecasts
i. Present financial forecasts for the following nine years (showing the impact of the proposed revised tariffs).
ii. Outline the assumptions used for financial forecasts.

3.3.4 Forecast operation and maintenance costs
i. Present forecast operation and maintenance costs stated in real terms.
ii. Identify forecast and operations maintenance costs which will be paid for by customers, government or other third party.

iii. Categorize capital expenditure as follows: replacement, growth, enhancement, other.

iv. 3.3.5 Demand and sales forecasts
i. Present demand forecasts for at least the following nine years (disaggregated by customer class). The submission of the demand forecast for the forecasted period should describe the methodological approach taken in preparing forecast, the key demand forecasting issues and key assumptions adopted in generating the forecasts. The information presented should include:

   3.3.5.i.1 Water consumption by customer class
   3.3.5.i.2 Customer numbers by customer class
   3.3.5.i.3 Maximum daily and hourly demand during dry and wet seasons
   3.3.5.i.4 New customer connections (net customer increase) by customer and broken down as follows: new customer connections; existing customer connections; total customer numbers; net increase in customer numbers.

ii. Present sales forecasts for at least the following nine years (disaggregated by customer category). The submission of the sales forecast should likewise describe the methodological approach taken in preparing the forecast, the key sales forecasting issues and key assumptions adopted in generating the forecasts.

3.4 Accounting Information
3.4.1 Present audited financial statements prepared in accordance with International Financial Reporting Standards for 10 years prior to the year of application. In preparing audited accounts the service licensee shall appoint an external auditor to audit the accounts and shall ensure that the auditor submits the following to the Commission:

i. A note indicating that the auditor acknowledges the intended use of the accounts by the Commission; A report, in respect of each of the accounting statements submitted, stating whether in the auditor’s opinion,

3.4.1.i.1 the service licensee has kept proper accounting records, in a form that enables identification of the revenues, costs, assets and liabilities of providing the services, and

3.4.1.i.2 the set of accounting statements submitted presents a true and fair view of the revenues, costs, assets and liabilities of the service the licensee incurred in providing the services

3.4.2 For the first triennial tariff review application, present the initial depreciation schedule.

3.4.3 For subsequent triennial tariff review applications, present changes to the depreciation schedule, as specified in paragraph 1.3 of schedule 3.

3.5 Regulatory Asset Value Inputs, Calculations and Assumptions

3.5.1 Present the Regulatory Asset Value and computations as determined using the formula outlined in the Water and Sewerage Tariff Regulations.

3.5.2 Present the value and computation of the Opening Assets as prescribed by the formula outlined in the Water and Sewerage Tariff Regulations.

3.5.3 Present forecast capital expenditure, that is, new assets forecast to be created annually, after the start of the Tariff Review Period, including rehabilitation and maintenance of existing assets and new infrastructure.

3.5.4 Present Forecast Depreciation, that is, the annual amount for depreciation forecast from the start of the Tariff Review Period.

3.5.5 Present Forecast Customer and Government Contributions, that is, assets forecast to be paid for by customers or Government/third parties over the tariff review period (e.g. connection assets).

3.5.6 Present the original cost and book value of all used and useful utility plant and intangible assets either to the first person who committed said plant or assets to public use or, at the option of the NURC, the first recorded book cost of said plant or assets;

3.5.7 Present the value of actual capital expenditure, that is actual new assets created, including rehabilitation and maintenance of existing assets and new infrastructure over the past three years, adjusted as described in the Water and Sewerage Tariff Regulations.

3.5.8 Present the accumulated depreciation and amortization for the assets recorded over the past three years.

3.5.9 Present the value of actual assets paid for by the customers and Government/third parties by contributions over the past three years. (e.g. connection assets)

3.5.10 Present the value of any accumulated deferred and unamortized income taxes and investment credits related to plant included in 3.6.6 above;

3.5.11 Present accumulated depreciation of customer advances and contributions in aid of construction related to plant included in paragraph 3.5.6 above
3.5.12 Present the value of materials and supplies necessary to the conduct of the business and investor supplied cash working capital

3.6 Allowable Rate of Return Calculations and Assumptions

3.6.1 Present the value of the Pre-tax Rate of Return and the computations used to derive it.
3.6.2 Present the average twelve-month deposit rate paid by commercial banks in Saint Lucia.
3.6.3 Present the leverage ratio and debt risk premium with an explanation of how the values were determined.
3.6.4 Present value and computation used to derive Q, additional return required by investors for an investment with similar risk characteristics, as prescribed in the formula contained in the regulations.

