ANNEXURE F

BUDGET SPEECH

Back to Basics for Service Delivery and Inclusive Growth

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City of Ekurhuleni

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ABBREVIATIONS USED

AFS	Annual Financial Statements
ARC	Asset Replacement Cost
CPI	Consumer Price Index
CRC	Current Replacement Cost
CRR	Capital Replacement Reserve
EAP	Economically Active Population
CoE	City of Ekurhuleni Metropolitan Municipality
FY	Financial Year
FYE	Financial Year End
GVA	Gross Value Added
IDP	Integrated Development Plan
IP	Investment Property
IPP	Independent Power Producers
INCA	Infrastructure Finance Corporation
IPM	INCA Portfolio Managers
LTFM	Long Term Financial Model
LTFS	Long Term Financial Strategy
MFMA	Municipal Finance Management Act
MRRI	Municipal Revenue Risk Indicator
MTREF	Medium Term Revenue and Expenditure Framework
MW	Megawatt
NERSA	National Energy Regulator of South Africa
NT	National Treasury
PPE	Property, Plant and Equipment
PV	Photovoltaic
Rm	Rand x 1 000 000

EXECUTIVE SUMMARY

Introduction to the Report

1. This report contains the proposed long-term financial strategy of the City of Ekurhuleni Metropolitan Municipality ("CoE" or "The City"). It is submitted to the municipality for its consideration and adoption.

2. The proposed strategy was preceded by an Independent Financial Assessment of the CoE prepared by INCA Portfolio Managers in April 2021, drawing on the audited financial statements for the past 8 years up to FYE2020. This assessment is attached as Annexure 1. The report in Annexure 1 includes a summary of the latest available information on the demography, economy and household infrastructure of the CoE. Based on the findings of the Independent Financial Assessment, the CoE is in an unhealthy liquidity position (current ratio of 0.8:1), with key metrics trending in the wrong direction which is indicative of potential financial risks. The risks include consistently low collection rates, deteriorating liquidity levels, high creditor payment days ratios and significantly reduced gross surplus margins from the sale of Electricity and Water Services. Although the city still maintains a positive cash bank balance and is able to provide ongoing services to residents, its ability to upgrade infrastructure and address infrastructure backlogs, may be severely curtailed if the negative trends are not addressed.

3. Available documents of the city were assessed and interviews with some of the executive directors of the municipality were conducted between 4-6 August 2021. This was done with the purpose of identifying key focus areas that could impact on the long-term financial sustainability of the city and to inform proposals regarding future strategies to pursue.

4. The city's cash needs against the revenue it can expect to generate, based on the economy and population of the sub-region, was modelled to determine the future financial sustainability of the city.

Key Findings

5. The following summary observations, pursuant to the independent financial assessment for the historic period 2011/12 to 2019/20 and the interpretation of the socio economic and infrastructure data published by IHS Global Insight Rex database, were made:

    5.1. The City of Ekurhuleni MM has a total population of 3 774 542 (2019). The population growth is 2.05% p.a, with the working age group of 25-64 years making up 52% of the total population, of which 47.6% of the population is being regarded as economically active.

5.2. Although the annual per capita income of R 77 205 is higher than the national average (R 60 767), it is below the provincial average of R 85 518.

5.3. Despite the increase in the annual per capita income over the past ten years, 24.4% of households earn income below R 42 000[1] per annum.

5.4. Economically Active People (EAP) increased from1 470 747 in 2010 to 1 798 202 in 2019 (47.6% of total population), however the official unemployment rate also increased from 29.6% in 2010 to 33.8% in 2019. This rate is above the national unemployment rate of 28.4%.

5.5. Gross Value Add (GVA) in constant 2010 prices of the City of Ekurhuleni MM is reported at R 191 billion.

5.6. GVA shrunk by 0.7%. p. a. in 2019. This contraction in the economy and the population growth of 2.05% in the same period, resulted in a decreased GVA per capita for the year.

5.7. The provision of basic service has improved over the past 10 years as indicated by an increased infrastructure index from 0.81 in 2009 to 0.83 in 2019. This compares favourably to the national (0.75) index, however, this index is slightly below the provincial (0.85) index.

5.8. The City of Ekurhuleni MM's 2018 service delivery challenges are represented by 13.8% electricity backlogs and 10.5% refuse removal backlogs, compared to the 18.9% electricity and 9.9% refuse removal backlogs from 2009.

5.9. The liquidity ratio has deteriorated since FYE2015 (1.8:1) to 0.92:1 as at FYE2020 – significantly below the NT recommended benchmark of 1.5:1. A ratio below 1 means current liabilities exceeded current assets, this indicates financial challenges and an unhealthy liquidity position whereby the city is unable to meet its current obligations when they fall due. The exclusion of debtors greater than 30 days (least liquid debtors) results in further deterioration of this ratio to 0.8:1.

5.10. The City of Ekurhuleni incurred operating deficits for the past couple of years. The deficit decreased from R 3.021 billion in FY2019 to R 2.254 billion in FY2020.

[1] The Division of Revenue At uses a monthly household income equivalent to two state old age pensions to define the Equitable Share affordability threshold. This income is approximately R 42 000 p.a.

5.11. The deterioration in profitability is partly due to significant reductions in the gross surplus margins on main municipal services:

a. Electricity margins declined from 31.1% in FY2014 to 21.8% in FY2020, and
b. Water margins declined from 23.5% in FY2014 to 14.3% in FY2020

5.12. The collection rate as at FYE2020 was 84%, significantly lower than the National Treasury benchmark norm of 95%.

5.13. Notwithstanding operating deficits and a low collection rate, the City of Ekurhuleni generated cash from its operations. This is attributed to delayed payment of creditors as indicated by the creditors' payment period increasing to 143 net creditor days as at FYE2020, exceeding the NT benchmark of 30 days.

5.14. Staff Costs as a percentage of total operating expenditure decreased from 24% in FY2013 to 20% in FY2020, below the NT minimum benchmark of 30%. Contracted Services in FY2020 as a percentage of total operating expenditure of 6% has, however, exceeded the NT norm of 5%; a trend over the last couple of years.

5.15. Expenditure on repairs and maintenance as a percentage of property, plant and equipment (PPE) and investment property (IP) has increased over the last 8 years from 3% in FY2013 to reach the NT norm of 8% in FY2020.

5.16. Cumulative capital expenditure for the past 8 years of R 33.5 billion was primarily funded through capital grants (44%), followed by cash resources (31%) and external borrowings (25%).

5.17. Considering the low levels of cash generation and the utilisation of cash resources to fund capital expenditure over the 8-year period, the City of Ekurhuleni's cash position has significantly deteriorated. This negatively impacted the liquidity position with the cash balance not meeting the minimum liquidity requirements, with a cash shortfall of R 2.53 billion, as at FYE2020.

Conclusions drawn from Financial Model

6. A long-term financial model was developed, based on the FYE2020 AFS of the municipality and populated with several assumed variables. A summary of the outcome of the Base Case of the model is presented in TABLE 1.

TABLE 1: BASE CASE FINANCIAL OUTCOME

Outcome	10-Years up to 2030
Average annual % increase in Revenue	6.8%
Average annual % increase in Expenditure	6.0%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425
Operating Surplus accumulated during Planning Period (Rm)	**-R 12 256**
Cash generated by Operations during Planning Period (Rm)	R 22 940
Average annual increase in Gross Consumer Debtors	12.3%
Capital investment programme during Planning Period (Rm)	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8
Liquidity Ratio at the end of the Planning Period	12: 1
Gearing at the end of the Planning Period	20.1
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%

7. We conclude that subject to disciplined future financial management, we estimate that in the ***Base Case Scenario*** the municipality will, over the planning period from FY2021 to FY2030, accumulate an accounting surplus of R 13 425 million, but generate an operating deficit of R 12 256 million , mainly because of the above CPI increases in operating expenditure over the MTREF period viz other materials, contracted services and bulk purchases. It will be able to invest in a capital programme of R 43 257 million which will be partly funded by R17 308 million from external borrowings. It should be able to hold cash and cash equivalents of R 14 104 million at the end of the planning period.

8. Capital demand over the planning period is expected to be R 174 285 million (Ekurhuleni estimate of new capital expenditure demand of R98 392 million plus IPM estimated replacement cost of R 75 893 million)

Recommendations

9. Chapter 13 of the main report contains a comprehensive list of recommendations. These recommendations are based on the historic independent financial assessment and long-term financial model. In summary, a financial strategy is recommended that prioritises the improvement of liquidity and very specifically:

    9.1. Tariff increases that are cost reflective and maintain a healthy margin.

9.2. Working capital management by progressively reducing days receivable (improvement of the consumer billings collection rate)

9.3. Should the CoE settle its creditors at once, its cash balance will deteriorate significantly, therefore the CoE should consider renegotiating with some or all its largest creditors

9.4. Improve productivity by optimising the use of contractors and employees. These expenditure items need to be managed in close relation with the expected income and very specifically the operational grants expected from the national fiscus.

9.5. Increase spending on repairs and maintenance to at least 3.9% of PPE and IP assumed in the reference case, should the financial situation of the city improve, the CoE should prioritise increasing this expenditure to reach the NT norm of 8%.

9.6. Improved budgeting and project management processes i.e., improve the monitoring and management of work performed by external service provider work to ensure the services provided and work performed are to the CoE's specified standard.

9.7. Implement an integrated water loss management programme.

9.8. Introduce a capital prioritization process.

9.9. Considering the high capital demand, it is recommended that the CoE prioritises a cash backed capital replacement reserve (CRR) for this purposes. It would be prudent to transfer the full depreciation charge to the CRR once liquidity improves and cash balances are available. Once the CRR has built up a significant balance, the CoE should avoid depleting its CRR in any given financial year but use a percentage of (say 50%) of their prior year balance for assets that require replacement. An asset replacement programme within the levels of available resources in the CRR will go far in quantifying the future replacement budget.

1. INTRODUCTION

1.1. This report is the outcome of an assignment undertaken by INCA Portfolio Managers ("IPM") pursuant to an appointment under tender RFP233/2020 of the Development Bank of Southern Africa ("DBSA"), on behalf of the National Treasury Cities Support Programme, to develop a Long-Term Financial Strategy ("LTFS") for the City of Ekurhuleni Metropolitan Municipality for a period of 10 years from 1 July 2021 to 30 June 2030, based on a Long-Term Financial Model ("LTFM").

1.2. In this assignment, a historic financial assessment of the municipality with the financial information up to 30 June 2020 has been included.

1.3. Based on a review of various documents made available by the municipality, as well as interviews with the management of the municipality, this document reflects on the capital investment requirements and financial strategies to be pursued by the municipality. The capital expenditure demand, consisting of asset replacement costs and new capital investments, is evaluated against the capacity of the municipality to afford these future capital expenses. As part of the evaluation the potential future municipal revenues, based on the economy and population of the sub-region, has been estimated. These revenues will in turn inform the funding mix that the municipality can access to finance its future capital needs.

1.4. The recommendations reflect the outcome of the analysis in this report and aim to ensure the long-term financial sustainability of the City of Ekurhuleni Metropolitan Municipality.

1.5. The following sources of information have been scrutinised and taken into consideration in the conclusion of the Independent Financial Analysis (IFA) and the development of this LTFS:

a. The audited financial statements for the years ending 30 June 2011 to 30 June 2020.
b. The Medium-Term Revenue & Expenditure Framework 2020/2021 – 2023/2024.
c. Various other strategy and planning documents of the municipality that are publicly available.
d. Economic, demographic, and household infrastructure data extracted from IHS Global Insight's Regional Explorer.

2. OBJECTIVES OF THE LONG-TERM FINANCIAL STRATEGY

2.1. The purpose of a long-term financial strategy is to recommend strategies and policies that will maximise the probability of the municipality's financial sustainability into the future. This is achieved by forecasting future cash flows and affordable capital expenditure based on the municipality's historic performance and the environment in which it operates.

2.2. The strategy provides guidelines, within the context of an uncertain future, of what the municipality can afford. The strategy does not prescribe what the municipality should implement.

2.3. The generic process (adapted for each municipality pending availability of data) that IPM follows in reaching the objective of the Long-Term Financial Strategy is illustrated in the diagram below:

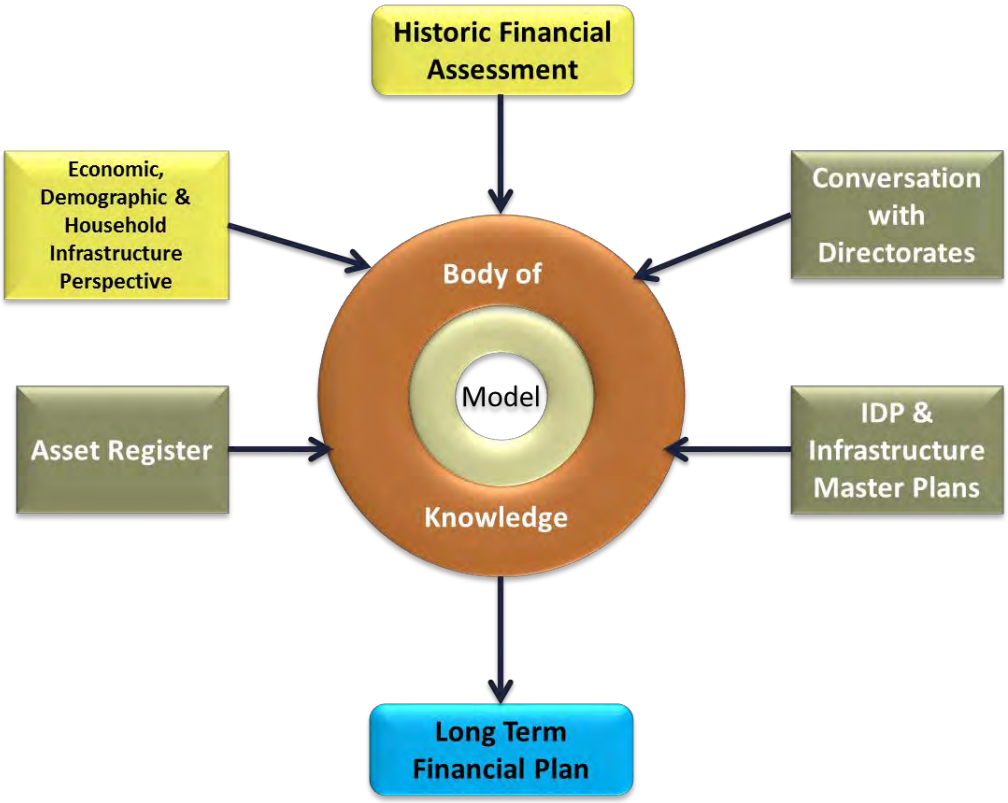


FIGURE 1: PLANNING PROCESS

3. PERSPECTIVE

An assessment of the City of Ekurhuleni Metropolitan Municipality's historic financial performance for the period 2013 to 2020 is presented in more detail in Annexure 1: *City of Ekurhuleni Metropolitan Municipality: Independent Financial Assessment against the context of the Municipality's Demographic, Economic & Household Infrastructure Situation, April 2021,* which highlights the following:

- The Total Population of 3 774 542 (2019) is growing at a relatively high rate of 2.05% p.a., relative to the South African population growth rate of 1.5%.
- This population growth rate is higher than the average economic growth of 0.6% p.a., indicating a decline in the economic output per capita.
- The official unemployment rate is 33.8%.
- The economy is dominated by the Manufacturing, Trade, Transport, Finance and Community Services sectors, contributing a combined 93% to GVA output.
- Infrastructure backlogs have reduced over the past ten years, however, the infrastructure index of 0.83 indicates that the provision of services in the city is below the provincial average, but higher than the national average.
- The municipality's liquidity deteriorated sharply since FYE2015 from a healthy current ratio of 1.8:1 to 0.92:1 as at FYE2020. This can be attributed to the deterioration of operating surpluses that resulted in lower levels of cash generation (worsened by a reduced collection rate over the same period) and a less than optimal funding mix for capital expenditure which utilised a significant amount of cash resources.

