



**ZAMBIA WATER AND SANITATION SERVICES IN GROWTH
CENTRES PROGRAM (P509550)**

PERFORMANCE IMPROVEMENT ACTION PLAN (PIAP)

CONTENT

PERFORMANCE IMPROVEMENT ACTION PLAN (PIAP)	1
1. GENERAL INFORMATION	3
3. STAKEHOLDER MAPPING	4
3.1 Stakeholder Engagement Approach	5
4. SWOT ANALYSIS	6
4.1 Leveraging SWOT to Achieve PIAP Objectives	6
5. KEY PERFORMANCE INDICATORS (KPIs)	7
5.1 Assumptions for Coverage with Tariff Adjustment	8
6. ACTION PLAN COMPONENTS	9
7. SUMMARY COST OF THE PAIP IMPLEMENTATION	22
8. RISK PROFILE	22
8.1 Risk Management Approach	22
8.2 Risk Matrix	22
8.3 Risk Monitoring and Reporting	24
9. MONITORING & EVALUATION	24
10. LEADERSHIP AND ACCOUNTABILITY	24
11. DISCLOSURE AND TRANSPARENCY MEASURES	25
11.1 Escrow Account Management and Control Framework	26
12. APPROVAL & SIGN-OFF	27

1. GENERAL INFORMATION

Utility Name	Kafubu Water and Sanitation Company Limited
Date of PIAP Preparation	
PIAP Period	2025–2030
Prepared By	Eng. Billima Paul, Project Coordinator/Manager Planning
Approved By	Joe Mbewe, Managing Director
Public Disclosure	: www.kafubu.co.zm , https://www.facebook.com/kafubuwater

2. STRATEGIC OBJECTIVE OF THE PIAP

The strategic objective of the Performance Improvement Action Plan (PIAP) is to transform Kafubu Water and Sanitation Company Limited (KWSC) into a high-performing and financially sustainable utility in line with the Utility of the Future (UoF) framework.

The PIAP builds upon progress made under the 100-Day UoF Program, which established key foundations such as the 2023–2027 Strategic Plan, NRW reduction strategy, customer engagement framework, and energy efficiency initiatives.

Specifically, the PIAP seeks to:

- Reduce Non-Revenue Water (NRW) through data-driven asset management, district metering areas (DMAs), and hydraulic modelling
- Improve energy efficiency by optimising pumping operations, conducting energy audits, and integrating SCADA-based monitoring systems
- Strengthen financial performance through improved billing accuracy, enhanced collection efficiency, and robust financial controls
- Expand water and sanitation service coverage in growth centres, particularly targeting underserved and peri-urban communities
- Enhance customer satisfaction through responsive service delivery and improved complaint resolution systems.
- Promote climate resilience, digital transformation, and gender inclusion across all operational areas.

Through these actions, KWSC seeks to achieve operational excellence, financial sustainability, and environmental stewardship while delivering reliable, safe, and equitable water and sanitation services.

3. STAKEHOLDER MAPPING

Stakeholder mapping is a critical component of the Performance Improvement Action Plan (PIAP), as it identifies key actors who influence or are affected by the operations of Kafubu Water and Sanitation Company Limited. Effective engagement with these stakeholders ensures alignment with regulatory requirements, enhances service delivery, promotes accountability, and supports successful implementation of planned interventions.

The table below outlines the key stakeholders, their roles, interests, level of influence, and the engagement strategies to be adopted:

Stakeholder	Role / Interest	Level of Influence	Engagement Strategy
National Water Supply and Sanitation Council (NWASCO)	Sector regulator; sets service standards, tariffs, and monitors performance	High	Regulatory reporting, compliance meetings, tariff consultations
Ministry of Water Development and Sanitation	Policy direction, sector oversight, funding coordination	High	Policy alignment, progress reporting, strategic engagement
World Bank	Project funding and technical support (PforR)	High	Periodic reviews, reporting, audits, implementation support
WaterAid	Support in sanitation and community programs	Medium	Joint program implementation, reporting, stakeholder coordination
Local Authorities (Ndola, Luanshya, Masaiti, Mpongwe)	Facilitate local implementation, land use, and community coordination	High	Coordination meetings, project approvals, joint planning
Customers (Domestic, Commercial, Institutional)	End users of water and sanitation services	High	Customer feedback systems, surveys, awareness campaigns
Employees (KWSC Staff)	Service delivery, operations, and implementation of PIAP	High	Training, performance management, internal communication
Contractors & Suppliers	Infrastructure development, supply of goods and services	Medium	Procurement processes, contract management, performance monitoring
Community-Based Organizations (CBOs)	Community mobilization and local support	Medium	Community engagement, sensitization programs
Financial Institutions (e.g., Access Bank)	Financial management and project accounts	Medium	Financial reporting, compliance with banking requirements
ZESCO Limited	Electricity supply for operations	High	Service agreements, energy management coordination

3.1 Stakeholder Engagement Approach

KWSC will adopt a structured and inclusive stakeholder engagement approach to ensure effective communication, collaboration, and transparency throughout the PIAP implementation period. This will include:

- Regular stakeholder consultations and review meetings
- Timely disclosure of performance reports and project updates
- Use of multiple communication platforms (website, radio, community meetings, social media)
- Integration of customer feedback into operational improvements
- Strengthening partnerships with cooperating partners and regulatory bodies

Through this approach, KWSC aims to build strong stakeholder relationships, enhance trust, and ensure the successful delivery of sustainable water and sanitation services.

3.2 Commitment to provide affordable services to the pro-poor communities

KWSC remains committed to implementing pro-poor strategies through targeted policies, investments, and development approaches that enable low-income populations particularly vulnerable women and men to actively participate in, contribute to, and benefit from economic growth. This approach prioritizes strengthening the assets, capabilities, and income levels of disadvantaged groups, thereby promoting a sustainable pathway out of poverty.

Provision of water services to poor and marginalized populations in growth centres typically small but rapidly expanding towns and peri-urban areas continues to face significant challenges. These include inadequate infrastructure and limited-service coverage, which often result in heavy reliance on unsafe, informal, or distant water sources.

In response, the KWSC has adopted a pro-poor service delivery model that moves beyond a purely infrastructure-focused approach. This model emphasizes equitable access, affordability, service reliability, and community participation in the management of water supply systems, rather than relying solely on indirect "trickle-down" benefits of broader economic growth.

Under this framework, targeted water supply schemes will be implemented in the growth centres of Kanyenda, Mishikishi, Chisokone, and Munkulungwe, aimed at improving access to safe and affordable water services for underserved communities.

4. SWOT ANALYSIS

The SWOT analysis for KWSC depicts a high-potential utility that is currently held back by significant operational and financial bottlenecks. While it possesses a strong foundation of skilled personnel and high-quality resources, its long-term viability depends on modernizing its failing infrastructure and stabilizing its liquidity.

STRENGTHS	WEAKNESSES
➤ Strong corporate governance framework ➤ Monopoly service provision within licensed areas ➤ Skilled and competent workforce ➤ Reliable and high-quality raw water sources ➤ Large and diversified customer base ➤ Ongoing automation of key operational systems	➤ Aging and deteriorating water and sewer infrastructure ➤ High levels of Non-Revenue Water (NRW) ➤ Outdated and incomplete customer database ➤ Inadequate operation and maintenance (O&M) coverage ➤ Weak liquidity position ➤ Organizational culture requiring performance strengthening
OPPORTUNITIES	THREATS
➤ Strong regulatory support (NWASCO) ➤ Development partner goodwill and funding opportunities ➤ Expansion into newly designated growth centres ➤ Increasing demand for water supply and sanitation services	➤ Infrastructure vandalism and water theft ➤ Encroachment on utility infrastructure and water sources ➤ Non-cost reflective tariffs ➤ Negative customer perception ➤ Climate change impacts (droughts, floods) ➤ Rising energy costs

4.1 Leveraging SWOT to Achieve PIAP Objectives

Kafubu Water and Sanitation Company Limited will strategically leverage its strengths, address internal weaknesses, capitalize on emerging opportunities, and mitigate external threats to achieve the objectives of the PIAP. The utility will build on its strong governance framework, skilled workforce, and reliable water sources to drive operational efficiency and service delivery improvements. Existing initiatives such as automation and strategic planning will be expanded to support digital transformation and data-driven decision-making.