3.7 Operating and Maintenance Expenditure

3.7.1 Present a discussion on the main drivers of expenditure.
3.7.2 Outline the relationship between expenditure and the delivery of outcomes.
3.7.3 Present all operating and maintenance expenditure to be included in the tariff computation. Expenditure should be disaggregated into detailed line items.
3.7.4 Provide a breakdown of operating expenditure by customer class.
3.7.5 Identify one-off costs or non-recurring operating costs.
3.7.6 Identify costs associated with goodwill, brand building and sponsorships.
3.7.7 Present operating expenditure on labor related items including:
   i. Level of overtime of the total payroll costs;
   ii. Level of sickness and absenteeism;
   iii. Level of total leave (contracted, extended emergency)
   iv. Labour costs for various functions including infrastructure maintenance, customer service, finance.

3.8 Estimated Revenue Requirement

3.8.1 Present estimated revenue requirement for the next three years
3.8.2 Present percentage change in annual revenue requirement over current revenue.

3.9 Proposed Tariff Scheme

3.9.1 Present the method of allocation used to deriving rates for each class of customer after determining the revenue requirement.
3.9.2 Present the proposed tariff for each customer class.
3.9.3 Present a schedule showing the dollar amount of the rate change by category of service or customer class.
3.9.4 Discuss existing or proposed direct or cross subsidies and their impact on tariffs.
3.9.5 Present assessment of customers willingness and capacity to pay proposed rates.
3.9.6

3.10 Supporting Documents and Information

3.10.1 Annual Report to Stakeholders.
3.10.2 Schedules showing accumulated depreciation and amortization.
3.10.3 List of assets by class/type including the following categories: land/building, plant, pipelines, vehicles, other equipment, furniture, IT, miscellaneous.

3.10.4 Bad debt policy.

3.10.5 Receivables and collection policy.

3.10.6 Cost of Service.

3.10.7 If intangibles assets are included in regulatory asset base, provide a specific reason for inclusion in the rate base.

3.10.8 Provide a schedule of Customer Advances and/or Contributions in Aid of Construction.

3.10.9 In accounting for depreciation of Customer Advances and Contributions in Aid of Construction, provide a statement which describes the accounting procedures used to segregate depreciation reserves between third party provided and contributed property and provide a schedule of the actual amounts.

3.10.10 Provide a complete analysis of all deferred income taxes.

3.10.11 If a claim is made for the inclusion of materials and supplies in the regulatory asset base, provide a schedule showing the balance in each of the major grouping of material and supplies and where estimates are used, explain the basis for such estimates.

3.10.12 Provide a schedule showing the components of third party supplied cash working capital included in the regulatory asset base claim.

3.10.13 If a regulatory asset base claim is made for property under construction but not used and useful in whole or in part, provide a schedule showing each major project and indicate whether or not the project will add capacity or replace existing capacity or both. If major units of capacity are being added, show in calculation the additional revenue to be realized. If major units of capacity are being retired, indicate the type of property, its original cost, accumulated reserves for depreciation and the expected date of retirement from service.
## ANNEX 2: DETAILED REVIEW OF WASCO’S TARIFF APPLICATION 2019