3.1. An assessment of City of Ekurhuleni Metropolitan Municipality's historic financial performance for the period 2013 to 2020 is presented in more detail in Annexure 1: *City of Ekurhuleni Metropolitan Municipality: Independent Financial Assessment against the context of the Municipality's Demographic, Economic & Household Infrastructure Situation, April 2021* This is summarised below:

Spatial & Demographic Perspective

3.2. The City of Ekurhuleni MM has a total population of 3 774 542 (2019). The population growth is 2.05% p.a, with the working age group of 25-64 years making up 52% of the total population, of which 47.6% of the population is being regarded as economically active.

3.3. Although the annual per capita income of R 77 205 is higher than the national average (R 60 767), it is below the provincial average of R 85 518.

3.4. Notwithstanding the increase in the annual per capita income over the past ten years, 24.4% of households earn income below R 42 000[2].

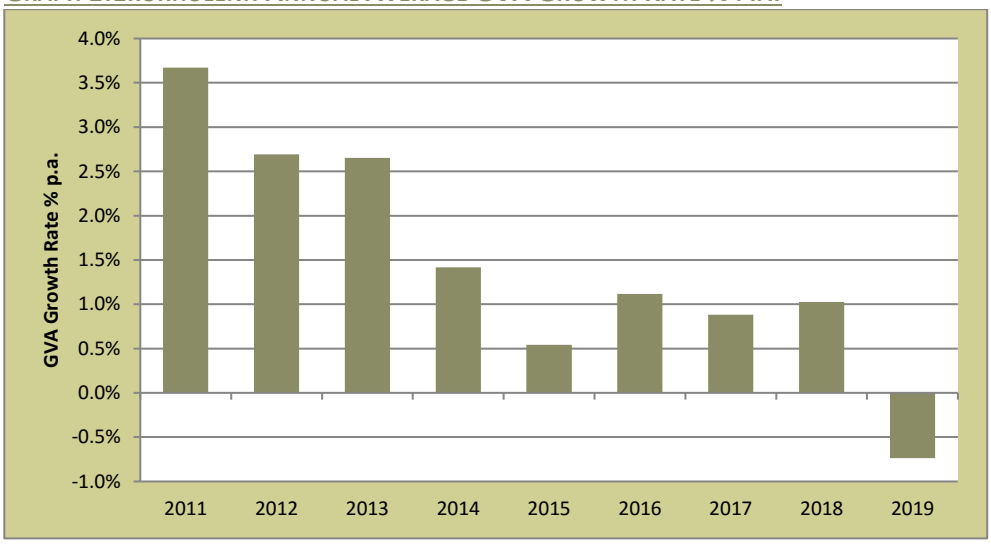
3.5. Economically Active People (EAP) increased from 1 470 747 in 2010 to 1 798 202 in 2019 (47.6% of total population), however the official unemployment rate also increased from 29.6% in 2010 to 33.8% in 2019. This rate is above the national unemployment rate of 28.4%

Economic Perspective

3.6. Gross Value Add (GVA), in constant 2010 prices, of the City of Ekurhuleni MM is reported at R 191 billion.

3.7. GVA shrunk by 0.7%. p.a. in 2019. This contraction in the economy and the population growth of 2.05% resulted in a decreased GVA per capita for the year.

GRAPH 1:EKURHULENI: ANNUAL AVERAGE GVA GROWTH RATE % P.A.



[2] The Division of Revenue At uses a monthly household income equivalent to two state old age pensions to define the Equitable Share affordability threshold. This income is approximately R 42 000 p.a.

3.8. The Manufacturing, Trade, Transport, Finance and Community Services sectors are the main contributors to the local economy, contributing approximately 93% to the GVA.

TABLE 2: SECTOR SHARE OF TOTAL GVA: EKURHULENI

	2010	2019
1 Agriculture	0.4%	0.4%
2 Mining	3.0%	1.9%
3 Manufacturing	24.1%	22.1%
4 Electricity	2.7%	0.5%
5 Construction	3.9%	3.8%
6 Trade	13.2%	14.1%
7 Transport	11.2%	11.7%
8 Finance	21.3%	24.0%
9 Community services	20.1%	21.6%

3.9. 24.4% of households are earning an income less than R 42 000 p.a. and qualify for free basic services. A high number of people working in the Manufacturing, Trade, Transport, Finance and Community Services contribute to the average annual household income of R 238 430 p.a. This is higher than the national average household income of R 210 993 p.a.

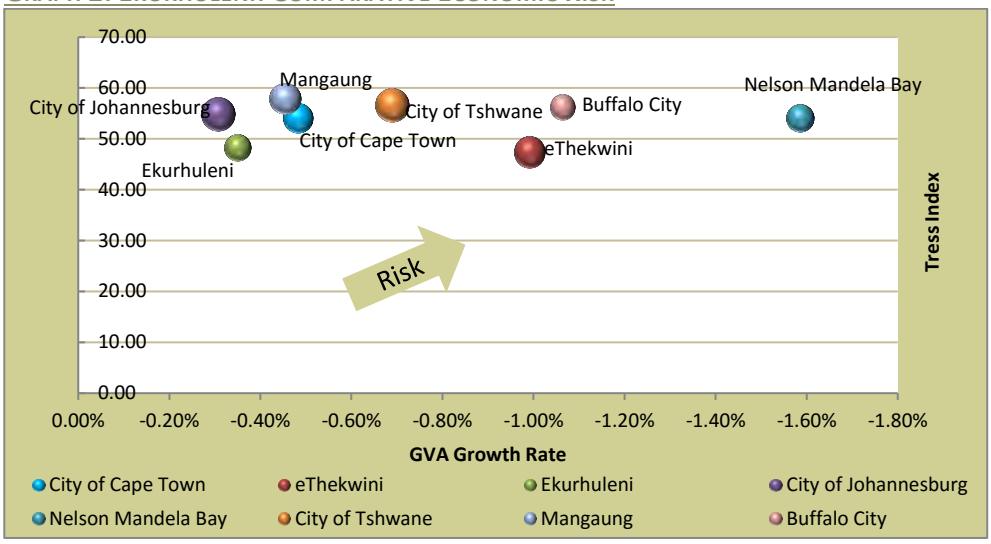
3.10. As the largest contributor to GVA, the Finance sector is also the largest provider of employment in the region, employing approximately 285 000 people in 2019.

3.11. A marked decrease in tourism trips was recorded; decreasing from 2 621 883 trips in 2010 to 1 993 833 in 2019, with the main purpose for the trips being to visit friends and relatives. Tourism spend was R 21.6 billion in 2019, contributing only 7.3% to GVA.

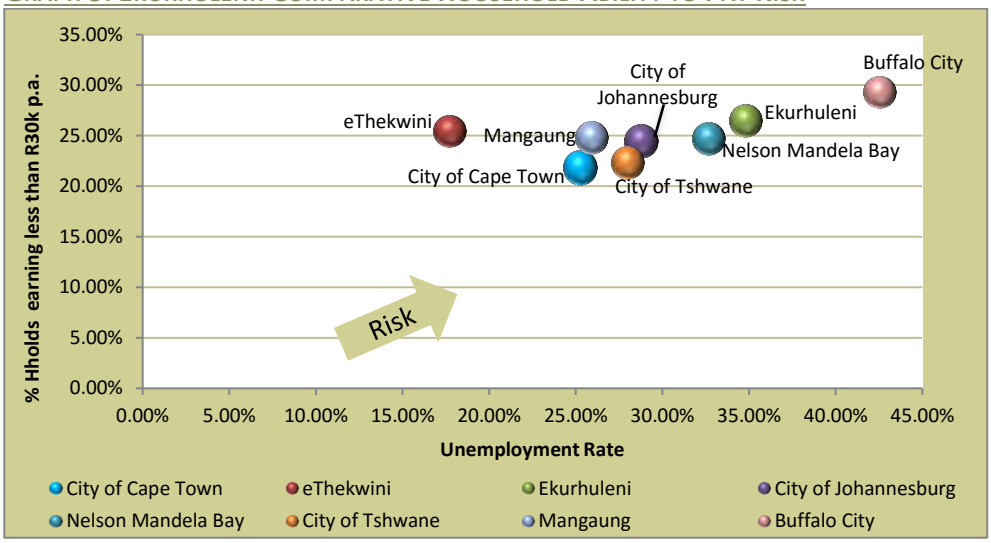
3.12. IPM has developed the Municipal Revenue Risk Indicator ("MRRI"), which measures the risk of a municipality to generate its own revenues. This risk is on the one hand a function of the economy (size of the economy as measured by the GVA per capita, GVA growth rate and Tress Index) and on the other a function of households' ability to pay (measured by the % of households with income below R42 000 p.a., unemployment rate and Human Development Index).

3.13. The regional economy and the ability of households to pay for services delivered by the municipality, rates the City of Ekurhuleni MM as a "high" risk on IPM's Municipal Revenue Risk Indicator scale. There is a high risk that the city will not be able to generate enough own revenue in future. The following graphs illustrate the City of Ekurhuleni MM's relative position in comparison to other metropolitan municipalities.

GRAPH 2: EKURHULENI: COMPARATIVE ECONOMIC RISK



GRAPH 3: EKURHULENI: COMPARATIVE HOUSEHOLD ABILITY TO PAY RISK



Household Infrastructure Perspective

3.14. The provision of basic service has improved over the past 10 years as indicated by an increased infrastructure index from 0.81 in 2009 to 0.83 in 2019. This compared favourably to the national (0.75) index, however, this index is below the provincial (0.85) index.

3.15. The City of Ekurhuleni MM's 2018 service delivery challenges are represented by 13.8% electricity backlogs and 10.5% refuse removal backlogs, compared to the 18.9% electricity and 9.9% refuse removal backlogs from 2009.

Financial Perspective

3.16. The liquidity ratio has deteriorated since FYE2015 (1.8:1) to 0.92:1 as at FYE2020 – significantly below the NT recommended benchmark of 1.5:1. A ratio below 1 means current liabilities exceed current assets, this indicates financial challenges and unhealthy liquidity position whereby the city is unable to meet its current obligations when they fall due. The exclusion of debtors greater than 30 days (least liquid debtors) results in further deterioration of this ratio to 0.8:1.

3.17. The City of Ekurhuleni incurred operating deficits (excluding capital grants) for the past couple of years. This deficit decreased from R 3.021 billion incurred in FY2019 to R 2.254 billion in FY2020.

3.18. The deterioration in profitability is partly due to significant reductions in the gross surplus margins on main municipal services:

- Electricity margins declined from 31.1% in FY2014 to 21.8% in FY2020, and
- Water margins declined from 23.5% in FY2014 to 14.3% in FY2020

3.19. The collection rate as at FYE2020 was 84%, significantly lower than the National Treasury benchmark norm of 95%.

3.20. Notwithstanding operating deficits and the low collection rate the City of Ekurhuleni generated cash from its operations. This can be attributed to delayed payment of creditors as indicated by the creditors' payment period of 143 net creditor days as at FYE2020, exceeding the NT benchmark of 30 days.

3.21. Staff Costs as a percentage of total operating expenditure decreased from 24% in FY2013 to 20% in FY2020, below the NT minimum benchmark of 30%. Contracted Services as a percentage of total operating expenditure at 6% in FY2020 has, however, exceeded the NT norm of 5% over the last couple of years.

3.22. Expenditure on repairs and maintenance as a percentage of property, plant and equipment (PPE) and investment property (IP) has increased over the last 8 years from 3% in FY2013 to reach the NT norm of 8% in FY2020.

3.23. Cumulative capital expenditure for the past 8 years of R 33.5 billion was primarily funded through capital grants (44%), followed by cash resources (31%) and external borrowings (25%).

3.24. Considering the low levels of cash generation and the utilisation of cash resources to fund capital expenditure over the 8-year period, the City of Ekurhuleni's cash position has significantly deteriorated. This negatively impacted the liquidity position, with the

cash balance not meeting the minimum liquidity requirements, recording a cash shortfall of R 2.53 billion as at FYE2020.

3.25. City of Ekurhuleni MM achieved a shadow credit rating of 4.3 on the INCA Shadow Credit Rating Model. This is “Investment Grade” and equates to a “BBB+” rating on the National Credit Ratings Scale.

4. KEY FOCUS AREAS

This section summarises key issues raised and discussed during the discussions with the City of Ekurhuleni's directorates. This is a key part of the LTFS process and help needed to get a better understanding of key issues the city is dealing with that may impact on the financial sustainability of the city in future. Importantly, it ensures that the desktop work is aligned with the realities at ground level. These discussions enhance our understanding and enables us to reach accurate conclusions.

Key Focus Areas identified during conversations with officials of the municipality and issues raised in the municipality's IDP are synthesized into the following main points:

- Low economic growth and high unemployment
- COVID-19 impact
- Low Collection Rate
- Aging infrastructure
- Limited financial resources
- Lack of project management
- Growth in informal settlements
- High housing backlogs
- High distribution losses
- Requirement for technological enablement in the City's procedures

4.1. Low economic growth and high levels of unemployment

At a macro-economic level, the CoE was experiencing sluggish economic growth, pre-COVID-19. It follows then that the unemployment rate in the city would be high. The City has seen a growth in its population over the years, specifically increase in number of informal settlements, with the majority of these households requiring indigent support. All these factors have negatively impacted the city's ability to generate cash revenue with a sizable portion of households not being able to pay for municipal services. COVID-19 has further exacerbated this problem as indicated 4.2 below.

4.2. COVID-19 Implications

COVID-19 and its implications expectedly had significant impact on the City of Ekurhuleni ("CoE"). The most severe impact was on the City's ability to generate cash from its operations, as a result of a reduced collection rate to 84% as at FYE2020, compared to FY2019's rate of 87% resulting from: 1) the economic (GVA) deterioration resulting from the COVID-19 associated lockdown; 2) resultant job losses which reduced the real household income, 3) the closure of various businesses that could not survive the lockdowns.

The City's capital investment programme has also been significantly impacted by COVID-19. Various projects were delayed due to the resultant lockdown, which has placed the city at a disadvantage, considering the detrimental state of the current infrastructure i.e., aged infrastructure, lack of repairs and maintenance.

The reduced ability to generate cash from operations has contributed to various "budget cuts" which have impacted departmental operations e.g., reduced repairs and maintenance of infrastructure, delayed hiring or filling of critical vacancies, prioritisation of funds towards critical projects to the detriment of other departments, additional expenditure incurred in response to the COVID-19 pandemic, additional unbudgeted operating expenditure.

4.3. Financial Resources are limited

The city's limited financial resources are reflected in the independent financial analysis and the historical trend analysis. Factors impacting on the revenue are:

- ESKOM distributing and collecting revenue in various part of the City, not only limits the scope to generate a positive cash return on a larger portion of trading services, but also impacts negatively on the City's credit control i.e., there is a low collection rate for payment of other basic services in these areas, and the municipality does not have the legal mandate to withhold such services.
- Revenue collection which has been negatively impacted by COVID-19 - 84% collection rate.
- The growth in indigent households over the years, with the equitable share not being sufficient to cover the full cost of providing basic services to these households.

4.4. Electricity Distribution

The City of Ekurhuleni currently sources a significant portion of its electricity bulk purchases from ESKOM. In an effort to reduce the harmful effects on the environment in the form of fossil fuels utilised to generate this electricity supply, the city approved an Energy and Climate Change Strategy in 2007 with the aim to diversify the energy supply to include renewable and cleaner energy sources to affect this strategy. The "*Network Master Plan Update, Final Study Report, 31 October 2019*" indicates that the city seeks to allocate suitable land parcels on its Zestfontein site to the successful IPP to construct 10 MW solar PV farms, totalling 90 MW.

The updated network masterplan did not include a refurbishment plan and, as a result, the determined capital cost demand is potentially higher than anticipated. The following were recommended in this regard:

- The City of Ekurhuleni (CoE) should do an audit of all the transformers that are being replaced due to capacity upgrades to determine their remaining lifespan

and reuse these transformers where they are required to optimize the capital expenditure where possible.

- The CoE to integrate the master plan with the refurbishment plan to optimize on capital expenditure and avoid wasteful expenditure.

4.5. Ageing Infrastructure

Ageing infrastructure has been identified as one of the major challenges for the city. This is further exacerbated by the insufficient repairs and maintenance over the years, vandalism and urbanisation which has placed significant pressure on the current infrastructure.