To address weaknesses such as high Non-Revenue Water (NRW), aging infrastructure, and weak financial position, targeted interventions including hydraulic modelling, infrastructure rehabilitation, improved metering, and enhanced billing systems will be implemented. Opportunities such as regulatory support from National Water Supply and Sanitation Council (NWASCO), development partner funding (e.g., World Bank), and growing demand in peri-urban areas will be leveraged to expand service coverage and strengthen financial sustainability.

At the same time, proactive measures will be taken to mitigate threats such as climate change impacts, rising energy costs, and infrastructure vandalism. These will include investments in climate-resilient infrastructure, energy efficiency programs, stakeholder engagement, and enhanced security measures. Through this integrated approach, KWSC will align its internal capabilities with external conditions to deliver improved performance, resilience, and long-term sustainability.

5. KEY PERFORMANCE INDICATORS (KPIs)

The table outlines key performance indicators and annual targets for tracking operational, financial, and service delivery improvements.

KPI Area		Baseline 2025	Year 1 2026	Year 2 2027	Targets Year 3 2028	Year 4 2029	Year 5 2030	Source for verification
Non-Revenue Water (%)		61.8	60	55	50	46	40	NIS /sector report and Quarterly Engineering Reports, Plant Register, System Generated Water Treatment Plant Register, Monthly ZESCO bills, NIS/ sector report Monthly System Collection Reports NIS/sector Report Monthly System Billing Reports NIS/sector Report, Quarterly Engineering Report, CSO, MoH. 2% additional coverage by extension due to the project Sector report/NIS, CU Sanitation Dept, FSM Reports, Household Surveys. 4% increase in the targeted area Job Adverts, Recruitment & Selection Policy Document, National Gender Policy Document 2023, KWSC Gender Policy. Sector report SLG, Monthly Customer Complaint Resolution Report, sector report Management Accounts, Quarterly Financial Report sector report
Energy Use (kWh/m ³)		0.98	0.97	0.95	0.93	0.91	0.90	
Collection Efficiency (%)		62	69	77	85	93	95	
Billing Efficiency (%)		91	92	93	94	95	98	
Water Service Coverage (%)		74.9	75	76	78	80	85	
Sanitation Coverage (%) of population with improved sanitation		85.4	86	87	88	89	90	
Gender Inclusion (% female staff)		12	13	15	17	19	20	
Customer Complaint Resolution Rate (%)		92	94	95	96	97	98	
Operating Cost Coverage Ratio	With tariff adjustment	43%	55%	65%	70%	75%	85%	
	With no tariff adjustment	43%	55%	57%	60%	63%	65%	

5.1 Assumptions for Coverage with Tariff Adjustment

Tariff adjustments are essential to ensuring the financial sustainability of the CU. The current tariffs were last revised six years ago and no longer reflect increases in key operational costs, including electricity, fuel, water treatment chemicals, and labor expenses. It is therefore necessary to review and increase the tariff structure to offset rising business costs and sustain the reliable delivery of the CU.

Furthermore, there remains a significant disparity between the actual cost of service delivery and the current tariff charged per cubic meter. For Kafubu WSC, the cost of service currently stands at K16.22/m³, while the average tariff is only K6.68/m³, representing a 41% recovery gap. Addressing this imbalance is critical to maintaining operational efficiency, infrastructure reliability, and long-term service sustainability.

The projected improvements in operating cost coverage and overall financial performance under the tariff adjustment scenario are based on the following key assumptions by Kafubu Water and Sanitation Company Limited:

- **Timing of Tariff Adjustment:** A tariff adjustment is assumed to be approved and implemented by National Water Supply and Sanitation Council (NWASCO) in 2026 (Year 1) of the PIAP period.
- **Level of Tariff Adjustment:** An average tariff increase of 15%–25% is assumed, applied progressively to move towards cost-reflective tariffs while maintaining affordability for low-income customers.
- **Phased Implementation:** The tariff adjustment will be implemented in a phased manner over 2–3 years to minimize customer shock and allow gradual revenue stabilization.
- **Improved Collection Efficiency:** Collection efficiency is expected to improve alongside tariff adjustments due to strengthened billing systems, customer database clean-up, and enforcement measures.
- **Reduction in Non-Revenue Water (NRW):** Planned NRW reduction interventions (e.g., metering, DMAs, leak detection) will increase billable water, thereby enhancing revenue without solely relying on tariff increases.
- **Customer Base Growth:** Expansion into growth centres and regularization of illegal connections will lead to an increase in the number of active, paying customers.
- **Regulatory Compliance:** All tariff adjustments will comply with regulatory guidelines and approval processes, ensuring alignment with sector policies and consumer protection requirements.
- **Affordability Measures:** Pro-poor strategies (e.g., lifeline tariffs, targeted subsidies) will be maintained to ensure continued access for vulnerable groups despite tariff increases.

6. ACTION PLAN COMPONENTS

The tables presented below priorities actions, timelines, and responsibilities for achieving the PIAP objectives.

A. Non-Revenue Water Reduction

Non-Revenue Water (NRW) reduction is a key priority for improving efficiency and financial performance at Kafubu Water and Sanitation Company Limited. This will be achieved through two main interventions: A1: Hydraulic Modelling, to support data-driven planning and network optimisation, and A2: NRW Management Strategies, including metering, DMA establishment, leak detection, and billing improvements. Together, these approaches will reduce water losses and enhance revenue collection.

A1. Hydraulic Modelling

This component focuses on developing and applying hydraulic models to improve network performance, support data-driven decision-making, and reduce water losses through optimized system management.

Action	Description	Target (Area/No)	Timeline	Responsible	Expected Impact	Funding Requirement (ZMW)	Funding Line
Hydraulic Modelling	Conduct data collection and analysis and setting						
	➤ Procurement of Hydraulic modelling software	Chifubu, Mpatamatu	2026				
	➤ Project Definition and Data Collection	Hillcrest, Mushili, Itawa	2026	GIS Officer	Reduction of NRW Physical losses	2,500,000	World Bank
	➤ Model Schematisation and Geometry Creation		2027				
	➤ Boundary Conditions and Parameters		2028				
	➤ Model Calibration and Validation		2029-				
	➤ Scenario Analysis and Reporting		2030				
	➤ Documentation						

A2. Non-Revenue Water (NRW) Management

This component focuses on reducing Non-Revenue Water (NRW) through a combination of technical and operational interventions, including metering, network zoning, and infrastructure improvements. By transitioning to a proactive NRW management approach, KWSC aims to enhance water accountability, improve system efficiency, and significantly increase revenue collection.