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<tr>
<td>3</td>
<td>Table of Content</td>
<td>WASCO’s tariff application logically follows the structure of the minimum filing requirements as prescribed by the NURC. This results in a very voluminous document with many repetitions and at times it is difficult to follow the logic and rationale.</td>
<td>It may be useful for WASCO to once again discuss with NURC about the structure for the information to be provided and come to a more logical and efficient presentation.</td>
</tr>
<tr>
<td>7</td>
<td>Plant Capacity and Service</td>
<td>This section presents information about WASCO’s production facilities, water supplied and consumed and information about non-revenue water and WASCO’s NRW Reduction Strategy. The section does not mention the unreliability of data on water production and consumption. It also does not address the current condition of the facilities. It would be useful if this section would explain the need for major investments in terms of water meters, SCADA, GIS and replacement of old pipes and other facilities to come to a better managed and more efficient production and distribution system and herewith significantly reduce the costs of operation and maintenance for both WASCO and its customers.</td>
<td>It is recommended to explain the need for investments in production facilities (meters, SCADA, GIS, new pipes, etc), aiming at more efficient operations, more reliable data and reduced costs for WASCO and its customers.</td>
</tr>
<tr>
<td>18</td>
<td>Detailed Information on System Losses</td>
<td>Table 9 in this section provides information about production and consumption of water and the number of connections. It does not explain the huge variations in production and consumption over the years and the unreliability of the data and lack of metering. It does not provide overall production and distribution data over the past 2.5 years and it does not provide any data on the number of inactive customers. This would be a good section to explain the composition of WASCO’s NRW and WASCO’s strategy to reduce it.</td>
<td>As above, this section should explain the need for substantial investments in the distribution network and the implementation of the NRW Reduction Strategy to improve operations and reduce costs.</td>
</tr>
<tr>
<td>22</td>
<td>Forecast of future water production</td>
<td>Section 1.2.6 forecasts an average production of 4,200 million gallons water per year over the next 9 years. The justification of this volume (historical trends and drier climate conditions) is not very strong. Also, the effects of the NRW Reduction Campaign are not visible in the forecast.</td>
<td>In order to clarify to the regulator the benefits of investments in NRW Reduction, it will be necessary to show that NRW Reduction will result in lower levels of production and lower investments in the future.</td>
</tr>
<tr>
<td>23</td>
<td>Effects of climate change</td>
<td>The second half of this page explains that WASCO’s level of production suffers from (among others) the negative effects of climate change. Although there is</td>
<td>Suggest adding the issue of urbanization and deforestation in future tariff reviews, as this will</td>
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<td>no doubt that this is true, other major causes of reduced production (deforestation, urbanization, land pressure, etc.) are not mentioned.</td>
<td>require additional efforts and investments from WASCO.</td>
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<td>25</td>
<td>Customer Base</td>
<td>Section 1.3 mentions the very high number of inactive connections but fails to explain why this number has been high for a very long time and how WASCO plans to reduce it (except mentioning a Water Metering Campaign).</td>
<td>Resources are needed to bring down the high number of inactive connections and herewith reduce the volume of NRW. It is important to show the regulator that WASCO is serious about this issue.</td>
</tr>
<tr>
<td>26</td>
<td>Water Rates</td>
<td>Table 11: is the current rate for hotels ($36.55 per 100 gallons) correct?</td>
<td>Please correct</td>
</tr>
<tr>
<td>28</td>
<td>Schedule of proposed tariffs</td>
<td>Section 1.4 provides an overview of the proposed new water tariffs and the changes as compared to the current rates. This is required and in line with NURC Minimum Filing Requirements. However, there is no justification for the new tariffs and why they are proposed to increase with 5,2% (water) and 13,5% (wastewater), nor is there a reference where this justification can be found. In chapter 7 there is an estimate of costs and it appears that currently WASCO is operating at a loss. Also, in chapter 7 there is no further clarification, except some financial projections in a table. In addition, there does not appear any clear justification nor analysis of the effects of the new tariff on willingness and ability to pay of the customer.</td>
<td>It is necessary that somewhere in the application WASCO provides a clear justification for the proposed tariff increases and how this is expected to affect willingness and ability to pay by customers.</td>
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<tr>
<td>31</td>
<td>Revenue Requirements</td>
<td>Table 14 provides the overview of revenue requirements and percentage increase of future revenues over current revenues. However, the table provides data for the years 2017-2019, which are already known, and does not have any information about the required change in revenues over current revenues. Also, there is no explanation of what the table is supposed to present.</td>
<td>The table needs to be adapted to meet the minimum filing requirements of NURC and explanation needs to be added.</td>
</tr>
<tr>
<td>33</td>
<td>Business Plan</td>