Electricity infrastructure

The network masterplan predicts an estimated R 2.354 billion capital expenditure demand over the 20-year period (2020 – 2040), with most of the demand (R 762 million) allocated for 2020. With the advent of COVID-19, these projects had to be stalled. This will negatively impact the supply of electricity in light of the growing demand resulting from urbanisation and the identified aging infrastructure.

Waste Water Treatment Infrastructure

Waster Water Treatment Infrastructure has specifically been identified to having reached critical state and require immediate capital investment. The city has seen growing demand for water and sanitation services, especially with the growth in the number of informal settlements. This has placed pressure on the current system which was not originally designed to meet the current demand.

Roads and Stormwater

The city has noted rapid deterioration of the roads and stormwater infrastructure which resulted in increases in flooding and damage to the roads and private properties. The SDBIP indicates the following as some of the contributing factors:

- Budget constraints for planning, implementation, and maintenance
- Inadequate capacity of the stormwater system
- Incomplete master planning and therefore inadequate forward planning by the department
- Backlog in bulk stormwater networks
- Insufficient maintenance
- Legal compliance constraints (court orders),
- Inhibiting and restrictive supply chain processes

4.6. Outsourcing (external service providers)

The following has been identified in relation to the outsourcing of services:

- Poor performance from certain service providers, resulting in the city having to incur additional costs in rectifying this.
- Certain service providers low-balling just to be contracted and subsequently increasing their prices.
- Spending on contracted services that exceeds the NT norm of 5%

4.7. Project Management

There is an overall concern when it comes to project management, specifically when it comes to roles that service providers and the city's project managers play. These has been blurred, resulting in contract disputes with service providers, incomplete projects due to lack of oversight and costly legal disputes.

4.8. Human Settlements

Increase in informal settlements

The increase in the number of people residing in the City of Ekurhuleni and especially the significant increase in informal settlements, as a result of urbanisation, presents the following service delivery challenges:

- Densification of urban areas through informal settlements has impacted the living conditions and surrounding environment, specifically grey water management.
- The extension of household infrastructure services (water, electricity, sanitation and refuse removal) is placing strain on current infrastructure, that is ageing, and on bulk service capacity. This relates to fixed as well as movable infrastructure capacity.
- An increased demand for housing, adding to the significant housing backlog.

The 2019/20 annual report indicates that, in response to this increase in the number of informal settlements (totaling 118), the CoE has committed to an Action Plan to make informal settlements more habitable through the upscaling of services:

- Electrification programmes are currently in progress across all informal settlements such as Mayfield Ext 45 and Eden Park substation
- The provision of waste removal services
- Installation of 10 886 photovoltaic solar units, exceeding the annual target of 8 336 connections
- Provision of chemical toilets - demand for these increased as a result of COVID-19 - currently 41 083 chemical toilets.
- Provision and upgrading of sewer and water networks

Housing

The CoE has the following programmes in place for the execution of its housing mandate:

- Serviced stands
- Upgrading of informal settlements
- Mega projects (IRDP) and house construction
- Urban renewal
- CoE owned stock refurbishment and hostels.

With regards to the construction of houses, the CoE is faced with significant backlogs, exacerbated by urbanization and the growing number of informal settlements. To address the growing number of informal settlements, the CoE is providing "Interim Basic Services" as part of its "Pro-Poor Agenda", whilst the inhabitants are still waiting for the upgrading of informal settlements or relocation to their completed housing. This has been done through the implementation of what the "re-blocking programme" i.e., aimed at re-arranging informal structures in targeted settlements to improve access for emergency vehicles and provision of basic interim services

As human settlements are grant funded through the fiscus and there is a condition placed on the grant funding that the city is not accredited to build houses, it is rather responsible for the provision of bulk infrastructure. This condition also contributes to the growing housing backlog.

The human settlements capital projects budget was reduced in the 2019/20 adjustments budget due to the impact of COVID-19. However, there was also underspending by a variance to original budget of 18%. The following were identified as impediments to spending, in addition to COVID-19 impact of lockdown and delays:

- Service provider delays e.g., contactor not in the required CIBD grading, management of cash flows and project management.
- Community disruptions on site, however, political leadership has been able to intervene in this regard in resolving community issues.

4.9. Distribution Losses

The high distribution losses have been noted as the main challenge for the city. As at FYE2020, water distribution losses and electricity distribution losses were 30.26% and 14.12% respectively, both exceeding their respective NT benchmarks of 10% and 30%. The following have been identified as the main contributors to the increased distribution losses:

- Aged infrastructure
- Illegal connections
- Vandalism

4.10. Technology

The City acknowledged the need for technology advancement, considering that certain functions are still done manually. This requires capital investment which has been regarded as lower priority considering the other infrastructure needs of the city.

4.11. Human resources

The CoE has identified the following as challenges experienced in relation to its human capital:

- Various departments have noted that there are vacant posts which take longer to fill, this was specifically experienced in the FY2020 due to the impact of COVID-19.
- There is a concern of a loss of institutional memory or lack of skills transfer in terms of infrastructure management with the retirement of staff at lower management level (specialised skills).

5. DEMAND FOR FUTURE CAPITAL EXPENDITURE

Based on IPM's estimate of future asset replacement cost and the City's estimation of cost to provide new assets, the capital expenditure demand over the 10-year planning period, amounts to R 174 285 million. This amount is considerably higher than the estimated affordable capex.

The estimates assume that the capex demand will be spread as follows over the 10-year period.

ESTIMATED 10-YEAR CAPITAL EXPENDITURE DEMAND (R MILLION)

		1	2
	TOTAL	**2021 – 2025**	**2026 - 2030**
Estimate Total Capex Demand	**157 591**	**78 753**	**78 838**

Asset Replacement Expenditure Demand

5.1. The replacement cost at a future replacement date for all the assets in the asset register was determined. "Replacement" could also imply rehabilitation, enhancement (upgrade) or renewal (refurbishment) of that asset, but excludes routine repairs and maintenance.

5.2. The calculation is done mechanistically and does not cater for engineering judgement. The information in the municipality's asset registers was used to estimate the future replacement cost. The model calculates the Replacement Cost (in nominal terms) of assets for the Planning Period, i.e., up to and including 2030. Some asset classes were not reviewed for replacement, viz. "Land", "Heritage Assets" and "Intangible assets - Servitudes". Whereas most assets in the asset registers had complete records regarding current replacement cost, estimated useful life and remaining useful life, the "Moveable assets" register was set up differently, and replacement cost had to be estimated based on original acquisition cost and estimated useful life.

5.3. The outcome of this analysis and the Annual Replacement Cost ("ARC") is presented in Annexure 4: Assets Earmarked for Replacement.

5.4. According to a mechanistic calculation, the nominal replacement cost for the 10-year period from 2020/21 to 2029/30 and added to the replacement not undertaken in 2019/20 and before, amounts to R 59 billion. The replacement of assets in the Roads and Stormwater category amount to almost 43% of this amount. The relatively low 1.9% that Sanitation assets comprise of the total replacement cost is largely due to the fact

that the bulk assets that serve the municipality (e.g. Waste Water Treatment Works) are owned and operated by ERWAT.

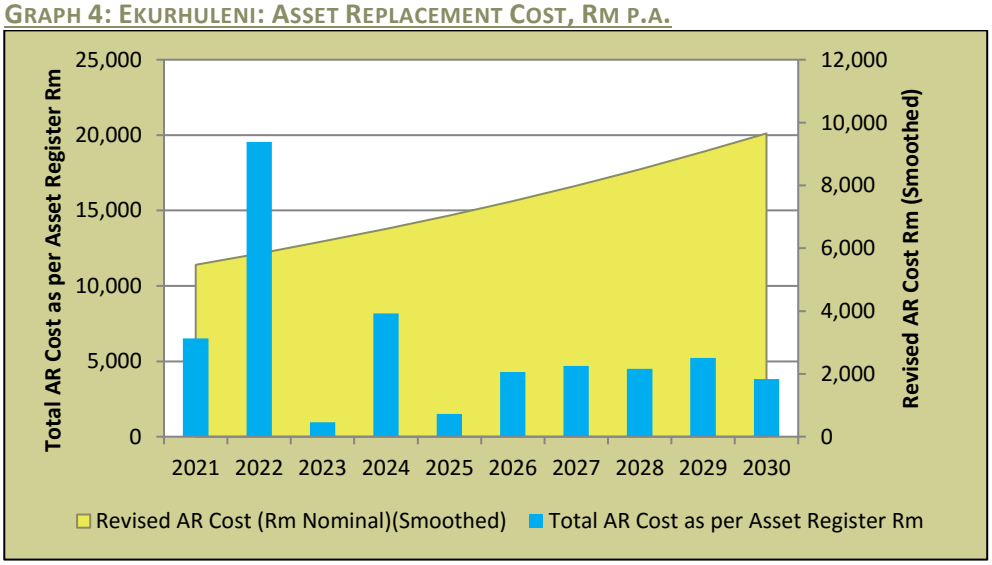
5.5. We have amended the estimated replacement costs. This was achieved by:

- Assuming that the actual remaining life of some assets will exceed the life recorded for some of the assets in the asset register
- Assuming that only a percentage of assets will be replaced when their estimated useful life expires (e.g. in the case of buildings in the "Other assets" category, it is doubtful whether the whole structure will have to be replaced, possibly only certain fittings, roof, finishes, etc. The same was assumed for some of the assets in the "Investment Property" category.)
- Spreading replacement not done in the past over several future years, and
- Smoothing the constant 2021 value over the Planning Period and reverting these back to nominal values

5.6. The total asset replacement cost, for the period 2020/21 to 2029/30 was reduced from the original R 64 259 million to R 59 199 million.

5.7. The graph below compares the Replacement Cost as determined from the asset register and the smoothed Replacement cost after adjustment as described above:

GRAPH 4: EKURHULENI: ASSET REPLACEMENT COST, RM P.A.



5.8. The high amounts as per the asset register for 2022 and 2024 are due to:

2022: Large variety of assets, including roadworks in Commissioner Street and Main Reef Road

2024: Large variety of assets, including water pumpstations at Selcourt, Rietfontein and Persida

5.9. It is worthwhile to assess the condition of the assets as accurately as possible and apply engineering judgment to determine when the asset components need to be replaced.

5.10. The smoothed Annual Replacement Cost ("ARC") curve ranges from R 5 477 to R 9 065 million p.a. for the period 2020/21 to 2029/30. A future smoothed asset replacement programme of this nature would be advisable. The quantum of more than R 5 billion p.a. of asset replacement cost may however not be affordable if compared with the total investment activities of the municipality in 2019/20 of R 5 207 million.

5.11. In the light of the large demand for the replacement of assets that will be reaching the end of its useful life during the 10-year planning period, we propose that the municipality prioritises a cash backed Capital Replacement Reserve ("CRR") for this purpose. It would be prudent to transfer the full depreciation charge to the CRR once the cash balances are available. The CRR can then be used as a funding source for future capital expenditure. Furthermore, once the CRR has built up a significant balance the municipality should avoid depleting its CRR in any given financial year but use a percentage (say 50%) of the prior year balance for assets that require replacement. An asset replacement programme within the levels of available resources in the CRR will go a far way in quantifying the future replacement budget.

New Capital Investment Demand

5.12. The City of Ekurhuleni prepared a financial model that includes a consolidated infrastructure investment plan that provides a long-term estimate of capital expenditure on new assets.

5.13. To determine the total capital investment, the capital demand for new assets as determined by the City of Ekurhuleni was added to the capital replacement cost as determined by IPM. We recognise that demand can exceed the available resources to fund capital investment. It is therefore recommended that a capital prioritisation programme be implemented effectively to determine optimal capital investment with the available limited resources.

Total Capital Investment Demand

5.14. The total capital investment demand is determined as follows:

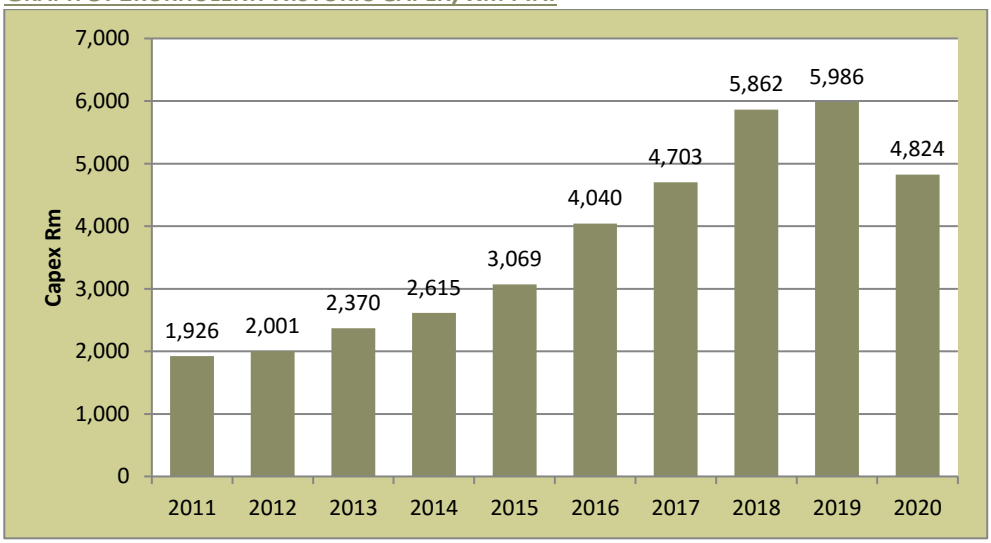
TABLE 3: EKURHULENI: ESTIMATE OF TOTAL FUTURE CAPEX DEMAND, R MILLION

R'm	TOTAL	1 -5 2021 -2025	6 -10 2026 - 2030
Energy Sources (Rm)	**8 910**	3 675	5 235
Water Management (Rm)	**460**	248	212
Sewer (Rm)	**8 767**	3 627	5 140
Storm Water	**2 942**	1 055	1 887
Waste Management	**1 420**	979	441
Transportation	**0**	0	0
Transportation	**75 893**	32 496	43 397
Ekurhuleni Estimate of New Capex Demand	**98 392**	**42 080**	**56 312**
IPM Estimate of Replacement Capex	**59 199**	36 673	22 526
Estimate of Demand CAPEX	**157 591**	**78 753**	**78 838**

5.15. The total Capital Investment estimate (Replacement and New Assets) for the period 2020/21 to 2029/30 is estimated to amount to R 157 591 million in IPM's estimate.

5.16. In comparison, the historic capital expenditure for the period 2010/11 to 2019/20 reveals the extent of the capital investment programme for which the City of Ekurhuleni has capacity. The average capex during the past 10 years was R 3 740 million p.a., with a maximum annual investment of R 5 986 million in 2018/19.

GRAPH 5: EKURHULENI: HISTORIC CAPEX, RM P.A.



6. FINANCIAL MODEL

Future forecasts are based on the outcome of a financial model. The essential Base Case assumptions of the model are listed in the table below:

ASSUMPTIONS OF BASE CASE VARIABLES

VARIABLE	BASE CASE AVERAGE FOR THE 10 –YEAR PLANNING PERIOD
RSA consumer inflation rate (CPI)	5.1%
Population Growth Rate	1.7%
GVA Growth Rate	2.6%
Short term investment rate (Margin above CPI)	0.0%
Electricity Price Elasticity of Demand	-0.4
Water Price Elasticity of Demand	-0.2
Employee related cost escalation	5.9%
Bulk electricity cost escalation	9.0%
Collection Rate of customer billings	89.3%

The Base Case outcome of the financial model is summarised below:

BASE CASE OUTCOME

Outcome	10-Years up to 2030
Average annual % increase in Revenue	6.8%
Average annual % increase in Expenditure	6.0%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425
Operating Surplus accumulated during Planning Period (Rm)	-R 12 256
Cash generated by Operations during Planning Period (Rm)	R 22 940
Average annual increase in Gross Consumer Debtors	12.3%
Capital investment programme during Planning Period (Rm)	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8
Liquidity Ratio at the end of the Planning Period	1.2: 1
Gearing at the end of the Planning Period	20.1
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%

6.1. The proposals in this financial plan are based on the assumptions in the Base Case Financial Model. We are cognisant of the fact that future cash flows may be influenced by a variety of variables which limit the accuracy with which forecasts can be made.