Action	Description	Target Area/No.	Timeline	Responsible	Expected Impact	Funding Requirement (ZMW)	Funding Line
DMA Establishment (Network Zoning)	Creation of District Metered Areas (DMAs), including installation of bulk meters, isolation valves, and zoning of distribution networks	Ndola, Luanshya, Masaiti, Mpongwe	2026–2028	Meter Management Engineer / NRW Unit	Improved monitoring, faster leak detection, NRW reduction (3–5%)	18,500,000	World Bank
Bulk & Plant Metering	Installation of electromagnetic flow meters at treatment plants and key transmission points	Itawa, Fisenge, Masaiti, Mpongwe	2026–2028	Meter Management Engineer	Accurate production vs consumption tracking	12,000,000	World Bank
Household Metering Program	Procuring/Metering of 11,000 properties and replacement of old/defective meters	Ndola & Luanshya (priority areas)	2026–2028	Meter Management Engineer	Improved billing accuracy, NRW reduction (2–3%)	27,854,626.40	World Bank
Capacity building and staff training on meter installations	Strengthening the technical skills, safety awareness, and procedural knowledge required to effectively deploy, maintain, and manage energy or utility meters	Across all Regions	2027	Meter Management Engineer	Enhance meter useful life circle	99,626.40	World Bank

B. Energy Efficiency Management Plan (EEMP)

The Energy Efficiency Management Plan aims to optimise energy consumption across all operational facilities. Through energy audits, pump optimisation, and real-time monitoring systems, KWSC seeks to reduce operational costs, improve efficiency, and minimise its environmental footprint while ensuring reliable service delivery.

Action	Description	Timeline	Responsible	KPI Impact /GHG Impact	Funding Requirement (ZMW)	Funding line
Energy Audit and Baseline Establishment	Conduct detailed energy audits at all Major Plants to verify kWh/m ³ performance and identify inefficiencies.	2026	Manager Technical	Establish accurate energy benchmarks		World Bank
	Implementation of the audit plan activities	2027 - 2030		Reduction in energy consumption (kWh/m ³) through implementation of identified efficiency measures, leading to lower operational costs and improved energy performance. Reduced electricity	850,000	
Pump Scheduling and Optimisation	Implement off-peak pumping schedules and optimise variable speed drives to reduce consumption at Kafubu and Itawa plants (currently >1.1 kWh/m ³)	2026 - 2030	Manager Water Supply	Reduce energy use by 5-8%	500,000	
SCADA Integration for Energy Monitoring	Link plant energy meters to SCADA to track real-time energy use and water output for automatic kWh/m ³ computation at Kafubu Dam WTP, Misundu I WTP, Misundu II WTP, Makoma WTP and Mikomfwa WTP	2026-2027	Manager Technical	Improves sustainability tracking Enables automated KPI reporting	750,000	
Procure/installation of solar system	Solar system for Kanini Laboratory complete with battery storage	2026	Project Engineer	Reduce energy cost	1,204,500	World Bank

C. Digitalisation

This component focuses on strengthening digital infrastructure to support data-driven decision-making and operational efficiency. The integration of SCADA, ERP, GIS, and AMR systems will enhance real-time monitoring, improve data accuracy, and streamline reporting processes, thereby transforming KWSC into a modern, technology-enabled utility.

12

[Signature]

[Signature]

[Signature]

Action	Description	Timeline	Responsible	System Benefit	Funding Requirement (ZMW)	Funding line
SCADA Network Expansion (Design & Integration)	Conduct design, hardware specification, and integration plan to extend the existing SCADA network from Midway Booster Pump Station to Makoma WTP, Mikomfwa WTP, and Kafubu Dam WTP.	2026 - 2028	Technical Services Manager	Establishes real-time visibility of energy use, pumping status, and flow across interconnected plants.	700,000	World Bank
Integration of Energy and Flow Monitoring unit (SCADA & Digitalisation)	Configure SCADA system to automatically log kWh/m ³ for each linked plant, integrating ZESCO energy meters and flow transmitters.	2026	Technical Services Manager	Supports automatic computation of energy efficiency indicators for PIAP reporting and management dashboards.	200,000	World Bank
Maintenance staff and Operator Training and Capacity Building (SCADA)	Train plant operators, IT, and control staff on SCADA system usage, alarms, and data interpretation for efficient operation and response.	2026 – 2027	IT Manager	Improves operational response time and data-driven decision-making.	400,000	World Bank
Preventive Maintenance and System Backup (MIS?)	Establish a preventive maintenance schedule and create a backup system (server and power redundancy)	Continuous from 2027	Technical Manager	Enhances system reliability and reduces downtime risks.	100,000	World Bank

Action	Description	Timeline	Responsible	System Benefit	Funding Requirement (ZMW)	Funding line
Enhancement of the AMR system (MIS)	to ensure uninterrupted SCADA operation. An Automatic Meter Reading (AMR) system to remotely collect consumption, diagnostic, and status data from customer water meters and transfers it to a central database for billing and analysis	2027	ICTM	➤ Efficiency & Accuracy: Eliminates human error in manual readings and reduces operational costs. ➤ Real-time Data: Enables near-real-time consumption tracking. ➤ Leak/Tamper Detection: Identifies leaks and unusual consumption patterns immediately.	550,000	World Bank
Implementation of Performance Management System (MIS)	Design and implement a performance management system integrated within the ERP to track KPIs (NRW, energy, billing, service levels), including staff training and system configuration	2026-2030	Manager HRA / ICT Manager	Enables integrated KPI tracking, performance monitoring, and data-driven decision-making	607,000	World Bank

D. Water Service Extension

The water service extension focuses on providing the water provision to low-income communities in the rural and peri urban growth centers in the part of Ndola (Bwanamukubwa), Luanshya (Chilabula Chisokone), Masaiti (Mishikishi) and Mpongwe (Kanyenda) Districts to cover over 19,000 population. Through the construction and operationalisation of new water schemes, KWSC aims to increase service coverage, improve public health outcomes, and support socio-economic development in targeted communities.

Action	Description	Location	Timeline	Responsible	Expected Output	Funding Requirement (ZMW)	Funding Line
Hydrological Surveys & Feasibility Studies	Conduct water resource assessments and feasibility studies	All 4 districts	2026	Engineer Rural Water	Confirmed water sources	1,500,000	World Bank / GRZ
Detailed Design & Engineering	Finalisation of designs, drawings, and BOQs	All districts	2026–2027	Engineer Rural Water	Approved construction designs	2,500,000	World Bank
Construction – Ndola	Water supply system (≈13,000 people)	Ndola	2027–2030	Project Engineer	Increased coverage	8,500,000	World Bank / KWSC
Construction – Luanshya	Water scheme (≈2,500 people)	Luanshya	2027–2029	Project Engineer	Improved access	2,500,000	World Bank
Construction – Masaiti	Water scheme (≈4,000 people)	Masaiti	2027–2030	Project Engineer	Expanded rural supply	4,500,000	World Bank / GRZ
Construction – Mpongwe	Water scheme (≈4,000 people)	Mpongwe	2027–2030	Project Engineer	Improved service delivery	3,800,000	World Bank
Installation & Commissioning	Pumps, tanks, networks, testing	All areas	2028–2030	Project Engineer	Operational systems	1,500,000	World Bank
Capacity Building & O&M Training	Training staff and community	All districts	2027–2030	Engineer Rural Water	Sustainable operations	1,198,000	KWSC / World Bank
Develop a Rural NRW Management Plan	Conduct an assessment to develop a rural NRW Management Plan focusing on the growth centres	All Subprojects	2027	Engineer Rural Water	Improved service delivery	1,500.00	KWSC

E. Sanitation Service Coverage

This component aims to improve sanitation coverage and faecal sludge management (FSM) through innovative and scalable solutions. By introducing improved sanitation technologies and strengthening service delivery systems, KWSC will enhance environmental health and ensure sustainable sanitation services in both urban and peri-urban areas.

