

Executive Summary

The South Africa Metro Trading Services Program (the Program) aims to improve the accountability, financial sustainability, and operational performance of water supply and sanitation (WSS), electricity, and solid waste management (SWM) services in metropolitan municipalities (metros). By strengthening the municipal service delivery systems, the Program will support the transition to low-carbon, climate-resilient urban development and contribute to South Africa's climate commitments.

The Program is a Results-Based Financing operation comprising three Result Areas (RAs) covering WSS, electricity, and SWM services. Each RA focuses on strengthening governance and accountability, financial sustainability, and operational performance to enable metros to deliver low-carbon, climate-resilient services. The Program supports a performance-based conditional grant mechanism under which participating metros will implement Performance Improvement Action Plans with measurable targets linked to disbursement-linked indicators. These include climate-focused targets such as reductions in non-revenue water, power losses, and methane emissions from solid waste.

The Program will be jointly co-financed with the World Bank (WB), which serves as the lead co-financier, alongside other development partners as part of a coordinated effort. The Program has been prepared under the WB's Policy on Program-for-Results Financing, whose environmental, social, and procurement provisions are considered materially consistent with AIIB's relevant policies. The Program is fully aligned with AIIB's mandate to promote green infrastructure and its Sustainable Cities, Water, and Energy Strategies, as well as its Strategy on Financing Operations in Non-regional Members.

Project No. and Name	P000988 South Africa Metro Trading Services Program		
AIIB Member	South Africa		
Borrower	Republic of South Africa		
Guarantor	Not Applicable		
Project Implementation Entity	Nelson Mandela Bay Metropolitan Municipality; Buffalo City Metropolitan Municipality; City of Tshwane; City of Johannesburg; eThekweni Metropolitan Municipality; Mangaung Metropolitan Municipality; City of Cape Town; City of Ekurhuleni		
Proposed AIIB financing (USDm)	USD500.00	Instrument type/subtype	Loan/Direct Sovereign
		Currency of financing requested	US Dollar
Sector (Subsector)	Urban (Multi-subsector)	E&S Category and Comments (if any)	B
Project Objective	To improve the accountability, financial and operational performance of water supply and sanitation, electricity, and solid waste management services in South Africa's metropolitan municipalities (metros). These improvements will contribute significantly to climate change mitigation and strengthen climate resilience through sustainable, low-carbon urban service delivery.		
Project Description	South Africa's metros, home to 22 million people and generating 85% of the country's economic output, are at the frontline of both the national development agenda and the climate crisis. Metros are among the largest contributors to greenhouse gas (GHG) emissions in South Africa, accounting for about one-third of national energy-related emissions. They are also increasingly exposed to climate change impacts, including rising temperatures, more frequent droughts, and extreme flooding that place mounting strain on water, energy, and waste systems. Addressing these challenges is therefore essential to achieving South Africa's climate mitigation and adaptation goals and to building resilient, low-carbon urban systems. Metros face increasing challenges in delivering critical municipal services, such as water, electricity, and solid waste management, due to aging infrastructure, poor governance, unsatisfactory revenue collection, and financial mismanagement. These service delivery constraints are exacerbated by rapid urbanization, inherited spatial inequalities, and growing pressure on overstretched systems. To this end, the South Africa Metro Trading Services Program (MTSP/the "Program") has been designed as a transformative platform to drive climate-smart urban service delivery. The MTSP will provide performance-based conditional grants to metros, incentivizing		

	improvements in governance, operational efficiency, and financial performance across three key sectors: water supply and sanitation (WSS), electricity, and solid waste management (SWM). Climate mitigation and adaptation are central to the MTSP's design. By rehabilitating and modernizing infrastructure, reducing water and electricity losses, and improving waste management operations, the Program will contribute to reducing GHG emissions and promote more sustainable urban practices. For instance, reducing technical and commercial power losses not only improves service efficiency but also lowers emissions. Similarly, modernizing SWM practices, including enhanced waste minimization and collection, and recycling interventions, offers tangible climate mitigation benefits. Overall strengthening service delivery systems through better governance, operational efficiency, and climate-smart investments will help metros mitigate climate change impacts, improve resilience, and foster a more sustainable, low-carbon urban environment, ultimately ensuring long-term sustainability. The Republic of South Africa (the Borrower), through the National Treasury, requested the World Bank (WB), AfDB and other development partners to support the government's program, i.e., MTSP, using the Program for Results (PforR) financing instrument by WB and a similar Results-Based Financing (RBF) instrument by AfDB. The Program comprises three Result Areas (RAs) corresponding to WSS, electricity, and SWM services. Each RA will cover each service with a focus on its governance and accountability, financial, and operational performance, key foundations to enable metros to become low-carbon, climate-resilient service providers. Disbursements will be made based on the verified achievement of Disbursement Linked Indicators (DLIs). Metro level DLIs require each metro to have a council approved Performance Improvement Action Plan (PIAP) for each of the three municipal services, with progress monitored through the achievement of periodic performance targets outlined in the plans. Each PIAP will include measurable climate-focused targets, such as reductions in non-revenue water, technical power losses, and methane emissions from solid waste. This integrated, climate-focused approach, supported by national policy alignment and capacity building, positions the Program as a transformative effort to strengthen metropolitan service delivery, unlock broader climate-adaptive urban development potential, and enable private sector investments.		
Implementation Period	Start Date: January 01, 2026 End Date: March 31, 2031	Expected Loan Closing Date	March 31, 2031

Co-financing type	Co-financing led by another financier	Following other Financier's E&S Policy?	Yes
Lead financier	World Bank	Following other Financier's Procurement Policy?	Yes
Financing Plan	Total Program Cost: USD3,000 million Indicative Financing Plan: AIIB loan: USD500 million (16.7%); International Bank for Reconstruction and Development (IBRD) loan: USD925 million (30.8%); and the Borrower: USD1,575 million (52.5%)		
Policy Assurance	The Project has passed a policy compliance review. No derogation or exception to the Bank's operational policies is required.		

Risk	
Key Risks	Mitigation Measures
Fiduciary	The Program will ensure strong fiduciary oversight through the following measures: (i) conducting annual statutory audit by Auditor-General of South Africa (AGSA) including audit of procurement activities and publishing the findings; and (ii) preparation and adoption of a Program Operations Manual (POM) satisfactory to the Bank and containing a dedicated procurement section.
Political and Governance	The Program will strengthen stakeholder engagement to build understanding and support, while implementing governance reforms to clearly define roles and responsibilities between central and local governments, thereby strengthening sector coordination and decision-making.
ECap	89.49USDm 17.90%

Strategic Alignment	
Alignment with AIIB's thematic priorities	Green infrastructure
Alignment with AIIB's strategies	Strategy on Financing Operations in Non-regional Members; Sustainable Cities Strategy; Water Strategy; Sustainable Energy for Tomorrow Strategy

Key Outcomes			
Indicator	Unit of measure	Baseline (Year)	Target (Year)

Metros that have met and maintained the Program's Minimum Conditions	Number	0 (2025)	8 (2031)
Non-Revenue Water reduction in South Africa's metros as a result of the Program	Percentage	41 (2025)	28 (2031)
Electricity losses reduction in South Africa's metros as a result of the Program	Percentage	22 (2025)	12 (2031)

Climate Action		
Climate Finance	Adaptation Finance (USDm)	USD0.0000
	Mitigation Finance (USDm)	USD265.0000
	Dual Benefit (USDm)	USD0.0000
	Total (USDm)	USD265.0000

Other Key Financing Requirements	
Conditions of Effectiveness	(i) signing of Project Co-lenders' Agreement between WB and AIIB and all conditions precedent to its effectiveness (other than the effectiveness of the Loan Agreement between the AIIB and the Borrower) have been fulfilled; (ii) effectiveness of Financing Agreement between WB and the Borrower; and (iii) completion of WB's Project restructuring and amendment to WB's Financing Agreement.
Key Conditions for 1st Disbursement	(i) Disbursements will follow the Program's arrangements, specifically linked to the achievement of DLIs.
Key Covenants	The Borrower shall: (i) maintain a Multi-Sectoral Steering Committee; (ii) maintain, until the completion of the Program, a MTSC team at the Intergovernmental Relations Division of the National Treasury, with terms of reference, functions and resources acceptable to WB and AIIB; (iii) ensure each participating metro assigns during Program implementation, an accounting officer to facilitate the coordination of Program activities; (iv) undertake the actions set forth in the Program Action Plan and maintain adequate policies/procedures to monitor and evaluate its implementation, in a manner satisfactory to WB and AIIB; and (v) no later than six months from effective date, appoint and thereafter maintain on an annual basis during the implementation of the Program, the Independent Verification Agent with terms of reference acceptable to WB and AIIB.

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**ASIAN INFRASTRUCTURE
INVESTMENT BANK**

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Sovereign-backed Financings

Approval Project Document

P000988 South Africa: South Africa Metro Trading Services Program

Currency Equivalents

(As at March 31, 2025)

Currency Unit – South African Rand or ZAR

USD1.00 = ZAR18.22

Borrower's Fiscal Year

April 1 – March 31

Abbreviations

AIIB	Asian Infrastructure Investment Bank
AGSA	Auditor General of South Africa
AM	Independent Accountability Mechanism
APA	Annual Performance Assessment
CapEx	Capital Expenditure
CO ₂ eq	carbon dioxide equivalent
DLI	Disbursement Linked Indicator
DORA	Division of Revenue Act
DWS	Department of Water and Sanitation
EEP	Employment Equity Plan
EIRR	Economic Internal Rate of Return
ENPV	Economic Net Present Value
E&S	Environmental and Social
ESF	Environmental and Social Framework
ESMS	Environmental and Social Management System
ESP	Environmental and Social Policy
ESSA	Environmental and Social Systems Assessment
FY	Fiscal Year
GDP	gross domestic product
GHG	greenhouse gas
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IBRD	International Bank for Reconstruction and Development
IFSA	Integrated Fiduciary Systems Assessment
IRR	Financial Internal Rate of Return
IVA	Independent Verification Agent
JET	Just Energy Transition (Municipal)
MAPS	Methodology of Assessment of Procurement Systems
MCs	Minimum Conditions
MDB	Multilateral Development Bank
MFMA	Municipal Finance Management Act
Mt	Metric ton
MTSC	Metro Trading Services Coordination
MTSG	Metro Trading Services Grant
MTSP	Metro Trading Services Program
NCCAS	National Climate Change Adaptation Strategy

NDC	Nationally Determined Contribution
NRW	Non-Revenue Water
NPV	Net Present Value
NT	National Treasury
OHS	Occupational Health and Safety
OMG	Outage Management Systems
PA	Paris Agreement
PAP	Program Action Plan
PD	Project Document
PFM	Public Financial Management
PFMA	Public Finance Management Act
PforR	Program for Results
PIAP	Performance Improvement Action Plan
POM	Program Operations Manual
PPP	Policy on Prohibited Practices
RA	Result Area
RAP	Resettlement Action Plan
RBP	Result-based Project
SCADA	Supervisory Control and Data Acquisition
SWM	Solid Waste Management
SPoMA	Single Point of Management Accountability
tCO ₂ eq	tons of carbon dioxide equivalent
ToC	Theory of Change
ToR	Terms of Reference
WB	World Bank
WSS	Water Supply and Sanitation

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1. Context

1.1 Country and Macroeconomic Overview. South Africa, an upper-middle-income economy with a per-capita income of around USD6,700 and a population of 63 million, has experienced a decade of modest economic performance but shows signs of gradual stabilization. Real Gross Domestic Product (GDP) expanded by an average of 0.7% between 2015 and 2024—well below the 3.1% pace of the previous decade—reflecting the combined impact of power shortages, infrastructure bottlenecks, and regulatory constraints. The post-pandemic recovery has gradually gained traction, with positive contributions from household consumption and exports, and resilient performance in the financial sector where stock-market capitalization rose over 50% since early 2024. Inflationary pressures have moderated sharply and the headline consumer price index fell from 7.8% in mid-2022 to 3.4% by 2025, supported by lower global commodity prices, currency appreciation, and prudent monetary management by the South African Reserve Bank.

1.2 Fiscal and external indicators remain broadly stable despite lingering structural headwinds. The fiscal deficit widened modestly to 6% of GDP in 2024 largely owing to revenue underperformance, higher debt-service costs and support to state-owned enterprises, pushing public debt to 76% of GDP. Nevertheless, external buffers have strengthened, with international reserves increasing from USD65.5 billion in end-2024 to USD71.5 billion by October 2025—equivalent to about six months of import cover. Macroeconomic conditions have improved further in 2025 as inflation eased to 3.4% by September 2025, supported by lower global commodity prices, currency appreciation, stable energy supply, and tight monetary policy. The South African Reserve Bank has cut rates by 125 basis points since September 2024 to revive credit growth amid low inflation. South Africa's sovereign ratings remained steady through 2025, reflecting investor confidence in macroeconomic management and reform continuity: Fitch (BB-, stable), S&P (BB-/B, positive), and Moody's (Ba2, stable). In November 2025, S&P upgraded South Africa to BB positive, reflecting stronger growth, sectoral reforms, the ongoing fiscal consolidation with good outcomes, and the potential for further improvements.

1.3 Sector Overview. South Africa continues to experience rapid urbanization, with approximately 65% of its population living in urban areas. Cities play a central role in shaping population dynamics, economic growth, and patterns of energy and resource consumption. When planned and governed effectively, urban areas can drive employment, improve quality of life, and offer significant potential to transform its emissions profile while enhancing climate resilience.

1.4 South Africa's metropolitan municipalities (metros)¹ are home to 22 million people (40% of the national population), cover 30,000 square kilometers and generate 85% of the country's economic activity. Recognized in the National Development Plan 2030, these metros form the backbone of the national economy and are critical to meeting its climate and development goals. They provide essential services like water supply and sanitation (WSS), electricity, and

¹ South Africa municipalities include eight metropolitan areas, 44 districts and 226 local municipalities.

solid waste management (SWM) that are collectively known as ‘trading services’,² to both residents and industrial customers in South Africa. These services are directly linked to climate mitigation, resilience, and the broader sustainable urban development agenda. Given their size, population, and economic influence, progress (or lack thereof) in metros often sets the tone for national climate performance, highlighting their pivotal role in sustainable development and emissions reduction.

1.5 Metros face mounting challenges due to rapid urbanization, deepening climate vulnerabilities, and inherited spatial disparities. Unplanned urban expansion and poor land-use management have compounded the risks of climate-related hazards such as flooding, extreme heat, and air pollution, especially in informal and peripheral settlements where the urban poor are concentrated. These communities often lack reliable access to basic services and are highly exposed to climate shocks. At the same time, metros are major contributors to South Africa’s greenhouse gas (GHG) emissions, accounting for about one-third of national energy-related emissions³ due to their high energy demand, a share that is projected to increase under business-as-usual scenarios. Localized climate actions,⁴ aligned with national frameworks such as the Nationally Determined Contribution (NDC), municipal Just Energy Transition (JET) strategies, are therefore increasingly critical to address these challenges and support low-carbon and climate-resilient economic development.

1.6 Addressing Key Development Challenges: Program Contributions. The capacity of metros to implement these local climate actions and deliver essential services is constrained by systemic governance, financial and operational challenges. Weak institutional accountability, declining operational efficiency and fiscal health have contributed to a crisis in service delivery, hindering the provision of low-carbon, climate-resilient urban services. Critical infrastructure for climate mitigation and adaptation has suffered years of underinvestment, mismanagement, and fragmented governance. Key support functions such as finance, human resources, procurement, and information technology are often siloed across metro administrations, further impeding coordinated service delivery. In particular, metros are facing aging infrastructure, governance weaknesses, and financial instability in essential metro services such as WSS, electricity, and SWM.

- (i) Water and sanitation services (WSS). WSS in South Africa’s metros face declining reliability and quality, with nearly half of households lacking access to safely managed water (46%) and sanitation (49%). High non-revenue water losses (41%),⁵ due largely to leaks and poor infrastructure, contribute to unnecessary energy use and GHG emissions, undermining climate mitigation goals. Aging infrastructure, unsatisfactory operations, and poor wastewater treatment further

² Trading services are services for which consumption charges are levied and determined with the intention to make a surplus (profit) on the delivery of the services. Given the revenue-generating nature of WSS, electricity, and SWM services, they are referred to as ‘businesses’ in the South African context.

³ Stockholm Environment Institute (SEI) & South African Cities Network. (2015). *The contribution of low-carbon cities to South Africa’s greenhouse gas emission reduction goals: Briefing on urban energy use and greenhouse gas emissions*. Stockholm Environment Institute. Retrieved from https://www.cityenergy.org.za/wp-content/uploads/2021/02/resource_343.pdf

⁴ Metros are committed to climate mitigation and adaptation as reflected in city-level climate change mitigation and adaptation strategies and/or action plans. The implementation of these will require significant financial support.

⁵ About 85% of non-revenue water is due to technical losses (leaks, bursts, illegal connections), and the remaining to commercial losses (low collection rates). This exacerbates the impact of climate change on water security in a country with low rainfall, which is mainly reliant on surface water storage.

drive emissions and environmental degradation. Structural inefficiencies, skills shortages, and governance failures hinder progress toward low-carbon, climate-resilient urban water systems, highlighting the need for integrated WSS planning as part of South Africa's broader mitigation strategy.

- (ii) *Electricity.* Metros also face a growing crisis in electricity distribution, with aging infrastructure nearing the end of its operational life. This has led to frequent outages, power losses (both technical and commercial),⁶ rising maintenance costs, and escalating vulnerability to vandalism and theft. Limited funding, supply chain delays, and dependence on grant financing have stalled grid refurbishment. Poor performance of the national utility (Eskom) has further disrupted municipal services via frequent supply interruptions of bulk electricity (i.e., foregone revenue) and damage to municipal equipment due to recurrent power stoppages and restarts. Metros' electricity service departments are trapped in a vicious cycle of underperformance, where financial instability and operational inefficiency lead to poor service delivery. These challenges not only threaten urban economic resilience but also hinder efforts to modernize the grid for low-carbon energy integration, a critical component of climate mitigation.
- (iii) *Solid Waste Management (SWM).* SWM in South Africa's metros faces mounting challenges due to rapid urbanization, inadequate infrastructure, limited technical capacity, and shrinking landfill space. Many landfills fail to meet compliance standards, while waste services remain underfunded, accounting for just 4% of metro budgets and are often understaffed. Inadequate data systems,⁷ poor service delivery, and limited coverage in informal areas contribute to environmental degradation, blocked drainage systems, and increased urban flood risks. The lack of integrated SWM and delayed implementation of waste minimization policies undermine climate mitigation efforts, as unmanaged waste contributes significantly to GHG emissions, particularly methane (CH₄).⁸

1.7 South Africa's metros are highly vulnerable to climate risks, including floods, urban heat, and droughts, which disproportionately affect underdeveloped peri-urban areas. These risks are expected to intensify, further exacerbating health challenges such as heat stress and vector-borne diseases, and damaging critical infrastructure, including WSS, electricity, and SWM systems. The resulting service disruptions, higher maintenance needs, and increased energy demand highlight the urgency of building resilience. For example, extreme heat affects waste management operations, while flooding can erode landfill caps and containment systems, releasing a range of contaminants. Strengthening municipal service delivery through improved accountability, financial and operational performance will also enhance resilience and adaptive capacity in addition to its mitigation benefits.

⁶ Metros' system losses (technical and non-technical) are as high as 30%, making it very difficult to achieve adequate revenue generation and financial sustainability, according to WB's technical assessment.

⁷ Many metros lack functional weighbridges, basic fleet and route optimization, and robust waste collection and disposal data systems (e.g. Management Information Systems) needed to monitor waste flows, ensure accurate disposal, and comply with national reporting requirements, such as Integrated Waste Management Plans.

⁸ Methane is a powerful GHG as its impact is much more pronounced in the short-term than carbon dioxide. The waste sector is a major contributor to overall methane emissions in South Africa. In particular, the municipal waste sector is a significant source of methane emissions, contributing 36.5% of the total methane emissions in 2020.

1.8 In response, the Metro Trading Services Program (MTSP) has been launched to improve metro service performance and promote long-term sustainability by embedding climate considerations into service delivery and infrastructure management. Through performance-based conditional grants, the MTSP incentivizes improvements in WSS, electricity, and SWM services while promoting climate-smart infrastructure that reduces water losses, optimizes energy transmission and use, and improves SWM. By improving operational efficiency alongside stronger governance and financial management, the Program aims to reduce GHG emissions, advance low-carbon urban development, and build climate resilience. Overall, the MTSP seeks to unlock the potential of metros to drive climate mitigation, climate adaptation, and inclusive economic development.

1.9 The Borrower, through the National Treasury (NT) of South Africa, requested the World Bank (WB), AIIB and other development partners to support the MTSP, using the Program for Results (PforR) financing instrument.

3. Rationale

3.1 Strategic Fit for AIIB. The Program is aligned with AIIB's mandate and thematic priority of promoting green infrastructure, as well as with its sector strategies, including the Sustainable Cities Strategy, Water Strategy, and Energy Strategy. The Program is a multi-sector operation that aims to address critical challenges in delivering quality urban services, including WSS, electricity, and SWM. With investments in key assets and service delivery systems, the Program will support and incentivize implementation of critical policies, capacity building, improvements in systems and financial strengthening of key service delivery agencies, thereby contributing to improved governance, operational and financial performance of municipal services in the South African metros. The Program seeks to lay the foundations for potential private sector engagement and increased access to commercial finance to supplement available grant finance, thus increasing the level of investment and ultimately improving service outcomes and building resilience.

3.2 The Program also aligns with the AIIB's Strategy on Financing Operations in Non-regional Members as it is expected to make a substantial contribution to climate change mitigation, with estimated annual net GHG emissions reductions of 5.3Mt CO₂eq and lifetime reductions of 111.6Mt CO₂eq (Annex 4, Table 6). It supports a range of GHG reduction measures, including the reduction of Non-revenue Water (NRW)⁹ and improvements in energy efficiency across WSS and energy systems to lower energy consumption and emissions. In the SWM sector, the Program promotes waste segregation, route optimization for waste collection, methane emission reductions through composting and leachate treatment. It also incentivizes the optimization of methane management assets used at landfill for gas management, flaring and remediation, and material recovery—advancing circular economy objectives.

3.3 To support South Africa's energy transition and improve system efficiency, the Program will address technical and commercial power losses¹⁰ and strengthen demand-side management, including deploying smart metering and bi-directional meters¹¹ to enable decentralized, renewable energy generation. These interventions are also expected to increase energy sector revenues, allowing Eskom to focus on retrofitting existing power plants with cleaner technologies such as carbon capture and investing in renewable energy, thereby reducing reliance on fossil fuels and enhancing both financial viability and environmental performance. The Program also aligns with the principles of the Municipal JET by ensuring the energy transition is inclusive, equitable, and locally driven. It promotes decentralized renewable energy solutions at the municipal level, expands access to affordable and clean energy, and strengthens the financial sustainability and governance of municipalities.¹²

⁹ Low NRW levels mean that metros can reduce water to be pumped, treated, and distributed, leading to reductions in energy use.

¹⁰ Reducing both technical and commercial losses decreases the need to generate additional electricity—produced from carbon-intensive sources—resulting in lower fuel consumption, reduced GHG emissions, and a more sustainable energy system.

¹¹ Advanced digital metering records electricity consumption and production in real-time. When households or businesses generate electricity (e.g. through solar panels), digital metering can track energy consumed vs. energy produced, and help utilities balance demand and supply, incorporating variable renewable output. Bi-directional meters can measure both energy consumed from the grid and energy fed back into the grid. This can facilitate integration of renewables by supporting grid stability and reducing the need for fossil fuel backups.

¹² There is a strong, albeit indirect, link between the Program and the broader integration of renewable energy in South Africa. The recently issued SAREM Renewable Energy Strategy (2025) highlights the critical role of local

3.4 Paris Agreement Alignment and Climate Finance. The Program is aligned with the goals of the Paris Agreement (PA) and is consistent with South Africa's NDC,¹³ Low-Emission Development Strategy, and National Climate Change Adaptation Strategy. Program activities will actively support the achievement of NDC targets. These include enhancing water security and improving WSS systems through NRW reduction, rehabilitation and expansion of production, pumping, treatment, and storage infrastructure, but also the use of adequate information systems to help monitor and track climate relevant data and enhance decision-making. Relevant domestic legislation and policy that the Program aligns with include the National Climate Change Response Policy, the National Strategy for Sustainable Development,¹⁴ the National Development Plan,¹⁵ as well as provincial, municipal, and sectoral adaptation strategies. Program activities are on the universally aligned list, including the rehabilitation and expansion of WSS systems, NRW management, wastewater management systems, and improving energy efficiencies. Wherever technically and financially feasible, the Program will support low-carbon energy for WSS operations, contributing to South Africa's JET by shifting from fossil fuels to renewables and accelerating decarbonization of key sectors. In addition, the Program promotes integrated SWM planning through metro integrated waste management plans, with a focus on landfill gas recovery and proper capping and remediation of landfills.

3.5 Program activities in the WSS sector are designed to mitigate the impacts of water scarcity and ensure the continuity of essential services amidst climate change-induced extreme heat and drought conditions. Through Disbursement Linked Indicators (DLIs), the Program will drive operational improvements that enhance water security and adaptive capacity by improving WSS service provision and reducing NRW. The Program also incorporates activities to significantly contribute to climate mitigation through enhanced energy efficiency, improved cost recovery, and reduced system losses. Key activities will involve financing governance and financial transparency reforms, implementing loss control programs, and rehabilitating infrastructure with advanced metering technologies, including bi-directional meters for customers with embedded renewable generation. In the SWM sector, the Program aims to mitigate climate impacts through landfill gas flaring and/or combustion, complemented by optimized waste collection routes and waste diversion and recycling efforts. Following Multilateral Development Bank (MDB) climate mitigation finance tracking methodology, all activities listed above in WSS, electricity and SWM sectors fall into the universally aligned list of PA assessment for mitigation and are eligible for climate mitigation finance. Key indicators

and national actors in driving this transition. Small-scale embedded generation (SSEG) has been increasingly supported—and in some cases incentivized—by municipalities: as of September 2023, 67 out of 187 licensed municipal authorities permitted SSEG, with 60 having formal application processes and 34 approving SSEG tariffs. National departments, provincial governments (like Gauteng and Western Cape), municipalities (e.g., Garden Route), and state-owned entities (such as Transnet) have initiated independent renewable energy procurement processes. By March 2023, the South African Photovoltaic Industry Association (SAPVIA) estimated that residential rooftop solar (0–30 kWp) had reached a capacity of 621 MW, while commercial and industrial SSEG installations (30 kWp–1 MWp) accounted for 1,248 MW. However, the expansion of transmission and distribution infrastructure—alongside the implementation of transparent, non-discriminatory grid access rules—is essential for the large-scale roll-out of renewables.

¹³ In the latest NDC submitted to the United Nations Framework Convention on Climate Change (UNFCCC), South Africa commits to 31% reduction and a fixed target for GHG emissions levels of 398-510 MtCO₂e by 2025, and 350-420 MtCO₂e by 2030. South Africa has set the goal to reach net zero emissions by 2050 in its Low-Emission Development Strategy submitted in 2020. South Africa's updated NDC also contains its first adaptation communication in terms of Article 7 of the Paris Agreement, Section 3, which serves as South Africa's adaptation NDC, and identifies water and human settlements among key climate vulnerability sectors.

¹⁴ Department of Environmental Affairs (2011), South Africa.

¹⁵ National Planning Commission (2011), South Africa.

such as NRW reduction and electricity loss reduction are included in Annex 1 (Results Monitoring Framework).

- (i) The water supply activities under DLI 1-8 are expected to have an emission reduction of 62,588 tCO₂eq/year, while the sanitation activities are estimated to result in an emission reduction of 410,421 tCO₂eq/year. The water supply activities have a lifetime emission reduction of 1,877,636 tCO₂eq due to NRW reduction, resulting in energy efficiency gains. The sanitation activities have a lifetime net emission reduction of 12,312,637 tCO₂eq, through collecting and treating waste that would otherwise remain untreated, causing GHG emissions unabated. The NRW emission reductions are dependent on Performance Improvement Action Plan (PIAP) Operational Indicators W1, W2, W5, W7, W8, W10, and W11 (see Annex 2 for details) to both improve the physical infrastructure and ensure proper operation and maintenance to prevent future leakages. The sanitation-related emission reductions rely on Operational Indicators W3, W4, W6, and W9 (see Annex 2 for details) to build, maintain, and efficiently operate the relevant sanitation system infrastructure. Electricity targets will contribute to climate mitigation through increased energy efficiencies, improved cost recovery, and loss reduction.
- (ii) On the electricity side, the Program will finance activities relating to governance and financial transparency, loss control, and improved revenue management. On the infrastructure side, activities include the rehabilitation or installation of advanced metering infrastructure (including bi-directional meters for customers with embedded renewable generation) as well as the rehabilitation of high, medium and low voltage lines to enhance their maintenance efficiency and effectiveness and to improve network reliability. All activities are universally aligned. Electricity activities will contribute to net GHG reductions of 3,368,823 tCO₂eq/year. The electricity and energy activities have lifetime emission reductions of 67,376,461 tCO₂eq. The emission reductions are dependent on Operational Indicators E4, E5, and E6 (see Annex 2 for details) which focus on enhancing repairs and maintenance, minimizing electricity losses, and reducing the frequency and duration of network interruptions, thereby improving overall network efficiency.
- (iii) SWM targets will mitigate climate impact through landfill gas flaring and/or combustion, with supplementary co-benefits from optimized SWM routes and waste diversion and recycling, with net GHG emissions reduced by 1,503,000 tCO₂eq, annually, by 2031, while also enhancing adaptation by preventing waste from clogging storm drains and contaminating water sources. PIAP indicators also contribute to mitigation and emission reduction by ensuring that landfills, transfer, and materials recovery infrastructure align with national climate policy and NDC.

3.6 On climate adaptation, South Africa's metropolitan areas face significant climate risks, including frequent droughts and extreme weather events. Result Area 3 of the Program is dedicated to enhancing operational performance to improve water and electricity security and resilience, ensuring that infrastructure for WSS, electricity, and SWM is robust against flooding, drought, and other climate-related disasters. Risks from climate hazards have been assessed and reduced to an acceptable level and are not likely to have material impact. Thus, the Program is aligned with PA goals on adaptation.