6.2. The model framework is illustrated in the diagram below:

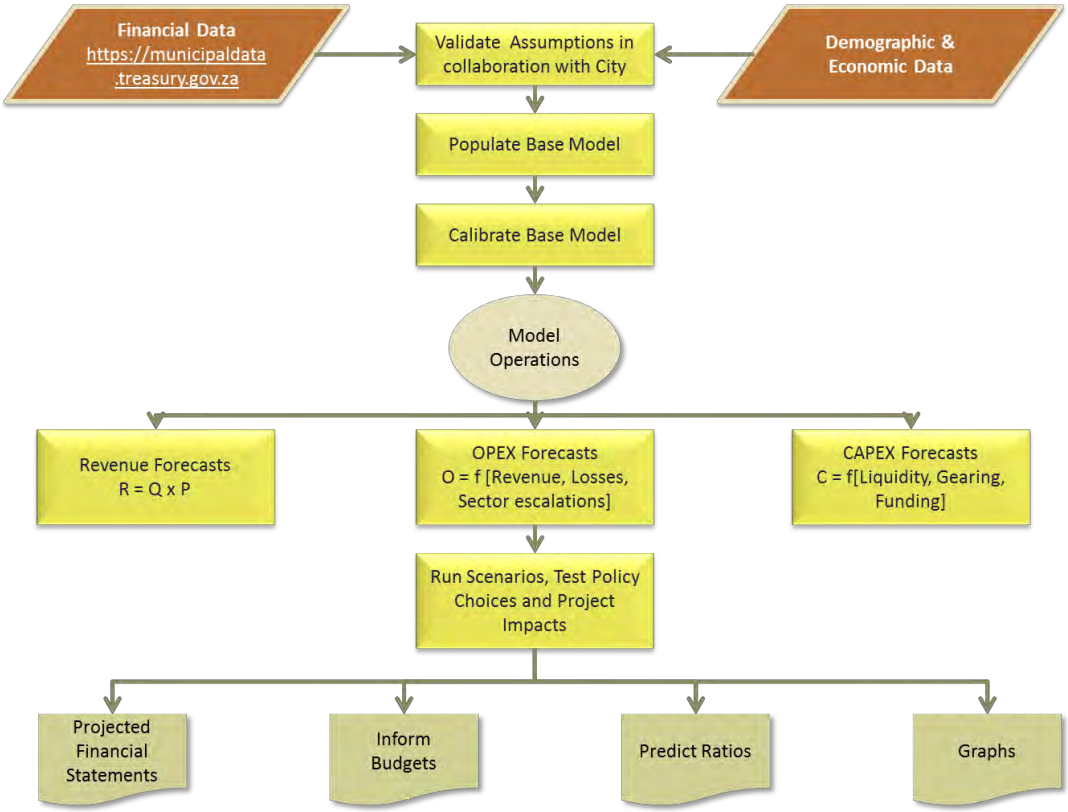


FIGURE 2: LTFM FRAMEWORK

6.3. The output of the model, especially the graphs and tables throughout this document have been developed using the LTFM The Projected Financial Statements are presented in Annexure 1, which may also serve as a guide to inform future budgets of the municipality. The Financial ratios are presented in Annexure 2 and summarised in paragraph 6.12 below.

6.4. The model forecasts the future revenue and expenditure by applying several independent variables. As an example, the future water services charges will, in addition to the tariff charged, be affected by future consumption as well as the addition of new users. Generic growth pursuant to the growth in population, households or economic output will be forecast.

6.5. To estimate the future revenue and expenditure, certain assumptions need to be made. These assumptions will serve as input to the model. For example, an assumption of future collection rates is required to convert billings to actual cash receipts.

6.6. The average values for the 10-year planning period of those variables that were also changed for scenario testing are indicated in TABLE 4 below:

TABLE 4: ASSUMPTIONS OF BASE CASE VARIABLES

VARIABLE	BASE CASE AVERAGE FOR THE 10-YEAR PLANNING PERIOD
RSA consumer inflation rate (CPI)	5.7%
Population Growth Rate (% p.a.)	1.7%
GVA Growth Rate (% p.a.)	2.6%
Short term investment rate (Margin as above CPI)	0.0%
Electricity Price Elasticity of Demand	-0.4
Water Price Elasticity of Demand	-0.2
Employee related cost escalation (p.a.)	5.9%
Bulk electricity cost escalation	9.0%
Collection Rate of customer billings	89.3%

6.7. Most of these variables are self-explanatory. Whereas the average economic growth rate as measured by the % GVA p.a. is 2.6%, it ranges between 0.8% and 3.0% p.a. Employee related expenses are expected to be marginally higher than CPI and increase by 5.9% p.a. The collection rate of customer billings is assumed to be 89.3% on average of the forecast period. The model allows for the decline of electricity and water consumption pursuant to price increases by applying a Price Elasticity of Demand ratio, estimated to be -0.4 and -0.2 for electricity and water respectively.

6.8. The historic financial assessment of the City of Ekurhuleni has indicated a decline in the liquidity position (current ratio less than 1) due to low collection ratio, operating deficits, delayed payments to suppliers and deterioration in cash position to below minimum liquidity requirements. The assessment also highlighted decreases in gross electricity and water surplus margins and increases in distribution losses over the 8-year period. The objective of the assumptions in the model was to rectify this over time to ensure future financial sustainability. The following factors represent the most important assumptions that were made in this regard. These assumptions will also have to be incorporated in the formation of the city's long-term financial strategy:

6.8.1. The funding mix for the MTREF budgeted capital expenditure (FY2022 to FY2024) of R 12.230 billion includes R 981 million funding through cash resources, in addition to the capital grants and external borrowings. This funding mix is forecast to result in a cash shortfall for the entire MTREF period. Considering the city's liquidity position, the MTREF funding mix is suboptimal which results in further deterioration of the liquidity position. The funding mix was therefore adjusted in arriving at the optimal case by eliminating the funding through cash reserves for FY2022 to FY2024 and increase funding through external borrowings by R 981 million over the same period.

6.8.2. The collection rate of customer billings as at FYE2020 was 84%. This was assumed to increase progressively to 90% by FY2024 and remain at this level for the remainder of the planning period. This contrasts with the MTREF which assumes a collection rate of 90%. The adjustment made in the model was deemed necessary considering the continued impact of COVID-19. We forecast to return to pre-COVID-19 rate of 90% by FY2024.

6.8.3. Days receivables, which were recorded as 75 days as at FYE2020, will have to reduce progressively to reach 60 days by FY2024.

6.8.4. The MTREF indicates a significant increase in operating expenditure when compared to historical assessments. Specifically contracted services, other materials, and other expenditure. In arriving at the base case, a permanent reduction of R 3 billion (approximately 7% of MTREF operating expenditure) is assumed from FY2022 and the remainder of the planning period.

6.8.5. Considering the current liquidity position, the investment in repairs and maintenance is assumed to remain at 4% of property, plant and equipment and investment property, below the NT norm of 8%.

6.8.6. Property rates tariff increase is assumed to be 3.5% and 3.0% above CPI for FY2023 and FY2024 as opposed to the MTREF proposed tariff increase that's equivalent to CPI.

6.8.7. Assumed a loan tenor of 12 years.

6.9. The outcome of the Base Case is reflected in the table below:

TABLE 5: BASE CASE OUTCOME

Outcome	10-Years up to 2030
Average annual % increase in Revenue	6.8%
Average annual % increase in Expenditure	6.0%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425
Operating Surplus accumulated during Planning Period (Rm)	**-R 12 256**
Cash generated by Operations during Planning Period (Rm)	R 22 940
Average annual increase in Gross Consumer Debtors	12.3%
Capital investment programme during Planning Period (Rm)	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8
Liquidity Ratio at the end of the Planning Period	1.2: 1
Gearing at the end of the Planning Period	20.1%
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%

6.10. In the Base Case an accounting surplus, but an operating deficit, will be generated during the 10-year planning period mainly due to the above CPI increases in operating expenditure over the MTREF period. The total affordable capital investment programme is forecast to be R 43 257 million. The cash balance at the end of the planning period to back a liquidity reserve and CRR amount to R 14 104 million.

6.11. The summary projected financial statements for the Base Case are presented in Annexure 1: Base Case Summary Projected Financial Statements.

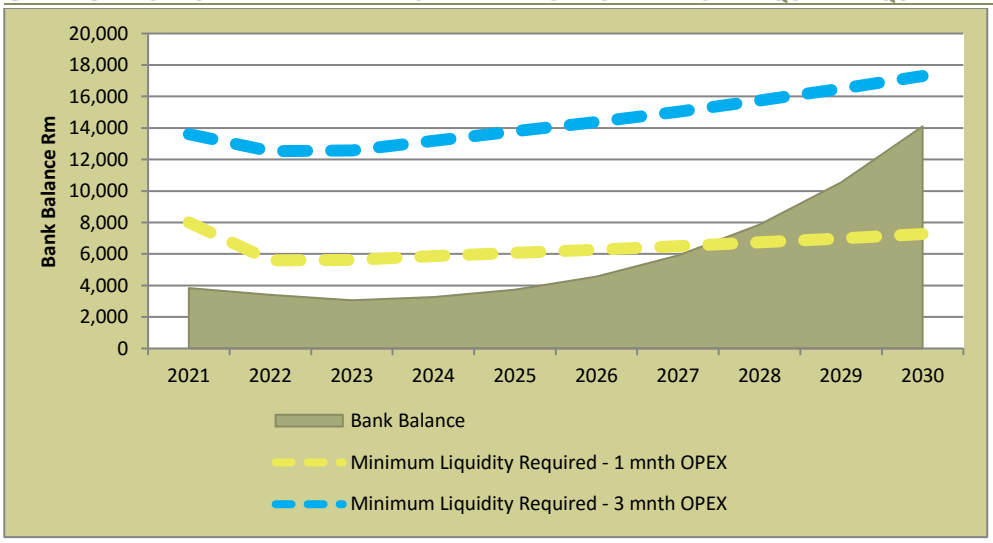
6.12. A selection of ratios is summarised in TABLE 6 below. A complete list of ratios is presented in Annexure 2. These ratios are the outcome of the financial model.

6.13. The liquidity ratio remains below 1 for most of the planning period but is expected to improve to 1.2:1 by the end of the planning period. Despite the cash balance remaining below the minimum required liquidity level for most of the planning period (FY2021 to FY2027), it is forecast to improve over the planning period in line with the improvement in the collection rate. The minimum required liquidity level is based on the requirement that at least 1 month's operational expenditure must be held in cash in addition to all other statutory reserves. The future projected cash balances in relation to the minimum required liquidity level based on a 1-month operational expenditure level is illustrated in GRAPH 6 below. Access to external financing is assumed to grow annually, but the gearing remains below the 45% NT benchmark, reaching 20.1% by the end of the planning period. The debt service cover ratio is consistently higher than the proposed benchmark, which indicates that the levels of borrowing proposed remains affordable and financially sustainable to the City of Ekurhuleni. Capital expenditure as a percentage of total expenditure is within the 10% to 20% range, an indication of the developing nature of the city and the considerable demand for capital investment, especially considering its efforts of eradicating backlogs. The reliance on grants as a revenue source remains relatively stable at an average of 14.7%, reflecting the city's level of dependency on grants, but also taking into account the strain the national fiscus is experiencing.

TABLE 6: SELECTION OF RATIOS (SEE ANNEXURE 2 FOR COMPLETE LIST)

YEAR		1	3	5	7	9	10
RATIOS	Norm	2021	2023	2025	2027	2029	2030
Cash generated by operations/Own Revenue		12.6%	6.6%	8.4%	9.8%	11.6%	12.7%
Liquidity Ratio (Current Assets: Current Liabilities)	1.5–2.0 :1	**0.8 : 1**	**0.7 : 1**	**0.7 : 1**	**0.8 : 1**	1 : 1	1.2 : 1
Cash surplus/ (shortfall) on minimum liquidity requirements R'm		**- R4 715.0 m**	**- R2 605.3 m**	**- R2 390.1 m**	**- R650.8 m**	R3 494.1 m	R6 771.6 m
Capital Expenditure / Total Expenditure	10% - 20%	9.3%	7.5%	7.1%	6.7%	6.3%	6.1%
Gearing (Total Debt (Borrowings) / Operating Revenue	45%	24.8%	26.4%	25.9%	24.4%	21.8%	20.1%
Debt Service Cover Ratio (Cash generated by operations / Debt Service)	Min 1.3:1	1.7 : 1	1.3 : 1	1.5 : 1	1.6 : 1	1.8 : 1	2 : 1
Total Grants / Total Revenue		18.1%	15.2%	14.5%	14.0%	13.6%	13.5%

GRAPH 6: EKURHULENI: BANK BALANCE IN RELATION TO MINIMUM REQUIRED LIQUIDITY LEVEL



7. FUTURE MUNICIPAL REVENUE

- When analysing future revenue, it is important to consider the correlation between the expansion of the municipal economic base (GVA), the residents' ability to pay and the municipal revenue growth forecast (revenue per capita).
- In constant monetary terms, the municipal revenue per capita in 2023 is estimated to be R 5 099 p.a., higher than the R 4 712 p.a. real per capita revenue generated in 2020.
- The City of Ekurhuleni's own revenue per capita has increased at a much higher rate than the GVA per capita during 2011 to 2020, indicating the additional financial burden on rate payers.
- INCA's model estimates that the real GVA per capita in 2030 will be higher than the real GVA per capita in 2020.

The estimated future 10-year annual average growth in revenue is 6.0% p.a.

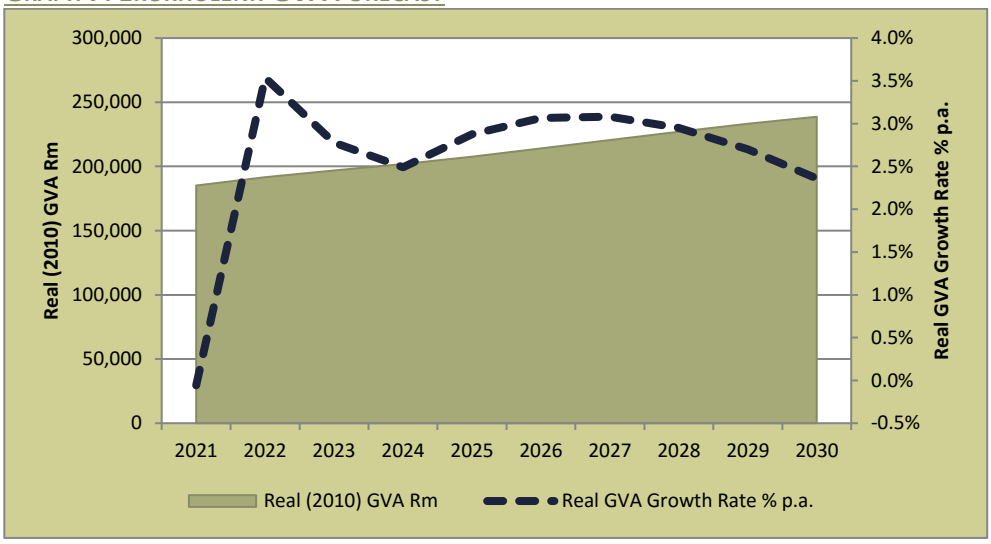
AVERAGE ANNUAL 10-YEAR GROWTH OF MAJOR REVENUE ITEMS

Revenue Item	Average Billings Growth % p.a.
Electricity	6.6%
Property Rates	10.0%
Water	4.1%
Equitable Share	7.1%

7.1. The forecast of future revenue in the financial model is based in part on historical trends as well as an estimate of future revenue (Revenue = Quantity x Price), where "Quantity" is a function of independent variables (such as households, population and GVA) and "Price" a function of policy choices (such as tariff increases).