12

PP Bellows

Amie

See

community of 18,000
Township in Nepal (target
300 households)

Manager

• Infrastructure -
Roughly 20
kilometers built and

Action	Description	Timeline	Responsible	Expected Output	Funding Requirement (ZMW)	Funding line
Reusable Pit Latrines to enhance FSM	Pilot the introduction of the reusable pit latrines in the low-income communities of Nkwazi Township in Ndola (target 300 households)	2026-2027	Manager Sanitation	Improved sanitation access. 4% increase in the target area		
	Enhance fecal sludge management models in Ndola, Masaiti, Luanshya and Mpongwe	2027-2030		- Infrastructure – Reusable pit latrines built and installed. - Capacity Building – Training of Wash groups/masons; O&M manuals distributed. - Community Engagement – Awareness campaigns and feedback collection. - Monitoring & Evaluation – Baseline/endline surveys, usage data, environmental checks. - Operational Costs – Servicing, logistics, supervision. - Strategic Documentation – Pilot evaluation and cost-benefit analysis. Scale up FSM services which include Mapped facilities and improved OS technologies - Mapped Facilities – GIS-based sanitation asset inventory. - Improved OSS Technologies – Upgraded latrines, septic systems - Service Expansion – Enhanced collection, transport, and treatment capacity.	26,350,000	WaterAid support, World Bank support, KWSC, GRZ

Action	Description	Timeline	Responsible	Expected Output	Funding Requirement (ZMW)	Funding line
--------	-------------	----------	-------------	-----------------	---------------------------	--------------

- Operational Systems – Standardized protocols, digital monitoring, trained operators.

Train and equip private emptiers based within operational area

- Skilled Workforce – Operators trained in safe desludging, transport, and disposal practices.
- Equipped Service Providers – Access to standardized tools, transport, protective gear, and desludging equipment.
- Data & Accountability – Registered, mapped, and monitored private emptiers integrated into FSM systems.

Provision of sanitation facilities at the 4 distribution centers in Ndola, Luanshya, Masaiti and Mpongwe

Construction of sanitation facilities in the 4 distribution centers complete with treatment facilities

- Ndola-Bwana mukubwa, 2027
- Luanshya-Chilabula Chisokone 2028
- Masaiti-Mishikishi 2029
- Mpongwe - Kanyenda 2030

Manager Sanitation

Installed and operational toilets at each center.

1,198,000

Capacity Building & O&M Training

Training staff and community

2027–2030 Manager Sanitation

Sustainable operations

12

[Signature]

[Signature]

[Signature]

F. Billing Efficiency

Action	Description	Timeline	Responsible	Expected Output	Funding Requirement (ZMW)	Funding Line
Billing System Upgrade (ERP Integration)	Upgrade and integrate billing system within ERP for automation, accuracy, and reporting	2026–2027	ICT Manager	Improved billing efficiency and system integration	1,500,000	World Bank
Customer Database Cleanup (Initial + Continuous Update)	One-time comprehensive cleanup in 2026 followed by system-driven continuous updates	2026 (initial), ongoing	Manager Billing	Accurate billing database and reduced errors	1,200,000	World Bank
Customer Data Verification & Regularisation	Field verification, illegal connection regularisation, and customer validation	2026–2028	Commercial / Billing Team	Increased billed customers and reduced losses	1,800,000	World Bank
Billing Process Automation & System Controls	Configure ERP for automated billing cycles, validations, and exception reporting	2026–2028	ICT Manager	Reduced manual errors and improved efficiency	1,500,000	World Bank
Revenue Protection & Enforcement Measures	Strengthen disconnections, penalties, and enforcement mechanisms	2027–2030	Commercial Manager	Improved revenue collection and compliance	1,200,000	KWSC
Customer Engagement for Billing Compliance	Awareness campaigns on billing, payments, and compliance	2026–2030	Commercial / PR Unit	Improved willingness to pay and reduced arrears	775,226.40	KWSC

G. Financial Management and Accountability

The financial management component focuses on strengthening financial sustainability through improved systems, accountability, and performance monitoring. Key interventions include financial system upgrades, budget control mechanisms, and enhanced reporting processes to ensure efficient resource utilisation and long-term viability of the utility.

Action	Description	Timeline	Responsible	Expected Output	Funding Requirement (ZMW)	Funding Line
ERP-Based Financial Management System Implementation	Procure and implement an ERP system (financial module) covering general ledger, budgeting, accounts	2026–2027	ICT Manager / Director Finance (DF)	Automated and transparent financial management system	4,500,000	World Bank

12

PPB

H. Hume

12

Action	Description	Timeline	Responsible	Expected Output	Funding Requirement (ZMW)	Funding Line
Financial System Configuration & Integration	payable/receivable, and reporting Configure ERP to generate financial reports, integrate with billing, procurement, and asset systems	2026–2028	ICT Manager	Real-time financial reporting and data integration	1,200,000	World Bank
Staff Training & Capacity Building (Financial Systems)	Train finance and relevant staff in ERP usage, reporting, and financial controls	2026–2028	DF / ICT Manager	Improved system utilisation and reporting accuracy	800,000	World Bank
Financial Controls & Compliance Strengthening	Strengthen internal controls, audit trails, and compliance mechanisms within ERP	2026–2030	DF / Internal Audit	Improved accountability and reduced financial risks	712,000	KWSC
Financial Reporting & Performance Analysis	Develop dashboards and reporting tools for budget tracking, variance analysis, and decision-making	2027–2030	DF	Timely and accurate financial reporting	500,000	KWSC
Independent External Audits Support	Facilitate annual external audits and compliance reviews	2026–2030	DF	Enhanced transparency and stakeholder confidence	1,000,000	KWSC

H. Climate Adaptation and Resilience

Recognising the increasing risks posed by climate change, this component integrates resilience measures into infrastructure, operations, and community engagement. The focus is on enhancing the utility's ability to withstand climate-related shocks such as droughts and floods, while ensuring sustainable water resource management and service continuity.

Action	Description	Timeline	Responsible	Link to NAP	Funding Requirement (ZMW)	Funding Line
Provide Climate Resilient Power Sources Infrastructure	Install solar-powered pumping systems, climate-proof assets, and achieve solar integration in 4 growth centres	2026–2030	PC / SHEQ	NAP Priority 2: Infrastructure Resilience and Adaptation	12,000,000	World Bank (linked to Water Service Extension)
Train Staff on Climate Adaptation	Capacity building in climate adaptation, water conservation, and environmental management	2026–2028	PC / ME / SHEQ	NAP Priority 8: Climate Change Education and Capacity Building	800,000	World Bank

W

Billings

Amie

Sen

Action	Description	Timeline	Responsible	Link to NAP	Funding Requirement (ZMW)	Funding Line
Upgrade Water Storage & Supply Systems	Construct/rehabilitate reservoirs and storage tanks to address climate variability	2026–2030	PC / SHEQ	NAP Priority 4: Water Security and Sustainable Management	5,500,000	World Bank / GRZ
Climate-Resilient Infrastructure Design & Construction	Design and construct flood-resistant WASH facilities and improved drainage systems	2026–2028	PC / ME	NAP Priority 2 & 5: Resilient Infrastructure & WASH Systems	2,500,000	KWSC / World Bank
Catchment & Borehole Protection	Implement watershed protection, pollution control, and water safety planning	2026–2030	PC / ME / SHEQ	NAP Priority 3: Ecosystem-Based Adaptation	1,100,000	KWSC
Community Awareness Campaigns	Sensitisation on climate adaptation, water conservation, and environmental protection	2026–2028	PC / SHEQ / ESS	NAP Priority 8: Climate Education	400,000	World Bank
Drought & Flood Response Plan Development	Develop and operationalise emergency response protocols	2026–2027	PC / SHEQ	NAP Priority 6: Disaster Risk Reduction	400,000	KWSC
Climate Risk & Vulnerability Assessment	Assess infrastructure and operational risks related to climate change	2026	PC / SHEQ / ESS	NAP Priority 1: Risk Assessment & Earl	300,000	World Bank
Establish GHG emission baseline	To undertake an Audit to determine the baseline GHG emission levels. Audit to be undertaken as part of the energy audit	2026	Operational Engineer/ SHEQ	Linked to Nationally Determined Contribution (NDC) for Zambia to the Paris Agreement on climate change	Budgetted under the Energy Audit	World Bank
Implement GHG emission Action Plan	To develop and implement an Action Plan for GHG emission reduction	2028	Operational Engineer/ SHEQ	Linked to Nationally Determined Contribution (NDC) for Zambia to the Paris Agreement on climate change	Budgetted under the Energy Audit	World Bank

I. Gender and Social Inclusion

KWSC is committed to promoting gender equality and social inclusion across all aspects of its operations. This component integrates gender-responsive approaches in employment, service delivery, and community engagement to ensure equitable access and participation of women and vulnerable groups in water and sanitation services.