- (i) Key measures include reducing NRW to increase water availability and service reliability, improving water and sewer network performance to reduce water mains failures and blockages that obstruct system flow, and enhancing water storage with quality sensors and automated distribution, along with strengthened SWM systems, to prevent flood risks due to clogged drains during heavy rainfall events. Climate resilience measures are embedded in metro climate change plans and will inform WSS designs. Infrastructure rehabilitation and expansion will be aligned with climate resilience principles to ensure water and sanitation infrastructure can withstand droughts and flooding. Indicators on wastewater treatment systems and final effluent quality (Operational Indicators W3 and W4) (see Annex 2 for details) will address public health risks linked to climate change.
- (ii) In the energy sector, upgraded Outage Management Systems and Supervisory Control and Data Acquisition implementation will enhance resilience to climate-induced disruptions like floods and high winds (monitored by service interruption indices). Fewer disruptions in the electricity network will make the metros more resilient to climate hazards such as extreme heat.
- (iii) Most metros have prioritized SWM in their city-level climate action or circular economy plans to address both adaptation and mitigation risks. Measures such as weighbridges and telematics will improve waste tracking and prevent illegal dumping, reducing blockages that cause urban flooding and improving service efficiency (Operational Indicators S2, S3, and S6) (see Annex 2 for details). Operational Indicator A5 focuses on building technical capacity for asset management, operational resilience, and proactive climate risk management. Indicator F5 supports capital expenditures for climate-resilient infrastructure. Planning also integrates flood risk mapping to prioritize waste collection in flood-prone areas, expedite complaint responses to river blockages, and use digital reporting systems to manage waste buildup, mitigating flood risks. These efforts protect water quality, maintain waste system functionality during droughts, floods, and storms, and ensure continuity of essential services. Asset resilience is further strengthened through comprehensive asset management, regular asset renewal, and adherence to climate-resilient design standards, which support reliable wastewater management and reduce disruptions that could lead to sewage overflows, as monitored by relevant PIAP indicators.

3.7 In line with the MDB climate finance tracking methodology, climate finance is typically assessed based on the capital expenditure (CapEx) attributable to climate related components. However, as a detailed, component-level CapEx breakdown is not yet finalized, an alternative and methodologically consistent approach has been applied. The Program's disbursements will be linked to the achievement of PIAP indicators, comprising 10% for accountability outcomes, 30% for financial outcomes, and 60% for operational outcomes across the WSS, energy, and SWM sectors. Given the strong linkage between operational outcomes and underlying capital investments in these sectors, the PIAP indicator structure is considered a reasonable proxy for the allocation of climate-relevant investments. Accordingly, the share of PIAP indicators associated with WSS, energy, and SWM has been used to

determine the proportion of climate mitigation finance. Based on this assessment, the climate mitigation finance share of the Program is estimated at 53%.

3.8 Value Addition by AIIB. The Program will contribute towards the fiscal envelope of the government to address service delivery imperatives and, as the reforms are implemented, ultimately assist metros with the possibility of leveraging additional funding for their infrastructure needs.¹⁶ AIIB has been working with the WB team throughout program preparation to streamline the pre-requisite requirements and the implementation procedures in line with MDB's standards, which will contribute to enhanced quality of the Program. Furthermore, the project team will provide continued support and advisory services to implementing agencies throughout the Program cycle including formulation of PIAPs at the municipal level with a focus on climate mitigation and adaptation, gender and inclusion, and private sector engagement. Capacity-building activities will strengthen the governance and institutional capacities of metro entities to effectively manage critical municipal services. The Program will also complement other ongoing and proposed operations in South Africa, including a Climate-Focused Policy-Based Financing¹⁷ which aims to advance national-level policy and institutional reforms in the energy and WSS sectors.

3.9 Value Addition to AIIB. The Program is expected to be AIIB's first operation in South Africa and also the first urban project in Sub-Saharan Africa, adopting a systematic and multi-sectoral approach to addressing complex challenges in metropolitan cities. The Program aims to tackle multi-sectoral urban challenges with comprehensive solutions tailored for multiple metros, carefully designed to lay the groundwork for potential large infrastructure investments. In this regard, AIIB's participation will enhance its reputation as a strong advocate for long-term, innovative engagement with clients to resolve significant development challenges, particularly in complex metropolitan cities. Furthermore, AIIB's involvement in the Program will foster the team's learning and sector experience in the country and the region, supporting the preparation of future projects and the design of more integrated urban operations going forward. This Program is expected to be followed by, or run in parallel with, large sectoral investments in WSS, energy, and SWM, which may require additional support from AIIB.

3.10 Lessons Learned. The Program incorporates lessons from similar results-based financing and multi-sectoral programs¹⁸ that include the following: (i) a well-structured performance-based grant mechanism that provides meaningful financial incentives to encourage city performance improvement, allocates funds across participating metros through a formula-based and transparent process, and is based on carefully calibrated performance indicators that are within the mandates of cities; (ii) periodic performance assessments conducted by independent evaluators, with transparent results that inform funding decisions and are aligned with both central and local budget planning cycles; (iii) comprehensive

¹⁶ An additional USD6 billion is expected to be mobilized as metros' contributions, municipal borrowing, and private sector financing. AIIB will explore an opportunity to provide direct lending to metros or private sector financing.

¹⁷ The South Africa Resilient Climate Action Program for Just Energy Transition (Subprogram 1) is currently under preparation, led by WB in partnership with other development partners including AIIB. The program is tentatively structured around three pillars: (i) Pillar 1: Strengthening the delivery of clean, efficient, and affordable electricity services; (ii) Pillar 2: Enhancing competition, transparency, and private sector participation in the freight services; and (iii) Pillar 3: Improving the services and resilience of water service delivery.

¹⁸ It also includes the AIIB-financed Result-based Financing programs, including India Chennai City Partnership: Sustainable Urban Services Program, Resilient Kerala Program for Results, Maldives Strengthening Fiscal Management and Sustainability Program, and Rwanda Energy Results-Based Financing Program.

capacity building and technical assistance provided by the central government to enable cities to strengthen institutional systems, data quality, and service delivery performance at the city level; and (iv) a supportive enabling environment driven by national-level leadership, interagency coordination, and sustained municipal commitment to financing and maintaining improved service delivery outcomes.

3.11 In addition, PIAPs are recognized as an effective tool for driving reforms and improving the performance of municipal service delivery entities, particularly in the WSS and electricity distribution sectors. The use of PIAPs as an instrument in various economies¹⁹ has demonstrated success, especially when structured around the same three core result areas emphasized in the Program: improved accountability, financial sustainability, and operational performance. Importantly, these reforms are also expected to yield significant climate benefits, including reductions in GHG emissions through improved energy efficiency, better water management, and strengthened utility performance contributing meaningfully to South Africa's climate mitigation and adaptation efforts.

¹⁹ Egypt – Sustainable Rural Sanitation Services PforR.

4. Project Description

4.1 Program Objective. The Program aims to improve the accountability, operational and financial performance of WSS, electricity, and SWM services (or “*trading services*”) in South Africa’s metropolitan municipalities (metros).²⁰

4.2 Expected Results. The Program is expected to contribute to improved performance of WSS, electricity, and SWM services, in South Africa’s metros. The Program Objectives will be evaluated against the following key outcome indicators:

- (i) metros that have met and maintained the Program’s Minimum Conditions (MCs)²¹ (number);
- (ii) NRW reduction in the metros as a result of the Program (percentage); and
- (iii) electricity losses reduction in the metros as a result of the Program (percentage).

4.3 Improved performance includes aspects that enhance the metros’ adaptive capacity to climate impacts through enhanced service sustainability and reliability, linked, for example, to NRW reduction, enhanced water security, energy efficiencies, and enhanced SWM (see Annex 2 for a description of the PIAP and associated indicators). The PIAP template includes material detailing baselines, targets, and the measurement methodology for each indicator. The Program would support and strengthen the implementation of South Africa’s metro program by focusing on a core set of infrastructure service delivery improvements across key urban service sectors, namely WSS, electricity, and SWM.

4.4 Expected Beneficiaries. The eight metros and three sector departments in each city (totaling 24 service entities) are considered the primary beneficiaries of the Program and hold responsibility for the Program outcomes. As direct beneficiaries, the metros will be empowered to deliver services more efficiently, strengthening the financial health of metros and, in turn, the broader government system. Indirect beneficiaries include the 22 million residents living in metros, who will benefit from improved access to WSS, electricity and SWM services. These improvements will not only enhance quality of life but also contribute to climate change mitigation and adaptation by reducing GHG emissions and improving resilience to climate-related shocks.

4.5 Activities under the Program in the WSS, electricity, and SWM sectors are also closely linked to advancing the jobs agenda by fostering inclusive economic growth and creating green employment opportunities. Investments in these areas will enable the metros to adopt cleaner technologies, improve resource efficiency, and transition toward low-carbon service delivery. For instance, investments in energy-efficient systems, renewable energy integration, climate-resilient water infrastructure, and the circular economy will help metros reduce their carbon footprint and adapt to climate variability.

²⁰ Johannesburg, Ekurhuleni, Tshwane, Cape Town, eThekweni, Nelson Mandela Bay, Buffalo, and Mangaung.

²¹ Eight accountability indicators have been identified as MCs within the PIAPs. The MCs pertain to matters such as the delegation of management authority in various business areas (such as procurement, human resources, fleet management), the establishment of an effective organizational structure, the appointment of the chief executive of the municipal service, and so on. Collectively, the MCs seek to achieve the ‘*single point of management accountability*’ for each service, which is cardinal to improved institutional, financial and operational performance. Maintaining these MCs throughout MTSP is a condition for Program participation.

4.6 Metro officials in the service entities will benefit from tailored capacity building interventions, in addition to support from the Metro Trading Services Coordination (MTSC) team in the implementation of climate-responsive reforms across the governance, operational and financial thematic areas. These include support for implementing PIAPs²² that integrate climate considerations, sector-specific interventions to improve climate resilience, and operational guidance on sustainable asset management, tariff structures, and strategies for revenue enhancement. Various options for the design and implementation of technical assistance are under consideration and leveraging support from other development partners to scale up climate-smart development.

4.7 **Results Areas.** The Program comprises the following three Result Areas (RAs) to contribute to the outcomes of the MTSP in the WSS, electricity, and SWM services. Each RA will affect each service with a focus on its governance and accountability, financial, and operational performance.

- (i) *RA 1: Improve Accountability Performance of Metro Trading Services.* Reforming metros' institutional structures and governance processes to improve the management of the trading services businesses through (a) establishment of a single point of management accountability for each trading service including, among other issues: (i) appointing the Head of Trading Services department, and (ii) delegating all relevant functions to the trading service such as procurement and financial management to the head of said department; and (b) improving the financial transparency of trading services including through issuance of separate audited financial statements.
- (ii) *RA 2: Improve Financial Performance of Metro Trading Services.* Enhancing the Metro's financial management of their trading services, by: (a) implementing relevant cost-reduction and revenue improvement initiatives, (b) assigning the benefits (increased cash operating surpluses) to the trading service concerned; and (c) ensuring that increased surpluses are used to fund priority trading service investments.
- (iii) *RA 3: Improve Operational Performance of Metro Trading Services.*

Enhancing the Metro's operational performance in WSS operations, including through: (a) improving water security, (b) the rehabilitation and expansion of networks and infrastructure/assets; (c) upgrading of priority systems to reduce NRW and improve network operations; (c) improving operations of WSS networks and plants, including NRW, through improved systems, data management and digitalization.

Enhancing the Metro's operational performance in Electricity and Energy operations, including through: (a) the rehabilitation/replacement of distribution networks infrastructure to improve network operations; (b) upgrading billing, collection and vending systems to improve system efficiency; and (c) deploying Management

²² The PIAPs will contain the metro commitments to a set of key performance indicators and targets across the three reform areas of the Program, namely: (i) governance and accountability, (ii) financial performance, and (iii) operational performance for each service sector. The PIAP template includes material detailing baselines, targets, and the measurement methodology for each indicator.

Information Systems (MIS), smart metering, and reliability monitoring to improve data quality and management.

Enhancing the Metro's operational performance in SWM operations, including through: (a) rehabilitation/replacement of SWM systems; (b) improvements in landfill management; and (c) implementation of waste management information systems to improve data quality and management.

4.8 Government Program and Result-based Project (RBP) Scope. The primary financing mechanism for the Program is a new performance-based fiscal transfer known as the Metro Trading Services Grant (MTSG),²³ which forms the basis of the PforR approach. The Program is the same as the MTSP. The MTSG totals USD3 billion and is funded through AIIB financing (USD500 million), IBRD financing (USD925 million), and central government contributions (USD1,575 million).²⁴ An assessment comparing the grant parameters with existing metro capital expenditure in the three service sectors indicates that the proposed funding level is sufficient to incentivize metros to pursue reforms in governance, operational and financial performance improvement.

4.9 The total MTSG envelope will be allocated horizontally among the eight participating metros based on two criteria: population size (weighted at 70%) as a proxy for expenditure needs, and poverty incidence (weighted at 30%) to reflect equity considerations.²⁵ This allocation method determines the maximum funding envelope available to each metro. Disbursements will be made twice annually, contingent upon each metro continually maintaining MCs, submission of a Council-approved PIAP, and (starting in year two), phased achievement of performance indicators across the three services, verified by an Independent Verification Agent (IVA).

4.10 Expenditure Framework. The Government's expenditure on the Program is the expenditure on the MTSG. In line with South African national accounting standards and International Monetary Fund (IMF) practices, this expenditure is recognized at the point when the NT disburses the grant to the participating metros. The MTSG funds allocated to metros will be used to support both capital and operational spending across three key sectors in order to achieve the objectives outlined in their respective PIAPs. As such, these constitute the Program expenditure framework. To ensure that government contributions exceed the financing provided by WB and AIIB over the Program's duration, both will closely monitor the disbursement of MTSG funds to the metros.

4.11 The MTSG will be appropriated through the national budget process, with its legal and financial basis anchored in the Division of Revenue Act (DORA). Passed annually by Parliament as part of the national budget, the DORA outlines the framework for conditional grants, including annual and medium-term budget allocations and eligibility criteria for local governments. The NT has already developed a conditional grant framework for the MTSG, which will be included in the Fiscal Year (FY) 2025/26 annual budget and the three-year

²³ It is also referred to as the Metro Trading Services Component of the Urban Developing Financing Grant (UDFG).

²⁴ Development partners including New Development Bank (NDB), KfW Development Bank (KfW), and Agence Française de Développement (AFD) are processing parallel co-financing for the Program or offering complementary support.

²⁵ These criteria have been agreed with the NT and the fiscal impact on each metro, relative to their current grant allocations from the NT and expenditures on services, has been assessed to be reasonable.

Medium-Term Expenditure Framework. The Medium-Term Budget Policy Statement released on October 30, 2024, confirms the government's intent to launch this new grant to “*incentivize reforms to trading services and unlock additional infrastructure financing.*” Disbursements will be results-based, in accordance with established accounting practices. Metros will be required to report their expenditures to the NT, which will in turn include them in audited financial statements. At Program closure, a reconciliation of disbursements and actual expenditures will be conducted to determine if a refund is required or not.

4.12 MTSG-funded investments are fully aligned with the objectives of the broader MTSP and include technical assistance to support the design, adoption, and implementation of the metros' three services turnaround strategies, institutional reform roadmaps, investment plans, and capacity building at both the national and metro levels. Permitted expenditures under the MTSG include capital investments, operations and maintenance costs directly related to achieving PIAP targets, and these will be budgeted for annually, by the metros.

4.13 Permitted investments include low-risk physical investments to support institutional strengthening across the three key services such as network rehabilitation, service expansion, or fleet optimization. Any investment likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people—will be excluded.

4.14 **Cost and Financing Plan.** The Program, with a total cost of USD3 billion, will be co-financed by the AIIB with USD500 million, WB (IBRD) with USD925 million, and counterpart funding of USD1.575 billion from South Africa's NT.

Table 1. Indicative Program Cost and Financing Plan

Item	Program Cost (USD million)	Financing (USD million and %)		
		AIIB	IBRD	NT
Total	3,000	500	925	1,575
	(100%)	(16.7%)	(30.8%)	(52.5%)

4.15 Annual MTSG allocations may be adjusted if a metro's service fails to meet MCs, with funding reduced proportionally. Allocated but unspent funds can be rolled over to the next financial year, subject to rules set by the NT and outlined in the Program Operations Manual (POM). Unallocated funds, e.g. due to any metro scoring less than 100% of what is possible, will be systematically reallocated to relatively overperforming trading services, as outlined in the POM. The reallocation will be made in proportion to their relative performance and the underlying formula (allocation key based on population and poverty), to improve the incentive impact of the grant. The PIAP scoring system is weighted to prioritize results: 10% for Accountability, 30% for Financial, and 60% for Operational outcomes (see Annex 1 for PIAP Indicators Definition Sheets).

Table 2. Funding Envelope for Metro Trading Services Grant (USD Million)²⁶

	Min/Max	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	TOTAL
NT allocations for the MTSG		133.6	248.2	506.3	666.7	694.4	750.8	3,000
		4.45%	8.27%	16.88%	22.22%	23.15%	25.03%	100%
of which for								
WSS	40% to 70%	53 to 93	99 to 173	203 to 354	267 to 477	278 to 486	300 to 526	1,200 to 2,010
Elect ricity	20% to 50%	27 to 67	50 to 124	101 to 253	133 to 333	139 to 347	150 to 375	600 to 1,500
SWM	10% to 40%	13 to 53	25 to 99	50 to 203	67 to 267	69 to 278	75 to 300	300 to 1,200

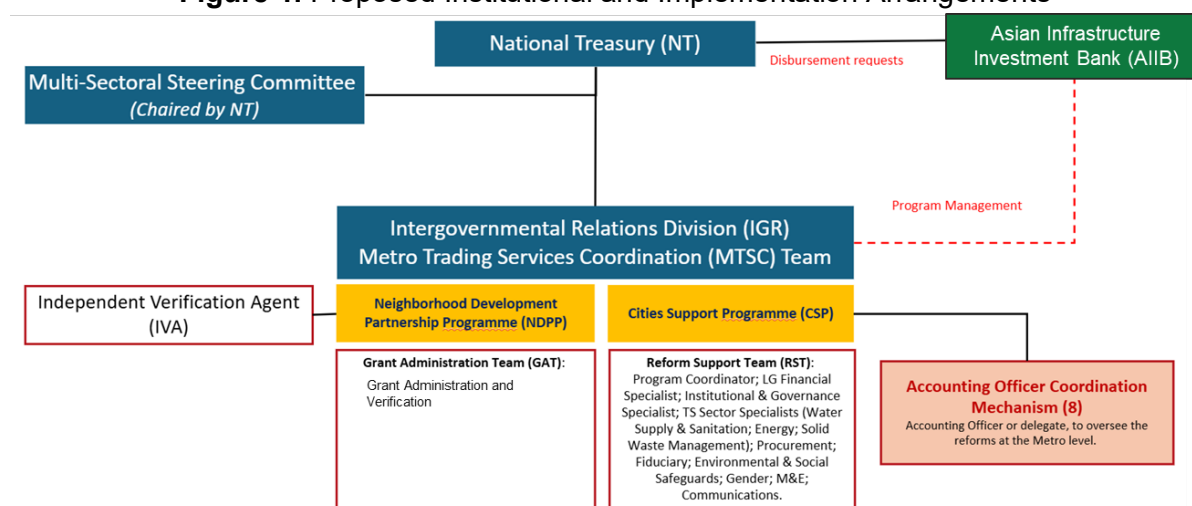
²⁶ Sectoral and annual allocations are indicative at this stage and are being finalized in consultation with the NT and National Departments. The total of USD2,963.7 million is marginally different to the USD3 billion stated in the data sheet due to currency exchange rate movements since the Medium-Term Expenditure Framework estimate was made. Exchange rates will continue to vary, and the USD figures for the sectoral allocations should be considered approximate for the same reason.

5. RBP Implementation

A. Institutional and Implementation Arrangements

5.1 Implementation Arrangements. The Program will rely on the existing government systems for the implementation of its constituent activities under the oversight of a National-level Multi-Sectoral Steering Committee²⁷ that includes the key stakeholders involved in the three metro services. Management and implementation of the Program will be undertaken through the NT with specific functions established for grant regulation, financing, alignment with infrastructure reforms, metro oversight, delivery and support, and grant administration, as illustrated in Figure 1. A dedicated MTSC²⁸ team placed at the NT will be responsible for day-to-day Program management, including providing technical and capacitation support to the metros in the development and execution of the PIAPs, monitoring and reporting. At the metro level, the accounting officer will oversee the implementation of the reforms.

Figure 1. Proposed Institutional and Implementation Arrangements



5.2 A POM will be developed and placed as a condition of effectiveness of the loan. The POM will set forth the institutional, administrative, financial, technical and operational guidelines and procedures for the implementation of the Program, including the composition of the MTSC team, environmental and social risk mitigation measures, the financial management protocols, including relevant budget codes to track program expenditures, and standards applicable to the Program, procurement arrangements, protocols for reporting to AIIB on, and sharing the findings of, any case of fraud and corruption denounced and/or investigated under the Program.

5.3 Implementation Period. The Program is expected to be implemented from Jan. 1, 2026, to Mar. 31, 2031.

²⁷ The Multi-Sectoral Steering Committee, chaired by the NT, comprises the relevant national agencies, including Department of Water & Sanitation, Department of Energy & Environment, Department of Forestry, Fisheries & Environment, Cooperative Governance & Traditional Affairs, South African Local Government Association, and Department of Human Settlements. It meets at least once a year to: (i) receive and confirm reports from the IVA on: achievement and maintenance of the Minimum Commitments, performance against PIAP indicators, and implications for future Program incentive allocations per metro; (ii) support alignment and coordination between national departments, as well as national reform and policy agendas; and (iii) oversee progress on reforms.

²⁸ The MTSC will comprise well capacitated specialists across trading services sectors and cross-cutting specialists.

B. Results Monitoring and Evaluation

5.4 Monitoring and Evaluation. The Program will be monitored through a multi-tiered system using existing government mechanisms, with results verification by an IVA. The monitoring process will rely on Annual Performance Assessment (APA) reports by the IVA and progress reports from metros to the NT, following national conditional grant reporting protocols. The NT will require participating metros to submit half-yearly reports detailing financial expenditures and interim progress on PIAPs. WB and AIIB will also conduct a quality assurance review of the APA for result certification.

5.5 The IVA will be a private firm competitively selected by the NT based on Terms of Reference acceptable to WB. The IVA will be selected within six months of loan effectiveness and tasked with reviewing PIAPs and progress reports, visiting metros, and scoring progress based on standardized templates.²⁹ An interdepartmental Program Steering Committee, chaired by the NT, will review the IVA's findings to inform MTSG allocations. The Bank will make final decisions on DLI achievements, in line with the PforR policy. The overall responsibility for Program monitoring and evaluation will lie with the NT, who shall be required to coordinate with the participating metros for timely reporting. The NT will provide bi-annual progress reports to WB and AIIB. An outline of what is required in the progress report will be included in the POM.

5.6 AIIB's Implementation Support. WB, as lead co-financier, will coordinate overall Program supervision and serve as the primary liaison with the Borrower. An experienced in-country WB team, supported by Program consultants, will provide regular implementation support to the NT and participating metros with additional support from staff located internationally. Program implementation support and monitoring will be conducted jointly by AIIB and WB, with each institution maintaining its respective oversight and due-diligence obligations in line with the co-financing arrangement. The AIIB team will: (i) provide technical and operational inputs to support implementation of the Program; (ii) periodically join WB's implementation support missions (virtually or otherwise) as necessary; and (iii) monitor and supervise an appropriate use of AIIB funds. AIIB/WB will carry out more frequent implementation support missions and supervision in the early stages of Program implementation. WB will provide AIIB with copies of all relevant documents, reports, recommendations, no-objections and communications (whether external or internal) received or sent by WB in connection with any Program activity.

C. Disbursement Arrangements and Verification Protocol

5.7 Disbursement Linked Indicators (DLIs). Disbursements will be made based on the verified achievement of DLIs that have been developed for each metro's performance, particularly focusing on climate mitigation efforts. The disbursement deadline date will be six months after the closing date stated in the Loan Agreement. These DLIs will track the progress of key performance indicators and set out in the PIAPs, emphasizing water security, climate

²⁹ The IVA will be selected by the NT based on Terms of Reference acceptable to WB and AIIB. Its tasks will include: (i) reviewing relevant documents such as PIAPs and progress reports and visiting all metros to assess progress against PIAP implementation firsthand; and (ii) providing assessment scores of each metro's progress on PIAP implementation using prescribed templates and scoring criteria.

resilience, and sustainability (see Annex 2 for details). For example, the PIAPs will include targets related to reducing NRW, improving water network and sewer performance, and decreasing power losses. By improving operational efficiencies and adaptive capacity in WSS, metros will work towards reducing the impact of water scarcity, securing water resources, and enhancing service delivery under climate stress. The design of the DLIs will mirror the approach of the MTSG, where higher performance will lead to higher grant allocations and disbursements from the NT to metros, and subsequently from the Bank to the NT. This will include significant contributions to climate mitigation through enhanced operational efficiency and optimization of WSS, electricity, and SWM services.

5.8 Two types of independent verifications will be undertaken during the Program: (i) verification of MCs (to confirm whether the minimum commitments have been made, achieved or maintained, as the case may be), including whether PIAPs have been approved by the Councils; and (ii) verification of annual performance (to confirm performance against PIAP targets). The results will determine the MTSG award to each metro for the subsequent FY, based on objective scoring criteria for various performance indicators. No metro which has received an adverse or disclaimed financial audit for the previous FY will be eligible for a MTSG award in the forthcoming year, as communicated to the metros by the NT in a circular.

Table 3. Disbursement Linked Indicators and Allocated Financing (indicative)

	DLIs	Allocated Amount (USD million)	
		WB	AIIB
DLI 1.	Buffalo City has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	66.0	35.7
DLI 2.	The City of Cape Town has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	149.0	80.5
DLI 3.	The City of Ekurhuleni has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	132.5	71.6
DLI 4.	The City of Johannesburg has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	174.6	94.4
DLI 5.	The City of Tshwane has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	123.6	66.8
DLI 6.	eThekweni has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	147.9	80.0
DLI 7.	Mangaung has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	60.8	32.9
DLI 8.	Nelson Mandela Bay has council approved PIAPs for the (3) Trading Services and is meeting its accountability, financial and operational performance targets	70.6	38.2
TOTAL		925	500

6. Assessment Summary

A. Technical (including RBP economic evaluation)

6.1 Project Design. Program scope and design, the proposed activities are based on sectoral diagnostics,³⁰ technical assessments, and stakeholder dialogue with the responsible national departments and associated Metro level departments.

(i) WSS Assessment Summary. Despite having one of the most progressive legislative frameworks for water management among developing economies, South Africa's WSS sector faces significant challenges due to aging and poorly maintained infrastructure, unsatisfactory governance, and declining financial and operational performance which result in significant water losses and inefficiencies. Despite past gains in service coverage, reliability and quality are deteriorating, with NRW reaching about 47% and water losses estimated at 41.7% in 2023.³¹ With coal accounting for approximately 81.7% of generation in 2024,³² the National Generation Grid Emission Factor stood at 0.906 tCO₂/MWh,³³ meaning every kilowatt-hour consumed to pump or treat lost water generates nearly one kilogram of carbon dioxide that could be avoided.

Opportunities for climate mitigation therefore lie in reducing water losses and improving energy efficiency across treatment and distribution systems. Implementing water conservation and demand management can lower operating costs and reduce the sector's carbon footprint by cutting unnecessary energy use for pumping and treatment. Less than optimal financial transparency, fragmented accountability, and underinvestment have led to inefficiency, revenue losses, and poor service delivery. Climate mitigation actions should focus on modernizing infrastructure, improving asset management, and enhancing monitoring systems to optimize energy and water use. Strengthening governance and tariff reform will enable sustainable financing for low-carbon investments, including renewable-powered pumping and wastewater treatment with energy recovery.

The interventions under the proposed Program reinforce the revival of three certification initiatives aimed at improving drinking water quality (Blue Drop), wastewater management (Green Drop), and water conservation (No Drop). The institutional arrangements at the national level are adequate to support Program implementation. While WSS capacity gaps vary across metros, these will be strengthened and continuously assessed through the Program's participation requirements, including the development of capacitated professional trading services.

(ii) Electricity Assessment Summary. Municipal electricity departments have experienced significant financial and operational decline over the past decade, with

³⁰ *Waste Not, Want Not: A Diagnostic of Solid Waste Management in South Africa's Metros.* A report produced for National Treasury's CSP by World Bank. 2023; *State of Water in South African Cities: The Case for Change.* Report produced for NT's Cities Support Program by World Bank. 2023; *Assessment of electricity businesses in South Africa's Metros.* Report produced for NT's Cities Support Program by World Bank. 2022. (Unpublished).

³¹ Department of Water and Sanitation (DWS), South Africa, 2023. <https://ws.dws.gov.za/wsks/default.aspx>

³² CSIR Energy Research Centre. 2025. Utility-scale power generation statistics in South Africa 2024.

³³ Department of Forestry, Fisheries and Environment (DFFE). *South Africa's 2023 Grid Emission Factors Report.*

system losses (both technical and non-technical) reaching up to 30% in some metros (except the City of Cape Town), undermining revenue generation and sustainability. The carbon emissions due to physical losses alone, estimated for the metros at around 4.5%,³⁴ amount to 1.78 Mt CO₂eq per annum.³⁵ Climate mitigation opportunities are therefore significant in reducing technical and non-technical losses, modernizing grids, and enhancing energy efficiency in operations. Investments in advanced metering infrastructure (AMI), smart grid technologies (Supervisory Control and Data Acquisition and Outage Management Systems), and improved maintenance can reduce waste, improve reliability, and enable integration of renewable energy sources. Upgrading network management systems and establishing clearer accountability frameworks would also enhance efficiency and transparency, key to decarbonizing municipal power distribution. Refurbishment of aging networks can support grid resilience and readiness for clean energy transition, contributing directly to emissions reduction goals. While metro electricity departments may not fully match the competencies of traditional electricity distribution and retail utilities in terms of management and operations, the system improvements and capital investments required under the Program are expected to significantly enhance financial and operational performance within the existing institutional framework.

- (iii) *SWM Assessment Summary.* South Africa's SWM regulations and standards are comparable with advanced economies but face challenges in implementability and affordability. The sector is particularly hampered by its dual nature: it functions as both a private good/service—delivering services to customers who can be charged directly—and a public good/service—addressing illegal dumping or enforcing waste bylaws in public spaces, which provide distributed benefits without direct charges, requiring cross-subsidization. The sector, therefore, suffers from underfunding, inadequate infrastructure, and low recycling rates, leading to methane emissions from unmanaged landfills. Solid waste disposal from all South African landfills emitted approximately 8.6 Mt CO₂eq in 2022, having increased by 44% since 2000.³⁶ Climate mitigation priorities include waste diversion, recycling, and landfill gas capture and utilization to reduce emissions from organic waste decomposition. Upgrading fleet management, optimizing logistics, and implementing data-driven operations (weighbridges, route optimization software) can cut fuel consumption and emissions. It is necessary to consolidate the numerous regulatory obligations and policy imperatives currently spread across metros into a single point of management accountability. Aligning local waste management plans with the National Waste Management Strategy will help scale circular economy initiatives. Increasing investment in waste minimization infrastructure and material recovery facilities, improving financial controls, and expanding public engagement on waste segregation are essential to advancing low-carbon, climate-resilient waste systems.

³⁴ eThekweni estimates 4.5% in its business plan and Ekurhuleni, which has done a loss load study, finds similar results.