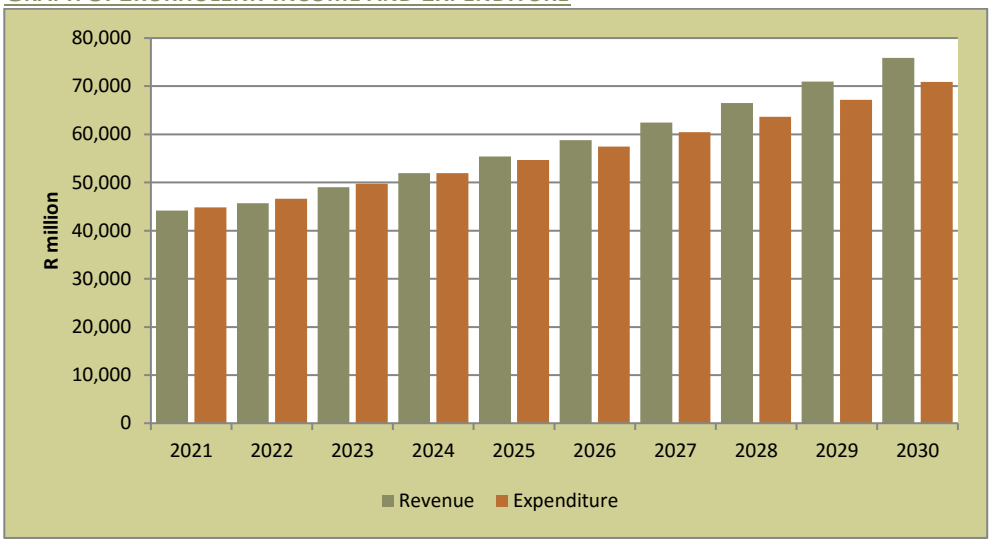
7.2. The future Gross Value Add ("GVA") of the City of Ekurhuleni was estimated based on a view of the future economic growth of the region as well as an estimate of future population of Ekurhuleni. The graph below illustrates the Base Case GVA and GVA growth rates used in IPM's model. The average annual economic growth rate for the planning period is 2.6% p.a.. Following on from the impact of COVID-19, which resulted in a contraction in the economy of approximately 7.1% in 2020, the IPM model estimates economic growth during the planning period, reaching a high of 3.54% p.a. in 2022.

GRAPH 7: EKURHULENI: GVA FORECAST



7.3. The estimated future revenue was informed by the municipality's forecast of future revenue in its MTREF. The estimated Total Income and Expenditure during the planning period for Ekurhuleni is illustrated in GRAPH 8:

GRAPH 8: EKURHULENI: INCOME AND EXPENDITURE



7.4. The number of households is expected to grow at an average rate of 1.7% p.a., in line with the assumed population growth rate, due to the expectation of a continuation of the high occupancy levels . The proportion of indigent households is assumed to remain at approximately 54% during the planning period. This resulted in an estimated future 10-year annual average growth in revenue of 6.8% p.a. This growth cannot be achieved with an increase in tariffs alone, but consists of a combination of (i) increased quantities of sales, and (ii) increased tariffs.

7.5. The 10-year growth in billings of major revenue items is illustrated in TABLE 7

TABLE 7: AVERAGE ANNUAL 10-YEAR GROWTH OF MAJOR REVENUE ITEMS

Revenue Item	Average Billings Growth % p.a.
Electricity	6.6%
Property Rates	10.0%
Water	4.1%
Equitable Share	7.1%

7.6. The growth in billings will be lower than the growth in tariffs due to an expected decrease in the consumption of services.

7.7. IPM's model estimates that the real GVA per capita in 2030 is R 52 578 p.a., 9% higher than the GVA per capita in 2020 due to economic growth exceeding the average population growth rate. The municipal real revenue (excluding grants) per capita at that time is estimated to amount to R 5 099 p.a. which is higher than the R 4 712 p.a. real per capita revenue of 2020. We are comfortable that the real revenue per capita for 2030 as forecast by IPM's model is reasonable.

7.8. The equitable share receipts for FY2020 amounted to approximately R 3 478 million but are assumed to increase in future due to the expected indigent population growth. An estimate of capital grants, based on historic trends (but excluding ad hoc grants), is included in the capital funding mix.

7.9. Once the annual municipal revenue was projected, the ability of the municipality to pay for operational and capital expenditure and the level of expenditure was estimated based on a range of assumptions, as discussed in more detail further on in this report.

8. FUTURE OPERATIONAL EXPENDITURE

The largest operational expenditure items are employee related expenses and bulk purchases. To remain financially sustainable the municipality should maximise its efficiency by:

- At a minimum, maintaining its current staff productivity of 4.18 , as measured by total operating income/ staff costs.
- Ensure that the full cost of electricity distribution is covered by tariffs and the gross electricity surplus margin (difference between electricity service charges and electricity bulk purchases) is maintained at 18.1% or higher.
- Ensure that the full cost of water distribution is covered by tariffs. The margin as measured by the difference between water service charges and water bulk purchases should approximate 25.8% and higher.
- Put measures in place to reduce electricity and water distribution losses in the municipality.
- Carefully manage increase in expenses related to staff costs and contracted services, as it has a direct impact on financial sustainability.
- Reduce operating expenditure by at least R 3 000 million per annum to improve the liquidity position.

8.1. The ongoing challenge remains to align the expenditure budget not only to anticipated revenue growth, but very specifically to anticipated cash collections to generate both accounting and cash surpluses. Therefore, stringent expenditure management remains as important as ensuring that revenues are collected.

8.2. There is limited scope to substantially increase any costs without negatively impacting on the overall operational performance of the city, therefore requiring stringent management of increases in current expenses.

8.3. The regulated expense items, employee related expenses as well a bulk electricity purchases, represent the bulk of the total expenditure (56% in FY2020). The opportunity to save on regulated expenses in future is limited, but any potential savings on these expenditure items should be considered important.

8.4. Employee related expenses as a percentage of total expenditure (20% in FY2020) is below the maximum 25% - 40% norm range provided by National Treasury. This translates to staff productivity [3]as measured by operating income /staff costs of 4.2.

8.5. Contracted services, which in many respects is an alternative to employee related costs amounts to 6% of total expenditure (FY2020), exceeding the maximum benchmark of

[3] Staff Productivity = [Total Income] / [Salaries, wages and allowances] (As per financial statements)

5%. The MTREF budgeted an increase in contracted services from R 2 527.6 million for FY2020 to R 5 007.2 million (98%), resulting in this percentage increasing to 14% of operating expenditure. Management has an obligation to optimise the use of contractors and/or employees to maximise productivity and save costs. In the base case of the financial model, employee related expenses are estimated to increase at an average rate of 6.4% p.a. for the 10-year planning period and contracted services by an average of 7.1% p.a.

8.6. The expenditure on electricity bulk purchases is expected to grow at an average rate of 7.1% p.a. - it is assumed that the price elasticity of electricity will result in a decline in the average consumption of electricity in future. The margin between electricity service charges and electricity bulk purchases in FY2020 was 21.8%. This margin is expected to drop to 18.1% in FY2030, mainly due to the high electricity losses that have been assumed to remain at 14.1% in addition to the expected decline in consumption of services in future. The City of Ekurhuleni is encouraged to ensure that the electricity service charges cover all associated costs, including depreciation costs of associated infrastructure. The indication of a potentially lower income margin on electricity sales should emphasise the importance to limit the delivery of electricity without full recovery as far as possible (viz distribution losses).

8.7. The expenditure on water bulk purchases can only be controlled with improved water loss management - the water loss of 30.26% in FY2020 is assumed to remain at 30.26% during the planning period. The margin between the water service charge and the water bulk purchases in FY2020 was 23.5%. The model assumes that this margin will increase marginally to 25.8% by FY2030. It is essential to highlight the fact that all related costs, including infrastructure costs and operational expenses, and not just bulk water purchases, are covered by this gross margin. The historic analysis indicates an increase in the distribution losses over the past 8-year period of assessment. The City of Ekurhuleni should endeavour to reduce distribution losses to improve its surplus margins.

8.8. Repairs and maintenance expenditure as a percentage of the carrying value of PPE and IP reached 7.8% in FY2020. The MTREF, however, indicates that this ratio is declining (average of 4.0% of PPE and IP). From an asset management perspective and to delay asset replacement, it is essential that repairs and maintenance increase in future. The financial model however assumes that this expense item will remain at 4% of PPE and IP for the 10-year planning period, considering the city's financial position. An increase in this expenditure item is hindered by the low levels of profitability and the inability to generate cash from operations.

8.9. The MTREF budget indicates a significant increase in operating expenditure , from R 36 642 million in FY2022 to R 42 676 million in FY2023 (16% increase), this is mainly

due increases in bulk purchases[4] and other materials[5], which results in a deterioration of the city's operating surplus. As noted in the historic assessment, the city generates cash from its operations largely due to delayed payments to suppliers. This is not sustainable in future. It is imperative that not only the collection rate improve, but also profitability. To ensure future financial sustainability, the model assumes a R 3 000 million permanent decrease in the operating expenditure from the levels budgeted in FY2022.

8.10. Any cost containment under general expenditure items should always be pursued. The City of Ekurhuleni may also want to reconsider its level of services and adjust some of these downwards to effect savings.

8.11. The financial model has assumed cost increases like the increase in the MTREF for the first three years but uses various independent variables to calculate expenses in future and, where applicable, accounts for quantities sold and distribution losses to calculate bulk purchases.

[4] Bulk purchases budgeted to increase by R1.78 million/ 14% from R12.44 million for FY2021 to R14.22 million for FY2022

[5] Other material budgeted to increase by R4.85 million/100% from a nil amount for FY2021.

9. AFFORDABILITY OF FUTURE CAPITAL EXPENDITURE

- The affordable capital expenditure for the period FY2021 to FYE2030 amounts to R 43 257 million. The affordable capital expenditure is significantly less than the future capital expenditure demand of R 157 591 million. It requires a downward adjustment of the capital expenditure demand expectations, unless more funding can be secured from developers or grant sources.

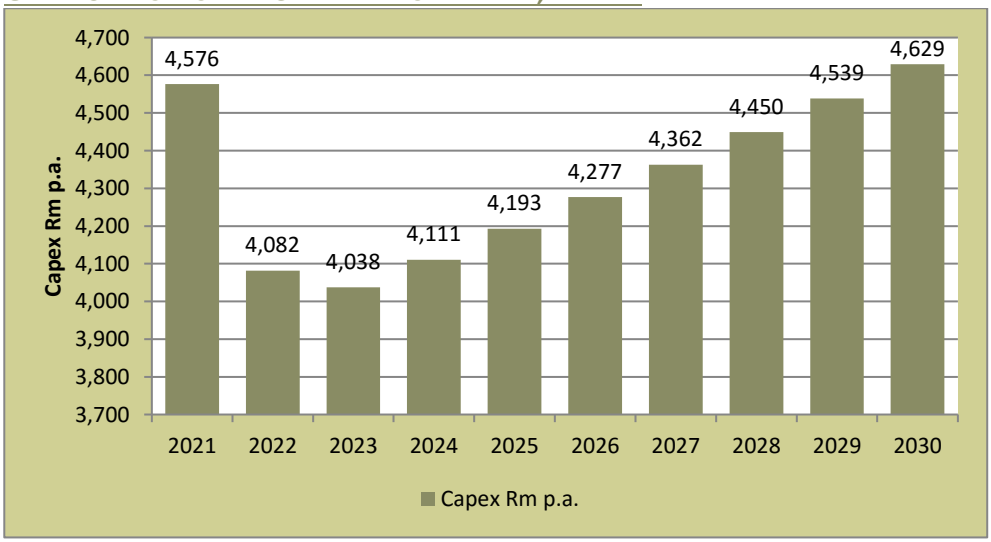
- Any operational cost saving, or an increase revenue will enable the City of Ekurhuleni to increase its affordable capital expenditure envelope.

9.1. It was assumed that the capital expenditure budget presented in the MTREF for the period up to FYE2024 will be implemented. The long-term financial model calculates the future capex that the city can afford for the period up to FYE2030.

9.2. The cash available to service any new debt is calculated by subtracting from the Revenue, as determined in paragraph 7 above, a waterfall of cash needs, starting with operational expenses and existing debt service. We also account for the minimum liquidity reserves that should be held before allocating cash towards investment in capital assets.

9.3. The New Debt that the city can afford plus any remaining cash as well as estimated capital grants and other capital contributions (e.g., developers' bulk contributions) can then be allocated towards capital expenditure.

GRAPH 9: EKURHULENI: CAPITAL AFFORDABILITY, RM P.A.



9.4. The total affordable capital expenditure for the period FY2021 to FY203 amounts to R 43 257 million. The affordable capex is approximately R 42 257 million less than the future capex demand of R 157 591 million and requires a downward adjustment of the capex demand expectations, unless more funding can be secured from developers or grant sources.

10.FUNDING OF FUTURE CAPITAL EXPENSES

The estimated 10-year capex funding is shown in the table below:

FUNDING FUTURE AFFORDABLE CAPITAL EXPENDITURE

Source of Funds	Amount Rm	%
Public and Developers' Contributions	3 760	8.7%
Capital Grants	21 922	50.7%
Financing	17 308	60.0%
Cash Reserves and Funds	267	0.6%
TOTAL	**43 257**	**100%**

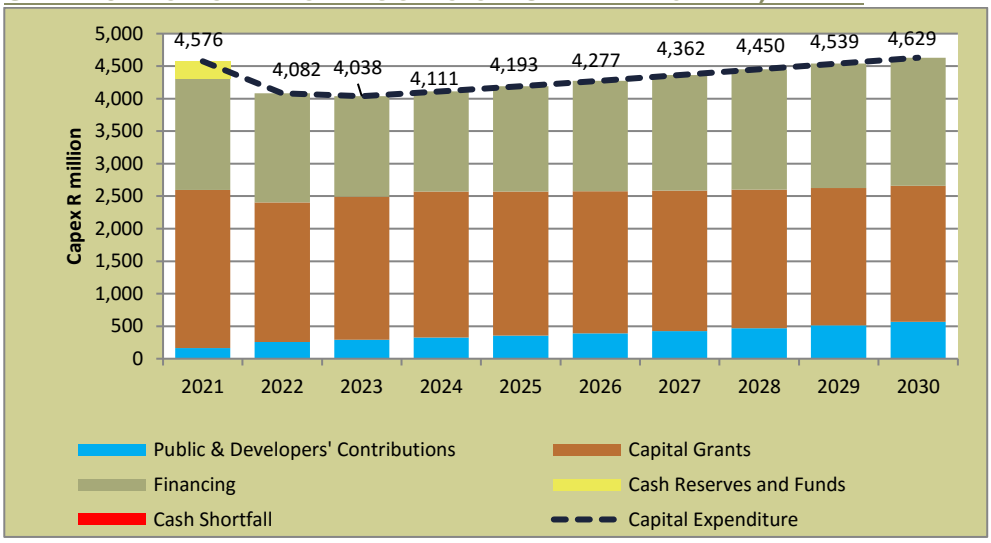
10.1. The funding mix to fund the future affordable capital expenditure is determined by the model by ensuring that the available cash is either invested to cover the minimum liquidity requirements and fund a capital replacement reserve or invested in capital assets. In accordance with the model the capex may be funded as follows:

TABLE 8: ESTIMATED 10-YEAR FUNDING OF CAPITAL EXPENDITURE R MILLION

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Public & Developers' Contributions	166	258	292	324	355	389	426	469	516	567
Capital Grants	2 431	2 147	2 199	2 249	2 216	2 186	2 158	2 133	2 111	2 091
Financing	1 713	1 677	1 547	1 538	1 622	1 702	1 778	1 848	1 912	1 971
Cash Reserves and Funds	266									
Capital Expenditure	**4 576**	**4 082**	**4 038**	**4 111**	**4 193**	**4 277**	**4 362**	**4 450**	**4 539**	**4 629**

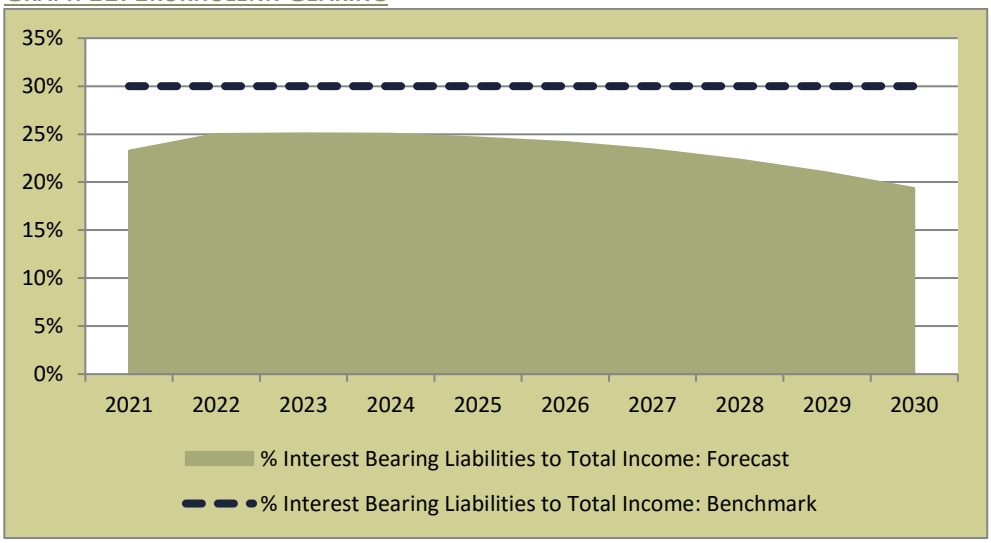
10.2. The level of capital expenditure for the years up to FYE2024 correlate with the MTREF budget. The capital funding mix has, however, been adjusted from FY2022 to be more optimal.