Action	Description	Timeline	Responsible	Expected Outcome	Funding Requirement (ZMW)	Funding Line
Gender Diagnostic Review	Review the 2022 Gender Diagnostic Report (UoF) to establish baselines and inform gender-responsive planning	2026	ESS	Established baselines and improved gender-responsive planning	240,000.00	World Bank (PforR)
Gender Action Plan (GAP) Development	Develop and approve a Gender Action Plan aligned to PIAP objectives and KPIs	2026–2027	ESS	Approved and operational GAP	180,000.00	World Bank
GAP Implementation	Implement gender-responsive activities including policy updates, inclusive service delivery, and institutional reforms	2027–2030	ESS / ME	Improved gender inclusion in operations and service delivery	450,000.00	World Bank / KWSC
Gender Capacity Building & Training	Train staff on gender mainstreaming, inclusion, and workplace equality	2026–2029	ESS / HRA	Enhanced staff capacity on gender integration	117,198.00	World Bank

J. Customer Engagement and Feedback

This component aims to enhance customer satisfaction and trust through improved communication, feedback mechanisms, and service responsiveness. By establishing accessible feedback channels, conducting regular surveys, and strengthening stakeholder engagement, KWSC will ensure that customer needs inform operational improvements and decision-making.

Action	Description	Timeline	Responsible	Outcome	Funding Requirement (ZMW)	Funding Line
Baseline Customer Satisfaction Survey	Conduct initial survey to establish	2026	Billing Manager	Established benchmark	400,000	KWSC / WaterAid

W

Billings

Billings

Billings

Action	Description	Timeline	Responsible	Outcome	Funding Requirement (ZMW)	Funding Line
	customer satisfaction levels, pain points, and service gaps			for service improvement		
Customer Satisfaction Survey (Follow-up)	Conduct follow-up survey to measure improvements after interventions	2027	Billing Manager	Data-driven service improvements	350,000	WaterAid
Customer Feedback System (CRM Integration)	Configure ERP (CRM module) to capture, track, and report customer complaints and feedback	2026–2027	ICT Manager / Commercial Manager	Improved complaint tracking and resolution	600,000	World Bank
Establish Customer Feedback Channels	Set up toll-free line, WhatsApp, and digital complaint platforms	2026	Commercial Manager	Increased accessibility and responsiveness	300,000	KWSC
Customer Engagement & Awareness Programs	Conduct structured radio programs, community outreach, and public awareness campaigns (replace "Kafubu on Air" with formal programs)	Quarterly (2026–2030)	MPRO	Improved public trust and awareness	750,000	KWSC
Quarterly Stakeholder Engagement Meetings	Hold structured meetings with communities and civic leaders	Quarterly (2026–2030)	APRO / ACR	Increased accountability and stakeholder trust	500,000	KWSC

W

PP

Amel

See

7. SUMMARY COST OF THE PAIP IMPLEMENTATION

For the successful implementation of PIAP a total of K160.9 million is required with 94% from the World Bank, 4.1% from KWSC and 1.5% from WaterAid as shown in the table below. A detailed breakdown of the costs is provided in Annex 3

S/N	FUNDER	BUDGET (ZMW)
1	World Bank	151,724,394.02
2	WaterAid	2,349,655.78
3	KWSC	6,525,226.40
	Grand Total	160,599,276.20

8. RISK PROFILE

8.1 Risk Management Approach

The implementation of the Performance Improvement Action Plan (PIAP) will be undertaken in a dynamic and complex operating environment characterised by technical, financial, environmental, and institutional risks. To ensure successful delivery of planned outcomes, Kafubu Water and Sanitation Company (KWSC) will adopt a proactive risk management approach that emphasises early identification, continuous monitoring, and timely mitigation of risks.

Risk management will be integrated into the utility's planning and operational systems, including the Management Information System (MIS), SCADA platforms, and financial reporting frameworks, to enable real-time tracking and informed decision-making. Each identified risk has been assessed based on its likelihood of occurrence and potential impact on PIAP objectives, and categorised into risk levels (Low, Moderate, High, Critical). Appropriate mitigation measures have been proposed and will be regularly reviewed during monthly, quarterly, and annual performance evaluations.

8.2 Risk Matrix

The risk matrix provides a structured assessment of potential risks that may affect the successful implementation of the PIAP. By evaluating risks based on their likelihood and impact, and identifying appropriate mitigation measures, KWSC aims to proactively manage uncertainties and ensure the achievement of planned outcome.

Risk Category	Risk Description	Likelihood	Impact	Risk Level	Mitigation Measures	Responsible Unit
Technical	Persistent high Non-Revenue Water (NRW) due to aging infrastructure and leaks	High	High	Critical	DMA establishment, active leak detection, pressure management, pipeline rehabilitation	Technical / NRW Unit
Technical	Failure or delays in SCADA and digital system implementation	Medium	High	High	Phased implementation, staff training,	ICT / Technical

12

[Signature]

[Signature]

[Signature]

Risk Category	Risk Description	Likelihood	Impact	Risk Level	Mitigation Measures	Responsible Unit
Financial	Insufficient funding or delayed disbursements	Medium	High	High	vendor support agreements Diversify funding sources, phased budgeting, strengthen financial planning	Finance Department
Financial	Low collection efficiency affecting cash flow	High	High	Critical	Strengthen billing systems, enforce debt recovery, AMR implementation	Commercial / Finance
Operational	Inadequate staff capacity and resistance to change	Medium	Medium	Moderate	Continuous capacity building, performance management systems, change management programs	HR / Management
Environmental	Climate change impacts (droughts, floods affecting water sources)	High	High	Critical	Climate-resilient infrastructure, water source diversification, drought response planning	SHEQ / Technical
Environmental	Degradation of water catchment areas	Medium	High	High	Catchment protection programs, community engagement, enforcement of regulations	SHEQ / Environmental Unit
Social	Vandalism and theft of infrastructure	Medium	Medium	Moderate	Community sensitization, stakeholder engagement, security enhancements	Commercial / Security
Social	Poor customer perception and low willingness to pay	Medium	High	High	Improve service delivery, customer engagement programs, awareness campaigns	Commercial / Public Relations
Regulatory	Non-cost reflective tariffs affecting financial sustainability	High	High	Critical	Engage regulator (NWASCO), cost-reflective tariff proposals, efficiency improvements	Management / Finance
Energy	Rising electricity tariffs increasing operational costs	High	High	Critical	Energy efficiency programs, solar power integration, optimized pumping	Technical / Energy Unit

8.3 Risk Monitoring and Reporting

KWSC will establish a Risk Monitoring Framework to ensure that all identified risks are continuously tracked and managed. This will include:

- Integration of risk indicators into monthly and quarterly performance reports
- Assignment of risk owners for each major risk category
- Periodic risk review meetings at management level
- Use of data-driven tools (MIS/SCADA) for early warning signals
- Annual risk reassessment and updating of mitigation strategies

The detailed risk matrix is shown in Annex 1.