³⁵ This figure is based on an annual electricity consumption for all metros of 43,589 GWh (reference year 2022/23) and the most recent National Generation Grid Emission Factor.

³⁶ Department of Forestry, Fisheries and the Environment. 2024. *9th National Greenhouse Gas Inventory Report for the Republic of South Africa*, Table 7.1.

6.2 AIIB and WB agreed that a result-based financing approach (using WB's PforR and AIIB's RBF) was the most suitable approach to support a multi-sector urban program involving national departments and multiple metropolitan municipalities and to enable the linking of policy and institutional shifts at the top with real expenditures and the disbursement of funds against verifiable results on the ground. The use of the PforR (or RBF) instrument will strengthen existing government systems, rather than creating parallel systems. It reflects South Africa's strong ownership of the Program and aligns with its domestic expenditure commitments. The Program is also expected to lay the groundwork for follow-on operations that will deepen and sustain sector investments, including further public and private investments in the WSS, electricity, and SWM sectors.

6.3 The Program aims to address inefficiencies in South Africa's metro infrastructure grant system, which currently lacks result-oriented incentives, leading to underinvestment and deteriorating service delivery in water, wastewater, electricity, and waste management. The Program seeks to significantly improve the operational performance of the WSS, electricity, and SWM services by strengthening institutional governance, enhancing financial transparency and cost recovery, and restructuring capital grants to be performance-based. Aligned with national policies and reforms across various government departments, the Program introduces a new targeted fiscal transfer, i.e., the MTSG, which is allocated based on the achievement of specific results over a six-year period. Participating metros are required to develop detailed, council-approved PIAPs with clear targets and budgets, which will be reviewed by the NT to qualify for funding, thereby fostering sustainable improvements in service quality, reliability, and financial sustainability.

6.4 **Operational Sustainability.** The Program design takes into account South Africa's intergovernmental processes in both financial and institutional terms. At the national level, the MTSG will be appropriated through the national budget process, with disbursements by the NT to metros monitored by WB and AIIB. At the local level, MTSG funds include capital investments and operations and maintenance costs incurred by metros to achieve their PIAP targets; these expenditures will be costed by metros and included in their annual budgets. The performance of metros is assessed through a robust, externally executed, and transparent periodic performance assessment, the findings of which form the basis for funding allocations. In terms of staffing, the MTSC team will be responsible for day-to-day Program management, including providing technical and capacitation support to the metros in the development and execution of the PIAPs, monitoring and reporting. At the metro level, reform efforts will be coordinated by the assigned accounting officer.

6.5 **RBP Economic Analysis.** An economic analysis was conducted to assess the economic viability of the investment under the Program. A standard cost-benefit analysis for the Program was conducted by comparing *with-program* and *without-program* scenarios. In the context of declining service quality among metropolitan municipalities, across WSS, electricity, and SWM, the Program has laid out a set of operational performance indicators addressing underlying key issues constraining service effectiveness.

6.6 Given the absence of hard benchmarks and targets for many indicators at this stage, the analysis focuses on the available core indicators which make up significant weightings in their respective sectors. The *without-program* scenario assumed that these key operational activities are not undertaken. Meanwhile, the *with-program* scenario considered the benefits

associated with meeting the pre-defined targets under the planned disbursements. Benefits calculations consequently covered WSS, electricity, and SWM operational indicators.

6.7 Economic benefits include benefits from reduced NRW through less leakages, reduced electricity losses, and improved waste removal. Meanwhile, economic costs were proxied using the planned disbursements while operating and maintenance (O&M) costs have been obtained from estimates in the technical assessment, before being adjusted appropriately by the Bank. The baseline Economic Internal Rate of Return (EIRR) was estimated at 22.78% with the Economic Net Present Value (ENPV) of USD3,404 million. EIRR remained robust under extreme circumstances in a sensitivity analysis, with the lowest at 16.23% when costs are up by 20% and benefits are down by 20%. Detailed economic analysis is presented in Annex 4 (Economic and Financial Analysis).

Table 4. Sensitivity Analysis

Scenarios	Change (%)	EIRR (%)	ENPV (USD million)
1. Reduction of total benefits	20%	19.04	2,252
2. Removal of emissions benefits	-	15.34	1,257
3. Increased capital investment	20%	19.88	2,996
4. Increased O&M costs	20%	22.59	3,339
5. Increased total costs	20%	19.70	2,933
6. Combined scenarios 1 and 5	20%	16.23	1,782

6.8 **Financial Analysis.** A financial analysis was undertaken to assess the financial viability of the Program. The analysis focuses on the additional revenue generated from improvements in the operational performance of key metro services. The analysis assumes a six-year disbursement period (2026 - 2031) and twenty-four years of operations (2032 – 2055). Financial flow calculations therefore arise achieving the targeted operational indicators for WSS, electricity, and SWM, assessing the difference in flows compared to the *without-program* scenario of no advances in efficiency and capacity. The evaluated relevant data is gathered from numerous sources including technical assessments and sector reports.

6.9 RA 2 under the Program focuses on improving the financial performance of the metro services. Currently, the sector-specific services face challenges including cost minimization, revenue collection, and effective recycling of surplus back into funding investments. This analysis here focuses on the cash flow benefits arising from increased revenue/savings from improving operational effectiveness in relation to water and sanitation, electricity, and solid waste management initiatives. The chosen approach makes use of the available benchmarks and targets available at the time of Program preparation, reflecting anticipated advancements in overall financial performance.

6.10 The baseline Financial Internal Rate of Return (IRR) was estimated at 24.75%, compared to the 11.5% discount rate, with the Net Present Value (NPV) of USD5,211 million. IRR remained robust under extreme circumstances in a sensitivity analysis, with the lowest at 18% when total costs are up by 20% and revenue/savings are down by 20%.

Table 5. Sensitivity Analysis

Scenarios	Change (%)	IRR (%)	NPV (USD million)
1. Reduction of total revenue/savings	20%	20.90	3,527
2. Increased capital investment	20%	22.09	4,798

3. Increased O&M and depreciation costs	20%	24.19	4,983
4. Increased total costs	20%	21.58	4,569
5. Combined scenarios 1 and 4	20%	18.00	2,884

B. Fiduciary

6.11 An Integrated Fiduciary Systems Assessment (IFSA) was conducted along with the defined Program boundary and expenditure framework. The IFSA has assessed the existing arrangements and systems in key implementing agencies to determine whether they are adequate for the Program to achieve its intended results with due attention to the principles of economy, efficiency, effectiveness, transparency and accountability. Capacity assessments have been carried out for the key implementing agencies, in particular, the participating metros. Overall, the assessment concludes that the examined Program fiduciary systems including financial management, procurement and anticorruption measures provide reasonable assurance that the financing proceeds will be used for the intended purposes, with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability and for safeguarding program assets once the proposed mitigation measures have been implemented. Based on the assessment, the fiduciary risk is rated as “*High*”.

6.12 **Procurement.** As lead co-financier, WB’s PforR Policy will apply to the Program and is deemed consistent with AIIB’s Operational Policy on Financing as regards Results-Based Financing. As part of the IFSA, the procurement systems assessment considered the degree to which the planning, tendering, evaluation, contract award, and contract administration arrangements and practices will provide reasonable assurance that the Program would achieve the intended results through its procurement processes and procedures. Risks identified include: (i) procurement noncompliance and irregularities in fiduciary quality; (ii) inadequate quality of procurement process and inadequate contract management (iii) fraudulent and corrupt actors contracting with the state (iv) limited transparency and oversight of procurement (v) risk of award of contracts to WB debarred or suspended providers. Mitigation measures include: (i) conducting annual statutory audit by AGSA including audit of procurement activities and publishing the findings (ii) preparation and adoption of a Program Operations Manual (POM) satisfactory to the Bank and containing a dedicated procurement section;

6.13 **Program Procurement Regime.** The Municipal Finance Management Act 2003 (MFMA), which establishes the legal framework for municipal procurement, is applicable to all municipalities and municipal entities including the metros that will implement this Program. A new Public Procurement Act was enacted in July 2024 and its subsidiary instruments are under development. The 2024 Methodology of Assessment of Procurement Systems of South Africa’s public procurement system shows that though progress had been achieved over the last decade, there remains significant room for improvement across key areas: legal and institutional frameworks, operational efficiency, accountability, and integrity.

6.14 The 2024 MAPS assessment highlights that, while the legal framework is extensive and complex, it remains fragmented. The institutional system can also benefit from clearer definition of roles and mandates. There is potential to enhance the use of the electronic procurement system and to strengthen the professionalization of the Supply Chain Management function. Key deficiencies include inefficiencies, non-compliance, lack of

transparency, and unsatisfactory contract management practices. There is a lack of enforcement and consequence management leading to inability to resolve structural issues.

6.15 Program Procurement Profile. Contracts expected to be procured under the Program in WSS, electricity, SWM sectors include rehabilitation of existing infrastructure, expansion and construction of new distribution networks, maintenance works, fleet modernization and optimization investments, institutional management and systems improvement investments, technical consulting services, and other operating costs aimed at consolidating, modernizing, and improving the efficiency of service delivery by the metros.

6.16 Procurement Exclusions. The Program is not expected to procure high value contracts exceeding WB's Operational Procurement Review Committee (OPRC) thresholds for programs with a "*Substantial*" procurement risk rating. However, two waivers were negotiated applicable to this Program: Following negotiations, the Integrated Fiduciary Systems Assessment (IFSA) contract ceiling for works contracts was increased from USD75 to USD100 million by way of a limited waiver to not constrain high-capacity metros. The new thresholds, applied per contract package, therefore are: (i) USD100 million equivalent or more for works; (ii) USD50 million equivalent or more for goods and non-consulting services; and (iii) USD20 million equivalent or more for consulting services. In addition, contracts over USD100 million may be included subject to approval of a High Value Works waiver by WB. WB and NT will monitor the development of any such contracts during the Program implementation, and report these as part of routine reporting, including to AIIB. This being a jointly co-financed RBF led by WB aimed at avoiding duplicate approval processes, "*in lieu of the Procurement Policy's provisions applicable to RBPs*", AIIB will apply "*the co-financier's procurement policies and procedures applicable to the co-financier's results-based financing modality provided that AIIB is satisfied that these policies and procedures are materially consistent*" with AIIB's (section 5.16.5 of AIIB's Procurement Policy). Given that AIIB and WB have a Cofinancing Framework Agreement in place, this material consistency has been met.

6.17 Financial Management. South Africa's fiduciary framework is adequate to support the proceeds of the loan as evidenced by the findings of the February 2024 IMF technical report and the 2023 Open Budget Index. Based on the IMF report, South Africa adheres to advanced practices in fiscal transparency across the following areas: (i) fiscal reporting; (ii) fiscal forecasting and budgeting; and (iii) fiscal risk analysis. In terms of Program funds flow, WB and AIIB will disburse funds to the NT in USD upon achievement of agreed results, which will then be transferred to the South African Reserve Bank. For the Program, specific budget codes at both the national level (to record the grant expenditure) and at the Metro level (covering both revenue and expenditure) will be used.

6.18 The Public Financial Management (PFM) Act of 1999 mandates the NT to ensure accountability, transparency, and control of PFM systems in South Africa, including the management of budget preparation processes and revenue administration. A similar law, the MFMA, governs the financial framework for the Metros. The major strengths of South Africa's PFM systems include: (i) transparency and access to information by leveraging technology; (ii) the established use of performance-assessment tools across various levels of government; (iii) an integrated approach to reform coordination; and (iv) a focus on ethical skills development in the public sector. However, the following key systemic and institution-specific weaknesses have been identified: (i) undue influence of political office holders on PFM; (ii)

unsatisfactory public sector accountability culture and professional ethics; and (iii) a lack of consequence management.

6.19 The overall risk rating reflects the following key factors: (i) low budget execution for infrastructure projects due to poor planning, delayed procurement, unsatisfactory contract management, and political instability at times; (ii) the nature of audit opinions, as noted under external auditing, which poses a risk to accountability of funds; (iii) poor quality financial reporting which impedes informed decision-making, prioritization (particularly for metros under financial distress), service delivery assessment, trend analysis, and general monitoring.

6.20 Section 8 of the Public Finance Management Act (PFMA) requires the NT to prepare consolidated financial statements in accordance with generally recognized accounting practices. These statements must be submitted to the Auditor-General of South Africa (AGSA) for audit within three months after the end of the financial year and tabled before Parliament within one month thereafter. The consolidated financial statements must be made public upon submission to Parliament.

6.21 For municipalities, Section 121 of the MFMA stipulates that every municipality and municipal entity must prepare an annual report and submit it to the municipal council within nine months after the end of the financial year. The annual report must include the annual financial statements as well as the AGSA's audit report on those financial statements. The law mandates that the financial statements be audited within three months of their receipt.

6.22 **Disbursements.** The NT will allocate and release funds to the participating and eligible metros as conditional (performance-based) grants as per Program design using their existing and well-established intergovernmental budget and fiscal transfer mechanisms which are used to administer several other grants to all subnational governments (provinces, metros, and other municipalities). Once funds have been disbursed to metros, annual rollovers of unspent funds will be permitted subject to provisions of the annual Division of Revenue Act (DORA). WB and AIIB loan proceeds will be disbursed to the government upon verification of agreed results and will be used by the NT to finance a part of the conditional grant allocations to the metros. As such, WB and AIIB loan proceeds will not flow separately to the metros outside of the conditional grant framework of the NT. The recipient entity of grant (and Program) funds at the municipal level will be the metros, who can grant the Program funds to ring-fenced trading services entities and utilities established by the metros either at present or during Program implementation. This is consistent with existing intergovernmental budget systems. The statutory audits of National Treasury and metros by AGSA, inclusive of Program expenditures, shall be submitted to the Bank no later than nine months following the end of the Metro financial year. In adherence to the PFMA and MFMA, the financial statements will be embedded in the annual reports as required by the two Acts. The annual reports constitute financial statements (which disclose the sources and uses of funds), performance information (which discloses the details of the programs under implementation), and the opinion by the AGSA on both. These auditing arrangements were assessed and found to be adequate for the Program to rely on. The statutory audits of NT and metros by AGSA, inclusive of MTS Program expenditures, shall be submitted to WB and AIIB no later than nine months following the end of the Metros' financial year.

6.23 Governance and Anti-corruption. AIIB is committed to preventing fraud and corruption in its financing. It places the highest priority on the projects it finances being implemented in strict compliance with AIIB's Policy on Prohibited Practices (or PPP) (2016). To the extent that WB's "*Guidelines on Preventing Fraud and Corruption in Program-for-Results Financing*" dated Feb. 1, 2012 and revised July 10, 2015 (Anti-Corruption Guidelines) are consistent with AIIB's PPP, WB's Anti-Corruption Guidelines will apply to the Program activities financed in whole or in part by the proceeds of AIIB and WB loans. AIIB reserves the right to undertake investigations regarding the Prohibited Practices not covered under WB's Anti-Corruption Guidelines.

C. Environmental and Social Systems Assessment

6.24 Categorization. The Program will be jointly co-financed with WB as the lead co-financier. In line with AIIB's Environmental and Social Framework (ESF), and to provide a harmonized approach to managing environmental and social (E&S) risks, WB's Program-for-Results (PforR) Policy will apply in lieu of AIIB's ESF. WB has assessed the Program's E&S risk level as "*Substantial*," which corresponds to Category B with high/medium-risk rating under AIIB's classification. In accordance with the PforR Policy, activities that may cause significant, irreversible, or unprecedented E&S impacts will be excluded from the Program.

6.25 Excluded Activities. As required under WB's PforR Policy, the Program excludes activities that are likely to have significant adverse E&S impacts that are permanent in nature, irreversible, or unprecedented (similar to Category A if AIIB's ESF were applicable wherein activities that are likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or Project-affected people will be excluded from the RBP). Once more details on the designs and locations of activities are available, it will be screened using an E&S screening list, included as part of the POM, to exclude activities considered high in E&S risks and to determine eligibility for support.

6.26 Environmental and Social Instruments. Based on the anticipated scope and nature of the Program, several E&S instruments are expected to be prepared to manage potential risks and achieve compliance with the applicable frameworks. As required for a PforR/RBF operation, an Environmental and Social Systems Assessment (ESSA) was conducted by WB to evaluate the country's systems for managing the Program's E&S risks and impacts. The ESSA, prepared as part of the PforR process, assesses the adequacy of the borrower's systems and includes a screening mechanism to exclude activities with high E&S risks. It is complemented by the Program Action Plan (PAP), which outlines key capacity-strengthening and management measures, and the POM. The draft ESSA was consulted with stakeholders in January 2025, disclosed in February 2025, and finalized and redisclosed in October 2025. AIIB has reviewed the ESSA and is satisfied that it provides an adequate and reliable basis for assessing the Program's E&S risks and impacts.

6.27 Although major resettlement is not anticipated, there is a minor risk of displacement related to infrastructure works, particularly in the water sector. South African Prevention of Illegal Eviction and Unlawful Occupation of Land Act (Act 19 of 1998) would offer protection in case this happens. Additionally, where needed, Resettlement Action Plans (RAPs) or Abbreviated RAPs may be prepared in line with national legislation and good international

practice. Activities identified as having high E&S risk will be excluded from financing consideration, as outlined in the ineligible activities list included in the ESSA and POM.

6.28 An Environmental and Social Management System (ESMS) will be implemented at the metro level. The National Treasury's Cities Support Program, along with the Program Implementation entities at each metro, will be responsible for overall E&S management and implementation. The Metro Trading Services Coordination unit will provide support to the metros in fulfilling their E&S responsibilities. Dedicated E&S safeguards staff will be engaged, and a program reporting and monitoring system is being developed to track performance. Overall, the E&S instruments will support the Program's goal of enhancing climate mitigation, resilience and environmental sustainability while minimizing adverse impacts.

6.29 **E&S Policy and Legal Framework.** South Africa has a strong and progressive legislative framework that provides a solid basis for managing E&S risks under the Program. Environmental rights are recognized in the Constitution, which establishes the environment as a functional area across all three spheres of government, with local authorities responsible for air pollution, water supply, and wastewater management. The National Environmental Management Act (NEMA, Act 107 of 1998) sets out principles for cooperative governance, requiring environmental assessments, monitoring, and authorizations for activities that may impact the environment. Additional approvals, such as water use licenses under the National Water Act (Act 36 of 1998), may also be required. NEMA allows for integrated licensing processes and registered independent Environmental Assessment Practitioners conduct assessments. The Department of Forestry, Fisheries and Environment web-based environmental screening tool (2019) supports early identification of sensitive areas, exclusions, and specialist studies.

6.30 Most metropolitan municipalities have environmental management systems broadly aligned with international best practices, though some are outdated. The ESSA recommends that these metros update their systems and establish formal Environmental and Social Management Systems (ESMS). While E&S indicators are already part of the national monitoring framework, implementation and enforcement capacity varies across metros due to limited human and financial resources. The ESSA further concludes that some gaps remain in certain areas such as on: (i) inconsistency of municipal by-laws and management plans, including alignment with sustainability objectives and the waste hierarchy; (ii) limited explicit provision for temporary land acquisition or access restrictions; (iii) gaps in compensation, livelihood restoration, and support for affected households, including those without formal legal rights; (iv) limited mechanisms for continuous and inclusive stakeholder engagement, including participation of women and vulnerable groups; (v) limited scope to clarify requirements for restoration or replacement of public infrastructure and community services affected by the Program; (vi) lack of dedicated budgeting or funding mechanisms for compensation and other assistance; and (vii) gaps in monitoring and grievance redress mechanisms, particularly for external independent oversight. The Program will, however, support metros in strengthening their E&S capacity, operational and monitoring procedures, and help address these gaps through targeted capacity building.

6.31 **Environment Aspects.** The ESSA concluded that the Program will deliver significant E&S benefits, including reduced GHG emissions, lower demand for greenfield water resources, decreased pollution from wastewater and waste disposal, promotion of a circular

economy, improved access to basic services, and enhanced public health through better environmental management. The Program activities may include rehabilitation and expansion of water supply and sanitation systems, NRW management, wastewater management systems, and improving energy efficiencies which may result in both positive and negative outcomes. Although the precise nature and scope of physical interventions under the Program will only be determined during implementation, it is anticipated that most activities will be confined to existing facilities, thereby limiting environmental impacts to site-specific, short to medium-term effects that are not expected to result in significant adverse direct, indirect, or cumulative impacts on human health or the environment.

6.32 Potential environmental risks are temporary, site-specific disturbances to soil, habitats, water quality, and air quality arising from construction, rehabilitation, pipeline installation, and facility upgrades. Large wastewater treatment works may generate nutrient loads that exceed existing standards, potentially causing downstream eutrophication, while gaps in municipal solid waste management, illegal dumping, and incomplete implementation of the waste hierarchy could result in local pollution. There is also variability in municipal bylaws and enforcement, licensing and compliance challenges for activities requiring permits, and potential limitations in climate resilience if international best practices are not fully applied. Effective monitoring and performance tracking may be constrained by inconsistent Key Performance Indicators (KPIs) across metros, while limited municipal capacity and inconsistent ESMS application could weaken the implementation of E&S safeguards. Although most activities are anticipated to occur within existing infrastructure footprints, cumulative or indirect effects may arise when multiple interventions overlap.

6.33 To mitigate environmental risks, the ESSA has proposed boundaries that classify the eligibility of the possible MTSP civil works. Additionally, specific capacity and system strengthening measures have been proposed in the PIAPs. Metros will implement the ESMS aligned with international standards to guide planning, construction, and operations. Key measures include strengthening SWM and enforcement of the waste hierarchy, integrating climate resilience into new and upgraded infrastructure, consolidating environmental permitting and compliance, and improving monitoring through clearly defined KPIs and independent verification. Technical assistance and capacity-building support will build municipal capacity to manage environmental risks, support effective implementation of safeguards, and promote positive environmental outcomes across all metros.

6.34 **Social Aspects.** According to the ESSA, the Program is expected to deliver significant social benefits across the water, sanitation, electricity, and solid waste sectors. In water and sanitation, improved governance, maintenance, and financial sustainability of municipal services will enhance the reliability and accessibility of infrastructure, reducing service disruptions that often lead to social unrest. Better access to safe water and sanitation will improve public health, reduce waterborne diseases, and enhance overall well-being, while more efficient water systems will lower costs for households and businesses. In the electricity and waste sectors, strengthened municipal capacity will ensure more reliable energy supply and sustainable waste management, supporting economic growth, job creation, and healthier living environments. The integration of informal waste pickers into formal systems will further promote social inclusion and create fairer livelihood opportunities.

6.35 The main social risks identified in the ESSA relate to potential inequities in the implementation of free basic services, displacement from infrastructure works, and challenges in integrating informal workers in the waste sector. Differences in how metros define and deliver free basic water, sanitation, and electricity could lead to unequal benefits or financial strain if subsidy adjustments are not well balanced. Civil works for expanding or rehabilitating networks may cause temporary or permanent physical and economic displacement, especially in informal settlements. In the waste sector, risks include the exclusion of vulnerable groups during waste picker registration, elite capture of benefits, or conflicts arising from poor coordination and competition over recyclable materials. Mechanization and the establishment of new recovery facilities could also reduce informal livelihood opportunities if not managed inclusively.

6.36 To mitigate these risks, the Program will help support metros maintain current subsidy systems for indigent households and align changes only where financially sustainable. Displacement and livelihood impacts will be minimized through advance planning, meaningful community engagement, and fair compensation when necessary. Integration of informal waste pickers will follow national regulations and WB's recommendations, including transparent registration, municipal training, awareness campaigns, and the establishment of local working groups to guide implementation. Additional support will include educational materials, capacity-building programs, and the design of material recovery facilities that complement rather than replace informal recycling. These measures aim to promote equitable participation, strengthen local capacity, and enhance the overall social sustainability of the Program.

6.37 **Gender.** Women in South Africa continue to face significant barriers to accessing professional opportunities within the utility sectors. Currently, only about 32,000 women are employed across these sectors, compared to 67,000 men, reflecting pronounced occupational segregation, with women largely concentrated in lower-skilled and more vulnerable positions. Female representation in technical and leadership roles remains limited, women hold only 31% of positions in the state-owned electricity utility, and within the water utilities, women make up an average of just 18% of the workforce, with only 23% occupying technical or managerial roles. At the metropolitan level, women are also underrepresented and tend to be employed in administrative or customer relations roles rather than in technical areas such as engineering, supervision, operations, and maintenance. Structural barriers, including gender bias in recruitment, limited access to training, mentorship gaps, and childcare responsibilities, further constrain women's entry, retention, and advancement in technical and leadership positions. In addition, non-transparent hiring processes and entrenched social hierarchies at the metro level restrict women's opportunities for career progression in trading services.

6.38 The Program aims to reduce the gender gap in women's participation within metro-level trading services by supporting the implementation of South Africa's Employment Equity Act (No. 55 of 1998), which provides the legal framework for enhancing female labor force inclusion through metro-level Employment Equity Plans (EEPs). It will assist the eight participating metropolitan governments in implementing EEPs that incorporate gender mainstreaming strategies designed to increase women's participation across the technical value chain. Key activities under the EEPs will include targeted recruitment and selection of women for technical and managerial positions; succession planning through capacity-building and skills development training at technical and management levels; and awareness and advocacy campaigns—such as women's forums—to encourage more women to pursue

technical careers. These efforts aim to promote gender-inclusive metro-level plans that enhance women's recruitment, retention, and promotion within the utility sectors. A monitoring framework will be established to collect gender-disaggregated data across all three sectors and track progress. Additionally, the Program will monitor performance through the indicator *"percentage of newly appointed female technical staff in utility sectors at the metro level under the Program,"* with a baseline of 0% and a target of 20% by the end of the Program.

6.39 Furthermore, the Program will provide for improved sanitation facilities, particularly for women and girls which contribute to gender equality by providing safe and private spaces and reducing the risk of gender-based violence. Enhanced access to water and sanitation services also supports women's health and dignity, while reducing the time burden associated with water collection and care responsibilities.

6.40 **Institutional Capacity.** The ESSA conducted by WB confirms that the implementing entity and participating metros have prior experience managing E&S requirements under national and donor-funded programs. However, capacity varies significantly across metros. Key gaps include: (i) human resources and coordination – limited dedicated E&S staff and fragmented oversight; (ii) systems and enforcement – uneven application of environmental bylaws and management plans, with several metros needing to establish or strengthen ESMSs aligned with international standards; (iii) capacity building – need for regular training on environmental screening, supervision, Occupational Health and Safety (OHS), and monitoring; and (iv) monitoring and reporting – overlapping performance systems requiring rationalization for consistency. To strengthen institutional capacity, the Program will assign E&S expertise within the National Treasury's Cities Support Program, supported by targeted training, technical assistance, and independent verification.

6.41 **Occupational Health and Safety (OHS), Labor and Employment Conditions.** The Program involves civil works and infrastructure upgrades with potential occupational health and safety (OHS) risks, including site-specific hazards. These will be managed through adherence to South Africa's rigorous worker health and safety legislation set out in the Occupational Health and Safety Act (OHSA) of 1993 and Compensation for Occupational Injuries and Diseases Act (COIDA) of 2020, as well as specific regulations for the management of construction contracts, WB EHS Guidelines, and enhanced municipal Environmental and Social Management Systems (ESMS) that incorporate labor and OHS protocols. Measures include appointing trained OHS managers, providing safety training, maintaining emergency preparedness plans, and monitoring performance through KPIs, improving compliance, labor conditions, and overall safety management.

6.42 **Stakeholder Engagement, Consultation and Information Disclosure.** Consultations to collaborate with key stakeholders and disclose the preliminary ESSA findings were conducted through a series of online meetings. The first meeting, held with CSP and attended by representatives from the NT and WB team, focused on presenting materials to be shared with the eight participating metros. A subsequent online consultation was held on January 21, 2025, with all eight metros, attended by representatives from relevant departments and senior management. During this session, the key findings and recommendations of the ESSA were presented and discussed. Participants provided feedback and engaged in dialogue, and no material issues were raised that required changes to the ESSA's findings or recommendation.

Finalized ESSA and enhanced ESMS, will be timely disclosed by the Borrower and the Bank in an appropriate manner.

6.43 Project Grievance Redress Mechanism. Communities and individuals who believe they are adversely affected by the Program, as defined by the applicable policies and procedures, have the right to seek redress through established grievance mechanisms. They can submit complaints to the Program's existing Grievance Redress Mechanism (GRM), which is designed to handle concerns related to implementation, impacts, or other project-related issues in a transparent and timely manner.

6.44 AIIB's Project-affected People's Mechanism. Project affected communities and individuals may submit their complaint to WB's Independent Accountability Mechanism as per co-financing framework agreement signed with AIIB. Consequently, in accordance with AIIB's Policy on Project-affected People's Mechanism (PPM), submissions to the PPM under this Project will not be eligible for consideration by the PPM. The Accountability Mechanism houses the Inspection Panel (which determines whether harm occurred, or could occur, as a result of AIIB non-compliance with its E&S policies and procedures), the WB-supported South Africa Metro Trading Services Program (P505813) and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted at any time after concerns have been brought directly to WB's attention, and WB Management has been given an opportunity to respond. For information on how to submit complaints to WB's Grievance Redress Service (GRS), visit <https://www.worldbank.org/GRS>. Information on how to submit complaints to WB's Accountability Mechanism is available at <https://accountability.worldbank.org>.

6.45 Monitoring and Supervision Arrangements. The overall responsibility for Program monitoring and evaluation will lie with the National Treasury (NT), who shall be required to coordinate with the participating metros for timely reporting. The NT will provide bi-annual progress reports to WB and AIIB based on agreed format. AIIB will periodically join WB's implementation monitoring missions as necessary, and monitor appropriate use of AIIB funds. More details will be determined with the Borrower during the appraisal of the Program.