GRAPH 10: EKURHULENI: FUNDING OF FUTURE CAPITAL INVESTMENT, RM P.A.

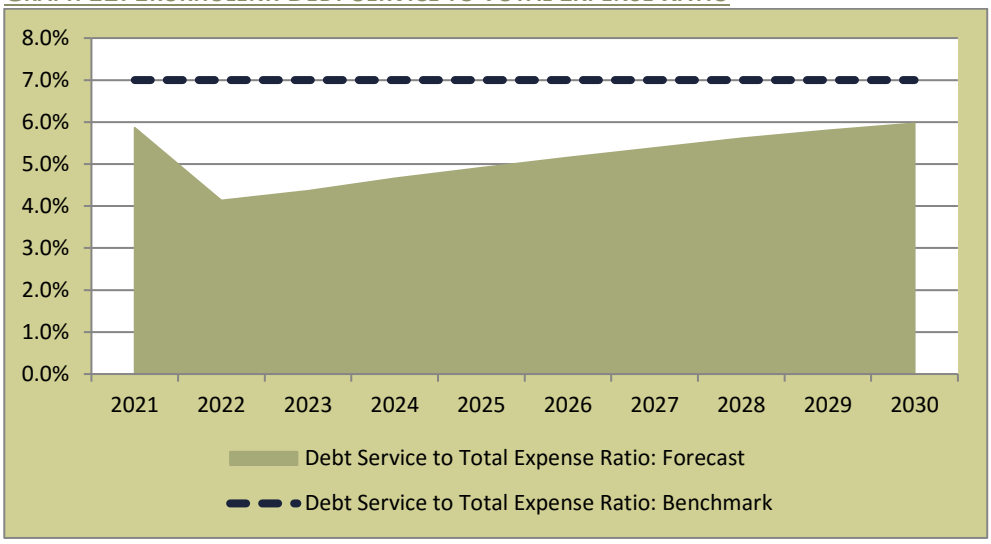


10.4. The amount of Grants was informed by historical trends (but may differ considerably if the current constraints of the national fiscus proceed indefinitely). Ad hoc capital grants were excluded from future estimates. Although the future quantum of grants is uncertain the model calculates that 50.7% of spending on PPE will be by way of grants. This is reflective of the need to provide infrastructure for a growing population of proportionally more indigents but also of a municipality with liquidity constraints. External loans amount to approximately 60% of the funding mix in the 10-year planning period. From a gearing and debt service capacity perspective, the city can borrow these amounts and at the same time safeguard its liquidity.

GRAPH 11: EKURHULENI: GEARING



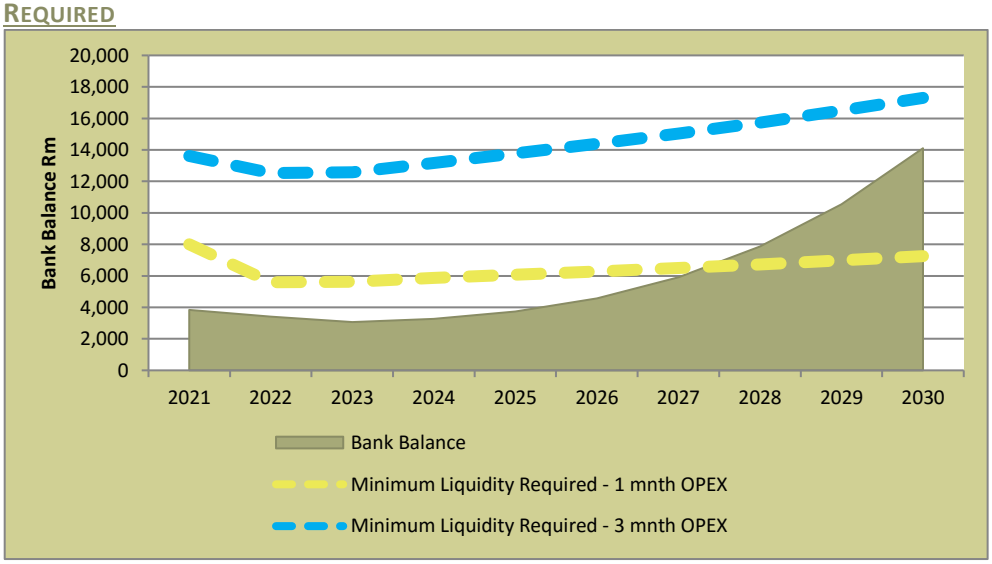
GRAPH 12: EKURHULENI: DEBT SERVICE TO TOTAL EXPENSE RATIO



10.5. The model proceeds from the premise that the minimum required liquidity must be held in reserve before cash may be spent on capital expenditure. The "Liquidity Reserve" is the amount of cash equivalents held to cover the amounts of statutory reserves, unspent conditional grants, short term provisions and one month's operational expenditure.

10.6. The cash balance as at FYE2020 is below the minimum required liquidity. In the financial model, the cash balance is forecast to improve steadily and meet the minimum required liquidity levels by FYE2028.

GRAPH 13: EKURHULENI: BANK BALANCE IN RELATION TO THE MINIMUM LIQUIDITY REQUIRED



10.7. Although the cash available will not allow for the cash funding of a capital replacement reserve (CRR) as a rate equivalent to the depreciation charge, a percentage of this charge may be reserved each year in future.

10.8. The realisation that only a small proportion of the capital investment demand is affordable requires the municipality to prioritise its investment programme. To avoid any deterioration in the asset quality, the municipality is advised to prioritise asset renewal and replacement, focusing on its absolute core functions.

11. ALTERNATIVE SCENARIOS

Several scenarios were analysed and compared to the Base Case Scenario:

- Improvement in profitability by an additional R 500 million
- No improvement of the collection rate for the 10-year planning period.
- Increase the collection rate by 2 percentage point p.a.
- Reduction in water and electricity distribution losses

Environmental factors outside the control of the municipality (e.g., economic growth and regulated prices) as well as policy choices by the municipality (e.g., tariff increases) impact on the future financial performance of the municipality. Another important variable is the productivity measure. The municipality must ensure that its employment of staff and contractors is linked to its expected income.

11.1. A scenario analysis shows the changes in outcome for a change of several input variables. Various scenarios may be tested. For purposes of this report, we limited the comparison to four scenarios with the Base Case:

- Firstly, to indicate the financial impact of an improvement on the city long term financial sustainability, a positive scenario indicating the impact of an additional permanent annual increase in profitability of R 500 million from FY2022 (to be achieved through a combination of a reduction in operating expenditure and an increase in revenue). We believe the city should investigate its proposed MTREF and make necessary changes to improve profitability to better levels than historically achieved as the continued operating deficits cannot be sustained over a long term. No other changes were made to the model input assumptions, to specifically indicate this positive impact that such a change alone would have on liquidity levels. The outcome is presented in TABLE 9 below.

- Secondly, to illustrate the long-term financial stability's sensitivity to the collection rate:
    i. a negative scenario indicating no improvement in the collection rate over the 10-year planning period, i.e., collection rate remains at the FYE2020 rate of 84%.
    ii. a positive scenario indicating an improvement in the collection rate by 2 percentage points to reach 92% by the end of the planning period.

- Thirdly, to illustrate the future financial impact of a reduction in distribution losses, a positive scenario was modelled whereby: (i) the water distribution losses were reduced by 1 percentage point progressively from 30.3% (as reported in FY2020) to reach 20% by the end of the planning period; and (ii) the electricity distribution losses

as reported in FY2020 of 14.1% progressively reduced to reach the NT minimum benchmark of 7% by the end of the planning period.

Scenario 1: Improvement in Profitability Scenario

11.2. It is recommended that the city focus on improving profitability through a combination of expenditure management and tariff increases (while remaining cognisant of household's ability to pay) to turn current operating deficits to operating surpluses, as continued operating deficits are not sustainable over a longer term.

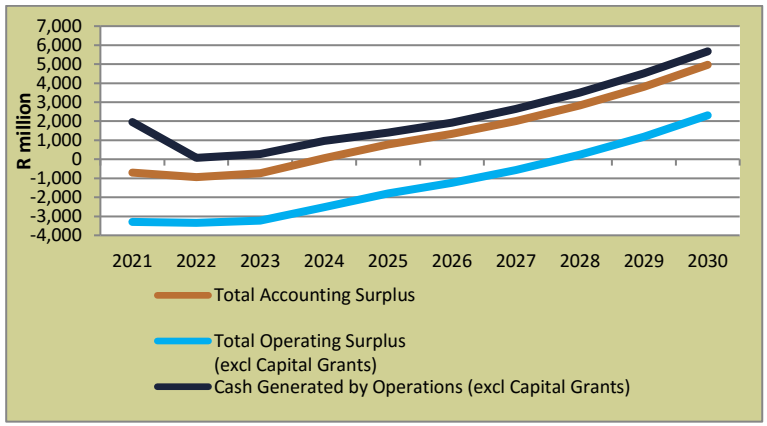
11.3. The Base Case model was therefore adjusted to permanently increase profitability by reducing operating expenditure by R 500 million per annum (approximately 1% of MTREF operating expenditure) from FY2022 onwards. The outcome indicates a significant improvement in liquidity levels. The additional liquidity will enable the city to service its debts and build up its CRR, which will lead to further investment in its capital expenditure programme, within an optimal funding mix. Refer to TABLE 9 for a comparison of the outcome of this scenario with the Base Case.

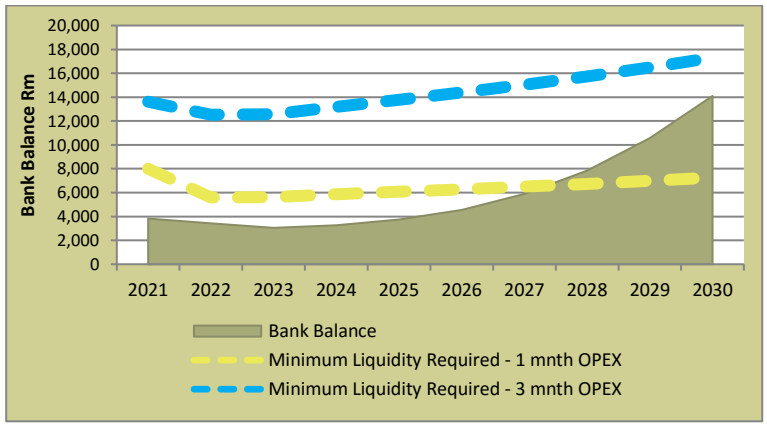
11.4. The results indicate the significance of the city managing its operational expenditure. Should the R 500 million decrease in expenditure not be achievable, revenue should be increased to achieve this improvement in profitability. The affordability of the city's municipal bill and the increased pressure on households to pay should, however, be considered.

TABLE 9: OUTCOME OF AN IMPROVEMENT IN PROFITABILITY

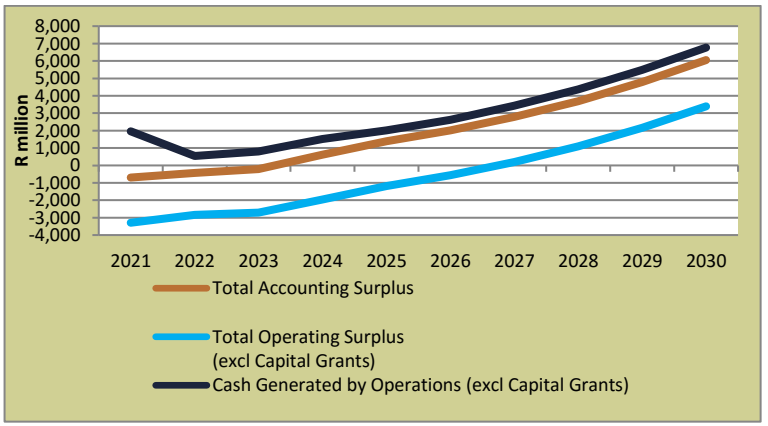
Items	Base Case	Improvement in profitability
Average annual % increase in Revenue	6.8%	6.8%
Average annual % increase in Expenditure	6.0%	5.9%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425	R 19 977
Operating Surplus accumulated during Planning Period (Rm)	-R 12 256	-R 5 704
Cash generated by Operations during Planning Period (Rm)	R 22 940	R 29 524
Average annual increase in Gross Consumer Debtors	12.3%	12.3%
Capital investment programme during Planning Period (Rm)	R 43 257	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104	R 20 687
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8	4.2
Liquidity Ratio at the end of the Planning Period	1.2: 1	1.5:1
Gearing at the end of the Planning Period	20.1%	20.0%
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%	6.0%

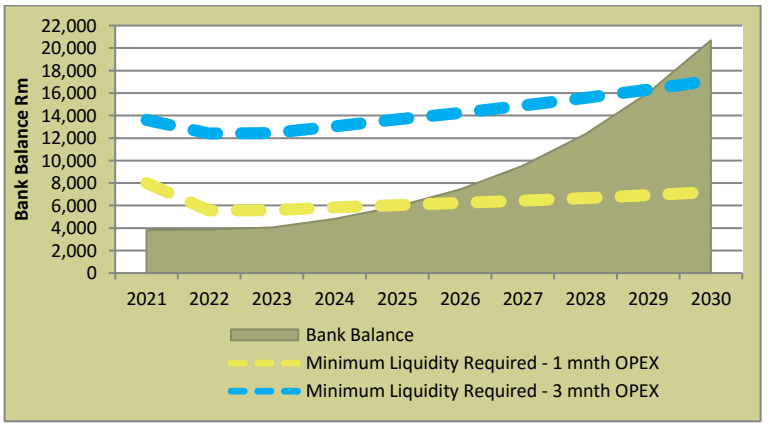
Base Case





Improvement in profitability scenario





Scenario 2: Sensitivity analysis of the collection rate

No Improvement of The Collection Rate

11.5. Should the economic growth remain sluggish, the income base of the City of Ekurhuleni continues to erode and the household's pressure to pay the municipal bill continue to increase, one can expect a lower collection rate in future. To assess the impact of such adverse conditions will have on the city's finances, the model was adjusted by assuming the collection rate remaining the same as that of FY2020 i.e., 84% for the remainder of the planning period, as opposed to the Base Case assumption of an improvement in collection rate to reach a level of 90% by the end of the planning period. All other input variables and assumptions remain constant to illustrate the impact of a low collection rate in isolation.

11.6. The results (see TABLE 10 below) indicate a significant decrease in the cash balance to a position where the city will not be able to: meet the minimum required liquidity levels, pay its creditors, or sustain its capital investment programme. This highlights the significance of the city ensuring an improvement in the collection rate over the planning period to a rate higher than 90%, along with the implementation of stricter credit control measures.