9. MONITORING & EVALUATION

The Monitoring and Evaluation (M&E) framework is designed to track progress, assess performance, and support informed decision-making throughout the PIAP lifecycle. Through regular reporting, inspections, and performance reviews, KWSC will ensure accountability, transparency, and continuous improvement in project implementation.

Action	Description	Timeline	Responsible	Impact	Data Source
M&E System Strengthening	Operationalise IMIS and project tracking systems for monitoring PIAP implementation	2026–2030	ICT Manager / M&E Unit	Evidence-based decision-making	
Monthly Site Inspections	Conduct regular site inspections to monitor project implementation and compliance	Monthly (2026–2030)	Project Engineers / M&E Unit	Improved implementation quality and early issue detection	Project reports
Quarterly Progress Reporting	Prepare and submit quarterly progress reports on PIAP implementation	Quarterly (2026–2030)	M&E Unit / Department Heads	Timely tracking of performance and corrective actions	Gantt Chart
Bi-Annual Internal PIAP Review	Conduct internal performance reviews to assess progress against KPIs and targets	Twice per year (2026–2030)	Senior Management / M&E Unit	Improved accountability and performance alignment	Implementation reports, Gantt chart

10. LEADERSHIP AND ACCOUNTABILITY

Effective leadership and accountability are critical to the successful implementation of the Performance Improvement Action Plan (PIAP). Kafubu Water and Sanitation Company Limited will ensure that clear roles, responsibilities, and reporting structures are established across all levels of the organisation to drive performance and achieve PIAP objectives. Leadership oversight will be provided by senior management, led by the Managing Director, with support from departmental heads responsible for specific thematic areas such as Non-Revenue Water (NRW), energy efficiency, financial management, customer service, and infrastructure development. Each component of the PIAP will have designated responsible officers accountable for planning, execution, monitoring, and reporting.

To strengthen accountability:

- A Performance Management System (PMS) integrated within the ERP/MIS will be used to track key performance indicators (KPIs) across departments.
- Departmental performance contracts will be aligned with PIAP targets to ensure individual and team accountability.
- Regular performance review meetings (monthly, quarterly, and annual) will be conducted to assess progress and address implementation challenges.
- The Internal Audit Unit will provide independent oversight on financial management, compliance, and risk controls.
- Management will ensure that all activities are implemented in line with approved budgets, procurement procedures, and regulatory requirements set by National Water Supply and Sanitation Council (NWASCO).

Through this structured leadership and accountability framework, KWSC will promote a culture of performance, transparency, and responsibility, ensuring effective delivery of the PIAP and sustained improvements in service provision.

11. DISCLOSURE AND TRANSPARENCY MEASURES

Disclosure and accountability measures will be implemented to ensure that the utility operates transparently and takes full responsibility for its actions. These measures are intended to foster stakeholder trust and verify performance outcomes through open communication, regular audits, and structured reporting systems. Key actions include the disclosure of financial performance, monitoring compliance with social and ethical standards, management of conflicts of interest, and facilitation of stakeholder feedback and reporting mechanisms. Information will be disseminated through multiple platforms, including the Kafubu website, email (Outlook), WhatsApp, radio broadcasts, and print media, to ensure broad accessibility and effective stakeholder engagement.

11.1 PIAP Disclosure Date: _____

11.2 Public Access: www.kafubu.co.zm , <https://www.facebook.com/kafubuwater>

11.3 Escrow Account Details:

Account Name	: Kafubu Water & Sanitation Ltd
Account Number	: 1147376
Bank	: ABSA
Branch	: Luanshya

11.31 Escrow Account Management and Control Framework

In line with provision (g), an escrow account shall be established to ring-fence a defined portion of the Commercial Utilities' (CUs) revenues. The purpose of this account is to ensure dedicated funding for priority investments and service extensions, including climate disaster response, climate-proof retrofitting, and system resilience enhancement through redundancy. To safeguard against misuse and ensure accountability, the escrow account will be governed by a strict financial management and control framework as outlined below:

Access, Control, and Utilisation of Funds

1) **Ring-Fencing of Funds:**

A predetermined percentage of revenues shall be deposited directly into the escrow account. These funds shall be strictly reserved for approved capital investments and resilience-related interventions and shall not be used for recurrent or operational expenditures.

2) **Authorisation and Approval Process:**

Access to the escrow account shall require joint authorisation. All disbursements must be approved by the Managing Director (MD) and the Director of Finance (DF), based on approved work plans and budgets aligned with the Programme Appraisal Document (PAD).

3) **Role of the Director of Finance (DF):**

The DF shall serve as the principal financial controller of the escrow account and will be responsible for:

- Ensuring all deposits and withdrawals comply with approved financial procedures
- Verifying the availability of funds prior to any commitment or disbursement
- Certifying that all expenditures are aligned with approved investment plans and budget provisions
- Maintaining accurate financial records and ensuring timely reporting
- Enforcing internal controls and compliance with audit requirements

4) **Disbursement Conditions:**

Funds shall only be released upon:

- Submission and approval of detailed project proposals and cost estimates
- Confirmation of alignment with PIAP priorities and PAD guidelines
- Certification by the DF that funds are available and properly allocated
- Approval through established procurement and financial procedures

5) **Segregation of Duties:**

Financial control, approval, and implementation functions shall be clearly separated to prevent conflicts of interest. The DF shall oversee financial compliance, while project implementation shall be handled by designated technical units.

6) **Monitoring and Reporting:**

Regular financial and performance reports shall be prepared and submitted to management, the Board, and relevant stakeholders. These reports will track fund utilisation, project progress, and compliance with approved plans.

7) **Audit and Oversight:**

The escrow account shall be subject to periodic internal audits and mandatory

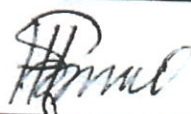
annual external audits to ensure transparency, accuracy, and compliance with regulatory standards.

Control Objective

This framework is designed to ensure that escrow funds are utilised efficiently, transparently, and strictly for their intended purposes, while minimising risks of misuse, misallocation, or financial mismanagement.

11.4 Annual Report Publishing: _____

12. APPROVAL & SIGN-OFF

Name	Title	Signature	Date
Joe Mbewe	Managing Director		18/06/26
Eng. Sydney M. Matamwandi	Board Chairperson		18/06/26
Eng. Billima Paul	PIU Coordinator		18/06/26
V. CHITUMBOD	NWASCO Representative		18/06/2026

Annex 1: Risk Matrix

RISK IDENTIFICATION

MONITORING & CONTROL											
ID	Risk	Risk Description	Risk Area	Risk Impact (1-5)	Probability of Occurrence (1-5)	Risk Rating	Implication	Triggers	Risk Response Strategy Currently in Place	Contingency Plan	Responsible
1	Project Fund disbursements	There is a risk of late/delay in releasing PforR funds	Project execution Stalled works	5	3	15	-Affects the Capacity of the Company to complete the works in good time -vandalism on uncompleted installations -Low community Confidence	-Bureaucracy	- proactive in planning project works -Continuous follow up	-Adequate and consistent in planning of the works -Continuous engagements of the ministry	PC/MD
2	Foreign exchange exposure on hardware procurement	There is a risk of local currency devaluation	Budget Financial	5	4	20	-Increased costs of buying materials -May have impact on transportation of goods needed in the implementation of the project works	-Global political changes -Instabilities on the global trades' variabilities	-Monitoring of global and local market changes. -open dollar account	-Having alternative sources of raw Water - Fencing of all Water Treatment facilities	PC/FMS/MD
3	Climate-induced disruptions to water sources	No water/ erratic water supply to customers	Financial Operation Public health	5	3	15	-No water affects people's health - It affects revenue and revenue collection - Increased costs of service provision	-Climate change/variable s	-Availability of alternative water sources. -standby pumps and network repair materials -Maintenance of infrastructure -Water harvesting	-Availability of water bowser -Availability of Alternative facilities -Availability of alternative power supply and continuous engagement with ZESCO	PC/SHEQ/MD
4	Resistance to tariff adjustments	Potential risk of non-upward tariff adjustment	Operation Financial	5	3	15	-operational challenges -unsustainable service delivery -Litigations -Increased cost of operation	-Political interference	-Regular engagements with Government, NAWASCO and cooperating partners	-Continues increasing the customer base.	DPD/DCS/MD
5	Staff turnover in critical technical roles	The risk of high staff turnover	Operational Financial Reputational	5	4	20	-Disruption of operations -High recruitment costs -Loss of institutional memory	-Uncompetitive conditions of service -Low motivation	-Continuous improvement of conditions of service	-Succession Plan in Place -Training and Development of current staff	DHRA DF/MD