D. Risks Assessment

Risk Description	Assessment (H/M/L)	Mitigation Measures
Technical designs		
- Institutional and technical complexity of undertaking the proposed reforms across three sectors and across eight large metros, and the novel undertaking of using a performance grant approach. - Notable rent seeking behaviors and vested interests, and risks relating to vandalism and theft of infrastructure.	M	The Program will: (i) work closely with Metros to support PIAP implementation through technical support and capacity building; and (ii) invest heavily in developing a robust and detailed design, drawing on a combination of global and local expertise.
Institutional capacity		

Risk Description	Assessment (H/M/L)	Mitigation Measures
▪ Institutional capacity, systems, and coordination mechanisms required for the proposed Program activities across multiple metros and various service sectors.	L	▪ The Program will provide the required technical assistance and training and incentives in the form of DLIs to strengthen institutional capacity of implementing agencies.
Macroeconomic		
▪ Fiscal consolidation required to control rising public debt, projected to peak in 2027/28. Political and economic uncertainties further heighten this risk.	M	▪ AIIB and WB will conduct close monitoring of the political and economic environment in coordination with development partners. The Program supports structural reforms in key service delivery sectors (water, sanitation, energy, solid waste) to foster inclusive growth, reduce infrastructure-related constraints on the private sector, and mitigate long-term fiscal pressures.
Political and Governance		
▪ Political instability, governance challenges, and the complex, multi-stakeholder nature of the sector. Frequent leadership changes in four coalition-run metropolitan municipalities and upcoming 2026 local elections create uncertainty and disrupt decision-making.	H	▪ The Program will strengthen stakeholder engagement to build understanding and support, while implementing governance reforms to clearly define roles and responsibilities between central and local governments, thereby strengthening sector coordination and decision-making.
Fiduciary		
▪ Identified risks include: (i) procurement non-compliance and irregularities in fiduciary quality; (ii) inadequate quality of procurement process and inadequate contract management; (iii) fraudulent and corrupt actors contracting with the state; (iv) limited transparency and oversight of procurement; (v) risk of award of contracts to WB-debarred or suspended providers; (vi) low budget execution; and (vii) lack of adequate and skilled staff.	H	▪ An IFSA identified risks, and the following mitigation measures have been incorporated into the Program: (i) conducting annual statutory audit by AGSA including audit of procurement activities and publishing the findings; and (ii) preparation and adoption of a Program Operations Manual (POM) satisfactory to AIIB.
Environmental and Social		
▪ The potential environmental risks relate to issues connected with WSS, electricity, and SWM services; the potential social	H/M	▪ An ESSA was conducted to evaluate the Program's E&S risks. The assessment covered: (i) the identification of potential E&S risks and

Risk Description	Assessment (H/M/L)	Mitigation Measures
risks relating to livelihood, inequitable distribution, access, costs and other factors; and unsatisfactory institutional capacity, systems and procedures for ensuring proper E&S management during Program implementation.		impacts; (ii) the capacity of metropolitan municipalities to manage these risks and impacts; and (iii) the applicable legal, regulatory, and procedural frameworks, as well as their implementation performance. Mitigation measures to address the identified risks have been incorporated into the PAP.

E. Program Action Plan

Action Description	DLI	Covenant	Due Date	Responsible Party	Completion Measurement
Develop and implement a GRM at Program level			Six months after effectiveness	MTSC and metros	GRM is in place and functioning
Develop and implement functional ESMS, including requirements for capacity improvement			One year after effectiveness	Metros	ESMS Manual and Procedures
Assign E&S responsibilities in the MTSC team to support metros.			Six months after Program effectiveness	NT	Responsibilities assigned to experienced MTSC team staff
Statutory audit by AGSA including audit of Program expenditures			Within 9 months from close of each Metro	MTSC	Statutory audit by AGSA including Program expenditures

Annex 1: Results Monitoring Framework

Program Objective (PO):	To improve the accountability, operational and financial performance of water supply and sanitation, electricity, and solid waste management services in South Africa’s metropolitan municipalities.									
Indicator Name	Unit of measure	Base-line Data 2025	Cumulative Target Values					End Target 2031	Data source / Methodology ³⁷	Responsibility
			2026	2027	2028	2029	2030			
Program Objective Indicators:										
Program’s Minimum Conditions met and maintained by Metros										
1. Metros that have met and maintained the Program’s Minimum Conditions	Number	0						8	M1-M8	IVA/GAT
Non-Revenue Water (NRW) reduction in South Africa’s metros as a result of the Program										
2. Non-Revenue Water reduction in metros as a result of the Program	%	41						28	W10	IVA/GAT
Electricity losses reduction in South Africa’s metros as a result of the Program										
3. Electricity losses reduction in metros as a result of the Program	%	22						12	E5	IVA/GAT
Intermediate Results Indicators:										
Water & Sanitation: Operational Performance of W&S Services										
1. Bulk water system input volume versus the permitted raw water allocation volume	%							To be identified at PIAP formulation	W1	IVA/GAT
2. Green Drop Score	%							To be identified at PIAP	W3	IVA/GAT

³⁷ Where applicable the shorthand for the corresponding Minimum Commitments (M1-M8) or performance indicators (A1-A5, F1-F6, W1-W11, E1-E7 and S1-S8) are given. Data sources and methodologies are provided in the corresponding indicator summaries in Annex 2, page 58 onwards.

Program Objective (PO):	To improve the accountability, operational and financial performance of water supply and sanitation, electricity, and solid waste management services in South Africa's metropolitan municipalities.									
Indicator Name	Unit of measure	Base-line Data 2025	Cumulative Target Values					End Target 2031	Data source / Methodology ³⁷	Responsibility
			2026	2027	2028	2029	2030			
								formulation		
Electricity: Operational Performance of Electricity Services										
3. Industrial (bulk) and commercial customers metered and operational	%							To be identified at PIAP formulation	E1	IVA/GAT
4. Repairs Efficiency, Total operational spend on repairs and maintenance / total operational revenue	%							To be identified at PIAP formulation	E4	IVA/GAT
Solid Waste Management: Operational Performance of SWM Services										
5. Formal and informal settlements receiving basic waste collection services.	%							To be identified at PIAP formulation	S1, S2	IVA/GAT
6. Improved service reliability	%							To be identified at PIAP formulation	S3	IVA/GAT
7. Net greenhouse gas emissions	tCO2eq/year							To be identified at PIAP formulation	S7	IVA/GAT
Gender Inclusion										

Program Objective (PO):	To improve the accountability, operational and financial performance of water supply and sanitation, electricity, and solid waste management services in South Africa's metropolitan municipalities.									
Indicator Name	Unit of measure	Base-line Data 2025	Cumulative Target Values					End Target 2031	Data source / Methodology ³⁷	Responsibility
			2026	2027	2028	2029	2030			
8. Newly appointed female technical staff in trading sectors at metro level under the Program	%							20 ³⁸		GAT
Accountability Performance of Trading Services										
9. City Manager delegations to Trading Services Head of Department for: human resources, SCM, revenue, fleet management, IT, customer service, real estate, and security	Yes/No	No						Yes	M4	IVA/GAT
10. Service compact between service authority (Metro) and service provider (Trading Service) for effective delivery of the trading service	Yes/No	No						Yes	M1	IVA/GAT
11. Full separate Annual Financial Statement for each trading service	Yes/No	No						Yes	M7	IVA/GAT
Financial Performance of Trading Services										

³⁸ Due to data constraints, national level proxy data is used where average women's participation is 18 percent in water utilities, and 31% in electricity. Baseline is zero, as all new recruited female staff will be through the new project. The Program will be able to establish a baseline after the gender assessment.

Program Objective (PO):		To improve the accountability, operational and financial performance of water supply and sanitation, electricity, and solid waste management services in South Africa's metropolitan municipalities.								
Indicator Name	Unit of measure	Base-line Data 2025	Cumulative Target Values					End Target 2031	Data source / Methodology ³⁷	Responsibility
			2026	2027	2028	2029	2030			
12. Operating cost coverage ratio (OCCR)	Yes/No							To be identified at PIAP formulation	F1	IVA/GAT
13. Cash collection rate	%							To be identified at PIAP formulation	F2	IVA/GAT

Annex 2: Disbursement Linked Indicators, Disbursement Arrangements and Verification Protocols

Table A2-1. Disbursement Linked Indicator Matrix (\$=USD)

	Total Financing Allocated	% of Total Financing Amount	DLI Baseline	Indicative timeline for DLI achievement					
				Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
DLI-1. Buffalo City has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the defined institutional, financial and operational performance targets	\$35,692,534	7.1%	0	\$1,530,211	\$2,681,984	\$5,974,157	\$8,022,889	\$8,389,507	\$9,093,786
DLI-2. The City of Cape Town has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the defined institutional, financial and operational performance targets	\$80,518,321	16.1%	0	\$3,448,543	\$6,065,108	\$13,484,601	\$18,085,916	\$18,921,838	\$20,512,315
DLI-3. The City of Ekurhuleni has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the defined institutional, financial and operational performance targets	\$71,632,963	14.3%	0	\$1,053,647	\$5,549,145	\$12,355,460	\$16,598,049	\$17,317,609	\$18,759,062
DLI-4. City of Johannesburg has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the defined institutional, financial and operational performance targets	\$94,358,282	18.9%	0	\$4,037,888	\$7,101,052	\$15,805,774	\$21,215,569	\$22,158,383	\$24,039,616
DLI-5. The City of Tshwane has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the	\$66,790,423	13.4%	0	\$2,862,415	\$5,027,244	\$11,181,678	\$15,020,066	\$15,711,764	\$16,987,256

	Total Financing Allocated	% of Total Financing Amount	DLI Baseline	Indicative timeline for DLI achievement					
				Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
defined institutional, financial and operational performance targets									
DLI-6. eThekweni City has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the defined institutional, financial and operational performance targets	\$79,957,999	16.0%	0	\$3,428,612	\$6,017,616	\$13,367,625	\$17,980,667	\$18,773,669	\$20,389,810
DLI-7. Mangaung has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the defined institutional, financial and operational performance targets	\$32,863,212	6.6%	0	\$951,661	\$2,514,035	\$5,588,286	\$7,493,578	\$7,823,343	\$8,492,309
DLI-8. Nelson Mandela Bay has council approved PIAPs in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting the defined institutional, financial and operational performance targets	\$38,186,267	7.6%	0	\$0	\$3,001,315	\$6,678,748	\$8,977,707	\$9,354,752	\$10,173,745
TOTAL	\$500,000,000	100%		\$17,312,977	\$37,957,490	\$84,436,329	\$113,394,440	\$118,450,864	\$128,447,899

Note: Totals may not add up exactly due to rounding.

Table A2-2. DLI Disbursement Schedule, in USD million, by year, by DLI

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Disbursement linked indicators								
DLI 1	Buffalo City has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$1,530,211	\$2,681,984	\$5,974,157	\$8,022,889	\$8,389,507	\$9,093,786	\$35,692,534
DLR 1.1	Buffalo City Metropolitan Municipality has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$1,530,211						\$1,530,211
DLR 1.2	Buffalo City Metropolitan Municipality has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$2,681,984					\$2,681,984
DLR 1.3	Buffalo City Metropolitan Municipality has met the MCs for Year			\$5,974,157				\$5,974,157
DLR 1.4	Buffalo City Metropolitan Municipality has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$8,022,889	\$8,389,507	\$9,093,786	\$25,506,182
DLI 2	The City of Cape Town has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$3,448,543	\$6,065,108	\$13,484,601	\$18,085,916	\$18,921,838	\$20,512,315	\$80,518,321
DLR 2.1	City of Cape Town has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$3,448,543						\$3,448,543
DLR 2.2	City of Cape Town has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$6,065,108					\$6,065,108
DLR 2.3	City of Cape Town has met the MCs for Year 2 and maintained			\$13,484,601				\$13,484,601
DLR 2.4	City of Cape Town has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$18,085,916	\$18,921,838	\$20,512,315	\$57,520,069
DLI 3	The City of Ekurhuleni has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$1,053,647	\$5,549,137	\$12,355,460	\$16,598,049	\$17,317,609	\$18,759,062	\$71,632,963
DLR 3.1	City of Ekurhuleni has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$1,053,647						\$1,053,647

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Disbursement linked indicators								
DLR 3.2	City of Ekurhuleni has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$5,549,137					\$5,549,137
DLR 3.3	City of Ekurhuleni has met the MCs for Year 2 and maintained			\$12,355,460				\$12,355,460
DLR 3.4	City of Ekurhuleni has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$16,598,049	\$17,317,609	\$18,759,062	\$52,674,719
DLI 4	The City of Johannesburg has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$4,037,888	\$7,101,052	\$15,805,774	\$21,215,569	\$22,158,383	\$24,039,616	\$94,358,282
DLR 4.1	City of Johannesburg has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$4,037,888						\$4,037,888
DLR 4.2	City of Johannesburg has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$7,101,052					\$7,101,052
DLR 4.3	City of Johannesburg has met the MCs for Year 2 and maintained			\$15,805,774				\$15,805,774
DLR 4.4	City of Johannesburg has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$21,215,569	\$22,158,383	\$24,039,616	\$67,413,568
DLI 5	The City of Tshwane has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$2,862,415	\$5,027,244	\$11,181,678	\$15,020,066	\$15,711,764	\$16,987,256	\$66,790,423
DLR 5.1	City of Tshwane has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$2,862,415						\$2,862,415
DLR 5.2	City of Tshwane has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$5,027,244					\$5,027,244
DLR 5.3	City of Tshwane has met the MCs for Year 2 and maintained the MCs for the TSs for Year 1.			\$11,181,678				\$11,181,678
DLR 5.4	City of Tshwane has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$15,020,066	\$15,711,764	\$16,987,256	\$47,719,086

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Disbursement linked indicators								
DLI 6	eThekwini has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$3,428,612	\$6,017,616	\$13,367,625	\$17,980,667	\$18,773,669	\$20,389,810	\$79,957,999
DLR 6.1	eThekwini has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$3,428,612						\$3,428,612
DLR 6.2	eThekwini has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$6,017,616					\$6,017,616
DLR 6.3	eThekwini has met the MCs for Year 2 and maintained the MCs for the TSs for Year 1.			\$13,367,625				\$13,367,625
DLR 6.4	eThekwini has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$17,980,667	\$18,773,669	\$20,389,810	\$57,144,146
DLI 7	Mangaung has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$951,661	\$2,514,035	\$5,588,286	\$7,493,578	\$7,823,343	\$8,492,309	\$32,863,212
DLR 7.1	Mangaung has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$951,661						\$951,661
DLR 7.2	Mangaung has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$2,514,035					\$2,514,035
DLR 7.3	Mangaung has met the MCs for Year 2 and maintained the MCs for the TSs for Year 1.			\$5,588,286				\$5,588,286
DLR 7.4	Mangaung has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$7,493,578	\$7,823,343	\$8,492,309	\$23,809,230
DLI 8	Nelson Mandela Bay has council approved PIAPs for the Trading Services and is meeting its institutional, financial and operational performance targets	\$0	\$3,001,315	\$6,678,748	\$8,977,707	\$9,354,752	\$10,173,745	\$38,186,157
DLR 8.1	Nelson Mandela Bay has submitted to NT satisfactory draft PIAPs for the TSs and a Commitment to the MCs.	\$0						\$0
DLR 8.2	Nelson Mandela Bay has submitted to NT Council Approved PIAPs for the TSs and Achieved the MCs for Year 1.		\$3,001,315					\$3,001,315
DLR 8.3	Nelson Mandela Bay has met the MCs for Year 2 and maintained the MCs for the TSs for Year 1.			\$6,678,748				\$6,678,748
DLR 8.4	Nelson Mandela Bay has met and maintained the MCs and implemented the PIAPs for the TSs and their Performance Targets.				\$8,977,707	\$9,354,752	\$10,173,745	\$28,506,204

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Disbursement linked indicators							
TOTAL	\$17,312,977	\$37,957,490	\$84,436,329	\$113,394,440	\$118,450,864	\$128,447,899	\$500,000,000
as % of total	3.46	7.59	16.89	22.68	23.69	25.69	100

Table A2-3. Combined DLI Verification Protocols and Disbursement Table (\$=USD)

DLI 1: Buffalo City has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets						
Description		Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service, a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.				
Data source/agency		Annual performance assessment by team of experts				
Verification entity		Expert panel, with government representatives and independent experts				
Procedure		As outlined in the POM				
DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula
						x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant ³⁹ , whereby $x+y+z=100\%$
1.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$1,530,211	2	$\$1,530,211 \times (x\% + y\%)$ for the TSs
1.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$2,681,984	3	$\$2,681,984 \times (x\% + y\% + z\%)$ for the TSs
1.3	Year 3	YES	The Metro has adhered to the Minimum Commitments for three Trading Services as verified by IVA	\$5,974,157	3	$\$5,974,157 \times (x\% + y\% + z\%)$ for the TSs
1.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$8,022,889	3	Subject to meeting Minimum commitments: \$8,022,889 * $x\% \times \text{Performance Targets } (\%) + \$8,022,889$ * $y\% \times \text{Performance Targets } (\%) + \$8,022,889$ * $z\% \times \text{Performance Targets } (\%)$
1.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$8,389,507	3	Subject to meeting Minimum commitments: \$8,389,507 * $x\% \times \text{Performance Targets } (\%) + \$8,389,507$

³⁹ Within bands, metros have discretion to allocate their MTSG-allocations across the three trading services. The shares for each sector for the program duration will be set through the full PIAPs, and are referred to as x, y and z respectively.

						* y% * Performance Targets (%) + \$8,389,507 * z% * Performance Targets (%)
1.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$9,093,786	3	Subject to meeting Minimum commitments: \$9,093,786 * x% * Performance Targets (%) + \$9,093,786 * y% * Performance Targets (%) + \$9,093,786 * z% * Performance Targets (%)

DLI 2: The City of Cape Town has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets

Description		Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service, a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.				
Data source/agency		Annual performance assessment by team of experts				
Verification entity		Expert panel, with government representatives and independent experts				
Procedure		As outlined in the POM				
DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula
						x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant, whereby x+y+z =100%
2.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$3,448,543	2	\$3,448,543 * (x% + y%) for the TSs
2.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$6,065,108	3	\$6,065,108 * (x% + y% + z%) for the TSs
2.3	Year 3	YES	The Metro has adhered to the Minimum Commitments for three Trading Services as verified by IVA	\$13,484,601	3	\$13,484,601 * (x% + y% + z%) for the TSs
2.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$18,085,916	3	Subject to meeting Minimum commitments: \$18,085,916

						$* x\% \text{ * Performance Targets (\%)} + \$18,085,916$ $* y\% \text{ * Performance Targets (\%)} + \$18,085,916$ $* z\% \text{ * Performance Targets (\%)}$
2.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$18,921,838	3	Subject to meeting Minimum commitments: \$18,921,838 $* x\% \text{ * Performance Targets (\%)} + \$18,921,838$ $* y\% \text{ * Performance Targets (\%)} + \$18,921,838$ $* z\% \text{ * Performance Targets (\%)}$
2.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$20,512,315	3	Subject to meeting Minimum commitments: \$20,512,315 $* x\% \text{ * Performance Targets (\%)} + \$20,512,315$ $* y\% \text{ * Performance Targets (\%)} + \$20,512,315$ $* z\% \text{ * Performance Targets (\%)}$

DLI 3: The City of Ekurhuleni has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets

Description		Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service, a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.				
Data source/agency		Annual performance assessment by team of experts				
Verification entity		Expert panel, with government representatives and independent experts				
Procedure		As outlined in the POM				
DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula
						x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant, whereby $x+y+z = 100\%$
3.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$1,053,647	2	\$1,053,647 $* (x\% + y\%) \text{ for the TSs}$

3.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$5,549,137	3	\$5,549,137 * (x% + y% + z%) for the TSs
3.3	Year 3	YES	The Metro has adhered to the Minimum Commitments for three Trading Services as verified by IVA	\$12,355,460	3	\$12,355,460 * (x% + y% + z%) for the TSs
3.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$16,598,049	3	Subject to meeting Minimum commitments: \$16,598,049 * x% * Performance Targets (%) + \$16,598,049 * y% * Performance Targets (%) + \$16,598,049 * z% * Performance Targets (%)
3.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$17,317,609	3	Subject to meeting Minimum commitments: \$17,317,609 * x% * Performance Targets (%) + \$17,317,609 * y% * Performance Targets (%) + \$17,317,609 * z% * Performance Targets (%)
3.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$18,759,062	3	Subject to meeting Minimum commitments: \$18,759,062 * x% * Performance Targets (%) + \$18,759,062 * y% * Performance Targets (%) + \$18,759,062 * z% * Performance Targets (%)

DLI 4: The City of Johannesburg has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets

Description	Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service, a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.
Data source/agency	Annual performance assessment by team of experts
Verification entity	Expert panel, with government representatives and independent experts
Procedure	As outlined in the POM

DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula
						x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant, whereby $x+y+z=100\%$
4.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$4,037,888	2	\$4,037,888 * (x% + y%) for the TSs
4.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$7,101,052	3	\$7,101,052 * (x% + y% + z%) for the TSs
4.3	Year 3	YES	The Metro has adhered to the Minimum Commitments for three Trading Services as verified by IVA	\$15,805,774	3	\$15,805,774 * (x% + y% + z%) for the TSs
4.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$21,215,569	3	Subject to meeting Minimum commitments: \$21,215,569 * x% * Performance Targets (%) + \$21,215,569 * y% * Performance Targets (%) + \$21,215,569 * z% * Performance Targets (%)
4.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$22,158,383	3	Subject to meeting Minimum commitments: \$22,158,383 * x% * Performance Targets (%) + \$22,158,383 * y% * Performance Targets (%) + \$22,158,383 * z% * Performance Targets (%)
4.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$24,039,616	3	Subject to meeting Minimum commitments: \$24,039,616 * x% * Performance Targets (%) + \$24,039,616 * y% * Performance Targets (%) + \$24,039,616 * z% * Performance Targets (%)

DLI 5: The City of Tshwane has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets

Description		Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service, a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.				
Data source/agency		Annual performance assessment by team of experts				
Verification entity		Expert panel, with government representatives and independent experts				
Procedure		As outlined in the POM				
DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula
						x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant, whereby $x+y+z=100\%$
5.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$2,862,415	2	\$2,862,415 * $(x\% + y\%)$ for the TSs
5.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$5,027,244	3	\$5,027,244 * $(x\% + y\% + z\%)$ for the TSs
5.3	Year 3	YES	The Metro has adhered to the Minimum Commitments for three Trading Services as verified by IVA	\$11,181,678	3	\$11,181,678 * $(x\% + y\% + z\%)$ for the TSs
5.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$15,020,066	3	Subject to meeting Minimum commitments: \$15,020,066 * $x\% \times \text{Performance Targets } (\%) +$ \$15,020,066 * $y\% \times \text{Performance Targets } (\%) +$ \$15,020,066 * $z\% \times \text{Performance Targets } (\%)$
5.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$15,711,764	3	Subject to meeting Minimum commitments: \$15,711,764 * $x\% \times \text{Performance Targets } (\%) +$ \$15,711,764 * $y\% \times \text{Performance Targets } (\%) +$ \$15,711,764 * $z\% \times \text{Performance Targets } (\%)$
5.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$16,987,256	3	Subject to meeting Minimum commitments: \$16,987,256 * $x\% \times \text{Performance Targets } (\%) +$

						\$16,987,256 * y% * Performance Targets (%) + \$16,987,256 * z% * Performance Targets (%)
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DLI 6: eThekweni has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets

Description		Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service, a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.				
Data source/agency		Annual performance assessment by team of experts				
Verification entity		Expert panel, with government representatives and independent experts				
Procedure		As outlined in the POM				
DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant, whereby $x+y+z=100\%$
6.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$3,428,612	2	\$3,428,612 * (x% + y%) for the TSs
6.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$6,017,616	3	\$6,017,616 * (x% + y% + z%) for the TSs
6.3	Year 3	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$13,367,625	3	\$13,367,625 * (x% + y% + z%) for the TSs
6.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$17,980,667	3	Subject to meeting Minimum commitments: \$17,980,667 * x% * Performance Targets (%) + \$17,980,667 * y% * Performance Targets (%) + \$17,980,667 * z% * Performance Targets (%)
6.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$18,773,669	3	Subject to meeting Minimum commitments: \$18,773,669 * x% * Performance Targets (%) +

						\$18,773,669 * y% * Performance Targets (%) + \$18,773,669 * z% * Performance Targets (%)
6.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$20,389,810	3	Subject to meeting Minimum commitments: \$20,389,810 * x% * Performance Targets (%) + \$20,389,810 * y% * Performance Targets (%) + \$20,389,810 * z% * Performance Targets (%)

DLI 7: Mangaung has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets						
Description		Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.				
Data source/agency		Annual performance assessment by team of experts				
Verification entity		Expert panel, with government representatives and independent experts				
Procedure		As outlined in the POM				
DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant, whereby x+y+z =100%
7.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$951,661	2	\$951,661 * (x% + y%) for the TSs
7.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$2,514,035	3	\$2,514,035 * (x% + y% + z%) for the TSs
7.3	Year 3	YES	The Metro has adhered to the Minimum Commitments for three Trading Services as verified by IVA	\$5,588,286	3	\$5,588,286 * (x% + y% + z%) for the TSs
7.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$7,493,578	3	Subject to meeting Minimum commitments: \$7,493,578

						$* x\% \text{ * Performance Targets (\%)} +$ $\$7,493,578$ $* y\% \text{ * Performance Targets (\%)} +$ $\$7,493,578$ $* z\% \text{ * Performance Targets (\%)}$
7.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$7,823,343	3	Subject to meeting Minimum commitments: $\$7,823,343$ $* x\% \text{ * Performance Targets (\%)} +$ $\$7,823,343$ $* y\% \text{ * Performance Targets (\%)} +$ $\$7,823,343$ $* z\% \text{ * Performance Targets (\%)}$
7.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$8,492,309	3	Subject to meeting Minimum commitments: $\$8,492,309$ $* x\% \text{ * Performance Targets (\%)} +$ $\$8,492,309$ $* y\% \text{ * Performance Targets (\%)} +$ $\$8,492,309$ $* z\% \text{ * Performance Targets (\%)}$

DLI 8: Nelson Mandela Bay has council approved Performance Improvement Action Plans (PIAPs) in place for (i) water and sanitation; (ii) energy and electricity; and (iii) solid waste management and is meeting its institutional, financial and operational performance targets

Description		Metros are invited to present Performance Improvement Action Plans, with clear targets to turn around the Trading Services provision for Water and Sanitation; for Energy and Electricity; and for Solid Waste. The targets relate to areas of (i) governance and institutional reform; (ii) financial performance and (iii) operational performance. For each Trading Service, a number of Minimum Commitments are set in regard to institutional reform to provide a solid basis for the turn-around strategy. The Metro is annually assessed, for compliance with the Minimum Commitments and for YR-4, YR-5 and YR-6 also against a set of performance indicators (23 for water and sanitation; 19 for energy and electricity; 21 for solid waste) resulting in a score on a scale of 0-100% for each Trading service. IBRD funding is set proportionally (1/3) to the government committed budget for the Metro Trading Services Grant for the period 25/26 – 2030/31.				
Data source/agency		Annual performance assessment by team of experts				
Verification entity		Expert panel, with government representatives and independent experts				
Procedure		As outlined in the POM				
DLR	Period	Scalability	Unit of measurement	Allocated amount (USD)	Maximum # of units on which disbursement can be based	Formula
						x, y and z are the shares for the three different TSs in the allocation of their MTS-Grant, whereby $x+y+z = 100\%$
8.1	Year 1	YES	Draft PIAPs submitted to NT with written commitment to achieving the MCs for two Trading Services as verified by IVA	\$0	2	$\$0 * (x\% + y\%)$ for the TSs

8.2	Year 2	YES	Full Council-approved PIAPs submitted to NT and Metro has achieved the MCs for two Trading Services as verified by IVA	\$3,001,315	3	\$3,001,315 * (x% + y% + z%) for the TSs
8.3	Year 3	YES	The Metro has adhered to the Minimum Commitments for three Trading Services as verified by IVA	\$6,678,748	3	\$6,678,748 * (x% + y% + z%) for the TSs
8.4.1	Year 4	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$8,977,707	3	Subject to meeting Minimum commitments: \$8,977,707 * x% * Performance Targets (%) + \$8,977,707 * y% * Performance Targets (%) + \$8,977,707 * z% * Performance Targets (%)
8.4.2	Year 5	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$9,354,752	3	Subject to meeting Minimum commitments: \$9,354,752 * x% * Performance Targets (%) + \$9,354,752 * y% * Performance Targets (%) + \$9,354,752 * z% * Performance Targets (%)
8.4.3	Year 6	YES	Performance Score of achieving targets in PIAPs for three Trading Services as verified by IVA	\$10,173,745	3	Subject to meeting Minimum commitments: \$10,173,745 * x% * Performance Targets (%) + \$10,173,745 * y% * Performance Targets (%) + \$10,173,745 * z% * Performance Targets (%)

Table A2-4. PIAP Indicators Definition Sheets⁴⁰

Performance areas	Ref	Minimum commitments & performance indicators	YR-1	YR 2	YR 3-6	Weights	
Accountability Performance Minimum commitments	M1	Single Point of Management Accountability (SPoMA) Service Compact	binary	binary	binary		
	M2	SPoMA Appointment	binary	binary	binary		
	M3	SPoMA Organisational structure	binary	binary	binary		
	M4	SPoMA Delegations	binary	binary	binary		
	M5	Financial Model and Business & Investment Plan	binary	binary	binary		
	M6	Budget Support of Business & Investment Plan	binary	binary	binary		
	M7	Financial Transparency – separate AFS	binary	binary	binary		
	M8	Support for management of organizational change	binary	binary	binary		
Accountability Performance Performance Indicators	A1	Customer surveys	n.a.	binary	scalable	2	10
	A2	Financial Accounting – mSCOA compliance	n.a.	binary	scalable	2	
	A3	Public Procurement Transparency	n.a.	binary	scalable	2	
	A4	Capital Budget Execution	n.a.	binary	scalable	2	
	A5	Core Technical & Management Capacity	n.a.	binary	scalable	2	
Financial Performance Performance Indicators	F1	Financial Viability OCCR	n.a.	binary	scalable	5	30
	F2	Cash Collection rate	n.a.	binary	scalable	5	
	F3	Operational Cash Flow	n.a.	binary	scalable	5	
	F4	Customer Debt management – debtors days	n.a.	binary	scalable	5	
	F5	Infrastructure CapEx	n.a.	binary	scalable	5	
	F6	Self-Financing ratio	n.a.	binary	scalable	5	
Operational Performance Performance Indicators Water & Sanitation	W1	Water Security – input volume % raw water allocation	n.a.	binary	scalable	5	60
	W2	Drinking Water Systems Blue Drop	n.a.	binary	scalable	5	
	W3	Waste Water Treatment Systems Green Drop	n.a.	binary	scalable	5	
	W4	Wastewater % of samples compliant with license	n.a.	binary	scalable	5	
	W5	Water Network – mains failures frequency / 100 km	n.a.	binary	scalable	5	
	W6	Sewer Network – blockages frequency / 100 km	n.a.	binary	scalable	5	
	W7	Physical Water Loss – Infrastructure Leakage Index	n.a.	binary	scalable	5	
	W8	Water Service Complaints Response % in 48 hours	n.a.	binary	scalable	5	
	W9	Sewer Service Complaints Response % in 48 hours	n.a.	binary	scalable	5	
	W10	Non-Revenue Water (NRW)	n.a.	binary	scalable	10	
	W11	Metering Performance	n.a.	binary	scalable	5	
Operational Performance Performance Indicators Electricity & Energy	E1	Bulk Commercial Metering Performance	n.a.	binary	scalable	5	60
	E2	Vending Efficiency % of metering operational	n.a.	binary	scalable	5	
	E3	Automated Meter Reading Coverage	n.a.	binary	scalable	5	
	E4	Repairs Efficiency	n.a.	binary	scalable	5	
	E5	Electricity losses as % of electricity purchased	n.a.	binary	scalable	30	
	E6	Network effectiveness ASIFI	n.a.	binary	scalable	5	
	E7	Network effectiveness ASIDI	n.a.	binary	scalable	5	
Operational Performance Performance Indicators Solid Waste Management	S1	Service collection coverage	n.a.	binary	scalable	7	60
	S2	Service reliability	n.a.	binary	scalable	7	
	S3	Asset Maintenance & Operations	n.a.	binary	scalable	12	
	S4	Waste minimization	n.a.	binary	scalable	7	
	S5	Environmental compliance	n.a.	binary	scalable	8	
	S6	Cost Efficiency	n.a.	binary	scalable	3	
	S7	Climate change mitigation	n.a.	binary	scalable	5	
	S8	Landfill Airspace Monitoring	n.a.	binary	scalable	6	
	S9	Access Control/Security	n.a.	binary	scalable	5	

⁴⁰ NT's A3: PIAP Guidance Notes and Resource Documents: <https://mfma.treasury.gov.za/Guidelines/Documents/Trading%20Services>

ACCOUNTABILITY PERFORMANCE MINIMUM COMMITMENTS

Indicator No & Name	M1 SPoMA Service Compact
Performance Area	Service Compact.
Cross Reference	M2, M3, M4.
Definition	The Service Compact between Service Authority (Metro) and the trading service⁴¹ • Specifies Internal Business Unit / Municipal Owned Entity decision • Provides for the transfer of Metro obligations and responsibilities in terms of law (both municipal and sector legislation) to its Service Provider as agent to execute these services on its behalf and within the scope of applicable municipal legislation. The Metro discharges its responsibilities in terms of its Service Compact including that of the (previously) shared services⁴². • Defines and structures the service role that the new utility business must execute on behalf of its parent body (the metro).
Purpose	The new utility business becomes responsible for full financial and managerial operation of the trading service and shall be accountable to the accounting officer of the metro. The compact amongst others will define reporting and other obligations and responsibilities between the parties.
Key Components	The service compact defines the execution requirements in both municipal and applicable sector legislation from service authority to service provider and includes the service provider's role in the IDP, license requirements, specific service delivery requirements, free basic services, tariff setting etc. It sets the division of responsibilities across value chains (including decision-making and operational performance), investments, performance metrics, consequence management, information sharing, oversight meetings etc.
Calculation Formula	Binary. (Council commitment to service compact, approval, implementation and retention of service compact).
Frequency	Once as per Target for commitment, approval and appointment and also, retention of service compact.
Performance Interpretation	Benchmark: Service Compacts reflects and re-enforces SPoMA. Y0: Council Commitment to service compact Y1: Council approval of service compact Y2 – Y6: Implementation and retention of service compact.
Definition of Success	Service compact committed to, approved by council and implemented as per targets. Signed into operation by City Manager. Retention of compact.
Benefits	Clearly defined division of responsibilities across value chains for service authority to service provider with clear performance and accounting metrics. Transparent expectation of service delivery and sustainability targets. Clear accountability for sustainable service delivery.