Increase Collection Rate by 2 percentage points

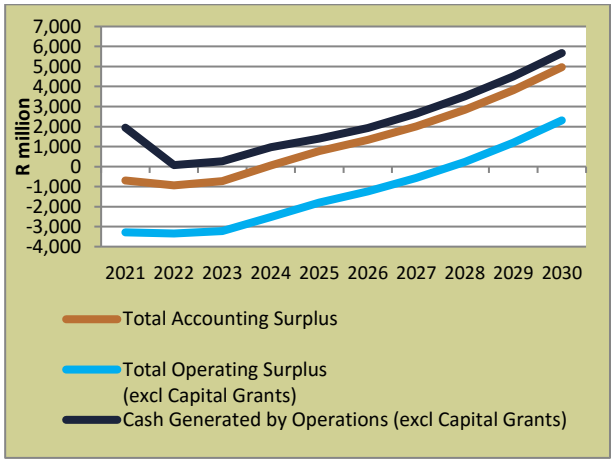
11.7. To assess the positive financial impact of an improvement in the collection rate over the planning period, a scenario was modelled whereby the annual collection rate was increased by 2 percentage points over the planning period, whilst keeping all other input variables and assumptions constant.

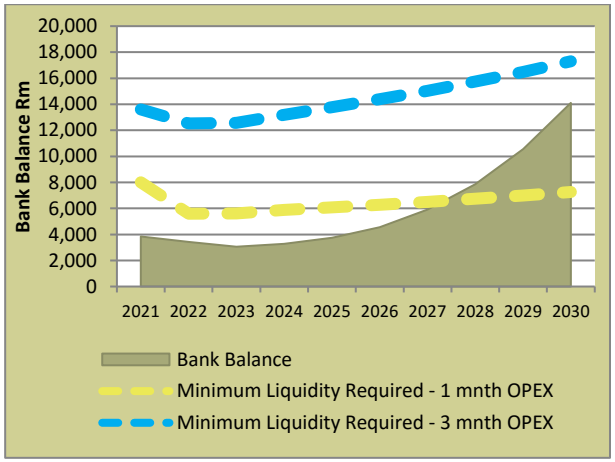
11.8. The results (see TABLE 10 below) indicate a significant improvement in the cash balance to a position where the city will not only meet the minimum liquidity requirements, but also, service its debts and build up CRR to fund its capital investment programme.

TABLE 10: OUTCOME OF SENSITIVITY ANALYSIS ON COLLECTION RATE

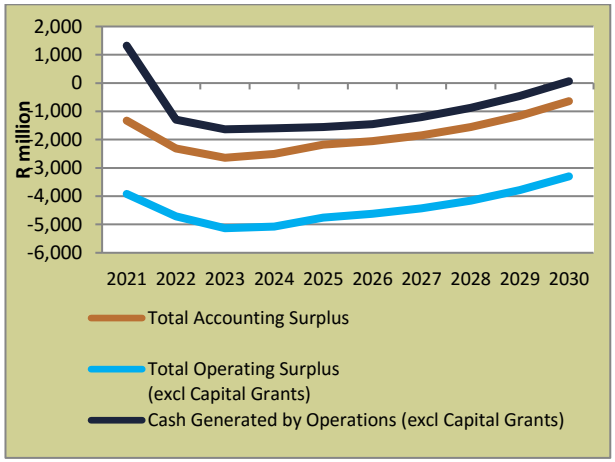
Items	Base Case	No improvement in collection rate	Increase collection rate
Average annual % increase in Revenue	6.8%	6.7%	6.9%
Average annual % increase in Expenditure	6.0%	6.7%	5.8%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425	**-R 18 201**	R 24 189
Operating Surplus accumulated during Planning Period (Rm)	**-R 12 256**	**-R 43 883**	**-R 1 492**
Cash generated by Operations during Planning Period (Rm)	R 22 940	**-R 8 686**	R 33 704
Average annual increase in Gross Consumer Debtors	12.3%	16.0%	10.6%
Capital investment programme during Planning Period (Rm)	R 43 257	R 43 257	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308	R 17 308	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104	**-R 17 523**	R 24 868
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8	**-3.4**	5.0
Liquidity Ratio at the end of the Planning Period	12: 1	**0.3:1**	1.8: 1
Gearing at the end of the Planning Period	20.1%	20.3%	19.9%
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%	7.7%	6.1%

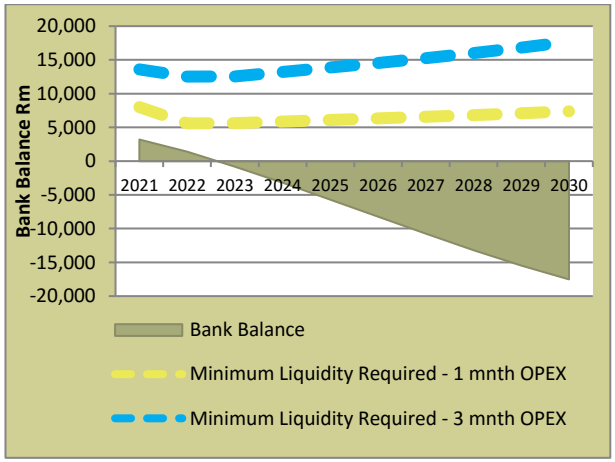
Base Case



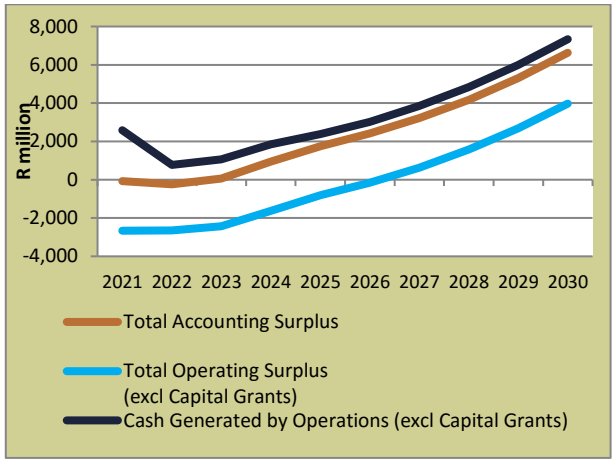


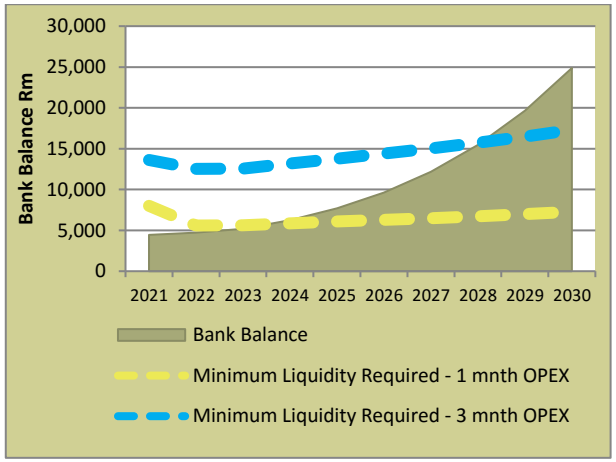
No Improvement in Collection Rate





Increase Collection





Scenario 3: Reduce Distribution Losses Scenario

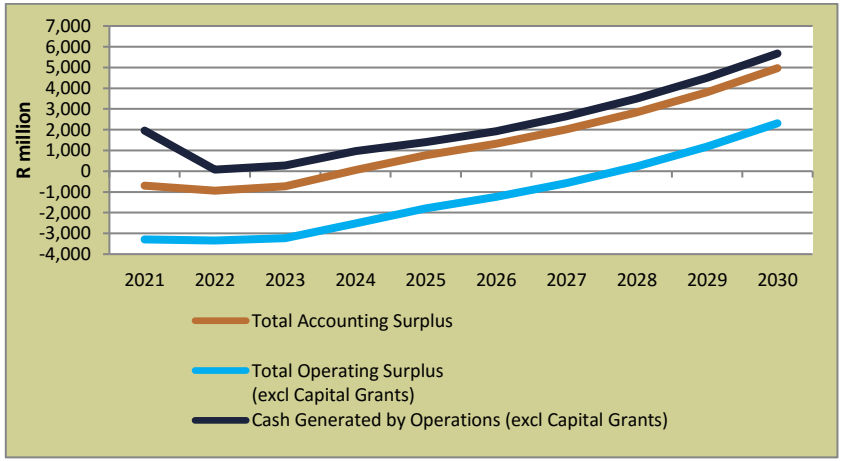
11.9. The Base Case assumes the distribution losses over the 10-year planning period to remain unchanged from the FY2020 14.1% and 30.3% respective rates for electricity and water distribution. The city has noted the high distribution losses (specifically non-technical losses) as one of the key issues, stemming from the aged infrastructure, lack of maintenance and illegal connections amongst others. To illustrate the significance of a reduction of the distribution losses, the model was adjusted by reducing the water and electricity distribution losses to reach 20% and 7% respectively.

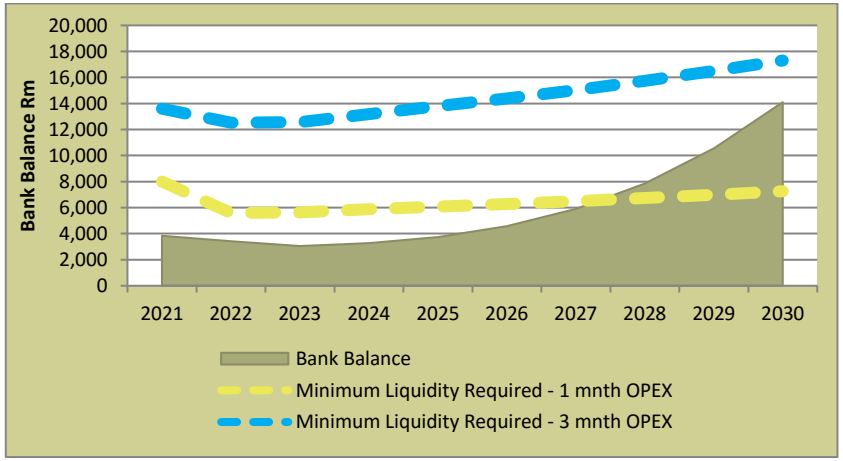
11.10. The outcomes of this scenario indicate a significant improvement in the liquidity position whereby the city will be able to service its debt and build up its CRR to invest in its capital expenditure programme. The outcome for each of this scenario is summarised in TABLE 11 below.

TABLE 11: OUTCOMES OF A REDUCTION OF DISTRIBUTION LOSSES SCENARIO

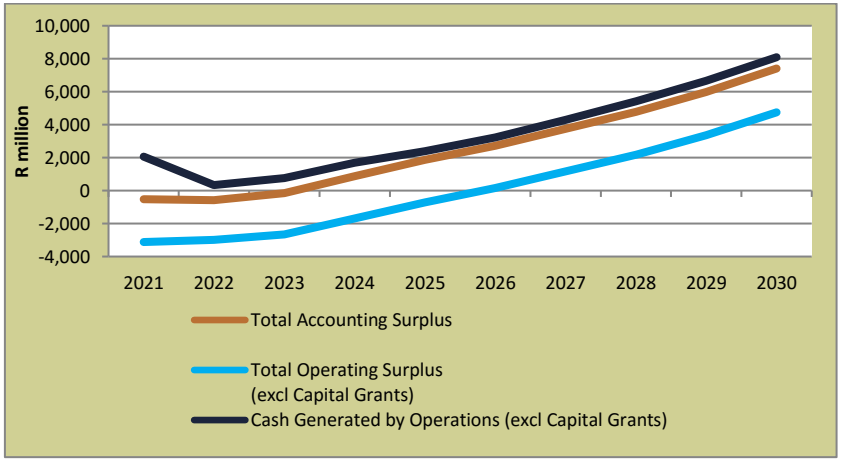
Items	Base Case	Reduce Distribution Losses
Average annual % increase in Revenue	6.8%	6.9%
Average annual % increase in Expenditure	6.0%	5.7%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425	R 26 120
Operating Surplus accumulated during Planning Period (Rm)	-R 12 256	R 439
Cash generated by Operations during Planning Period (Rm)	R 22 940	R 34 954
Average annual increase in Gross Consumer Debtors	12.3%	12.3%
Capital investment programme during Planning Period (Rm)	R 43 257	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104	R 26 118
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8	5.4
Liquidity Ratio at the end of the Planning Period	12: 1	1.9: 1
Gearing at the end of the Planning Period	20.1%	19.9%
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%	6.1%

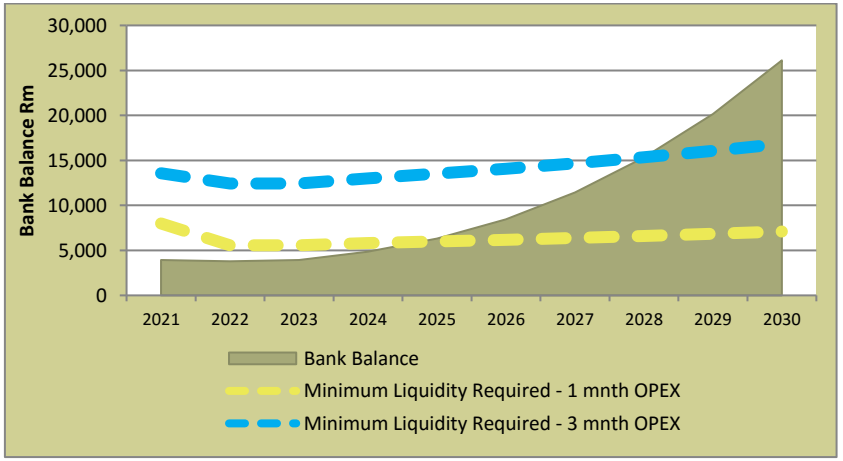
Base Case





Reduce Distribution Losses





12.COVID-19 IMPACT ASSESSMENT

- The Best-Case and Worst-Case scenario were modelled to assess the impact of COVID-19 on the city's financial sustainability. These outcomes were compared to the Base Case scenario, which already considers the most likely impact of the COVID-19 pandemic
- The COVID-19 Worst case scenario indicates a deterioration in the municipality's liquidity position. To address this, the city needs to be prepared to reduce cash outflows by focusing on reducing operating expenditure.
- The city should consider reducing its budgeted operating expenditure by R500 million (in addition to the R3 billion reduction recommended in the Base Case) for FY2022 and FY2023 to avoid a reduction in its liquidity position.

12.1. Within the first three months of 2020, COVID-19 developed into a global pandemic. With the advent of COVID-19, and the resultant lockdowns implemented to deal with this pandemic, South Africa has been severely impacted as a consequence i.e. public health, economy, education etc.

12.2. At a macro-economic level, the City of Ekurhuleni had already been experiencing sluggish economic growth, pre COVID-19. The pandemic exacerbated the situation. This has severely impacted the city's ability to generate cash revenue, as indicated by the deterioration of the collection rate and additional costs e.g., food parcels, food banks, establishment of quarantine sites etc incurred in response to the pandemic. The reduced ability to generate cash revenue was a result of mainly the increased pressure on the consumers to settle the municipal bill, emanating from the reduction in household income due to job losses; reduced consumption of services during lockdowns (business and industrial) and closure of businesses because of the lockdowns.

12.3. IPM already considered the most likely future impact of COVID-19 on the financial position of CoE in the Base Case. Considering uncertainty as to how the pandemic will play out in future, two additional scenarios were modelled to assess the potential Best-Case and Worst-Case financial impact that the city may still experience in future.

12.4. The report aims to quantify the impact (under the Base Case, Best Case and Worst Case) and also lists recommendations in terms of the corrective steps that the city should implement to maximise the profitability to improve long-term financial sustainability as measured by the key indicators viz cash balances and minimum liquidity requirements.

GVA Decline

12.5. IHS Explorer indicates a 7% decline in GVA for 2020, as a result of COVID-19 impact on the economy. 85.1% of the City's economic output is generated by fifteen economic subsectors. TABLE 12 below indicates the impact of COVID-19 on each subsector.