<td>Chapter 2 of the Application is devoted to the Business Plan and consists of a description of the many aspects of WASCO’s operations that need to be improved. It includes numerous actions to enhance performance in line with the strategic plan of WASCO. However, it is very difficult for the outsider to link the numerous initiatives mentioned in the business plan to responsibilities and tasks of the various departments and to the planned investments and expenditures presented in the financial tables in section 2.3.</td>
<td>It is recommended to improve the presentation of the business plan and more clearly link the many proposals for improving performance with the planned investments of the various departments.</td>
</tr>
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<td>63</td>
<td>Planned Investments</td>
<td>Table 23: Planned Investments. As mentioned above, it is difficult to understand the relation between the numerous proposals for performance improvement in</td>
<td>Include in the business plan for each area of improvement an</td>
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<td>the business plan and the proposed investments in the 9-year investment schedule.</td>
<td>outline budget and link this to the investment plan.</td>
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<td>65</td>
<td>Financial tables</td>
<td>The financial tables provide contradictory information. E.g. in table 24 (9-year financial forecast) the levels of annual depreciation vary between EC$ 6 - 7 million, whereas in table 26 depreciation varies between EC$ 6 and 15 million without a clear explanation why.</td>
<td>Check the tables for consistency and provide additional explanation.</td>
</tr>
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<td>67</td>
<td>Financial Forecasts</td>
<td>In the assumptions listed for the financial forecasts, there is no mentioning of the costs related to NRW. It is understood that WASCO does not wish to emphasize this issue in the tariff application. However, it might be prudent to expect that WASCO in the coming years will be able to reduce NRW and improve efficiencies in its operations. This should be reflected in reduced costs of O&amp;M over the years.</td>
<td>Consider to present improvements in efficiency over the years to be reflected in reduced costs for O&amp;M.</td>
</tr>
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<td>71</td>
<td>O&amp;M expenditures</td>
<td>Table 26 presents the projections on O&amp;M expenditures. For most of the figures the annual forecasts appear to consist of annual increases with a fixed number. It appears that the annual costs of O&amp;M are fixed at a certain level (aligned to the projected revenues), without a proper analysis of what is needed to adequately operate and maintain the water and waste water systems of WASCO and without assessing the impact of all the proposed improvements in the business plan. Also, the annual increases of the main components of WASCO’s cost structure since the latest tariff increase in 2014 are not provided in the Application.</td>
<td>It is recommended to carry out further analysis and assess the real costs that are needed to adequately operate and maintain WASCO’s (waste)water systems and also incorporate efficiency improvements in the projections for the coming years.</td>
</tr>
<tr>
<td>74</td>
<td>Demand Forecast</td>
<td>Section 2.4.1 estimates the average domestic consumption per capita per day for Saint Lucia at 60 imperial gallons per day (= 273 litres/capita/day) and 21,900 gallons per capita per year. This is very high. If this were true, WASCO would have to produce about 3,500 million gallons per year to only satisfy domestic consumption. Add to that about 40% NRW and annual production would have to be 6,000 million gallons per year, which it is not. On the contrary, WASCO plans to produce an average 4,200 million gallons per day for the foreseeable future. Also the figure of 60 gallons per day does not align with the average water bills presented in the customer survey in section 2.3.</td>
<td>It is suggested to check the average consumption per day for Saint Lucia and revise the demand projections accordingly.</td>
</tr>
<tr>
<td>74</td>
<td>Domestic Demand</td>
<td>Table 28 projects annual domestic demand for water which is e.g. estimated at 1,081 million gallons per year for 2018. This would add up to 6,052 gallons per</td>
<td>Please check and clarify table 28. For all tables, please mention the units used.</td>
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capita per year, which is much less than the 21,900 gallons per year mentioned above.

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<td>Allowable rate of return</td>
<td>By requesting this information, it appears that the NURC, in regulating water tariffs, will apply the “maximum allowable revenue” model. This would allow WASCO to increase tariffs to a certain level which generates the allowable rate of return. What is not clear is what will happen if, in reality, WASCO’s rate of return is higher or lower than the allowable rate of return.</td>
<td>Further analysis is needed on how the NURC will apply the “maximum allowable revenue” model.</td>
</tr>
<tr>
<td>94</td>
<td>Revenue requirements</td>
<td>Section 7.1 deals with revenue requirements for the next three years. However, the report presents the data for 2017, 2018 and 2019, which mostly are already known. From the data it appears that the company is currently operating at a loss and is not able to cover its normal operation and maintenance costs. This information would provide an important argument for increasing the water tariffs. However, no explanation is provided along with the table.</td>
<td>Add explanation to table 42 and explain if the figures presented are real or estimated. Provide argumentation for a tariff increase.</td>
</tr>
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