Indicator No & Name	M2 SPoMA Appointment
Performance Area	TS Leadership.

⁴¹ Regarding Municipal Services Act, Municipal Finance Management Act, & other mandates transferred; and services and standards required.

⁴² Shared services refer to financial management, customer services, supply chain management, human resources, fleet, IT systems & support, and other shared services as per indicator M4.

Indicator No & Name	M2 SPoMA Appointment
Cross Reference	M1, M3, M4 (see Guidance Notes 1 and 3), M5.
Definition	The appointment of a chief executive of the trading service with an appropriate job description, reflecting all delegated powers and responsibilities, and an appropriate performance contract.
Purpose	To ensure properly authorized executive leadership of the trading service.
Key Components	Acknowledgement of enhanced and additional functions, competencies, requirements, responsibilities and obligations of the executive officer of the new business unit that will have all elements of the classical utility business under their jurisdiction, as applicable for the particular TS. • The TS leadership position will oversee all the elements of the utility value chain, expanding from the current (mostly infrastructure related) responsibilities. • Since this job description (incorporating commercial as well as technical and managerial skills) in almost all cases differs from what is currently applicable, filling the new SPoMA post requires a formal recruitment process. • Such process should be (1) open and transparent; (2) designed and executed to ensure that a person with the necessary commercial, technical and managerial experience and stature is appointed; (3) appropriately timed to align with other accountability minimum access conditions. • The appointee's performance contract should focus on achievement of targets regarding the trading services reform as expressed in A3: PIAP (M7) as well as other statutory targets such as SDBIP.
Calculation Formula	Binary.
Performance Interpretation	BENCHMARK: Commitment by metro, appointment of new executive officer of utility business, per annual targets. Y0: Commitment to appropriate appointment process as outlined Y2: New appointee in place Y3–Y6: Appointee supported to remain in place.
Definition of Success	Scoping and redefinition of ex HOD/ Executive officer Job description and role for new business unit, commitment thereto, appointment and retention of executive role for business unit as SPoMA.
Benefits	Ensure definition and recruitment of right competencies and skills to run TS (under Model 2) as a full trading business (or under Model 3 as Municipal Owned Entity) in a sustainable manner.

Indicator No & Name	M3 SPoMA Organizational Structure
Performance Area	Organizational Structure.
Indicator Cross Reference	M1, M2, M4 (see Guidance Notes 1 and 3).
Definition	See Guidance Note 3. An appropriate organizational structure, described in an organizational chart, is established and maintained to support the delegations and effective business functioning of the Trading Service as SPoMA.

Indicator No & Name	M3 SPoMA Organizational Structure
Performance Area	Organizational Structure.
Purpose	To create an organizational structure for a capable, professional and effective utility along best practices that has all the required functions of the classical value chain in one business for service delivery enhancement.
Key Components	A single organizational structure with all elements of <i>the infrastructure and commercial value chain</i> , with the necessary <i>supporting business processes and systems</i> under an appropriate capable and professional management and governance framework. It shall have measurements of performance KPI's of the targeted conditions of accountability, financial and operational performance as part of the structural arrangement.
Calculation Formula	Binary, but scalable for implementation. Appropriate organizational structure along the classical utility value chain and 7-box model.
Performance Interpretation	Benchmark = organizational structure which support the delegations and effective functioning of the trading service as SPoMA Y0: Council Commitment to revising and approving org structure to support SPoMA delegations Y1: Council approves org structure as required Y2-Y6: Implementation and retention of org structure as required.
Definition of Success	SPoMA is supported by effective org structure and reporting lines along the classical value chain of the particular utility, as required. Approved by council and signed off by City Manager.
Benefits	An effective organizational structure along the full value chain requires a coherent, non-fragmented delivery structure, SPoMA accountability and will ensure an appropriate operational utility management structure for sustainability and service delivery.

Indicator No & Name	M4 SPoMA Delegations
Performance Area	Delegations.
Indicator Reference Cross	M1, M2, M3 (see Guidance Notes 1 and 3).
Definition	Business Unit (Model 2): Delegations means the delegations/ passing of the authority for the financial management, operational and management control of all shared services for the effective operation of the Trading Services (TS) as a Single Point of Accountability (SPoMA) Business. Municipal Entity (Model 3 ⁴³): Same but SPoMA accounts to Board.
Purpose	To ensure that the responsibilities and functions pertaining to/or supporting operational, financial management and overall management of the Trading Service are fully accounted for within that Trading Service SPoMA. This requires delegation by the City Manager of all the shared service responsibilities to the SPoMA to operate the Trading Service business enabling the SPoMA to be responsible for the effective execution of these services in support of the TS as a single business unit.
Key Components	Financial and operational management of HR, SCM, revenue, fleet management, IT, customer service, real estate, security and operational and safety requirements ⁴⁴ .

⁴³ Model 3 (MoE): ensure appropriate Water Service Provider (WSP) responsibilities and/ or Electricity Service as applicable

⁴⁴ Including appropriate accountabilities iro Occupational Health and Safety Act and other RSA social protection & environmental legislation, and licenses

Indicator No & Name	M4 SPoMA Delegations
Performance Area	Delegations.
	The SPoMA may determine how to discharge its responsibilities in terms of its Service Compact (<i>Indicator M4</i>) regarding the shared services.
Calculation Formula	Binary. (All shared services as applicable captured in the formal delegation document ⁴⁵ of the metro (as required in MFMA C80) and approved by council. Signed delegation from City Manager to HOD/ Executive officer of TS in place).
Performance Interpretation	Benchmark: Formal delegation commitment by Council, delegations in place in target year, retention in place over remainder of period. Y0: Council commitment for delegations for full SPoMA Y1: Delegations in place Y2-Y6: Delegations remain in place.
Definition of Success	• Formal delegations part of metro delegations and delegation policy • SPoMA has full accountability for service performance with all the related shared services delegated under its control. • Service Delivery Agreements (SDA) between Service Provider and Trading services for all services in place, self-executed or contracted out as applicable as per target year signed by both parties. • Full accountability with HOD/ Executive officer of TS.
Benefits	All delegation and shared services responsibilities rest in the new business unit and can be accounted for and managed as a SPoMA ensuring effective service delivery of complete business for sustainability.

Indicator No & Name	M5 Financial Model and Business & Investment Plan
Performance Area	Business and Investment Planning.
Indicator Cross Reference	M6.
Definition	Submission of annual Trading Services business and investment plan, which has been supported and prioritized by means of a utility financial model to ensure business financial sustainability, turnaround and improvement.
Purpose	The annual business and investment plans need to be supported by a financial model to ensure a robust PIAP (A3) that supports sustainability and business turnaround. The model will be used to inform strategic financial and business decisions for business turnaround/ performance improvement; and to target and focus investments for turnaround/ performance improvement.
Key Components	• Multi-year utility financial model reflecting the utility characteristics and requirements, to underpin utility reform priorities and strategy development • Annual business plan and budget incorporating a long-term strategic perspective, and medium-term capital and operational planning. • Data development program to ensure that trading services management has access to all the financial and operational data required for effective utility management

⁴⁵ NB see indicator A2: Delegations, segregation of duties & organisational structure must be embedded in the financial system configuration

Indicator No & Name	M5 Financial Model and Business & Investment Plan
	initially to inform A3-PIAP v2 for 2026/27 onwards, and then to track performance and build on to the model over remainder of period as the trading service improves.
Calculation Formula	Binary. Comprehensive business plan supported by financial model outcomes and indicators.
Performance Interpretation	Benchmark: Annual trading service business plan as defined Y0: Council commitment to production and approval of a business and investment plan for the utility by end of Y1 Y1: Council approves turnaround and reform business plan and budget Y3 – Y6: annual submission & approval of revised business plans NB: The business plan must be funded and reflected in Council budgets per indicator M5.
Definition of Success	A full annually updated business and investment plan based on a financial model for each trading service with a multi-year focus.
Benefits	The financial model will underpin the investment plans to ensure targeted and robust business and investment strategies to result in business performance improvement. It provides transparency and focused investment strategies across all areas of the SPoMA business (not for infrastructure alone). The multi-year focus of the model will ensure correct tracking and targeting of investment of whether utility performance improvement is still on track and will be used in mid-term review A3: PIAP.

Indicator No & Name	M6 Budget support of Trading Service business and investment plan
Performance Area	Budget Support.
Indicator Cross Reference	M5.
Definition	The metro budget supports the Financial Model and Business & Investment Plan (M7).
Purpose	The metro budget must be structured to provide the required funding for its utility businesses (different trading services). This includes own metro funding, borrowings/loans, equitable share allocations, funding from operations, the allocation under DORA, other grants and other allocations the metro received from NT and/or other bodies annually or from time to time. Metro budget allocations need to align with Financial Model and Business & Investment Plan to ensure financial sustainability in service delivery.
Key Components	Supportive framework of policy commitments by metro for MTS improvement as expressed in increasing CapEx budgets, appropriate transition and change management cost allocations; re-investment of TS operational surpluses, co-funding, etc.
Calculation Formula	Binary.
Performance Interpretation	BENCHMARK: Planned trading services opex and CapEx for each FY, as reflected in A3-PIAP costing and funding sheets, are evident and reflected in corresponding metro budgets for that financial year. Y0: Council commitment to supporting the budgetary and funding implications of the business plan and budget Y1: Council budget for Y2 reflects and is consistent with M7.

Indicator No & Name	M6 Budget support of Trading Service business and investment plan
	Y2 – Y6: Council budgets and AFS continuously reflect and are consistent with M7.
Definition of Success	Business plan developed under M7 should be substantially evident in the metro budget from the Y2 onwards.
Benefits	Investment will be as per the Business and Investment plan that will be based on a financial model (M7) for utility sustainability.

Indicator No & Name	M7 Financial Transparency – separate AFS
Performance Area	Financial Transparency.
Indicator Cross Reference	A2.
Definition	Model 2: Full separate MTS AFS, published within aggregated metro AFS, per specimen template (MFMA circular July 2024) (the easiest way to comply with M6 is to ensure A2 is achieved) Model 3: Full separate published trading services financial statements, also consolidated into Metro AFS Models 2 and 3: including ‘flows and balances statement’ per below.
Purpose	Full financial transparency is essential for trading services reform • To track financial performance of the utility service itself (without being hidden within overall municipal performance) • To monitor trading services recovery improvement and ongoing sustainability • To ensure the TS is performing according to its business and investment plan • To generate key performance indicators for purposes of disbursement, C88, and license/ regulatory reporting.
Key Components	• Full trading service AFS each year (statements of financial performance, financial position, and cash flow with notes and tables as regulated) • Corresponding annual report for each trading services • Statement of Metro Trading Services Flows and Balances, to comprise at least ○ Grant shares: Equitable share, USDG, incentive grants, ISDG, HSDG, other ○ Cost of shared and internal services (shared costs & activity-based costing) such as revenue, treasury, facilities management, HR, city manager & Council, etc. ○ Contributions & subsidies: contributions by trading service (including any dividends) to metro rates account, subsidies paid by metro to trading services ○ Cash balances: Trading services cash balances held by metro, amounts invoiced on behalf of trading service, proceeds not yet paid over ○ Other as appropriate NB: Assessment of this indicator will necessarily be based on unaudited financial information as submitted to the AG and simultaneously to the assessor.
Calculation Formula	Binary
Performance Interpretation	Benchmark: Preparation of full Trading Services AFS per year per specimen formats issued by NT, accompanied by an annual report

Indicator No & Name	M7 Financial Transparency – separate AFS
	Y0: Council Commitment to preparation of Trading Services AFS separately Y1: Separate TS AFS and annual report produced and published as regulated Y2-Y6: separate TS AFS and AR produced as regulated.
Definition of Success	Full reporting as defined.
Benefits	Provide financial transparency of TS- utility business performance as a ringfenced business.

Indicator No & Name	M8 Support for management of organizational change and increased delivery
Performance Area	Change and Delivery Management Capacity.
Indicator Cross Reference	M1, M2, M3, M4.
Definition	Additional capacity in place that responds to requirements outlined in Annexures A1: Institutional Road Map and A2 (Business & Investment Plans) - Capacity to support the process of managing organizational change including staff engagements, communications, detailed design, capacity enhancement (filling critical vacancies and beyond), key documentation, service compact and other activities, to manage and facilitate planned changes - Capacity to manage the increased TS CapEx envisaged, including engineering project and contract management capacity.
Purpose	- To create and establish the necessary capacity to support migration from a new organizational structure under the SPoMA. - Significant additional investment will be undertaken, and the utility will need the additional capacity to successfully execute this additional investment.
Key Components	Additional management capacity whether contracted in or recruited, change management, communications and filling of critical vacancies for service delivery.
Calculation Formula	Binary.
Performance Interpretation	Benchmark: Additional capacity that responds to requirements outlined in Annexures A1 (Institutional Road Map) and A2 (Business & Investment Plans), as further developed, is in place: Y0: Council Commitment to put additional capacity in place that responds to requirements outlined in A1 and A2 Y1: Effective change management & project implementation support, with approved change management plan in place Y2 – Y6: implementation and continued refinement of the plan NB1: The costs and funding of the additional change management and project management capacity must be incorporated into the metro budget per M5. NB2: The additional change management and project management capacity is required to implement the business plan (M7), yet must be put in place parallel to that business plan being developed.

Indicator No & Name	M8 Support for management of organizational change and increased delivery
Definition of Success	• Additional capacity in place during Y1, to help plan and start preparing to implement in Y2 • Additional capacity regarding, as required in the particular case: (a) planning, driving, leading institutional change; (b) business turnaround strategy; (c) communication and stakeholder engagement; (d) negotiating and formalizing new value chain contractual arrangements (e) recruiting, contracting, and managing additional project management capacity, as required.
Benefits	A well thought through and robust change management plan is critical to the transformation of the trading service. Capacity and change support is necessary as the organization will be in flux, new functions will be added and shared services will be incorporated to create the SPoMA business.

ACCOUNTABILITY PERFORMANCE INDICATORS

Indicator No & Name	A1 Customer Surveys
Performance Area	Customer Surveys.
Indicator Cross Reference	-
Definition	Customer service satisfaction surveys are undertaken annually and reflect progress towards the benchmark.
Purpose	Customer surveys provide a measurable feedback mechanism or data point that can be used to assess the effectiveness of customer satisfaction, identify trends in customer feedback, and derive actionable insights. All metros already conduct annual surveys of customer satisfaction, and generate headline results per trading service Using the historical results of these surveys, metro trading services should plan and execute actions to improve these results, as part of the business and investment plan (M7). 1. Surveys assist trading service businesses to monitor and evaluate customer behavior, sentiment, and experience. 2. They provide the business units with quantifiable insights into customer experiences and can help track performance over time.
Key Components	a) Actual customer satisfaction result as % of planned customer satisfaction result for the year
Calculation Formula	Actual improvement of trading service customer satisfaction result, as % of planned trading services customer satisfaction result, per year.
Performance Interpretation	Benchmark = 70% customer satisfaction result (per trading service) Y0: Y1: Customer satisfaction improvement plan incorporated in business plan; substantive targets set for Years 2 – 6 Y2–Y6: Improvement in headline result: progress against plan.
Definition of Success	Feedback from surveys used to guide key business decisions and improved customer interface to eventually improve customer satisfaction thereby improving customer sentiments towards service payments.
Benefits	Surveys provide independent opinion to assist in identifying areas of improvement, highlighting strengths, and guiding future decision-making processes.

Indicator No & Name	A2 Financial Accounting - mSCOA compliance
Performance Area	Financial Accounting.
Indicator Cross Reference	M5.
Definition	The mSCOA compliance technical indicator evaluates a Trading Services Business Unit or Entity's alignment with the prescribed standards for financial accounting, reporting, and internal controls (minimum business processes and system requirements) as articulated in Annexure B of MFMA Circular No. 80.
Purpose	mSCOA compliance ensures that the business unit's financial systems, processes, and reporting mechanisms meet the requirements outlined in the Minimum Business Processes and Systems Requirements (MBPSR).

Indicator No & Name	A2 Financial Accounting - mSCOA compliance
	Such compliance re-enforces the Metro Trading Service Reform program by offering the easiest and only feasible way for metros to achieve financial transparency requirements (M5).
Key Components	Major requirements of MFMA Circular No. 80 include that • Delegations, segregation of duties & org structure should be embedded in the configuration of the integrated system solution • AFS Module / sub-system to should seamlessly integrate to core integrated system solution used by the Metro (no manual integration) • Generation of audited data strings (PAUD, AUDA, RAUD) from integrated system solution.
Calculation Formula	City Manager (Accounting Officer) certificate of <i>mSCOA</i> compliance, confirmed / counter-signed by NT <i>mSCOA</i> team.
Performance Interpretation	Benchmark: full compliance with <i>mSCOA</i> requirements Y0: Baseline position Y1: CM certificate of <i>mSCOA</i> compliance, countersigned by <i>mSCOA</i> team Y2–Y6: CM certificate of <i>mSCOA</i> compliance, countersigned by <i>mSCOA</i> team.
Definition of Success	Improved financial transparency, accountability, and management, contributing to more efficient and effective trading service performance.
Benefits	1. Transparency leading to trust between the trading service business and the parent municipality including the public. 2. Confidence on good governance and evidential integrity of financial governance.

Indicator No & Name	A3 Public Procurement Transparency
Performance Area	Public Procurement Transparency.
Indicator Cross Reference	-
Definition	This measures the degree to which the Trading Service Business Unit adheres to best practices in ensuring transparency in its procurement process. This includes openness in tendering, decision-making, and reporting, aiming to reduce corruption, promote competition, and ensure the effective use of public resources.
Purpose	To assess the transparency of Trading Service procurement processes, ensuring that they are conducted with integrity, fairness, and openness. Procurement transparency depends upon clear and accessible tender documentation, public access to information, bid evaluation transparency, conflict of interest management, more use of e-procurement systems, audit and oversight Mechanisms. whistleblower protections, compliance with Legal and Regulatory Frameworks, and stakeholder Engagement and Feedback.
Key Components	At a minimum, this indicator requires compliance with statutory regulations regarding procurement transparency: that all TS tender opportunities are advertised, and bidders' lists, tender awards and contracts signed are all published according to regulations. Trading Services should however take steps to improve their procurement transparency beyond the minimum. Such steps should include use of a reliable e-procurement portal as regulated, and comprehensive disclosure of

Indicator No & Name	A3 Public Procurement Transparency
	all procurement information, presented in an accessible manner, on a well-maintained, up-to-date website.
Calculation Formula	Plan implementation.
Performance Interpretation	Benchmark: full transparency Y0: Y1: Baseline to be set with trading service business plans and targets for improvement in trading services procurement transparency Y2 – Y6: implementation of the plan.
Definition of Success	Improved financial transparency, accountability, and management, contributing to more efficient and effective trading service performance.
Benefits	Transparency leading to trust between the trading service business and the parent municipality including the public. Confidence on good governance and evidential integrity of financial governance.

Indicator No & Name	A4 Capital Budget Execution
Performance Area	Project implementation effectiveness.
Indicator Cross Reference	-
Definition	This measures how effectively an organization or public sector entity manages and executes investment projects to achieve its objectives.
Purpose	Effective performance of trading services depends on effectively executed procurement and project implementation processes.
Key Components	Capital Budget Execution is measured by the percentage of the capital budget agreed in the budget each year, that is spent.
Calculation Formula	Final capital spending as a % of budget.
Frequency	Annually and bi-annually at MYBR.
Performance Interpretation	Benchmark = 90% Y0: Y1: Plan with targets for increasing tech and management capacity Y2 – Y6: implementation of the plan.
Definition of Success	% of capital expenditure against original council-approved budget meets the planned performance improvement each year.
Benefits	Achievement of targets indicates effective procurement processes and results in actual capital spending aligning more closely with planned and budgeted capital expenditure.

Indicator No & Name	A5 Core technical and management capacity
Performance Area	Technical & Management Capacity.
Indicator Cross Reference	M5, M7.
Definition	Progress against planned technical and managerial capacity increases.
Purpose	While M8 is focused on change management and project management capacity for the short and medium-term, this indicator is concerned with the

Indicator No & Name	A5 Core technical and management capacity
Performance Area	Technical & Management Capacity.
	strengthening of permanent technical and managerial capacity. That capacity must include an ability to effectively plan, manage, and operate the utility, as well as execute projects, ensuring that both technical expertise and management skills are sufficient to meet strategic goals. The appointment or development of staff through professional registration and representation aligned with acceptable norms and gender equity policies also contributes to professionalization. Metros already have a strong sense of the capacity shortages they face. The indicator is therefore focused upon the inclusion with the trading services business plan (M5) a component which to increase permanent professional capacity, including contract management capacity, according to specified standard benchmarks in the water and sanitation, electricity and energy, and other relevant sectors (such as Professional Engineers, Registered Technologists, Registered Technicians, etc. per 100 k population in the applicable service area) appointed in terms of gender equity policy.
Key Components	No of technical management and contract management staff per 100 k population ⁴⁶ in the service area; appointed in terms of gender policy, & plan to improve from starting point; progress against plan.
Calculation Formula	No of technical, managerial and contract management posts per benchmark at start Plan with targets for annual improvement of critical positions & skills aligned with the organizational structure (see M5) % achievement of target.
Performance Interpretation	Benchmark = to be set as part of business plan (M7) Y0: Y1: Plan with targets for increasing tech and management capacity Y2 – Y6: implementation of the plan.
Definition of Success	Enhanced operational effectiveness and overall performance.
Benefits	Provides a holistic view of an organization's ability to manage both its technical and managerial functions effectively, enabling informed decision-making, efficient resource management, and the successful execution of projects.

⁴⁶ For example, number of technical, managerial and contract management posts per benchmark at start (compared to PrEng and Pr Technologist at 1:100,000 population and 4 : 100,000 PrTech for Water & Sanitation)

FINANCIAL PERFORMANCE INDICATORS

Indicator No & Name	F1 Financial Viability OCCR
Performance Area	Financial viability.
Indicator Cross Reference	For consideration: new trading services-specific indicator suggested for inclusion in MFMA S71 reports going forward.
Definition	The basic definition is “operating revenue / operating expenses”. Operating revenue excludes any capital items (capital grants) and interest income. Operating expenditure excludes any capital related items (interest and depreciation). The basic formula is adjusted to take into account cost of sales (bulk purchases). Bulk purchases is subtracted from operating revenue to give a gross operating profit. And operating costs are similarly adjusted to exclude the bulk purchases.
Purpose	Measures the financial viability of the trading service. In particular, it shows the extent to which revenue covers the operating costs of the distribution business, and hence the ability of the service to generate revenues to invest in the distribution business, as a share of the costs needed to operate the distribution business.
Key Components	Assessment Criteria: Against planned performance improvement. Data Sources: Income statement for the trading service. Operational Adjustments: none.
Calculation Formula	The formula is: $\text{Gross Profit} / \text{Operating expenditure (excluding bulk purchases)}$ where <u>Gross Profit</u> = Operating revenue (including operating grants, excluding capital grants, excluding interest) less bulk purchases <u>Operating expenditure (excluding bulk purchases)</u> = operating expenditure excluding depreciation and interest, and excluding bulk purchases NB: For the water service, the operating expense should be adjusted as follows: <u>subtract</u> inventory consumed (instead of bulk purchases), and <u>add back</u> chemicals purchased. This adjustment is necessitated by the accounting rules related to inventory consumed.
Performance Interpretation	Benchmark = 1.5 to 2 (as determined in financial model and business plan) Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieving performance target (and on track along planned path).
Benefits	Resource Management: Tracks ability of the service to generate resources to invest in the trading service business. Risk Mitigation: Guides corrective action to enhance financial viability of the business. Performance Benchmarking: Enables comparisons between municipalities.

Indicator No & Name	F1 Financial Viability OCCR
	Public Confidence: gives confidence that the business is financially viable and sustainable.

Indicator No & Name	F2 Cash Collection Rate
Performance Area	Cash collection.
Indicator Cross Reference	For consideration: new trading services-specific indicator suggested for inclusion in MFMA S71 reports going forward.
Definition	The efficiency of cash collection measured as cash collected from customers / total invoiced to customers (over the same relevant 12 month period).
Purpose	Measure effectiveness and efficiency of the cash collection process (translation of invoices amounts into cash available to the service).
Key Components	Assessment Criteria: Against planned performance improvement. Data Sources: Income statement and cash flow statement for the trading service. (These need to include the items necessary to calculate cash collection rate directly from the income statement and cash flow statement) Operational Adjustments: none.
Calculation Formula	Cash receipts from customers (12 months) / amount invoiced to customer (corresponding period).
Performance Interpretation	Benchmarks: 95% for water and 98% for electricity. Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieving performance benchmark (and on track along planned path).
Benefits	Resource Management: Tracks efficiency to collect invoiced revenue. Risk Mitigation: Guides corrective action to improve cash collections. Performance Benchmarking: Enables comparisons between municipalities. Public Confidence and fairness: gives confidence that the business is efficient at collecting revenue from all invoiced customers, and hence fair to all customers.

Indicator No & Name	F3 Operational Cash Flow
Performance Area	Operational cash flow.
Indicator Cross Reference	For consideration: new trading services-specific indicator suggested for inclusion in MFMA S71 reports going forward.
Definition	The cash available from operations after all operating costs have been met.
Purpose	Measures the availability of cash to invest in the business.
Key Components	Assessment Criteria: Against planned performance improvement. Data Sources: Trading service cash flow statement. Operational Adjustments: none.
Calculation Formula	Cash flow from operations (as shown on cash flow statement) which should be equivalent to the following: Cash receipts (related to operating revenues, and excluding capital items) less operating expenses (as depicted on the income statement excluding provisions for bad debt and capital related items).

Indicator No & Name	F3 Operational Cash Flow
Performance Interpretation	Performance target: as per financial model and business plan showing a financial turnaround and substantial improvement in cash from operations. Benchmark = Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieving performance target (and on track along planned path).
Benefits	Resource Management: Tracks ability to generate cash resources to invest in the business. Risk Mitigation: Guides corrective action to cash generation from operations. Performance Benchmarking: Tracks improvement in ability to invest in the business. Public Confidence: gives confidence that the business is able to invest in the business to sustain services.

Indicator No & Name	F4 Customer Debt Management – debtors-days
Performance Area	Customer debt management.
Indicator Cross Reference	For consideration: new trading services-specific indicator suggested for inclusion in MFMA S71 reports going forward.
Definition	Customer debt outstanding expressed as days of revenue.
Purpose	Measures customer debt management.
Key Components	Assessment Criteria: Against planned performance improvement. Data Sources: Trading service income statement and balance sheet. Operational Adjustments: none.
Calculation Formula	Customer accounts receivable (net of provisions for bad debt) / Invoiced customer revenues (12 months) x 365.
Performance Interpretation	Benchmark <60 days Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieving performance target (and on track along planned path).
Benefits	Resource Management: Tracks ability to manage customer debt and that adequate provisions have been made for customer debt. Risk Mitigation: Guides corrective action to manage customer debt. Performance Benchmarking: allows comparison across services and municipality. Public Confidence and fairness: gives confidence that customer debt is well managed and customers are treated fairly.

Indicator No & Name	F5 Infrastructure CapEx on PPE
Performance Area	Level of expenditure on infrastructure.
Indicator Cross Reference	Reported in MFMA Section 71 reports (with clarified definition), based on, and matching what is reported in the financial statements for the trading service.

Indicator No & Name	F5 Infrastructure CapEx on PPE
Definition	Actual capital expenditure incurred during the financial year on property, plant and equipment (PPE) for that trading service. (Includes replacement, refurbishment, upgrades and expansion).
Purpose	Ongoing and sufficient investment in property, plant and equipment (PPE) is essential to provide a reliable and sustainable service and to meet service needs. The expectation is that actual capital investments in PPE each year need to increase by a factor of 2 to 3 times in real terms over a period of 3 to 5 years. A suitable investment path will be determined for each metro based on a realistic investment plan anchored in a financial model.
Key Components	Actual cash expenditure on property, plant and equipment (PPE) during the financial year.
Calculation Formula	As reported in the cash flow statement (actual cash invested in property, plant and equipment) during the financial year, supported the statement of changes in PPE reported in the notes to the financial statement.
Performance Interpretation	Benchmark = 200% subject to business & investment planning Y0: n/a Y1: Plan to approach / reach benchmark Y2–Y6: implementation.
Definition of Success	Annual investments meet the planned investment pathway.
Benefits	Improvements in service reliability and performance, and expansion to meet service needs.