Annex 1: Risk Matrix

RISK IDENTIFICATION

ID	Risk	Risk Description	Risk Area	Risk Impact (1-5)	Probability of Occurrence (1-5)	Risk Rating	Implication	Triggers	MONITORING & CONTROL		
6	Cybersecurity vulnerabilities	There is risk of ICT system failure, corruption and unauthorized access.	Operational	5	3	15	-Loss of data integrity -Fraud -Customer litigation -Loss of revenue	-Inadequate controls -Human error and intentional sabotage -obsolete hardware -Internal or external attacks -Failure to renew the vendor license before expiry date	Risk Response Strategy Currently in Place	Contingency Plan	Responsible
									- ERP installed on a modern server -Daily backups ran on the server -Regular patch up of the server -Password protection on ERP server -Non editable audit logs in place -Administrative action against sabotage -ERP automatic backups	-Establish a disaster recovery and online backup Centre -Enhanced Firewall monitoring & intrusion detection -Schedule the ERP training	MICT/MD

Different combinations of likelihood score and consequence score are plotted on the graph to result into a risk matrix illustrated below.

CONSEQUENCE	LIKELIHOOD				
	Rare (1)	Unlikely (2)	Possible (3)	Likely (4)	Almost certain (5)
Extreme (5)	5	10	15	20	25
Major (4)	4	8	12	16	20
Moderate (3)	3	6	9	12	15
Minor (2)	2	4	6	8	10
Negligible (1)	1	2	3	4	5

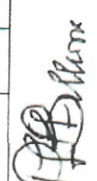
Annex 2:

5 Year Gantt Chart

KAFUBU WATER AND SANITATION COMPANY

SUB-DLR	DELIVERABLE	ACTIVITIES	Responsible	Year 1				Year 2				Year 3				Year 4				Year 5			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
DLR 2.2 - CUs have progressively achieved their Operating Cost Coverage Ratio (OCCR) in accordance with their approved PIAPs	Biannual clean up customer data base	Customer data base cleaning	ICT, Commercial,																				
	Improved revenue collection efficiency (installation of smart meters)	Purchase of smart bulk meters for commercial and industrial customers in all the service areas	Procurement Unit, Engineering Dept, PR																				
	Households Metering (Customers)	Install household meters	Meter management unit, Planning																				
	Reducing NRW (GIS, Modelling, Pressure Management System, Scada, Capacity Building)	Implement strategies to reduce NRW	Planning, Engineering																				
	Improving Financial Management	ERP Data migration validation and integration staff training	IT																				
DLR 2.3 - People provided with at least basic water services	Plant, Zones, Network metering	Creation of DMAs	Planning, Network Metering																				
	Energy Efficiency and Management	Implement quick wins on energy saving	Planning, Finance, Engineering																				
	Implementation of Performance Management System	Performance management system installation	HR & Admin																				
	Install and operationalize 3 water and sanitation schemes (equipment and capacity building) in Luanshya, Masiit and Mpongwe, Kanyenda, Chisikone, Mshikishi	Install water & Sanitation schemes in Luanshya, Masiit & Mpongwe	Engineering, Procurement, Planning																				
	Install and operationalize 1 water and sanitation scheme (equipment and capacity building) in Ntola Munkulungwe, introduce and operationalize reusable pit latrines in old Ntola (equipment and capacity building)	Install water & Sanitation scheme in Munkulungwe (Ntola)	Procurement																				
DLR 4.3: Compliance with Amended Articles of Association (Board Governance)		Construction of houses of service in Ntola	Engineering																				
		Conduct training for Board Secretaries on Article 63-66 compliance	HR/Secretary																				
		Train Board members on MWASCO Corporate Governance Handbook																					
		Approve PIAPs through KWSC Board and disclose to the public.																					
		Technical and operation board meeting																					
DLR # 2.4 compliance with PIAPs targets on gender balance and sensitivity		Full board meeting																					
		Publish PIAPs on websites, public notice boards, and radio announcements																					
		Develop and adopt Gender Action Plans aligned with PIAPs																					
		Implement awareness campaigns on women's and vulnerable groups' participation in water governance																					






Annex 3: Presentation of Costings

ANNEX 3: PRESENTATION OF COSTS																		
S/n	Action Plan Component	Details of Activity					Budget Line (Funding Source)					Costs (ZMW)				Total Cost (ZMW)		
		2026	2027	2028	2029	2030	2026	2027	2028	2029	2030	2026	2027	2028	2029		2030	
1	NRW	DMA Establishment (Network Zoning)	DMA Establishment (Network Zoning)				Improved revenue collection efficiency (installation of electromagnetic meters, smart meters)-World bank PforR	9,250,000.00				9,250,000.00						10,500,000.00
		Bulk & Plant Metering	Bulk & Plant Metering	Bulk & Plant Metering			Improved revenue collection efficiency (installation of electromagnetic meters, smart meters)-World bank PforR					6,000,000.00	6,000,000.00					12,000,000.00
		Procuring of Household Water Meters	Household Metering Program	Household Metering Program			Procurement of domestic water meters - World Bank PforR					10,500,000.00						10,500,000.00
		Installation of Household Water Meters	Household Metering Program	Household Metering Program			Installation of water meters (hy connecting meters)-World bank PforR						8,954,626.40					8,954,626.40
			Pressure Management	Pressure Management			Reducing NRW (GIS, Modelling, Pressure Management System, Scada, Capacity building)											
		Illegal Connection Regularisation	Illegal Connection Regularisation	Illegal Connection Regularisation			Reducing NRW (GIS, Modelling, Pressure Management System, Scada, Capacity building)											
			Capacity building and staff training				KWSC-Commercial budget						99,626.40					99,626.40
		Hydraulic Modelling	Hydraulic Modelling	Hydraulic Modelling			Reducing NRW (GIS, Modelling, Pressure Management System, Scada, Capacity building)	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00						2,500,000.00
							Reducing NRW (GIS, Modelling, Pressure Management System, Scada, Capacity building)											
							Reducing NRW (GIS, Modelling, Pressure Management System, Scada, Capacity building)											
Sub-Total											24,150,000.00	24,926,252.80	625,000.00	625,000.00	625,000.00	625,000.00	60,954,252.80	
2	Energy Efficiency	Energy Audit and Baseline Establishment	Energy Audit and Baseline Establishment	Energy Audit and Baseline Establishment	Energy Audit and Baseline Establishment	Energy Efficiency and Management -World bank PforR	Energy Efficiency and Management -World bank PforR	Energy Efficiency and Management -World bank PforR	Energy Efficiency and Management -World bank PforR	Energy Efficiency and Management -World bank PforR	425,000			425,000			850,000.00	