Indicator No & Name	F6 Self-financing ratio
Performance Area	Ability to finance CapEx from own operations.
Indicator Cross Reference	Recommended to be reported in MFMA Section 71 reports, based on, and matching what is reported in the financial statements for the trading service.
Definition	Cash flow from operations (Indicator F3) divided by actual capital expenditure incurred during the financial year on property, plant and equipment (PPE). (Indicator F5).
Purpose	The expectation is that the ability of the service to finance a share of its capital expenditure from its internal resources will increase over time as a result of the reforms. This ratio reflects the ability of the trading service to do that. A suitable performance pathway will be determined for each metro based on a realistic investment plan anchored in a financial model modelling both CapEx (indicator F5) and cash flow from operations (Indicator F3).
Key Components	• Cash flow from operations • Actual cash expenditure on property, plant and equipment (PPE) during the financial year.
Calculation Formula	Ratio = Indicator F3 / Indicator F5.
Performance Interpretation	Benchmark = 100% subject to business & investment planning Y0: n/a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.

Indicator No & Name	F6 Self-financing ratio
Definition of Success	An increase ability to finance CapEx from internal resources (as per the defined performance pathway).
Benefits	Improvements in the financial sustainability of the service, assuring ongoing reliable service provision.

OPERATIONAL PERFORMANCE INDICATORS

WATER & SANITATION

Indicator No & Name	W1 Water Security input volume % of raw water allocation
Performance area	Water Security.
Indicator Cross Reference	New indicator to be considered for inclusion in future amendments to National Treasury C88 .
Definition	The Water Security indicator measures the adequacy of a water utility's supply system in meeting demand while adhering to regulatory bulk raw water allocation limits and ecosystems requirements. It is defined as the ratio of the bulk water system input volume (all sources) to the permitted raw water allocation volume. The planned water use allocations are determined through Department of Water and Sanitation (DWS) facilitated water reconciliation strategies, which reconcile all available water resources (surface, ground, desalinated and reused water) with current use requirements. These allocations are formalized in Water Use Licenses (WUL) or Service Level Agreements (SLA) and apply to water service providers, such as municipalities and Water Boards.
Purpose	Supports sustainable water use, effective water conservation and demand management, regulatory compliance, and sustainable access to resources by monitoring adherence to allocated water use limits.
Key Components	Assessment Criteria: Bulk system input volumes, allocated abstraction volumes, water use/demand/water requirements, regulatory compliance, and resource reconciliation specific to user requirements. Data Sources: Flow meter abstraction records, bulk water supplied and releases, WULs/SLAs, and DWS reconciliation strategies, municipal and water board water resource planning documentation. Operational Adjustments: Temporary variations permitted under extraordinary conditions such as droughts, with documentation.
Calculation Formula	Water Security (%) = (Bulk Water System Input Volume / Permitted Raw Water Allocation Volume) × 100
Performance Interpretation	Benchmark = <80%: Adequate security; significant buffer for future growth or emergencies. Y0: n/a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieving <80% of permitted bulk allocation volume annually.
Benefits	- Resource Management: Promotes sustainable water supply by balancing demand and availability. - Regulatory Compliance: Ensures adherence to DWS and Water Board water allocations. - Risk Mitigation: Guides corrective action to prevent overuse. - Performance Benchmarking: Enables comparisons across municipalities and utilities. - Stakeholder Engagement: Aligns practices with national water resource management goals and fosters collaboration.

Indicator No & Name	W2 Drinking Water Systems Blue Drop
Performance Area	Drinking water systems.

Indicator No & Name	W2 Drinking Water Systems Blue Drop
Indicator Cross Reference	Existing Indicator, National Treasury C88 WS4.5, DWS Blue Drop Certification Program.
Definition	The Blue Drop Score is a performance indicator developed as part of the Blue Drop Certification Program to assess and promote the excellence of drinking water quality management. It evaluates compliance by the Water Services Authority (WSA) with water quality standards and the effectiveness of operational and management systems supporting safe drinking water provision. The WSA is supported by a Water Services Provider (WSP), which is a public or private entity. For example, waterboards are regarded as WSPs, also known as a Bulk Water Supplier or Provider, and their performance contributes to the overall municipal Blue Drop score. In several instances, the WSAs themselves act as water service providers in their own areas and may also be WSPs for other WSAs.
Purpose	Benchmarking and promoting high standards in drinking water quality management.
Key Components	Assessment Criteria: Drinking water quality compliance (microbiological, chemical, and physical), operational management, infrastructure reliability, community engagement. Data Sources: Laboratory tests, safety plans, maintenance logs, audits. Assessment Methodology: Annual or periodic assessments by regulatory authorities.
Calculation Formula	Blue Drop Score (%) = (Total Points Achieved / Total Points Available) × 100.
Performance Interpretation	Benchmark ≥95–100%: Excellent situation; need to maintain via continued improvement. Y0: n/a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve a Blue Drop Score ≥95%, demonstrating compliance with best practices and regulatory standards for municipal water service provision.
Benefits	• Benchmarking: Facilitates comparisons and encourages achievement/adherence to high standards. • Public Confidence: Builds trust by demonstrating commitment to safe drinking water. • Regulatory Compliance: Assists utilities in meeting water quality standards. • Continuous Improvement: Identifies and addresses gaps in water quality management.

Indicator No & Name	W3 Wastewater Treatment Systems Green Drop
Performance Area	Wastewater treatment systems.
Indicator Cross Reference	Existing Indicator, National Treasury C88 WS4.4, DWS Green Drop Certification Program.
Definition	The Green Drop Score is a performance indicator introduced as part of the regulatory Green Drop Certification Program to assess the quality and efficiency of wastewater management systems. It evaluates the ability of water service authorities and providers to treat wastewater effectively, protect public health, and minimize environmental impacts. The score reflects

Indicator No & Name	W3 Wastewater Treatment Systems Green Drop
	adherence to regulatory and best-practice standards in wastewater management.
Purpose	Assess the quality and efficiency of wastewater management systems.
Key Components	Assessment Criteria: Effluent compliance, infrastructure reliability, risk management, operational efficiency, transparency. Data Sources: Lab analyses, maintenance logs, regulatory inspections. Assessment Methodology: Periodic evaluations by regulators or auditors.
Calculation Formula	Green Drop Score (%) = (Total Points Achieved / Total Points Available) × 100
Performance Interpretation	Benchmark = 90–100%: Excellent situation, need to maintain via continued improvement. Y0: n/a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve Green Drop status (a Green Drop Score of $\geq 90\%$ as per DWS audits of municipal wastewater services).
Benefits	• Benchmarking: Facilitates comparisons of performance across utilities. • Environmental Stewardship: Encourages sustainable wastewater management and reduces pollution. • Regulatory Compliance: Supports adherence to wastewater discharge standards. • Public Confidence: Builds trust through transparency and accountability. • Public Health: Reduction in waterborne diseases.

Indicator No & Name	W4 percentage of wastewater samples compliant with water use license
Performance Area	Final effluent quality.
Indicator Cross Reference	Existing Indicator, National Treasury C88 WS4.22 , aligned with DWS Green Drop standards.
Definition	The Wastewater Final Effluent Compliance indicator measures the extent to which treated wastewater (final effluent) discharged from wastewater treatment facilities complies with the conditions outlined in the Water Use License (WUL), or defaults to a General Authorization (GA) in the absence of WUL. It is aligned with the DWS Green Drop Certification Program, and assesses compliance with microbiological, chemical, and physical standards mandated to protect water resources, public health, and ecosystems.
Purpose	Ensure wastewater treatment facilities meet WUL or authorized conditions, protecting public health, ecosystems, and water resources.
Key Components	Assessment Criteria: - Microbiological Compliance: E. coli and total coliforms within specified WUL limits or GA limits. - Chemical Compliance: Acceptable levels of Chemical Oxygen Demand (COD), ammonia, nitrates, and phosphates. - Physical Compliance: pH, turbidity, and suspended solids within regulatory thresholds. Data Sources: Laboratory analyses, monitoring plans, and compliance reports.

Indicator No & Name	W4 percentage of wastewater samples compliant with water use license
	Assessment Methodology: Regular effluent sampling at discharge points as mandated by WUL or GA limits and Green Drop monitoring protocols.
Calculation Formula	Effluent Compliance (%) = (Number of Compliant Samples / Total Samples Collected) × 100.
Performance Interpretation	Benchmark = 90–100%: Excellent performance; fully compliant with WUL / GA. Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve and maintain >90% compliance with WUL or GA conditions as verified through routine monitoring and Green Drop assessments.
Benefits	- Regulatory Compliance: Ensures alignment with WUL or GA and Green Drop standards. - Environmental Protection: Safeguards water resources and reduces pollution. - Operational Optimization: Identifies process inefficiencies, guiding investments and upgrades. - Public Health Protection: Reduces risks of waterborne diseases linked to poor effluent quality.

Indicator No & Name	W5 Frequency of water mains failures per 100 km of pipeline
Performance Area	Water Network Performance.
Indicator Cross Reference	Existing indicator, National Treasury C88 WS3.2.
Definition	The number of water mains failures per 100km of mains pipe per year is a performance indicator that has been developed to evaluate the efficiency and functionality of water distribution systems, particularly in managing the number of mains failures.
Purpose	Benchmarking and promoting high standards in water network performance, service quality and infrastructure asset management.
Key Components	Assessment Criteria: failure of metro owned water transmission and distribution pipes, valves and fitting, excluding repairs under active leakage control. Data Sources: telephonic and social media logging systems, workflow systems and records and worksheets. Assessment Methodology: Repairs undertaken annually.
Calculation Formula	Number of water mains failures per 100km of mains pipe per year: Number of mains failures per year (including failures of valves and fittings) / 100kms mains length, length, as per IWA methodology
Performance Interpretation	Benchmark = <50/100km Excellent network performance; full compliance with best practices. Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve a Score of <50/100km, demonstrating compliance with best practices and network performance standards for sustainable municipal water service provision.

Indicator No & Name	W5 Frequency of water mains failures per 100 km of pipeline
Benefits	• Benchmarking: Facilitates comparisons and encourages achievement/adherence to excellent water network performance standards. • Public Confidence: Builds trust by demonstrating commitment to continuous safe drinking water supply. • Service Quality: Assists utilities in meeting water network service quality standards • Continuous Improvement: Identifies and addresses gaps in water network performance and infrastructure asset management.

Indicator No & Name	W6 Frequency of sewer blockages per 100 km of pipeline
Performance Area	Sewer Network Performance.
Indicator Cross Reference	Existing indicator, National Treasury C88 WS3.1.
Definition	The number of sewer blockages per 100km of sewer length per year is a performance indicator that has been developed to evaluate the efficiency and functionality of sewer network systems, particularly in the management of blockages.
Purpose	Benchmarking and promoting high standards in sewer network performance, service quality and infrastructure asset management.
Key Components	Assessment Criteria: blockages in metro owned sewer pipes, excluding pumping station blockages, where blockages are defined as reported or logged blockages that result in an obstruction of system flow which may be caused by roots, obstructive items or other pipeline disruptions Data Sources: telephonic and social media logging systems, workflow systems and records and worksheets. Assessment Methodology: Blockages repaired annually.
Calculation Formula	Number of sewer blockages per 100km of sewer length per year: Number of sewer blockages per year / 100kms sewer length, as per IWA methodology.
Performance Interpretation	Benchmark = <50/100km Excellent sewer network performance; full compliance with best practices. Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve a Score <50/100km, demonstrating compliance with best practices and network performance standards for sustainable municipal wastewater/sanitation service provision.
Benefits	• Benchmarking: Facilitates comparisons and encourages achievement/adherence to excellent sewer network performance standards. • Public Confidence: Builds trust by demonstrating commitment to ensuring continuous safe sanitation practices by reducing sewer spills. • Service Quality: Assists utilities in meeting sewer network service quality standards • Continuous Improvement: Identifies and addresses gaps in sewer network performance and infrastructure asset management.

Indicator No & Name	W7 Physical Water Loss - Infrastructure Leakage Index
Performance Area	Physical Water Loss.
Indicator Cross Reference	Existing indicator, National Treasury C88 WS5.21, DWS No Drop, and proxy indicator for Resilience.
Definition	The ILI is a performance indicator developed by the International Water Association (IWA) to evaluate the operational efficiency of water distribution systems, particularly in managing water losses. It is the ratio of the Current Annual Real Losses (CARL) to the Unavoidable Annual Real Losses (UARL).
Purpose	Evaluate and improve the operational efficiency of water distribution systems by managing water losses effectively.
Key Components	Assessment Criteria: Leakage performance as a ratio of actual to unavoidable losses. Identification of operational inefficiencies and improvement areas. Data Sources: Water balance analyses, flow, and pressure monitoring records. Assessment Methodology: Regular evaluation of leakage metrics. Integration of operational and environmental conditions into loss assessments.
Calculation Formula	Infrastructure Leakage Index (ILI) = CARL / UARL - CARL (Current Annual Real Losses): Volume of water lost annually due to leaks, breaks, and overflows. - UARL (Unavoidable Annual Real Losses): Minimum leakage volume achievable under optimal conditions.
Performance Interpretation	Benchmark = < 2: Excellent performance; very low losses. Y0: n/a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve an ILI of <2, indicating efficient water loss management.
Benefits	• Benchmarking: Comparison across systems and regions. • Resource Allocation: Prioritize investment in leak detection and network upgrades. • Environmental Protection: Reduce unnecessary water wastage. • Public Confidence: Build trust through operational transparency. • Water Conservation: Improved water use efficiency and resilience.

Indicator No & Name	W8 Water Complaints % Response within 48 hours
Performance Area	Water Service Complaints Response.
Indicator Cross Reference	Existing indicator, National Treasury C88 WS3.21.
Definition	The percentage of water callouts responded to within 48 hrs is a performance indicator that has been developed to evaluate quality of service provision and is a proxy indicator for customer care. (Where “responded to” refers to “complaint logged, someone was on site, and has appraised the matter, and a process has been initiated to resolve the matter within 48 hours”).
Purpose	Benchmarking and promoting high standards in service quality and customer care
Key Components	Assessment Criteria: complaints logged, callouts responded to Data Sources: telephonic and social media callout logging systems,

Indicator No & Name	W8 Water Complaints % Response within 48 hours
	workflow systems and worksheets. Assessment Methodology: Annual or periodic customer satisfaction surveys and regular quality control assessments.
Calculation Formula	Water Service Complaints Response: (Number of water callouts responded to within 48 hours/Total number water callouts received and logged within 48 hours) x 100. (Notes: 1. Responded to = logged, appraised and responded to, but not necessarily resolved. 2. Multiple complaints on the same fault that are logged separately, are to be treated as one callout only).
Performance Interpretation	Benchmark = 90–100%: Excellent service; full compliance with best practices. Y0: n/a Y1: Plan to approach / reach benchmark Y2–Y6: implementation.
Definition of Success	Achieve a Score >90%, demonstrating compliance with best practices and regulatory standards for sustainable municipal water service provision.
Benefits	• Benchmarking: Facilitates comparisons and encourages achievement/adherence to high standards. • Public Confidence: Builds trust by demonstrating commitment to safe drinking water. • Service Quality: Assists utilities in meeting service quality standards. • Customer Care: Assists utilities in meeting customer care standards. • Continuous Improvement: Identifies and addresses gaps in water service quality and infrastructure asset management.

Indicator No & Name	W9 Sewer Complaints % Response within 48 hours
Performance Area	Sewer Service Complaints Response.
Indicator Cross Reference	Existing indicator, National Treasury C88 WS3.11.
Definition	The percentage of sewer callouts that are responded to within 48 hrs is a performance indicator that has been developed to evaluate quality of service provision and is a proxy indicator for customer care. (Where “responded to” refers to “complaint logged, someone was on site, and has appraised the matter, and a process has been initiated to resolve the matter within 48 hours”).
Purpose	Benchmarking and promoting high standards in service quality and customer care.
Key Components	Assessment Criteria: complaints logged, callouts appraised, and responded to. Data Sources: telephonic and social media callout logging systems, workflow systems and worksheets. Assessment Methodology: Annual or periodic customer satisfaction surveys and regular quality control assessments.
Calculation Formula	Sewer Service Complaints Response: (Number of sewer callouts responded to within 48 hours/Total number sewer callouts received and logged within 48 hours) x 100. (Notes: 1. Responded to = logged, appraised and responded to, but not necessarily resolved. 2. Multiple complaints on the same fault that are logged separately, are to be treated as one callout only).

Indicator No & Name	W9 Sewer Complaints % Response within 48 hours
Performance Interpretation	Benchmark = 90–100%: Excellent service; full compliance with best practices. Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve a Score >90%, demonstrating compliance with best practices and regulatory standards for sustainable municipal water service provision.
Benefits	• Benchmarking: Facilitates comparisons and encourages achievement/adherence to high standards. • Public Confidence: Builds trust by demonstrating commitment to safe sanitation. • Service Quality: Assists utilities in meeting service quality standards • Customer Care: Assists utilities in meeting customer care standards. • Continuous Improvement: Identifies and addresses gaps in sewer service quality and infrastructure asset management.

Indicator No & Name	W10 Non-Revenue Water (NRW)
Performance Area	Water delivery performance.
Indicator Cross Reference	Similar to existing National Treasury C88 WS5.1, alignment will be resolved.
Definition	NRW is a performance indicator included as a part of the No Drop Certification Program to measure the percentage of the treated volume of water supplied to a distribution system that does not generate revenue. NRW includes: Real Losses: Physical water losses (leaks, bursts, overflows). Apparent Losses: Unauthorized consumption, customer metering inaccuracies. Unbilled Authorized Consumption: Unbilled metered consumption and unbilled unmetered consumption (Water used for firefighting, municipal services, informal settlements).
Purpose	To evaluate and improve the efficiency of water utilities in reducing water revenue losses, enhancing operational sustainability, and protecting financial revenue streams.
Key Components	Assessment Criteria: Real (Physical) water losses, Apparent losses, Authorized consumption including Unauthorized consumption. Data Sources: Meter readings (bulk and customer), leakage assessments, billing records, operational adjustments for extraordinary events. Assessment Methodology: As per the No-Drop guidelines for the preparation of an IWA Water Balance for South Africa.
Calculation Formula	NRW % = ((System Input Volume–Billed Authorized Consumption) / System Input Volume) × 100 Where: • System Input Volume = Total treated water supplied to the distribution network from the utilities own sources. • Billed Authorized Consumption = Authorized volume of water billed to customers (this includes billed metered and billed unmetered volumes and the Free Basic Water volume).
Unit of Measurement	percentage (%).

Indicator No & Name	W10 Non-Revenue Water (NRW)
Performance Interpretation	Benchmark = <25%: Good performance. indicating good management of real and apparent water losses and operational efficiency Y0: n /a Y1: Plan to approach / reach benchmark Y2–Y6: implementation.
Benefits	• Performance Benchmarking: Enables utilities to compare and improve water loss levels. • Operational Efficiency: Identifies priorities like leak detection and infrastructure upgrades. • Revenue Protection: Minimizes financial losses from apparent losses and unbilled consumption. • Sustainability: Promotes water conservation and efficient resource use.

Indicator No & Name	W11 Metering Performance
Performance Area	Metering Performance.
Indicator Name	percentage of all water connections metered and billed on actual monthly readings.
Indicator Cross Reference	To be considered: amendments to existing National Treasury C88 indicator (WS5.31), percentage of total water connections metered.
Definition	The percentage of water connections metered and billed monthly on actual monthly readings. This indicator evaluates the financial sustainability and water use efficiency of municipalities by tracking accurate metering, and billing practices.
Purpose	Assess the financial and operational efficiency of municipalities, promote sustainable water use, reduce metering and billing inaccuracies, and reduce financial losses.
Key Components	Measurement Scope: Includes billed metered water connections (residential, commercial, industrial and free basic water). Target Scope: Total connections (billed metered + billed unmetered). Data Sources: Billing records, meter reading logs, water supply records.
Calculation Formula	$\text{percentage} = (\text{Number of connections metered and billed on actual readings monthly} / \text{Total number of connections (metered + unmetered)}) \times 100.$
Assessment Methodology	The calculation is performed on a rolling 12-month basis to account for seasonal variations.
Performance Interpretation	Benchmark: >98%: Ideal performance; accurate metering and billing practices, improved revenue, reduced NRW Y0: n /a Y1: Plan to approach / reach benchmark Y2–Y6: implementation.
Definition of Success	Achieve a target of >98% connections metered and billed on actual monthly readings.
Benefits	• Financial Sustainability: Increased revenue from accurate billing. • Water Use Efficiency: Promotes responsible water consumption. • Customer Satisfaction: Builds trust through fair billing. • Compliance: Aligns with National Treasury's performance indicators.

OPERATIONAL PERFORMANCE INDICATORS

ELECTRICITY & ENERGY

Indicator No & Name	E1 Bulk Commercial Metering Performance
Performance Area	Industrial (bulk) and commercial user meterage.
Indicator Cross Reference	New indicator to be considered for inclusion in future amendments to National Treasury C88 .
Definition	It measures the progress and maturity of the billing part of the revenue cycle that is active and in operation that should migrate to a perfect (100%) score. Technologies are available in the AMR/ AMI space to enhance this metering and collection (e.g. automated billing).
Purpose	Bulk (LPU), and commercial metering generate the most revenue for metros and are crucial for achieving financial turnaround and maintaining performance. It supports accurate metering (and billing) as part of the revenue management process and is seen as the critical starting point or where all metros need to focus attention to.
Key Components	Assessment Criteria: AMR/ AMI metering to all customers in these two categories. Progress towards full automated billing, cloud access to all customers. percentage of Bulk (LPU) and Commercial Customers Metered active and operational. Data Sources: Information is automatically obtained from AMI data sources. Operational Adjustments: Temporary variations are allowed under extraordinary conditions, such as system replacements and upgrades.
Calculation Formula	Bulk (LPU) & commercial meterage: Total bulk (LPU) and commercial meters in full billing operation/ Total bulk and commercial customers.
Performance Interpretation	Benchmark = >98% Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieving >98% full billing operation. Progress towards automated billing in Y5/Y6.
Benefits	• Resource Management: Promotes accurate metering and billing for revenue and financial turnaround in focusing utility actions on most critical element. • Risk Mitigation: Guides corrective action to enhance revenue management. • Performance Benchmarking: Enables comparisons across municipalities and utilities. • Stakeholder Engagement: Ensure more rigorous engagement and advance customer action to most critical part of customer base. • Public Confidence: Builds trust through transparency, accuracy and better information availability.

Indicator No & Name	E2 Vending Efficiency % of metering operational
Performance Area	Vending efficiency.
Indicator Cross Reference	New indicator to be considered for inclusion in future amendments to National Treasury C88 .
Definition	Measure the wholistic performance of the vending/ prepayment system ability to sell tokens continuously when customers require energy. It has two

Indicator No & Name	E2 Vending Efficiency % of metering operational
	components namely uptime to the master system and the number of active meters in the system. A downward trend (or below 100% indicator) shows inefficiencies in managing the system.
Purpose	Vending involves the prepayment master system and satellite stations managing and issuing tokens to customers for electricity purchases. Metros have vending systems in place but for various reasons the management and operations of prepayment metering is sometime only partly in service or functional. The system vending operation, which involves selling tokens, must operate at 100% efficiency to enable customers to make continuous purchases seamlessly. Indicator is seeking to encourage 100% continuous vending of prepayment sales.
Key Components	Assessment Criteria: a) Measure the uptime whether the complete master system (with it satellite stations) is operational and is vending to customers. b) Measure the number of active prepayment meters in the system to the total number of prepayment meters that needs to purchase pre-payment electricity. Data Sources: Vending system management reports, maintenance logs, audits. Assessment Methodology: Annual or periodic assessments by regulatory authorities.
Calculation Formula	Vending efficiency 1) Total monthly active customers / total number of prepayment customers and/or 2) Uptime of system as available hours against total system hours.
Performance Interpretation	Benchmark for both uptime and active meters in the system= >98% Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Downward trend but a 100% figure achieved not later than in year two.
Benefits	• Benchmarking: Against other utilities and indicative of wrong business processes and managerial trends in the utility. • Public Confidence: Builds trust by demonstrating commitment to have all systems in place. Deter theft and meter bypassing if the token system is fully available. safe drinking water. • Regulatory Compliance: Assists utilities in meeting electricity performance standards. • Continuous Improvement: Identifies gaps in electricity business processes and systems.

Indicator No & Name	E3 Automated Meter Reading Coverage
Performance Area	Automated meter reading coverage.
Indicator Cross Reference	New indicator to be considered for inclusion in future amendments to National Treasury C88.
Definition	Automated meter reading (AMR) as a percentage of Advanced metering infrastructure (AMI) that is operating operational, within each customer category of bulk (industrial) and commercial customers.
Purpose	This indicator evaluates the deployment and rollout of advanced metering and available technologies and the integration back into the main system to enhance the billing process for customer categories that contribute

Indicator No & Name	E3 Automated Meter Reading Coverage
	significantly to the utility's revenue. It highlights the need for technological advancements, often linked to SMART metering projects. The first deals primarily with a hardware rollout whilst the second part of the indicator deals with software integration.
Key Components	Assessment Criteria: 1) Automated meters as a percentage of total meters in both bulk and commercial customer categories (measured separately). 2) percentage of employed meters integrated into main systems and fully functional as a smart system. Data Sources: Meter statistics from utility records.
Calculation Formula	Automated metering as % total bulk (LPU) metering; Automated metering (smart) deployment as % of total 1) bulk (LPU) and 2) commercial metering. 3) % of Integration of bulk and 4) commercial against total meters.
Performance Interpretation	Benchmark = better than NERSA benchmark Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Internal increasing trend of meter coverage.
Benefits	• Benchmarking: Comparison of performance across utilities but indicative of the maturity of metering using advance processes and systems. • Public Confidence: Transparency in the availability of data for customer usages. Builds trust through transparency and accountability.

Indicator No & Name	E4 Repairs Efficiency
Performance Area	Repairs Efficiency.
Indicator Cross Reference	Existing NERSA Indicator.
Definition	Inadequate investment in repairs and maintenance of networks need to be pursued to improve the reliability of the networks. The indicator measured how much as a percentage of operation is spent on repairs and maintenance.
Purpose	Investing in repairs and maintenance is essential to improve network reliability. Utilities must meet or exceed regulatory benchmark levels.
Key Components	Assessment Criteria: Total operational maintenance (both planned and unplanned- mostly planned) need to achieve a set benchmark for the utilities. It needs to be guided by an asset management strategy (AMS) and process, based on long-term operational and refurbishment plans. It is informed by the needs of the utility business from work management systems and other internal data sources based on infrastructure assessments. Data Sources and Assessment Methodology: Continuous information from AMS and processes and outage records.
Calculation Formula	Repairs efficiency: = Total operational spend on repairs and maintenance / total operational costs (revenue).
Performance Interpretation	Benchmark = better than NERSA benchmark Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Achieve and exceed regularly benchmark and NT benchmark of 6% and 8% annually.

Indicator No & Name	E4 Repairs Efficiency
Benefits	- Regulatory Compliance: Ensures alignment with NERSA and NT standards. - Operational Optimization: Improve network performance and safety standard and customers supplies.

Indicator No & Name	E5 Total Electricity losses as % of electricity purchased
Performance Area	Loss Reduction.
Indicator Cross Reference	Existing indicator, National Treasury C88 EE4.4 and NERSA.
Definition	Losses consist of technical losses and non-technical losses. The first is mostly a characteristic of the network, but the second is an indicator of how good the utility deals with commercial and collection issues to get cash in the bank. It reflects the total sales against what is purchases and is an indicator of what is not available to sell to end customers and have a direct bearing on revenue.
Purpose	This definition focus to trend the losses and the efforts of the utility to curtail this and benchmarking against other utilities. Many utilities in SA have serious issues with losses and it is one of the main reasons for non-sustainability challenges. As a trend over time, it reflects the success of the utility in achieving efficiencies (optimize) in purchases versus sales.
Key Components	- Assessment Criteria: Driving down of losses over time at least below the regulatory benchmark of 12% - Data Sources: All purchases metering data versus total metering sales data consisting of the complete revenue management and losses value chain. Assessment Methodology: Measured annually but done on a continuous basis. Total kWh sales from all customer meters plus estimates for non- metered items such as streetlights/ own consumption and departmental sales against total purchases from all sales that can consist of bulk (LPU) purchases, wheeled energy and DER purchases.
Calculation Formula	$\frac{\text{Electricity Purchases in kWh} - \text{Electricity sales in kWh}}{\text{Electricity Purchases in kWh}}$
Performance Interpretation	Benchmark = better than NERSA benchmark Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Downwards trend realistic from business perspective, achieving regulatory benchmark in prescribed time.
Benefits	- Benchmarking: Improves utility financial sustainability and having more funds availed for critical network operations and investments. Efficiency benchmark against other utilities - Public Confidence: Builds trust by demonstrating commitment to continuous safe drinking water supply. - Service Quality: Assists utilities in having funds available for own investments in infrastructure. - Continuous Improvement: Measures utility efforts and performance to improve on efficiency and performance.

Indicator No & Name	E6 Network Effectiveness ASIFI
Performance Area	Network Effectiveness.
Indicator Cross Reference	Existing indicator, National Treasury C88 EE3.6, NRS 048 – 6, IEEE 1366.
Definition	ASIFI (Average System Interruption Frequency Index) or SAIFI (System Average Interruption Frequency Index).
Purpose	This definition focuses on the calculation of the average number of interruptions that a connected load or customer would experience in a year. Calculation of reliability indices on a consistent approach can deliver the benefit of valuable performance data to plan and execute maintenance better and reduce interruptions which reduce revenue to Utilities.
Key Components	Assessment Criteria: The ratio of the total kVA affected by the outage (i) over the total connected kVA on the distribution network. Total kVA is the kVA installed in the MV/LV distribution transformers or subscribed capacity in kVA for MV customers. Data Sources: Total number of outages / interruptions (n) Assessment Methodology: Summation of the ratio over an annual period.
Calculation Formula	$ASIFI = \sum_{i=1}^n \frac{\text{Total kVA affected by the outage (i)}}{\text{Total connected kVA}}$ Calculation must be for 12 month rolling period.
Performance Interpretation	Benchmark = better than NERSA benchmark Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Downwards trend realistic from business perspective, achieving regulatory benchmark in prescribed time.
Benefits	Benchmarking: Provide insights to distribution businesses based on national and international benchmarking. Public Confidence: Provide the regulator with consistent and comparable performance metrics to regulate license conditions. Service Quality: Provide customers with quality of supply information they can use in their investment and planning process. Continuous Improvement: Provide the distribution business with valuable performance data to plan and execute maintenance better, and reduce interruptions which reduce revenue to Utilities.

Indicator No.	E7 Network Effectiveness ASIDI
Performance Area	Network Effectiveness.
Indicator Cross Reference	Existing indicator, National Treasury C88 EE3.5, NRS 048 – 6, IEEE 1366.
Definition	ASIDI (Average System Interruption Duration Index) or SAIDI (System Average Interruption Duration Index).
Purpose	This definition focuses on the calculation of the average outage duration that a connected load or customer would experience in a year. Calculation of reliability indices on a consistent approach can deliver the benefit of valuable performance data to plan and execute maintenance better and reduce interruptions which reduce revenue to Utilities.

Indicator No.	E7 Network Effectiveness ASIDI
Key Components	Assessment Criteria: The ratio of the multiple of the duration of the outage (i) and the total kVA affected by the outage (i) over the total connected kVA on the distribution network. Total kVA is the kVA installed in the MV/LV distribution transformers or subscribed capacity in kVA for MV customers. Data Sources: Total number of outages / interruptions (n) Assessment Methodology: Summation of the ratio over an annual period.
Calculation Formula	$ASIDI = \sum_{i=1}^n \frac{\text{Duration of the outage (i)} \times \text{Total kVA affected by the outage (i)}}{\text{Total connected kVA}}$ Calculation must be for 12 month rolling period
Performance Interpretation	Benchmark = better than NERSA benchmark Y0: n /a Y1: Plan with targets to approach / reach benchmark Y2–Y6: percentage achievement of targets.
Definition of Success	Downwards trend realistic from business perspective, achieving regulatory benchmark in prescribed time.
Benefits	• Benchmarking: Provide insights to distribution businesses based on national and international benchmarking. • Public Confidence: Provide the regulator with consistent and comparable performance metrics to regulate license conditions. • Service Quality: Provide customers with quality of supply information they can use in their investment and planning process. • Continuous Improvement: Provide the distribution business with valuable performance data to plan and execute maintenance better and reduce interruptions which reduce revenue to Utilities.

OPERATIONAL PERFORMANCE INDICATORS

SOLID WASTE MANAGEMENT

Indicator No. & Name	S1 Service Collection Coverage
Indicator Cross Reference	<i>Existing indicator, C88 ENV3.1, 3.11</i>
Definition	Tracks the percentage of households in formal areas receiving regular curbside waste collection and recognized informal settlements with weekly collection (active) or access to passive collection points (e.g., skips, containers) within a 3km radius.
Purpose	Ensure service quality by measuring the extent to which all formal and informal areas have access to basic waste collection services, thereby reducing illegal dumping and promoting environmental cleanliness.
Key Components	Assessment Criteria: Percentage of households receiving scheduled, formal waste collection services in formal areas, as well as the percentage of residents in informal settlements located within 3km of metro-serviced passive waste collection points (e.g. skips, trailers). Data Sources: Municipal waste collection reports, GPS data on locations of passive collection points, supplemented by household surveys and records from waste service providers Assessment Methodology: Regular monitoring of waste collection routes and customer service data to ensure coverage. GIS mapping of passive waste collection points and population distribution, validated through field surveys.
Calculation Formula	% of Formal Residential Properties (HH) receiving weekly collection % of Informal Areas (Recognized Informal Settlements) receiving weekly collection (active) or equipped with collection units (passive) with 3km radius (max) & serviced weekly
Frequency	Quarterly GIS assessments and reporting based on collection data and population surveys.
Performance Interpretation	Achieve and maintain >98% coverage of waste collection services in formal areas, and ensure that >98% of residents in informal settlements live within 3km of metro-serviced waste collection infrastructure.
Definition of Success	Achieve and maintain >98% coverage of waste collection services in formal areas, and ensure that >98% of residents in informal settlements live within 3km of metro-serviced waste collection infrastructure.
Benefits	Environmental Protection: Reduces illegal dumping and littering, improving cleanliness in urban areas. Public Health Protection: Mitigates health risks from uncollected waste, especially in informal settlements. Equity in Service Delivery: Promotes fair access to waste services across all socio-economic areas. Operational Efficiency: Identifies gaps in service provision, helping municipalities optimize routes and infrastructure investments.
Indicator No. & Name	S2 Service Reliability
Indicator Cross Reference	<i>Existing indicator, C88 ENV3 2.1, 2.3, 3.2</i>

Definition	Evaluates waste collection service reliability by tracking adherence to scheduled collections and delays in service provision. Without a functioning weighbridge system, service quality cannot be assured, leading to inefficiencies, data manipulation, and malpractice. This indicator relies on automated integration with weighbridges and vehicle telemetry to verify the accuracy of service records, ensuring compliance with operational standards and preventing fraudulent reporting.
Purpose	Ensures waste collection services are delivered on time and at optimal fleet capacity, reducing service disruptions that contribute to waste accumulation, environmental hazards, public health risks, and customer dissatisfaction. The absence of weighbridges enables malpractice, including false reporting and inefficient service delivery, making automated monitoring essential for accountability.
Key Components	Assessment Criteria: Monitoring of waste collection vehicles via weighbridge and/or telemetry vehicle tracking system, providing real-time data on on-time performance in relation to published schedules. Data Sources: Automated fleet tracking data (GIS/Weighbridge systems)—can be supplemented by municipal waste collection service records, and user satisfaction surveys. Assessment Methodology: Automatic reporting is produced via the integration of telemetry vehicle tracking data as well as from weighbridge data.
Calculation Formula	1- Weighbridge Tracking System: $\frac{\text{Number of Incoming RELs to LS \& RTS where they } > X\% \text{ Full (as per LOS) }}{\text{Expected Trips per LOS recommendations. (Result = \%)}}$ AND/OR 2- Vehicle Tracking System: $\% \text{ of Deviation rate from scheduled optimization strategy, as per LOS.}$

Indicator No. & Name	S2 Service Reliability
Frequency	Automated, cloud-based reporting systems. Real-time, remote access.
Performance Interpretation	1- Weighbridge Tracking System: >90% of planned visits to LS & RTS per LOS recommendations. 2. Vehicle Tracking System <10% km driven per predetermined route / km deviation from route.
Definition of Success	1- Weighbridge Tracking System: >90% of planned visits to LS & RTS per LOS recommendations. 2. Vehicle Tracking System <10% km driven per predetermined route / km deviation from route.
Benefits	Operational Efficiency: Improves waste collection scheduling, routing, and fleet management through real-time data. Customer Satisfaction: Enhances public trust and satisfaction by delivering consistent, reliable services. Public Health and Environmental Protection: Reduces the risks associated with uncollected waste, ensuring timely removal of waste from residential and commercial areas. Resource Optimization: Identifies inefficiencies in waste collection routes and service schedules, guiding future investments and operational changes.

Indicator No. & Name	S3 Asset Maintenance & Operations
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Indicator Cross Reference	<i>Existing indicator, C88 ENV3 2.1, 2.2, 2.3</i>
Definition	Tracks the functionality and calibration of weighbridges at landfill sites and transfer stations, ensuring accurate waste volume recording and compliance with SAWIS reporting standards. This indicator measures operational uptime, automated data accuracy, and the use of analytics to validate reporting and track waste diversion.
Purpose	Enhance data accuracy for landfill operations and improve operational efficiency through the use of automated systems.
Key Components	Assessment Criteria: weighbridge uptime, automated record-keeping, and weighbridge software analytics. Data Sources: weighbridge operational logs and maintenance records, automated landfill data records (weighbridge software), compliance reports from landfill management, and weighbridge analytics reports. Assessment Methodology: monitoring operational status and downtime of weighbridges through maintenance and performance logs; reviewing the percentage of waste tonnage data automatically captured by the weighbridge system, analyzing the weighbridge software-generated reports for data accuracy, trends, and compliance tracking.
Calculation Formula	$\frac{\text{No. of Days each WB operational}}{\text{No. of LS \& RTS}} \times 365$ $\frac{\text{No. of Quarterly uploads to SAWIS}}{\text{No of expected Quarterly Uploads to SAWIS}}$
Frequency	Automated, cloud-based reporting systems. Real-time, remote access.
Performance Interpretation	>90% downtime for weighbridge & waste recording system >95% of data for sites uploaded to SAWIS on quarterly basis
Definition of Success	>90% downtime for weighbridge & waste recording system >95% of data for sites uploaded to SAWIS on quarterly basis
Benefits	Regulatory Compliance: Ensures adherence to waste management regulations through accurate data and automated reporting. Operational Efficiency: Reduces manual data entry and entry points for corrupt and manipulative practice, improves weighbridge uptime, and optimizes landfill security and access control. Data Accuracy: Enhances the quality and reliability of landfill data for better waste management planning. Resource Optimization: Guides landfill management decisions by providing insights through software analytics, improving overall performance.

Indicator No. & Name	S4 Waste Minimization
Indicator Cross Reference	<i>Existing indicator, # C88 ENV2.2; NEMWA (Section 18/EPR)</i>
Definition	Tracks the solid waste tonnage diverted from landfilling from registered and recognized waste facilities or initiatives, as well as direct Metro diversion activities, divided by the population.
Purpose	Promote waste recovery, recycling, composting, and other circular waste treatment options to reduce the volume of waste disposed of in general landfills. This indicator encourages municipalities to minimize waste sent to landfills, support the transition to a circular economy, and achieve waste diversion targets following national and local waste management policies.

Key Components	Assessment Criteria: waste diversion rates via government sanctioned or PPP based facilities used for waste processing/treatment. Data Sources: weighbridge or scale data from metro-sanctioned waste recovery and treatment sites. In addition, monthly and annual reports from waste treatment facilities on quantities diverted. Assessment Methodology: Improvement measured against a baseline diversion rate.
Calculation Formula	Waste Diversion (tons) = Total tons of waste diverted from landfill to treatment facilities.
Frequency	Quarterly reporting of waste diversion tonnage, with annual reviews against established baselines and national targets.
Performance Interpretation	Agreed improvement as per baseline
Definition of Success	Agreed improvement as per baseline
Benefits	EPR: Encourages alignment with the EPR, for recycling, composting, and recovery of materials, promoting resource efficiency and waste minimization. Regulatory Compliance: Ensures alignment with national waste diversion targets and supports compliance with the NWMS. Operational Optimization: Identifies opportunities to enhance the efficiency of waste collection and treatment infrastructure. Public Engagement: This activity raises awareness of waste minimization practices, encouraging residents and businesses to participate in waste reduction initiatives.

Indicator No. & Name	S5 Environmental compliance
Indicator Cross Reference	NEM:WA: Section 51 Contents of WML, requiring auditing N&S GNR 926: Norms & Standards for the Storage of Waste
Definition	Measures the compliance of waste management facilities with relevant environmental regulations, including the NEM:WA, GNR635, and Waste Classification and Management Regulations. The indicator provides a facility compliance rating that reflects adherence to applicable licenses and permits, where licensed facilities are rated based on fulfilling their license conditions. Non-licensed facilities are assigned a score of zero to incentivize the pursuit of proper licensing and registration. The indicator ensures facilities responsibly manage, treat, and dispose of waste according to the latest waste regulations and by-laws.
Purpose	Ensure all waste management facilities operate within the legal framework set by national and local regulations, promoting safe, environmentally responsible, and sustainable waste management practices.
Key Components	Assessment Criteria: license status and conditions, applicable waste management regulations, and weighting of license conditions. Data Sources: facility compliance audit reports (internal and external), waste management license documentation and conditions, and audit records detailing adherence to by-laws, regulations, and NWMS standards. Assessment Methodology: facility compliance rating, weighting of conditions, review of audit reports.
Calculation Formula	Compliance Rating (%) = (Weighted Score of Compliant License Conditions / Total Weighted Conditions) × 100 Unlicensed Facilities = Automatic zero compliance rating

Frequency	Annual compliance audits for all licensed and unlicensed waste management facilities.
Performance Interpretation	Compliant or Non-Compliant
Definition of Success	NEM:WA: Section 51 Contents of WML, requiring auditing N&S GNR 926: Norms & Standards for the Storage of Waste
Benefits	Regulatory Alignment: Ensures waste management facilities comply with NEM:WA, GNR635, and other relevant waste regulations. Operational Accountability: Facilitates the identification of regulatory gaps and operational inefficiencies, prompting improvements in facility management. Incentivizes Licensing: It assigns zero scores to unlicensed facilities to encourage them to obtain proper registration and operate within the legal framework. Public Health and Safety: Enhances protection of public health through better compliance with waste handling and disposal regulations. Continuous Improvement: Drives facilities to improve their compliance performance and maintain high standards in waste management.

Indicator No. & Name	S6 Cost Efficiency
Indicator Cross Reference	C88: Budget Reporting MSCOA: Collection & Disposal
Definition	Measures the annual operating cost of waste collection and disposal services per ton of waste disposed. It evaluates the financial performance of waste management services by tracking the costs specifically related to collection and disposal, separately from other public cleansing and support functions. This indicator helps to identify areas where cost reductions can be made while maintaining adequate service delivery and assesses the overall efficiency of revenue-generating waste services.
Purpose	Ensure that waste collection and disposal services are delivered cost-effectively, optimizing resource use while minimizing operational expenses.
Key Components	Assessment Criteria: operating cost per ton, separation of costs, and budget reporting. Data Sources: annual budget reports for waste management services, C88 financial reporting, waste disposal tonnage data from weighbridge systems or other verified sources, and operating expense breakdowns for collection, disposal, public cleansing, and support functions.
Calculation Formula	Total Expenditure from Statement of Financial Performance for Sub-Functions 4402 (Collection) and 4403 (Disposal) / Total Mass of Waste Recorded at LS weighbridges for disposal, including MSW sent to private landfills.
Frequency	Annual reporting based on fiscal year budget data and C88 reporting.
Performance Interpretation	Significant Improvement (Reduction): Demonstrates a substantial reduction in operating costs per ton compared to the baseline, indicating improved cost efficiency. Moderate Improvement: A moderate decrease in operating costs per ton indicates progress toward cost efficiency goals. No Change: No significant change in operating costs, suggesting stable but not improved cost efficiency. Cost Increase: Indicates rising costs per ton, highlighting the need for cost control measures and operational improvements.

Definition of Success	Achieve an agreed improvement (reduction) in the annual operating cost of waste collection and disposal services per ton of waste disposed, as compared to the baseline or previous reporting period. Success is measured by reducing costs without compromising service quality or operational effectiveness.
Benefits	Financial Sustainability: Ensures that waste management services are delivered cost-efficiently, optimizing budget allocations and reducing unnecessary expenditures. Informed Decision-Making: Provides data-driven insights for budget planning, cost control, and investment in waste management infrastructure. Operational Accountability: Highlights areas where cost inefficiencies may exist, allowing for targeted interventions to improve resource allocation. Increased Competitiveness: A more cost-efficient waste management system can lead to better service pricing, benefiting both the municipality and its residents. Transparency: Enhances financial transparency by clearly separating costs related to different functions within waste management services.

Indicator No. & Name	S7 Climate Change Mitigation
Indicator Cross Reference	<i>Existing indicator, # C88 ENV5.1. Aligned with IPCC GHG Reporting Guidelines.</i>
Definition	This indicator tracks the annual reduction of greenhouse gas emissions, specifically CO ₂ e (carbon dioxide equivalent) and CH ₄ (methane), from waste management operations. This includes emissions reductions achieved through fleet and route optimization, waste diversion from landfills, and methane flaring and management at landfills. The indicator tracks improvements in emission reductions and climate resilience strategies that contribute to mitigating the environmental impact of waste management activities.
Purpose	Improve waste management systems' environmental sustainability and climate resilience by minimizing carbon and methane emissions.
Key Components	Assessment Criteria: CO₂e reduction rate, CH₄ reduction rate, emission offset value, landfill gas management, odor, and air quality monitoring. Data Sources: metro internal records on fleet operations, route optimization, and waste diversion data; contractor reporting on landfill gas management activities and emissions measurements; IPCC values for CO₂e (for emission conversions); metered readings for methane (CH₄) emissions from landfill sites; and odor and air quality monitoring systems. Assessment Methodology: CO₂e emission reduction calculation, methane emission reduction calculation, waste diversion contribution, landfill gas management, and financial viability of emission reduction initiatives.
Calculation Formula	CO₂e Reduction = (Total CO₂e Avoided from Fleet Optimization + Total CO₂e Avoided from Waste Diversion) CH₄ Reduction = (Total Methane Captured and Treated through Landfill Gas Management) × IPCC Methane Equivalency Factor (CO₂e Conversion)
Frequency	Annual reporting based on fleet optimization, waste diversion, and landfill gas management data.

Performance Interpretation	Significant Reduction: Achieves a significant reduction in CO₂e and CH₄ emissions compared to the baseline, demonstrating effective climate resilience strategies. Moderate Reduction: Shows a moderate decrease in emissions, indicating progress toward emission reduction and climate resilience goals. No Change: Little or no change in emissions, suggesting that further interventions or improvements are needed. Emission Increase: Indicates rising emissions, requiring immediate corrective measures to address inefficiencies in waste management practices.
Definition of Success	Agreed improvement (reduction) in annual CO ₂ e and CH ₄ emissions compared to the baseline, aligned with national climate targets and waste management strategies.
Benefits	GHG Emission Reduction: Helps reduce the contribution of waste management operations to global greenhouse gas emissions, mitigating climate change impacts. Financial Savings: Demonstrates the financial viability of emission reduction strategies, including potential revenue generation from methane capture or carbon credits. Operational Efficiency: Optimizes waste collection and disposal processes, leading to cost savings in fuel consumption and landfill space management. Compliance with Climate Policies: Aligns with international and national climate resilience and greenhouse gas reduction frameworks, contributing to achieving sustainability targets.

Indicator No. & Name	S8 Asset Creation: Landfill Airspace
Indicator Cross Reference	N/A
Definition	Measures landfill operations' efficiency and future airspace availability by ensuring that metros perform annual airspace and topography assessments of their landfills for licensing purposes. It assesses the operational efficiency of current landfill cells, slopes, and operations and maintenance (O&M) practices. Additionally, the indicator evaluates long-term planning by calculating future airspace availability based on current usage trends and projections.
Purpose	Ensure efficient use of landfill airspace and maintain compliance with landfill licensing conditions.
Key Components	Assessment Criteria: operational efficiency, future airspace projections, O&M practices, and license compliance. Data Sources: Metro airspace measurement reports, operational reports from landfill operators, and waste tonnage data from weighbridge records. Assessment Methodology: Review license conditions, calculate used and available airspace and review landfill operations, such as compaction, slope stability, and O&M practices.
Calculation Formula	Remaining Useful Life = Available Airspace (as per modelled Final Profile) / Airspace Consumption Rate (as per monthly consumption – requires either weighbridge data or topographical surveys)
Frequency	Annual reporting on airspace measurements, operational efficiency, and license reviews.
	Efficient Use: Airspace is used efficiently, with operational practices maximizing landfill capacity while ensuring compliance with license conditions. Sufficient Future Airspace: Based on current and projected waste volumes, landfills should have a minimum of 8 years of available airspace.

Performance Interpretation	License Compliance: Landfill operations fully comply with regulatory requirements and best practices. Inefficient Use or Insufficient Airspace: Operational inefficiencies or insufficient airspace are identified, requiring corrective actions such as improved compaction, waste diversion strategies, or the identification of new landfill capacity.
Definition of Success	Annual Topographical Surveys / Airspace Reporting submitted and approved to HoD for all Metro owned landfills to quantify remaining airspace and weighbridge data to determine airspace consumption rate and calculate remaining useful life.
Benefits	Operational Efficiency: Ensures that landfill operations are optimized for efficient use of airspace, reducing the need for premature expansions or new landfills. Cost Savings: This strategy maximizes the lifespan of current landfills, delaying the need for costly new infrastructure and reducing operational costs associated with inefficient practices. Regulatory Compliance: Ensures landfill operations comply with regulatory requirements and license conditions, avoiding penalties and enforcement actions. Sustainability: Supports long-term waste management planning by ensuring adequate airspace to meet future needs.

Indicator No. & Name	S9 Access Control/Security
Indicator Cross Reference	N/A
Definition	Tracks the effectiveness of security measures implemented at landfill sites, preventing unauthorized access, vandalism, and theft. It includes developing and updating a security plan annually, coupled with incident reporting, to determine whether a site qualifies for necessary structural upgrades, such as landfill gas (LFG) systems or weighbridge installations. Security measures ensure the integrity of critical infrastructure and safe operations at the landfill.
Purpose	Ensure that landfill sites are adequately protected against theft, vandalism, and other security threats that could compromise operations or damage critical infrastructure.
Key Components	Assessment Criteria: security plan, incident report card, infrastructure protection, upgrade recommendations, risk management, and security improvement plan. Data Sources: Metro security plans and policies, incident report cards documenting security breaches, and contractor reports detailing security status and improvement recommendations. Assessment Methodology: review of security plan, incident monitoring, and vulnerability assessment.
Calculation Formula	Incident Frequency = (Total Incidents Reported / Number of Landfill Sites) × 100
Frequency	Annual update of security plans and incident report cards and continuous monitoring of incidents with quarterly reviews.
Performance Interpretation	Metro developed Security & Emergency Preparedness and Response Plan (EP&RP), updated annually, per LS & RTS. As per NEM:WA: - Perimeter wall and access control - Metros record incidents that are unexpected occurrences like major emissions, fires, vandalism, theft, or explosions, as well as those that

	pose a risk to public health or the environment, captured in incident reports.
Definition of Success	Submission of Security & EP&RP Implementation of Plan LSs & RTSs to maintain access control and a 1.8m perimeter wall around the waste facility. Metro to provide evidence of monitoring and reporting incidents.
Benefits	Asset Protection: This ensures that critical infrastructure, such as LFG systems and weighbridges, is protected from theft and vandalism, reducing operational disruptions and financial losses. Cost Savings: Reduces the cost of repairing or replacing damaged infrastructure due to vandalism or theft, leading to improved cost efficiency. Operational Continuity: Maintains uninterrupted waste management operations by preventing security breaches that could compromise landfill operations. Compliance: Ensures that landfill sites meet security requirements outlined in metro policies and that incident reports guide decision-making on infrastructure upgrades. Risk Mitigation: Reduces the risk of security incidents through proactive planning and response measures, ensuring long-term site safety and integrity.

Annex 3: Implementation Support

1. AIIB will support the implementation of the Program through close coordination with the implementing agencies, World Bank, and other development partners. The WB, KfW Development Bank, and Agence Française de Développement (AfD) are expected to provide technical assistance to the Government of South Africa in implementing the Program and in delivering capacity-building activities.

AIIB will closely supervise the Program's implementation to mitigate identified risks and respond effectively to emerging issues and challenges. This will include a structured plan of technical and safeguards support to ensure appropriate due diligence throughout the Program's implementation period.

1. AIIB will also monitor adherence to the Program Action Plan and provide necessary implementation support. Where required, AIIB may engage local experts in monitoring and evaluation (M&E) and other relevant areas to strengthen the capacity of the National Treasury and participating metros. These experts may assist in preparing regular monitoring reports for submission to AIIB, including progress on the Results Monitoring Framework (RMF).

2. In addition, AIIB will work closely with the IVA to ensure that the agreed verification protocols are followed and that IVA reports adequately document the achievement of Disbursement-Linked Indicators (DLIs).

Table A3-1. Main focus of Implementation Support

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	Establish implementation arrangements; finalize verification protocols; initiate capacity-building activities; monitor early results and compliance with the Program Action Plan.	Program management, fiduciary, procurement, safeguards, M&E	12–15 staff weeks	Coordination with WB, KfW, and AfD on technical and capacity-building support.
12-72 months	Continued implementation support and supervision; review of IVA findings; assessment of DLI achievement; adaptive support to address implementation challenges.	Technical specialists (sector), M&E, financial management, procurement	10–12 staff weeks per year	Joint reviews and supervision missions with development partners.

Other	Midterm review; evaluation of results and lessons learned; planning for follow-up engagement.	Evaluation, results management	8–10 staff weeks	Participation in joint evaluation with development partners and the Government of South Africa.
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Table A3-2. Project Team Skills Mix Requirements for Implementation Support

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Program Lead/PTL	20	6	Overall coordination and supervision.
Urban / Infrastructure Specialist (with a climate focus)	10	3	Technical inputs and monitoring.
Financial Management Specialist	6	2	Oversight of fiduciary aspects.
Procurement Specialist	4	2	Support on procurement compliance and capacity building.
Environment and Social Specialist	10	6	Safeguards and social systems monitoring.
M&E Specialist / Local Consultant	12	6	Support to NT and metros on data collection and reporting.

Table A3-3. Role of Partners in RBP implementation

Name	Institution/Country	Role
WB	International	Lead partner in co-financing and joint supervision; provide technical support and capacity building.
NDB	International	Co-financing partner (parallel); support technical and financial management aspects.
KfW	Germany	Co-financing partner (parallel); contribute to monitoring, evaluation, and capacity building activities.
AfD	France	Co-financing partner (parallel); support technical and financial management aspects.
National Treasury	South Africa	Lead implementing agency; coordination with metros and oversight of RBP implementation.
Participating Metros	South Africa	Implement Program activities, report on progress, and coordinate with IVA.
IVA	South Africa	Independent verification of DLI achievement.

Annex 4: Economic and Financial Analysis

1. **Economic Analysis Overview.** A cost-benefit analysis was carried out to assess the economic viability of the Project (otherwise referred to the MTSG Program) comparing with- and without-project scenarios, based on data provided by the client and technical assessments. The Project is expected to address chronic weaknesses in South Africa's metro trading services, spanning water and sanitation, electricity, and solid waste management. Existing infrastructure is deemed inadequate, with the lack of investment overtime contributing to the deterioration of performance. This new six-year program will provide performance-based conditional disbursements to drive improvements, with specific reforms addressing operational performance of interest in this analysis. The Project's key benefits subsequently cover the three key sectors, while the net GHG emissions savings from operations are also considered.

2. **Methodology.** The EIRR and ENPV were calculated based on a discounted cashflow analysis by comparing the Project's economic and societal benefits with the Project's cost over thirty years. A sensitivity analysis was performed taking into consideration variations in the Project's expected benefits and costs. Key assumptions include:

- All costs and prices are expressed in USD in constant prices of the base year (2025).
- The assumed USD/ZAR exchange rate is 20.0.
- The financial cost of the Project is estimated at USD3,000 million, spread across the construction period equally.
- The evaluation covers 30 years of Project economic life from 2026 to 2055, including six years of disbursements (a proxy for CapEx in this instance), from 2026 to 2031, and 24 years of operation (2032 to 2055).
- A Standard Conversion Factor (SCF) of 0.97 is used to convert financial costs to economic values. This was calculated using official sources on taxes alongside the latest trade figures.
- The social discount rate is assumed at 9%.

3. **Economic Costs.** The economic costs of the Project consist of the planned disbursements to achieve the Program Objectives as well as annual operating expenses from the proposed activities. The SCF is applied to both in order to appropriately convert from financial costs.

- (i) **Disbursements.** The planned disbursement schedule, determined by the funding envelope for the metro trading services, is appropriated as the upfront costs during the implementation period of six years. They amount to the total project cost of USD3,000 million.
- (ii) **Operating and Maintenance (O&M).** O&M costs are calculated as recurrent costs (a percentage of the expected total investment being allocated to that sector) for water and sanitation, electricity, and solid waste management respectively. The O&M cost estimations are based on Metro Trading Services and Treasury benchmarks. They come to around USD60 million per annum and are accounted from 2032 onwards.

Table A4-1. Recurrent Costs (%)

Water Sanitation	2.8
Electricity	1.6
Solid Waste Management	0.6

4. **Economic Benefits.** The key benefits arising from the Project include: (i) savings from reduced levels of Non-Revenue Water; (ii) health benefits from access to improved water and sanitation services; (iii) savings from reduced electricity losses; (iv) benefits from increased waste removal; and (v) net emissions savings from the new activities.

- (i) **Lower Non-Revenue Water (NRW) Benefits.** The methodology to determine this benefits stream utilizes the current NRW levels for the different metropolitan municipalities – taken from the technical assessment. Currently, water loss trends have been depicting a steady increase over the past 10 years, partly driven by a lack of long-term planning and investment, as well as declining capacity and utility management. Accordingly, the core water and sanitation operational performance indicator under the PIAP list is the reduction of current NRW levels to 28%. Water supply is estimated by first taking official government statistics on water consumption, 21.3m³ per household in 2024, before adjusting by the proportion of NRW losses (Table 4-2). The operational savings arising from a decrease in NRW, specifically leakages, are subsequently valued at the average unit production cost of water, taken from the National State of Water Report.

Table 4-2. Current Levels of Non-Revenue Water (%)

Buffalo City	38
City of Cape Town	25
City of Ekurhuleni	30
City of Johannesburg	46
City of Tshwane	34
eThekweni	54
Mangaung	50
Nelson Mandela Bay	54

Note: The data is sourced from numerous reports, including the International Water Association (IWA) and metro financial statements.

- (ii) **Health Benefits.** The reduced incidence of diarrhea was considered for the calculation of health benefits after improving the access to basic water services, from current levels referred to in the technical assessment (Table 4-3) to the target of 99% household coverage. South Africa's average incidence of diarrheal diseases was retrieved from the Global Burden of Disease (2023) report: estimated at 21%. Then, following Waddington et al (2009), the incidence is assumed to fall to around 13% following improvements in sanitation from the Project.⁴⁷ The overall incremental savings from the avoided costs due to direct production loss and loss from caring for

⁴⁷ <https://www.ircwash.org/sites/default/files/Waddington-2009-Water.pdf>

a sick child for income-earning adults, as well as reduced medical treatment costs for children and the elderly was supported by official labor statistics and the literature.⁴⁸

Table 4-3. Current Access to Basic Water Service (%)

Buffalo City	98
City of Cape Town	98
City of Ekurhuleni	93
City of Johannesburg	98
City of Tshwane	94
eThekwini	79
Mangaung	98
Nelson Mandela Bay	98

Table 4-4. Annual Avoided Health Costs (USD/person)

Avoided costs for income-earning adults	188.6
Avoided costs for children and elderly people	27.1

(iii) **Reduced Electricity Losses Benefits.** Currently, there is a real need to upgrade services as many parts of the electricity distribution system are reaching the end of their operational life. With the necessary disbursements, the Project aims to significantly limit the proportion of electricity losses, from a current average of 22% to 12% of purchases. The total amount purchased is estimated using a breakdown of energy billed across metros taken from the technical assessment on the sector. The savings from a reduction in energy losses is then calculated using average electricity generation cost figures.

(iv) **Waste Removal Benefits.** The unreliability of infrastructure alongside inadequate capacity amidst rapid urbanization has contributed to the unreliability of solid waste management (SWM) in some metros. In this analysis the operational performance indicator pertaining to 98% coverage of weekly basic household waste removal services is utilized to express the sanitation benefits from improved SWM. Using official data on formal and informal households in each metro, along with the official current levels of waste removal services (Table 4-5), the analysis estimates benefits only from the incremental number of households covered under the program. The total incremental savings across all metros achieving the target level are calculated based on avoided health costs, as shown in Table 4-4. For this purpose, the analysis applies the findings of Omang et al. (2021)⁴⁹, which report an average 23% reduction in the incidence of diarrhea resulting from effective waste management.