31

PPD

PPD

June

Pump Scheduling and Optimisation	Pump Scheduling and Optimisation	Pump Scheduling and Optimisation	Pump Scheduling and Optimisation	Pump Scheduling and Optimisation	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	250,000.00	250,000.00	250,000.00	250,000.00	250,000.00	500,000.00
SCADA Integration for Energy Monitoring	SCADA Integration for Energy Monitoring	SCADA Integration for Energy Monitoring	SCADA Integration for Energy Monitoring	SCADA Integration for Energy Monitoring	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	250,000.00	250,000.00	250,000.00	250,000.00	250,000.00	500,000.00
SCADA Network Expansion (Design & Integration)	SCADA Network Expansion (Design & Integration)	SCADA Network Expansion (Design & Integration)	SCADA Network Expansion (Design & Integration)	SCADA Network Expansion (Design & Integration)	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	430,000.00	430,000.00	430,000.00	430,000.00	430,000.00	750,000.00
Integration of Energy and Flow Monitoring unit (SCADA & Digitalisation)	Integration of Energy and Flow Monitoring unit (SCADA & Digitalisation)	Integration of Energy and Flow Monitoring unit (SCADA & Digitalisation)	Integration of Energy and Flow Monitoring unit (SCADA & Digitalisation)	Integration of Energy and Flow Monitoring unit (SCADA & Digitalisation)	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	550,000.00	550,000.00	550,000.00	550,000.00	550,000.00	700,000.00
Maintenance staff and Operator Training and Capacity Building (SCADA)	Maintenance staff and Operator Training and Capacity Building (SCADA)	Maintenance staff and Operator Training and Capacity Building (SCADA)	Maintenance staff and Operator Training and Capacity Building (SCADA)	Maintenance staff and Operator Training and Capacity Building (SCADA)	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	220,000.00	220,000.00	220,000.00	220,000.00	220,000.00	230,000.00
Preventive Maintenance and System Backup (MIS)	Preventive Maintenance and System Backup (MIS)	Preventive Maintenance and System Backup (MIS)	Preventive Maintenance and System Backup (MIS)	Preventive Maintenance and System Backup (MIS)	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	50,000.00	50,000.00	50,000.00	50,000.00	50,000.00	450,000.00
Enhancement of the ASR system (MIS)	Enhancement of the ASR system (MIS)	Enhancement of the ASR system (MIS)	Enhancement of the ASR system (MIS)	Enhancement of the ASR system (MIS)	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00	550,000.00
Implementation of Performance Management System (MIS)	Implementation of Performance Management System (MIS)	Implementation of Performance Management System (MIS)	Implementation of Performance Management System (MIS)	Implementation of Performance Management System (MIS)	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	Energy Efficiency and Management - World bank PoR	121,400.00	121,400.00	121,400.00	121,400.00	121,400.00	607,000.00
Sub-Total										2,546,400.00	1,071,400.00	371,400.00	546,400.00	121,400.00	4,657,000.00
Billing System Upgrade (ERP Integration)	Billing System Upgrade (ERP Integration)	Billing System Upgrade (ERP Integration)	Billing System Upgrade (ERP Integration)	Billing System Upgrade (ERP Integration)	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	750,000	750,000	750,000	750,000	750,000	1,500,000.00
Customer Database Cleanup (Initial + Continuous Update)	Customer Database Cleanup (Initial + Continuous Update)	Customer Database Cleanup (Initial + Continuous Update)	Customer Database Cleanup (Initial + Continuous Update)	Customer Database Cleanup (Initial + Continuous Update)	Biannual clean up customer data base - World bank PoR	Biannual clean up customer data base - World bank PoR	Biannual clean up customer data base - World bank PoR	Biannual clean up customer data base - World bank PoR	Biannual clean up customer data base - World bank PoR	1,200,300.00	1,200,300.00	1,200,300.00	1,200,300.00	1,200,300.00	1,200,000.00
Customer Data Verification & Regularisation	Customer Data Verification & Regularisation	Customer Data Verification & Regularisation	Customer Data Verification & Regularisation	Customer Data Verification & Regularisation	Automation	Automation	Automation	Automation	Automation	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	1,800,000.00
Billing Process Automation & System Controls	Billing Process Automation & System Controls	Billing Process Automation & System Controls	Billing Process Automation & System Controls	Billing Process Automation & System Controls	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	Improving Financial Management - World Bank PoR	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	1,500,000.00

32

BBB

Approved

Am

[illegible]

Billings

James

Financial System Configuration & Integration	Financial System Configuration & Integration	Financial System Configuration & Integration	Implementation of Performance Management System	Implementation of Performance Management System	Implementation of Performance Management System	400,000.00	400,000.00	0	0	800,000.00
Staff Training & Capacity Building (Financial Systems)	Staff Training & Capacity Building (Financial Systems)	Staff Training & Capacity Building (Financial Systems)	Financial Controls & Compliance Strengthening	Financial Controls & Compliance Strengthening	Financial Controls & Compliance Strengthening	266,666.67	266,666.67	266,666.67	0	900,000.00
Financial Controls & Compliance Strengthening	Financial Controls & Compliance Strengthening	Financial Controls & Compliance Strengthening	Financial Reporting & Performance Analysis	Financial Reporting & Performance Analysis	Financial Reporting & Performance Analysis	142,400.00	142,400.00	142,400.00	142,400.00	712,000.00
Independent External Audits	Independent External Audits	Independent External Audits	Independent External Audits	Independent External Audits	Independent External Audits	125,000.00	125,000.00	125,000.00	125,000.00	500,000.00
			Audit fees - KWSC	Audit fees - KWSC	Audit fees - KWSC	200,000.00	200,000.00	200,000.00	200,000.00	1,000,000.00
Sub-Total						3,359,067	3,384,067	467,400	467,400	8,312,000.00
Climate Adaptation and Resilience	Provide Climate Resilient Power Sources Infrastructure	Provide Climate Resilient Power Sources Infrastructure	Provide Climate Resilient Power Sources Infrastructure	Climate Adaptation and Resilience-World bank	Climate Adaptation and Resilience-World bank	2,400,000.00	2,400,000.00	2,400,000.00	2,400,000.00	12,000,000.00
	Train Staff on Climate Adaptation	Train Staff on Climate Adaptation	Train Staff on Climate Adaptation	Climate Adaptation and Resilience-World bank	Climate Adaptation and Resilience-World bank	266,667.00	266,667.00	266,667.00	266,667.00	800,000.00
	Upgrade Water Storage & Supply Systems	Upgrade Water Storage & Supply Systems	Upgrade Water Storage & Supply Systems	Climate Adaptation and Resilience-World bank	Climate Adaptation and Resilience-World bank	1,100,000.00	1,100,000.00	1,100,000.00	1,100,000.00	4,400,000.00
	Climate Resilient Infrastructure Design & Construction	Climate Resilient Infrastructure Design & Construction	Climate Resilient Infrastructure Design & Construction	Climate Adaptation and Resilience-World bank	Climate Adaptation and Resilience-World bank	833,333.00	833,333.00	833,333.00	833,333.00	2,499,999.00
	Catchment & Borehole Protection	Catchment & Borehole Protection	Catchment & Borehole Protection	Climate Adaptation and Resilience-World bank	Climate Adaptation and Resilience-World bank	220,000.00	220,000.00	220,000.00	220,000.00	1,100,000.00
	Community Awareness Campaigns	Community Awareness Campaigns	Community Awareness Campaigns			134,000.00	134,000.00			402,000.00
	Drought & Flood Response Plan Development	Drought & Flood Response Plan Development				200,000.00	200,000.00			400,000.00
	Establish GHG emission baseline					300,000.00				300,000.00
	Sub-Total					3,520,667.00	5,154,000.00	4,954,000.00	4,553,333.00	21,901,999.00
	CONSOLIDATED TOTAL					58,758,218.8	69,631,704.6	18,977,449.88	7,245,117.88	160,599,276.20

36

PP Bellone

PP Bellone

PP Bellone