Table 4-5. Current Access to Basic Waste Removal Service (%)

Formal Households	97.9
Informal Households	93.5

⁴⁸ [Cost of illness for childhood diarrhea in low- and middle-income countries: a systematic review of evidence and modelled estimates - PMC](#)

⁴⁹ [Public health implication of solid waste generated by households in Bekwarra Local Government area - PubMed](#)

- (v) **Emissions Savings Benefits.** The Project is also expected to lower net emissions across the three sectors by 5.3Mt CO₂eq annually and by 111.6Mt CO₂eq over the expected lifetime of assets (Table 4-6). The improvement of sanitation facilities and safe disposal of sewage will reduce GHG emissions in the medium to long term, while increased energy efficiencies and loss reduction contributes to climate mitigation on the electricity side. Meanwhile, solid waste management objectives involve limiting landfill gas flaring and combustion, further bringing down emissions. The net negative emissions are converted into economic savings using the projected carbon shadow price through to 2055, taken from the 2017 “*Report of the High-Level Commission on Carbon Prices*”.

Table 4-6. Annual and Lifetime emission reduction due to the Program (metric tons CO₂eq)

Sector	Annual	Lifetime
Water supply	62,588	1,877,636
Sanitation	410,421	12,312,637
Electricity	3,368,823	67,376,461
Solid Waste Management	1,503,000	30,060,000
Total	5,344,832	111,626,734

5. Wider Socioeconomic and Environmental Benefits that are not included in the analysis:

- (i) **Savings on Water Bills.** Minimized wastage leads to households and businesses also benefiting from the water and sanitation interventions since utility costs can be lowered to reflect more efficient operations. This can also save additional money, as well as time, from accessing water informally (especially in underserved areas). This then allows for income-generating activities or education.
- (ii) **Public Health System Efficiency.** By lowering the prevalence of sanitation-related diseases, the Project will ease the pressure on public healthcare facilities. This reduction in demand allows limited health resources to be directed toward other essential services, improving overall system efficiency. Over time, the metros can realize cost savings through decreased treatment expenditures and reduced need for emergency interventions.
- (iii) **Operational Efficiency and Improved Urban Infrastructure.** The improved efficiency reduces energy and chemical use in water treatment and distribution systems, lowering utility operating costs. This system supports more efficient urban planning by integrating wastewater management into broader municipal infrastructure, helping cities become cleaner, more livable, and more resilient.
- (iv) **Pollution and Ecosystem Benefits.** By preventing untreated effluent, the Project protects rivers, lakes, and oceans. These environmental improvements reduce eutrophication and help preserve aquatic life, contributing to a more sustainable and climate-resilient urban development pathway. Furthermore, if any of these water treatment plants rely on groundwater, the Program will also contribute to reducing groundwater depletion.

6. Therefore, the total benefits of the project are likely to exceed those quantified here, as these additional environmental, human capital, and economic advantages further underscore the long-term value and viability of the planned investments.

7. **Results and Sensitivity Analysis.** Based on the above calculations, the baseline EIRR is computed as 22.78% while the ENPV is estimated at USD3,403 million. The Project is therefore considered economically feasible.

Table 4-7. Total Project Economic Cash Flows (1k USD)

Year	Total Costs	NRW Benefits	Health Benefits	Electricity Losses Benefits	Waste Removal Benefits	Emissions Benefits	Total Benefits	Net Benefits
2026	129648	0	0	0	0	0	0	-129648
2027	240858	0	0	0	0	0	0	-240858
2028	491782	0	0	0	0	0	0	-491782
2029	647438	0	0	0	0	0	0	-647438
2030	674318	0	0	0	0	0	0	-674318
2031	729050	0	0	0	0	0	0	-729050
2032	58225	469774	3073	188779	535	394117	1056241	998016
2033	58225	469774	3113	188779	541	394117	1056288	998062
2034	58225	469774	3154	188779	549	394117	1056335	998109
2035	58225	469774	3195	188779	556	394117	1056382	998157
2036	58225	469774	3236	188779	563	394117	1056430	998205
2037	58225	469774	3278	188779	570	394117	1056479	998254
2038	58225	469774	3321	188779	578	394117	1056529	998304
2039	58225	469774	3364	188779	585	394117	1056579	998354
2040	58225	469774	3408	188779	593	394117	1056630	998405
2041	58225	469774	3452	188779	600	394117	1056681	998456
2042	58225	469774	3497	188779	608	394117	1056734	998508
2043	58225	469774	3543	188779	616	394117	1056786	998561
2044	58225	469774	3589	188779	624	394117	1056840	998615
2045	58225	469774	3635	188779	632	394117	1056894	998669
2046	58225	469774	3683	188779	640	394117	1056949	998724
2047	58225	469774	3731	188779	649	394117	1057005	998779
2048	58225	469774	3779	188779	657	394117	1057061	998836
2049	58225	469774	3828	188779	666	394117	1057118	998893
2050	58225	469774	3878	188779	674	394117	1057176	998951
2051	58225	469774	3928	188779	683	394117	1057234	999009
2052	58225	469774	3979	188779	692	394117	1057294	999069
2053	58225	469774	4031	188779	701	394117	1057354	999129
2054	58225	469774	4084	188779	710	394117	1057415	999190
2055	58225	469774	4137	188779	719	394117	1057477	999251

8. A sensitivity analysis was carried out using a matrix of cost and benefits. EIRR remains above the social discount rate in all scenarios. Even under the most pessimistic scenario, where costs are increased by 15% and benefits are down by 15%, EIRR is still 17.80%.

Table 4-8: Sensitivity Analysis

EIRR Sensitivity Analysis		Benefits				
22.78%		-15%	-10%	0%	10%	15%
Cost	-15%	22.78%	23.80%	25.73%	27.56%	28.43%
	-10%	21.79%	22.78%	24.67%	26.45%	27.31%
	0%	20.02%	20.97%	22.78%	24.49%	25.31%
	10%	18.49%	19.40%	21.14%	22.78%	23.57%
	15%	17.80%	18.69%	20.40%	22.01%	22.78%

ENPV (Million USD) Sensitivity Analysis		Benefits				
3402.28		-15%	-10%	0%	10%	15%
Cost	-15%	2891.94	3179.49	3754.59	4329.69	4617.24
	-10%	2774.51	3062.06	3637.16	4212.26	4499.81
	0%	2539.63	2827.18	3402.28	3977.38	4264.93
	10%	2304.76	2592.31	3167.41	3742.51	4030.06
	15%	2187.33	2474.88	3049.98	3625.08	3912.63

9. **Implications for the Project Implementation.** A large share of benefits arise from reduced NRW and saving from electricity efficiency gains. Therefore, attention should be paid in particular to successfully meeting the desired targets under these two operational performance indicators, in order to fully realize the economic savings. Indeed, both of these indicators have been identified as having the largest weighting in their respective sectors' list of objectives, with NRW accounting for nearly a fifth of the water and sanitation operational performance component, while electricity losses constitute a half of the total electricity and energy operational performance contribution to the DLIs. These indicators also already have an established target, further highlighting the importance placed on their successful completion. Furthermore, the significant reduction in net emissions under the Project contributes greatly to its economic viability. The focus on promoting energy-consciousness in the operations should be continued during the implementation period, providing longer-term climate mitigation benefits that complement the more immediate operational savings and health improvements.

10. **Financial Analysis Overview.** The financial analysis was undertaken to ascertain the financial viability of the Project (otherwise referred to the MTSG Program), with relevant data provided by the technical assessment, sector reports, as well as broader sources. Extensive financial data retrieved includes variables such as tariff rates and utility consumption levels. The key financial indicators are analyzed over the Project's twenty-four-year operational lifetime, following the six-year disbursement period – as is the case for the economic analysis. The focus is on the cost-saving and revenue generating activities arising from the improved operational performance of the metro trading services, enabling a considerable rise in cash flows to fully cover both disbursement and projected operational costs.

11. The Project exhibits a baseline internal Rate of Return (IRR) of 24.75%, with a Net Present Value (NPV) of USD5,211 million (discounted at 11.5% p.a. to 2055). The Project is

therefore considered financially viable. It is therefore also operationally sustainable, implying that external government support should not be necessary.

12. Methodology. The IRR and NPV were calculated based on a discounted cashflow analysis by comparing the Project's revenue incurred with the Project's cost over thirty years. A sensitivity analysis was carried out taking into consideration variations in the Project's expected revenue streams and costs. Key assumptions include:

- All costs and prices are expressed in USD, with an average long-term inflation rate of 4.5% assumed taking IMF projections.
- The assumed USD/ZAR exchange rate is 20.0.
- The financial cost of the Project is estimated at USD3,000 million, spread across the implementation period equally.
- The evaluation covers 30 years of Project financial life from 2026 to 2055, including 6 years of disbursements (a proxy for CapEx in this instance), from 2026 to 2031, and 24 years of operation (2032 to 2055).
- The discount rate is assumed at around 11.5%, representing the average lending rate for local commercial banks.⁵⁰

13. Financial Costs. The planned disbursement amounts and annual operational expenses form the two key cost components for this exercise. A depreciation of infrastructure equivalent to 5% of total disbursements, calculated per annum, is additionally estimated during the Project's operational lifetime.

- (i) **Disbursements.** The disbursement schedule proxies for capital costs in this case as they are linked to the successful rolling out of the metro trading services targets. They amount to USD3,000 million between 2026 and 2031.
- (ii) **Operating and Maintenance (O&M).** O&M costs are again calculated as recurrent costs (as a percentage of the total investment being allocated to that sector) for water and sanitation, electricity, and solid waste management respectively. They are based on Metro Trading Services and Treasury benchmarks. They come to USD60 million per annum and are accounted from 2032 onwards.

14. Tariff Analysis. Key data on tariffs for electricity and waste removal has been sourced from technical assessments. They are projected using the long-term IMF inflation rate for South Africa of 4.5% per annum. The sector studies provided tariff rates per metro, allowing for a more granular calculation of revenue increases under the Project. A tariff efficiency rate of 90% was assumed for electricity and solid waste management – reflecting the wider literature on collection in South Africa's metropolitan areas.⁵¹

Table 4-9. Average Tariffs (2025)

Metro	Electricity (ZAR/kWh)	Waste Removal (ZAR/household/month)
Buffalo City	2.3	390

⁵⁰ [Lending interest rate \(%\) - South Africa | Data](#)

⁵¹ [South Africa water sector investment requirements to 2050](#)

City of Cape Town	2.3	190
City of Ekurhuleni	2.1	260
City of Johannesburg	2.1	335
City of Tshwane	2.1	135
eThekweni	2.0	230
Mangaung	2.4	70
Nelson Mandela Bay	1.9	180

15. **Revenue/Savings from Outputs.** The Project's key operational indicators, as identified in the economic analysis, look to improve coverage and efficiency across the three services: water and sanitation, electricity, and solid waste management. Similarly to before, the performance indicators selected for this analysis are the main revenue-generating ones from each sector that already have a well-defined baseline and target. This proxy for the overall intended improvements in metros' financial health that the Project looks to achieve.

- (i) **Savings from Lower Non-Revenue Water (NRW).** The methodology to determine this stream again utilizes the current NRW levels for the different metropolitan municipalities as extracted from the technical assessment. The target of 28% NRW, compared to the average baseline of 41%, is valued at the unit cost as in the economic analysis. This indicator is expected to incur considerable operational savings for metros from the large decline in water leakages.
- (ii) **Revenue from Reduced Electricity Losses.** The proportion of electricity losses, from the current average of 22%, to 12%, will result in greater purchases by consumers. The metro-specific tariff, as provided in the accompanying sector report, is applied to the change in final purchases to then estimate the projected extra revenue for metros.
- (iii) **Revenue from Improved Waste Removal Coverage.** Key information on tariffs and the target coverage of households across metros for waste removal services was utilized. The projected incremental increase in removal coverage, up to 98% of households for all metros, was compared to the benchmark percentages at the household tariff rate.

16. **Results and Sensitivity Analysis.** Based on the above calculations, the baseline IRR is computed as 24.75% while the NPV is estimated at USD5,211 million.

Table 4-10. Total Project Financial Cash Flows (1k USD)

Year	Total Costs	NRW Revenue	Electricity Revenue	Waste Removal Revenue	Total Revenue	Net Cash Flow
2026	132000	0	0	0	0	-132000
2027	245000	0	0	0	0	-245000
2028	500000	0	0	0	0	-500000
2029	659000	0	0	0	0	-659000
2030	692000	0	0	0	0	-692000
2031	736000	0	0	0	0	-736000
2032	210000	611767	502570	1392	1115730	905730
2033	210000	639297	525186	1474	1165957	955957

2034	210000	668065	548819	1560	1218445	1008445
2035	210000	698128	573516	1652	1273296	1063296
2036	210000	729544	599324	1748	1330617	1120617
2037	210000	762374	626294	1851	1390518	1180518
2038	210000	796680	654477	1959	1453117	1243117
2039	210000	832531	683929	2074	1518534	1308534
2040	210000	869995	714706	2196	1586896	1376896
2041	210000	909145	746867	2324	1658336	1448336
2042	210000	950056	780476	2460	1732993	1522993
2043	210000	992809	815598	2605	1811011	1601011
2044	210000	1037485	852300	2757	1892542	1682542
2045	210000	1084172	890653	2919	1977744	1767744
2046	210000	1132960	930733	3090	2066782	1856782
2047	210000	1183943	972616	3271	2159829	1949829
2048	210000	1237220	1016383	3462	2257066	2047066
2049	210000	1292895	1062120	3665	2358681	2148681
2050	210000	1351075	1109916	3880	2464871	2254871
2051	210000	1411874	1159862	4107	2575843	2365843
2052	210000	1475408	1212056	4348	2691812	2481812
2053	210000	1541802	1266598	4602	2813002	2603002
2054	210000	1611183	1323595	4872	2939650	2729650
2055	210000	1683686	1383157	5157	3072000	2862000

17. A sensitivity analysis was carried out using a matrix of cost and revenues. IRR remains above the discount rate in all scenarios. Even under the most pessimistic scenario, where costs are increased by 15 % and revenues are down by 15 %, IRR is still 19.62 %.

Table 4-11: Sensitivity Analysis

IRR Sensitivity Analysis		Benefits				
		24.75%				
		-15%	-10%	0%	10%	15%
Cost	-15%	24.75%	25.79%	27.77%	29.64%	30.53%
	-10%	23.73%	24.75%	26.69%	28.51%	29.38%
	0%	21.91%	22.89%	24.75%	26.50%	27.34%
	10%	20.33%	21.27%	23.06%	24.75%	25.56%
	15%	19.62%	20.54%	22.30%	23.96%	24.75%

NPV (Million USD) Sensitivity Analysis		Benefits				
		5211.29				
		-15%	-10%	0%	10%	15%
Cost	-15%	4429.60	4850.76	5693.08	6535.40	6956.56
	-10%	4269.00	4690.16	5532.48	6374.80	6795.96
	0%	3947.81	4368.97	5211.29	6053.61	6474.77
	10%	3626.62	4047.78	4890.10	5732.42	6153.58
	15%	3466.03	3887.19	4729.51	5571.83	5992.99

18. **Implications for the Project Implementation.** The considerable reduction in NRW under the with-project scenario is the largest contributor to the financial viability of the Project. Effective revenue collection should be ensured to fully realize this potential cash flow boost to metros, such that they can offset current financial challenges. This also applies to the case of electricity payments – significantly reducing purchase losses provides the municipalities with an expanded revenue base. The disbursement plan should help incentivize the complete adoption of these key objectives.

19. The adjacent financial performance indicators under the Project include strengthening the cash collection rate, operational cash flow, and self-financing ratio of metros. The operational improvements arising from this Project, as discussed above, will consequently establish the long-term financial health of the trading services by supporting these broader targets. Successfully increasing utility supply and access is therefore not only important for the wider economic benefits, but also for capturing revenue streams that can enable sustainable trading services. In this way, any risk of requiring future central government support is minimized.

Annex 5: Country Credit Fact Sheet

A. Recent Economic Development

1. South Africa is an upper-middle-income economy with an income per capita of around USD6,700 and a population of approximately 63 million. Economic performance has been relatively unsatisfactory over the last decade, with the economy growing by an average of 0.7% between 2015 and 2024, compared with 3.1% in the preceding decade. The slowdown was due to chronic power shortages, unsatisfactory infrastructure, low productivity growth, regulatory burden and governance challenges, resulting in a stagnation of living standards with real income per capita in 2024 roughly the same as in 2007. After a strong post-pandemic rebound, growth lost momentum, with the economy growing by 0.7% during 2023 to 2024.

2. A new government took office in June 2024. However, despite an orderly political transition and the absence of power cuts, the economy grew by a mere 0.5% in 2024. Much of the slowdown was caused by the agriculture sector, which contracted by 16% amid adverse weather conditions. While household consumption and net exports contributed positively to growth, domestic investment contracted by about 3%. In contrast, stock market experienced a robust performance, with prices having risen by over 50% since early 2024.

3. Inflation fell from a peak of 7.8% in mid-2022 to 3.4%, as of September 2025, aided by softer global commodity prices, currency appreciation and tight monetary policy. Since September 2024, the central bank, has delivered a total of 125 bps of cuts to reinvigorate credit, which contracted by 0.4% in 2024.

4. Fiscal deficits have been elevated in recent years. The deficit reached about 6.0% of GDP in 2024, largely driven by revenue underperformance, higher debt service payments, support to the electricity sector and some increase in capital expenditure. It is financed through borrowing from domestic and international markets, including a USD3.5 billion Eurobond in November 2024. Persistent fiscal deficits, low growth and pandemic-related spending have resulted in a sharp increase in public debt from 27% in 2010 of GDP to 76% of GDP in 2024.

B. Economic Indicators

Key Economic Indicators	2023	2024	2025*	2026*	2027*	2028*	2029*
Growth 1/	0.8	0.5	1.1	1.2	1.5	1.7	1.8
Inflation 1/	5.9	4.4	3.4	3.7	3.2	3.0	3.0
Fiscal balance	-5.5	-5.8	-6.0	-5.6	-5.3	-5.0	-4.8
Public debt	73.2	76.0	77.3	79.5	81.9	83.9	85.5
Gross public financing needs	14.7	15.0	16.1	14.5	16.2	15.7	17.1
Current account balance	-1.1	-0.7	-0.9	-1.2	-1.6	-1.8	-1.9
External debt	41.5	43.2	44.7	45.1	45.6	46.5	46.9
FX reserves (USD billion) 2/	62.5	65.5	71.6	..	..	..	..
Exchange rate (ZAR/USD) 2/	18.6	18.7	17.1	..	..	..	..

Source: IMF country report 25/28, WEO Oct 2025; in % of GDP unless stated otherwise; ** = projections

Notes: 1/ % change, y/y, average; 2/ most recent data from central bank, end of period, for 2025 as of Nov 14

5. The external position remains generally stable with modest current account deficits comfortably financed by capital flows. However, being a major exporter of agricultural

commodities and minerals, the trade balance is dependent on global commodity prices. Since 2024, higher gold prices have aided a recovery in terms of trade. FX reserves have increased to over USD70 billion on gold revaluation gains, and are adequate, by IMF standards, sufficient to cover six months of imports.

C. Economic Outlook and Risks

6. Growth is expected to rise to 1.1-1.2% in 2025 and 2026, driven by strengthening private consumption and investment, supported by stable electricity generation, monetary easing and improved credit conditions. Pension system reform that will allow members to make partial withdrawal before reaching retirement is also likely to boost consumption temporarily. Growth is projected to reach 1.8% by 2030 as investment improves gradually aided by electricity and logistics reforms.

7. Inflation is projected to stabilize at around 3.0% in the near term, aided by declining commodity prices, a largely closed output gap and inflation expectations within the target range. Monetary policy is expected to remain accommodative accordingly.

8. The current account deficit is expected to widen from 0.9% of GDP in 2025, to around 2.0% by 2030, as rising domestic demand results in higher imports. This is due to rising global commodity prices, including imported energy and exported minerals. FX reserves are expected to remain adequate covering over 4.5 months of imports.

9. The Government plans to follow a path of fiscal consolidation over the next few years to reduce the borrowing requirements and help stabilize public debt. Consolidation will likely be led by expenditure rationalization, as room for more revenue in the short term is small, given relatively high tax intake.

10. According to the IMF, South Africa is at high risk of sovereign stress in the medium term. Fiscal deficit and public debt are elevated, and debt does not stabilize under current policies. That said, the authorities still have time for corrective measures, and hence the overall sovereign stress risk is assessed as moderate. Moreover, deep domestic financial markets, and low FX and short-term debt exposure, are mitigating factors. A credible fiscal consolidation strategy and higher growth will be needed to safeguard debt sustainability.

11. In this regard, implementation of structural reforms to improve governance, business environment and labor-market performance, accompanied by fiscal consolidation, should boost medium-term growth prospects. This is vital to higher growth and lower inequality and unemployment. A downside scenario includes a global slowdown, intensified trade tensions, stalled domestic reforms and financial sector volatility leading to lower growth.

12. In the past year, Fitch and Mody's have affirmed South Africa's sovereign credit ratings at BB- and Ba2, respectively, with stable outlook. In November 2025, S&P upgraded South Africa to BB positive, reflecting stronger growth, sectoral reforms, the ongoing fiscal consolidation with good outcomes, and the potential for further improvements.

Annex 6: RBP Summary Sheet

Project No. and Name	P000988 South Africa Metro Trading Services Program		
AIIB Member	South Africa		
Borrower	Republic of South Africa		
Project Implementation Entities	Nelson Mandela Bay Metropolitan Municipality; Buffalo City Metropolitan Municipality; City of Tshwane; City of Johannesburg; eThekweni Metropolitan Municipality; Mangaung Metropolitan Municipality; City of Cape Town; City of Ekurhuleni		
Proposed Amount of AIIB Financing (USD million)	USD500.00	Instrument type (Instrument subtype)	Loan (Direct Sovereign)
		Currency of financing requested	US Dollar
Sector (Subsector)	Urban (Multi-subsector)	E&S Category and Comments	B
Project Objective	To improve the accountability, financial and operational performance of water supply and sanitation, electricity, and solid waste management services in South Africa's metropolitan municipalities (metros). These improvements will contribute significantly to climate change mitigation and strengthen climate resilience through sustainable, low-carbon urban service delivery.		
Project Description	South Africa's metros, home to 22 million people and generating 85% of its economic output, are at the frontline of both the national development agenda and the climate crisis. Metros are among the largest contributors to greenhouse gas (GHG) emissions in South Africa, accounting for about one-third of national energy-related emissions. They are also increasingly exposed to climate change impacts, including rising temperatures, more frequent droughts, and extreme flooding that place mounting strain on water, energy, and waste systems. Addressing these challenges is therefore essential to achieving South Africa's climate mitigation and adaptation goals and to building resilient, low-carbon urban systems. Metros face increasing challenges in delivering critical municipal services, such as water, electricity, and solid waste management, due to aging infrastructure, poor governance, unsatisfactory revenue collection, and financial mismanagement. These service delivery constraints are exacerbated by rapid urbanization, inherited spatial inequalities, and growing pressure on overstretched systems. To this end, the South Africa Metro Trading Services Program (MTSP) has been designed as a transformative platform to drive climate-smart urban service delivery. The MTSP will provide performance-based conditional grants to metros, incentivizing improvements in governance, operational efficiency, and financial performance across three key sectors: water supply and sanitation (WSS), electricity, and solid waste management (SWM).		

	Climate mitigation and adaptation are central to the MTSP's design. By rehabilitating and modernizing infrastructure, reducing water and electricity losses, and improving waste management operations, the Program will contribute to reducing GHG emissions and promote more sustainable urban practices. For instance, reducing technical and commercial power losses not only improves service efficiency but also lowers emissions. Similarly, modernizing SWM practices, including enhanced waste minimization and collection, and recycling interventions, offers tangible climate mitigation benefits. Overall strengthening service delivery systems through better governance, operational efficiency, and climate-smart investments will help metros mitigate climate change impacts, improve resilience, and foster a more sustainable, low-carbon urban environment, ultimately ensuring long-term sustainability. The Republic of South Africa (the Borrower), through the National Treasury, requested the World Bank (WB), AIIB and other development partners to support the government's program, i.e., MTSP, using the Program for Results (PforR) financing instrument by World Bank and a similar Results-Based Financing (RBF) instrument by AIIB. The Program comprises three Result Areas (RAs) corresponding to WSS, electricity, and SWM services. Each RA will cover each service with a focus on its governance and accountability, financial, and operational performance—key foundations to enable metros to become low-carbon, climate-resilient service providers. Disbursements will be made based on the verified achievement of Disbursement Linked Indicators (DLIs). Metro-level DLIs require each metro to have a council-approved Performance Improvement Action Plan (PIAP) for each of the three municipal services, with progress monitored through the achievement of periodic performance targets outlined in the plans. The PIAP will include measurable climate-focused targets, such as reductions in non-revenue water, technical power losses, and methane emissions from solid waste. This integrated, climate-focused approach, supported by national policy alignment and capacity building, positions the Program as a transformative effort to strengthen metropolitan service delivery, unlock broader climate-adaptive urban development potential, and enable private sector investments.		
Implementation Period	Start Date: January 01, 2026 End Date: March 31, 2031	Expected Loan Closing Date	March 31, 2031
Co-financing type	Co-financing led by another financier	Following other Financier's E&S Policy?	Yes
Lead financier	World Bank	Following other Financier's Procurement Policy?	Yes

Financing Plan	Total Program Cost: USD3,000 million Indicative Financing Plan: AIIB loan: USD500 million (16.7%); International Bank for Reconstruction and Development (IBRD) loan: USD925 million (30.8%); and the Borrower: USD1,575 million (52.5%)
Policy Assurance	To be obtained before submitting for financing approval.

Risk	
Key Risks	Mitigation Measures
Fiduciary	The Program will ensure strong fiduciary oversight through the following measures: (i) conducting annual statutory audit by Auditor-General of South Africa (AGSA) including audit of procurement activities and publishing the findings; and (ii) preparation and adoption of a Program Operations Manual (POM) satisfactory to AIIB and containing a dedicated procurement section.
Political and Governance	The Program will strengthen stakeholder engagement to build understanding and support, while implementing governance reforms to clearly define roles and responsibilities between central and local governments, thereby strengthening sector coordination and decision-making.
Economic Capital (ECap) Consumption	USD89.49 million 17.90%

Strategic Alignment				
Alignment with AIIB's thematic priorities	Green infrastructure			
Alignment with AIIB's strategies	Strategy on Financing Operations in Non-regional Members; Sustainable Cities Strategy; Water Strategy; Sustainable Energy for Tomorrow Strategy			
Key Outcomes	Indicator	Unit of measure	Baseline (Year)	Target (Year)
Urban integrated development	Metros that have met and maintained the Program's Minimum Conditions	Number	0 (2025)	8 (2031)
Urban integrated development	Non-Revenue Water reduction in metros as a result of the Program	percentage	41 (2025)	28 (2031)
Urban integrated development	Electricity losses reduction in metros as a result of the Program	percentage	22 (2025)	12 (2031)
Other Key Financing Requirements				

Conditions of Effectiveness	(i) signing of Project Co-lenders' Agreement between WB and AIIB and all conditions precedent to its effectiveness (other than the effectiveness of the Loan Agreement between the AIIB and the Borrower) have been fulfilled; (ii) effectiveness of Financing Agreement between WB and the Borrower; and (iii) completion of WB's Project restructuring and amendment to WB's Financing Agreement.
Key Conditions for 1st Disbursement	(i) Disbursements will follow the Program's arrangements, specifically linked to the achievement of DLIs.
Key Covenants	The Borrower shall: (i) maintain a Multi-Sectoral Steering Committee; (ii) maintain, until the completion of the Program, a MTSC team at the Intergovernmental Relations Division of the National Treasury, with terms of reference, functions and resources acceptable to WB and AIIB; (iii) ensure each participating metro assigns during Program implementation, an accounting officer to facilitate the coordination of Program activities; (iv) undertake the actions set forth in the Program Action Plan and maintain adequate policies/procedures to monitor and evaluate its implementation, in a manner satisfactory to WB and AIIB; and (v) no later than six months from effective date, appoint and thereafter maintain on an annual basis during the implementation of the Program, the Independent Verification Agent with terms of reference acceptable to WB and AIIB.

President	Jiayi Zou
Chief Investment Officer	Kim-See Lim
Director General	Rajat Misra
Manager	Toshiaki Keicho
Project Team Leader	Sangmoo Kim, Senior Investment Officer, Urban
Project Team Members	Arrad Tabandeh, Investment Analyst, PSC1 Chitambala Sikazwe, Senior Procurement Specialist, SFD David Hartcher, Senior Finance Officer, CTL Ebrima Ceesay, Senior Counsel, LEG Eya Geanella Cruz, Environment Associate, SFD Gregor Herda, Senior Urban Development Consultant, PSC1 Mari Shimizu, Investment Officer, PSC1 Md Kutub Uddin Bakhtiar Sohag, Economist, ECON Rafael Noronha, Senior Social Development Specialist, SFD Jinghui Li, Project Assistant, PSC1 Yijun Jiang, Senior Climate Specialist, STF Yogesh Malla, Senior Financial Management Specialist, SFD

Annex 7. Project Readiness Checklist

Issues	Yes/No/Not Applicable/Work in progress	Remarks
1a. Is there an established government program?	Yes	
1b. If answer to question 1a is “no”, is the project creating a new program? (Yes/No/Not Applicable)		
2. Are RBP boundary and expenditure framework clearly identified, discussed, and agreed with the borrower?		
3. Are RBP boundary and expenditure framework clearly identified, discussed, and agreed with the borrower		
RBP Exclusions 4. Would the proposed RBP include any procurement, E&S, and FM related exclusions. If yes, have they been discussed and agreed with the client. Summarily elaborate the exclusions in the remarks column.	Yes	- Exclusions: Investments causing significant environmental and social harm. - Procurement thresholds: Works: $\geq$ USD100 million, Goods/Non-consulting services: $\geq$ USD50 million, Consulting services: $\geq$ USD20 million.
Disbursement-linked Indicators (DLIs)		
5a. Have the Disbursement linked Indicators (DLIs) identified, discussed, and agreed with the borrower?	Yes	
5b. Has the verification protocol against each DLI developed and agreed with the borrower?	Yes	
5c. Has the independent verification agent (IVA) identified and agreed with the borrower?	Work in progress	IVA will be appointed during the early stage of implementation.
6. Has the RBP action plan been developed, discussed and agreed with the borrower.	Yes	
7. Have the institutional arrangements for RBP implementation been worked out, discussed, and finalized with the borrower?	Yes	
8. Have the provisions for prior results financing (if any) and the advance	Yes	

payment arrangements been clarified and agreed with the borrower?		
9. Have the auditing arrangements and its scope agreed with the borrower?	Yes	
10. Have ESSA results been consulted with the relevant stakeholders and appropriately disclosed (elaborate in the remarks column)	Yes	
11. Have budgetary provisions for first-year project implementation been finalized and confirmed with the borrower?	Yes	