TABLE 12: EKURHULENI: IMPACT OF COVID-19 ON THE TOP 15 ECONOMIC SUBSECTORS

Economic Subsector	Proportion of Economic Output	COVID-19 impact on the 2020 Subsector GVA growth/ (decline).
81-83 Finance and Insurance	11%	1.2%
85-88 Other business activities	8%	-7.5%
62 Retail trade and repairs of goods	7%	-3.2%
93 Health and social work	6%	-0.8%
91 Public administration and defense activities	6%	6.1%
33 Fuel, petroleum, chemical and rubber products	6%	-7.6%
94-99 Other service activities	5%	-8.7%
35 Metal products, machinery and household appliances	5%	-12.1%
84 Real estate activities	5%	-10.5%
92 Education	5%	7.1%
71-72 Land and Water transport	5%	-12.1%
61 Wholesale and commission trade	5%	-6.0%
30 Food, beverages and tobacco products	4%	-2.4%
73-74 Air transport and transport supporting activities	4%	-12.4%
50 Construction	3%	-19.7%

12.6. Economic recovery from the impact of COVID-19 is not expected to accelerate, due to various constraints e.g., resurgences of COVID-19 waves, vaccination hesitancy slowing down vaccination roll out, a sharp drop in investment (credit rating downgrades). We therefore assume further contraction in GVA of 0.6% p a., for 2021, followed by an average GVA growth of 2.9% p.a. for the remainder of the planning period.

Affected Households

12.7. The City of Ekurhuleni is expected to experience job losses in certain subsectors emanating from the continued impact of COVID-19, however, based on an increase in economic output for various economic sectors, we estimate 48 810 job gains in formal employment opportunities. This represents 4.8% increase in the number of people that were employed in 2020.

12.8. Following the expected minimal contraction in GVA of 0.6% in 2021, and the increase in the employment opportunities, we estimate a 3 658 decrease in the number of households reliant on indigent support.

Collection Rate

12.9. The historical assessment indicates a reduction in the collection rate to 84% because of COVID-19 financial impact. We estimate an effective 2 percentage points improvement in the collection rate to 86% for FY2021, and subsequent steady improvement to the historical rate of 90% by the end of the 10-year planning period.

Consumption of Services

12.10. Economic growth is expected to positively impact the consumption of municipal services, through: 1) growth in commerce and industry emanating from investment into the City post COVID-19 increasing demand for municipal services, and 2) along with recovery phase of the economy an increase in the number of households that can afford to settle the municipal bill. This will improve the City's cash revenue generation and open room for implementation of cost reflective tariffs. However, the expected increase in the consumption of services, corresponds with the increase in bulk purchases, it is therefore imperative that the City maintain its surplus margins by ensuring tariffs cover not only the cost of bulk purchases but also all other associated cost i.e., repairs and maintenance costs and depreciation of infrastructure.

Additional Expenditure

12.11. In response to this pandemic from a public health and disaster management perspective, the city has incurred unforeseen expenditure. In the process of recovering from this pandemic, the municipality in expected to continue to incur expenditure in response to this pandemic, for the purposes of this assessment, this was assumed to be R 10 million p.a. for the duration of the pandemic and in proportion to the impact each year.

Scenarios

12.12. While the City of Ekurhuleni's MTREF includes responses to mitigate the risks associated with COVID-19, it is valuable to model different scenarios outlining the Best-Case and the Worst-Case outcomes of COVID-19 on the city's long term financial sustainability.

12.13. We have developed the Best-Case and the Worst-Case scenarios, indicating the potential impact of COVID-19 on the city's long term financial sustainability. The outcomes these scenarios were compared to the Base-Case. The two post-COVID-19 scenarios use the impact as determined in the paragraphs above by applying these for different durations. These durations are derived from assumptions regarding the time it takes to achieve success, or otherwise, of government initiatives, building up immunity for communities and the success being achieved with the current vaccination roll-out to the South African population.

12.14. The assumed duration of the pandemic for the two scenarios is as follows:

TABLE 13: EKURHULENI: ASSUMED DURATION OF THE PANDEMIC FOR DIFFERENT SCENARIOS

Scenario	Duration
Base Case	June 2021
Best Case	December 2021
Worst Case	December 2022

12.15. The Best-Case scenario assumes that the COVID-19 impact commences in April 2020 for an extends to the end of December 2021.

12.16. In the Worst-Case scenario, the COVID-19 impact also commences in April 2020 for an extended period until the end of December 2022.

12.17. The depth of the economic decline of each of the two scenarios differ in their magnitude, resulting in different GVA growth rates.

Outcome of Scenarios Before Remedial Measures

GRAPH 14: EKURHULENI: COMPARISON OF ECONOMIC OUTPUT

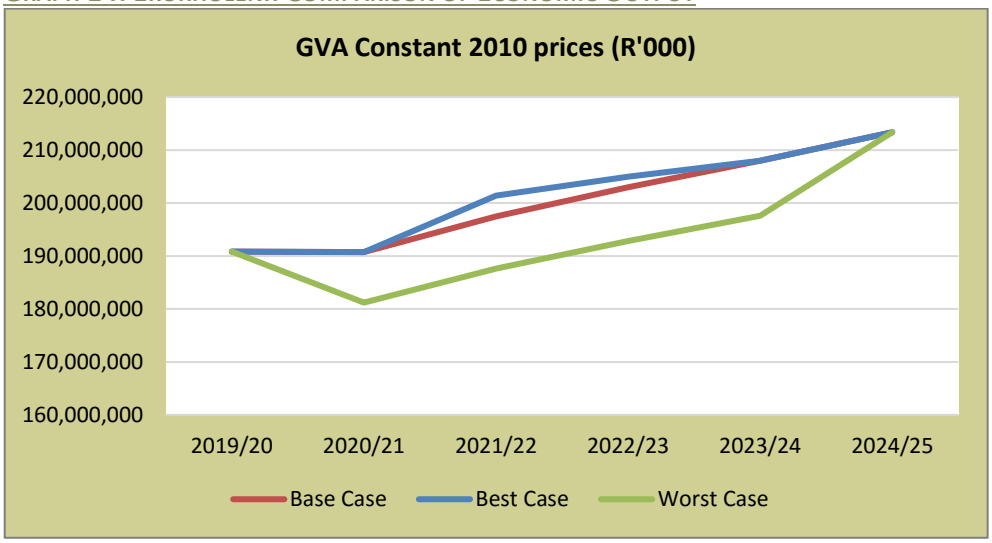


TABLE 14: EKURHULENI: ESTIMATED GVA GROWTH RATES FOR THE COVID-19 SCENARIOS

Financial Year Ended 30 June	2019/20	2020/21	2021/22	2022/23	2023/24
Base Case	-7.1%	-0.06%	3.54%	2.78%	2.49%
Best Case	-7.1%	-0.06%	5.61%	1.84%	1.5%
Worst Case	-7.1%	-5.05%	3.19%	2.51%	2.25%

12.18. The impact of COVID-19 on the financial situation of the city was measured against the Base-Case scenario and the outcomes are reflected in the table and the graphs below.

This represents the outcome before remedial actions to counter the impact of COVID-19 on the city are implemented.

TABLE 15: EKURHULENI: 10-YEAR OUTCOME OF SCENARIOS (BEFORE REMEDIAL MEASURES)

Items	Base Case	Best Case (Before Remedial Measures)	Worst Case (Before Remedial Measures)
Average annual % increase in Revenue	6.8%	6.7%	6.7%
Average annual % increase in Expenditure	6.0%	6.0%	6.0%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425	R 14 721	R 6 725
Operating Surplus accumulated during Planning Period (Rm)	**-R 12 256**	**-R 10 961**	**-R 18 956**
Cash generated by Operations during Planning Period (Rm)	R 22 940	R 24 236	R 16 240
Average annual increase in Gross Consumer Debtors	12.3%	11.9%	12.6%
Capital investment programme during Planning Period (Rm)	R 43 257	R 43 257	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308	R 17 308	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104	R 15 399	R 7 404
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8	3.1	1.5
Liquidity Ratio at the end of the Planning Period	1.2: 1	1.3: 1	**0.9: 1**
Gearing at the end of the Planning Period	20.1%	20.2%	20.3%
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%	6.0%	6.0%

12.19. The scenarios indicate a liquidity impact, which can be attributed to various factors. Firstly, the collection rate which is the major contributor to the improvement/deterioration in liquidity. Secondly, the increase/decrease in revenue due to differences in economic growth. Lastly and to a lesser extent, unforeseen additional expenditure to manage the disaster.

12.20. In the Best-Case Scenario, the bank balance decreases in 2021 and improves steadily to reach R15 399 million by the end of the 10-year planning period. This is sufficient to meet the minimum required liquidity levels (including one month's working capital) from FY2023 onwards.

12.21. In the Worst-Case scenario, the bank balance comes to R7 404 million by the end of the 10-year planning period. This bank balance does not meet the required minimum liquidity levels the entire duration of the 10-year planning period.

Remedial Measures

12.22. The Worst-Case scenario indicate COVID-19's further potential negative impact on the city's financial performance, especially the rapidly declining liquidity. This requires a suite of remedial measures to be implemented.

12.23. The objective in this instance is to improve liquidity such that the bank balance at least meets the minimum liquidity requirements by the end of the 10-year planning period.

12.24. To counter the effect of a Worst-Case scenario, the city must be prepared to implement strict austerity measures. The proposed measure includes a further permanent reduction of operating expenditure (in addition to the R3 billion reduction recommended in the Base Case) of R 500 million (+/- 1% of total operating expenditure) from FY2022 onwards. Typically, through savings in contracted services and other expenditure (operational expenditure savings).

TABLE 16: EKURHULENI: OUTCOME OF SCENARIOS AFTER REMEDIAL MEASURES

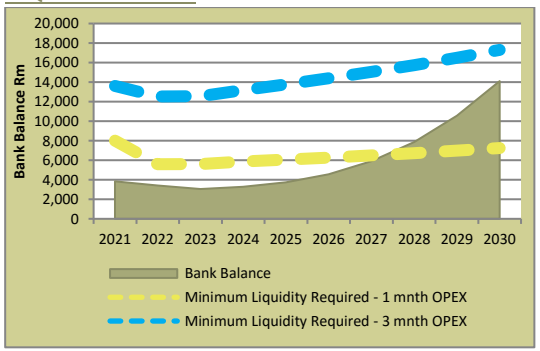
Items	Base Case	Best Case (Before Remedial Measures)	Worst Case (After Remedial Measures)
Average annual % increase in Revenue	6.8%	6.7%	6.7%
Average annual % increase in Expenditure	6.0%	6.0%	5.9%
Accounting Surplus accumulated during Planning Period (Rm)	R 13 425	R 14 721	R 12 221
Operating Surplus accumulated during Planning Period (Rm)	-R 12 256	-R 10 961	-R 13 461
Cash generated by Operations during Planning Period (Rm)	R 22 940	R 24 236	R 21 459
Average annual increase in Gross Consumer Debtors	12.3%	11.9%	12.6%
Capital investment programme during Planning Period (Rm)	R 43 257	R 43 257	R 43 257
External Loan Financing during Planning Period (Rm)	R 17 308	R 17 308	R 17 308
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 14 104	R 15 399	R 12 623
No of Months Cash Cover at the end of the Planning Period (Rm)	2.8	3.1	2.5
Liquidity Ratio at the end of the Planning Period	12: 1	1.3 : 1	1.1 : 1
Gearing at the end of the Planning Period	20.1%	20.2%	20.2%
Debt Service to Total Expense Ratio at the end of the Planning Period	6.0%	6.0%	6.0%

12.25. We recommend no other additional relief measures e.g., payment holidays, to its customers, other than those provided for in the MTREF (if any). Should the city decide otherwise, the measures will compromise liquidity, and, in such instance, additional remedial measures will be warranted.

Snapshot of COVID-19 Impact on Liquidity

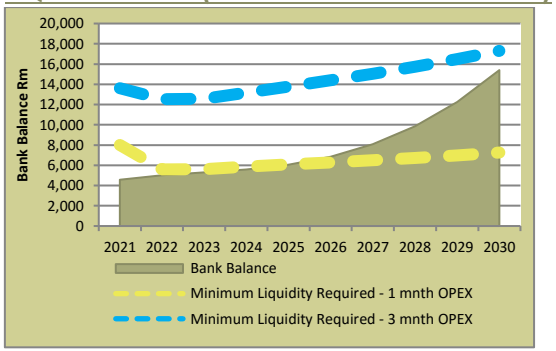
Base Case

BANK BALANCE VS MINIMUM REQUIRED LIQUIDITY LEVELS



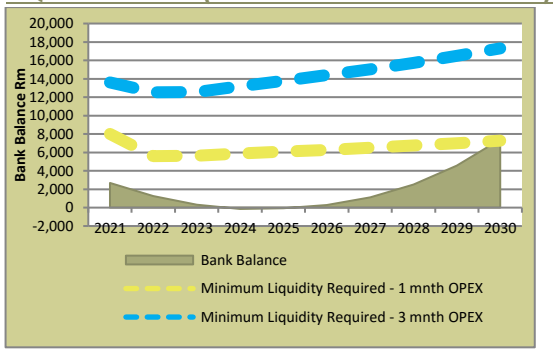
Best Case

BANK BALANCE VS MINIMUM REQUIRED LIQUIDITY LEVELS (BEFORE REMEDIAL MEASURES)

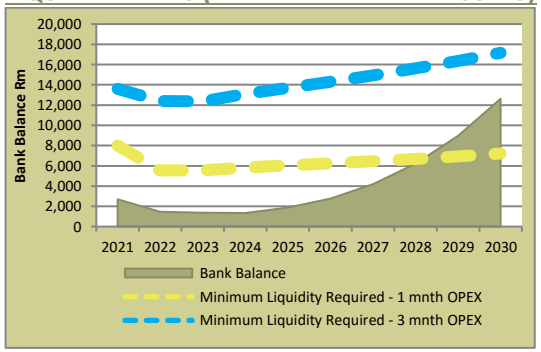


Worst Case Scenario

BANK BALANCE VS MINIMUM REQUIRED LIQUIDITY LEVELS (BEFORE REMEDIAL MEASURES)



BANK BALANCE VS MINIMUM REQUIRED LIQUIDITY LEVELS (AFTER REMEDIAL MEASURES)



13.RECOMMENDATIONS

We recommend the following, subject to discussions with Executive Management and Council of the CoE, to be adopted for inclusion in a long-term financial strategy.

The recommendations are based on the findings in the Independent Financial Analysis which concluded that the CoE was historically financially sustainable but that the current negative trend of liquidity – if it were to continue unchecked – would threaten future financial sustainability. We recommend that the municipality implements an integrated strategy which prioritises the improvement of liquidity during the 10-year planning period.

13.1. OPERATIONS FRAMEWORK

Whereas the average Base Case Outcome does not yet comply with benchmark norms it is essential that the municipality commences with a financial strategy that aims to achieve the norms of the following parameters (detail and definitions are provided in Annexure 3: Ratio Analysis and Annexure 6: Viability Framework):

TABLE 17: OPERATIONS FRAMEWORK

		MFMA Norm	Minimum	Healthy	Base Case 10-Year Average
FINANCIAL POSITION					
ASSET MANAGEMENT					
	Capital Expenditure / Total Expenditure	10% - 20%	10%	20%	7.2%
	Repairs and Maintenance as % of PPE and Investment Property	8%	8%	8%	4.0%
DEBTORS MANAGEMENT					
	Gross Consumer Debtors Growth	n.a.	n.a.	0%	12.3%
	Payment Ratio / Collection Rate	95%	90%	95%+	89%
	Net Debtors Days	30	60	30	56
LIQUIDITY MANAGEMENT					
	Minimum Liquidity Level	1 – 3 months	1 months	3 months	1.4
	Liquidity Ratio (Current Assets : Current Liabilities)	1.5:1 – 2.:1	1:1	2:1	0.9: 1
LIABILITY MANAGEMENT					
	Debt Service as % of Total Operating Expenditure	6% - 8%	10%	7.5%	5.2%

		MFMA Norm	Minimum	Healthy	Base Case 10-Year Average
	Total Debt (Borrowings) / Operating Revenue	45%	40%	35%	24%
	Debt Service Cover Ratio (Cash Generated by Operations / Debt Service)	n.a.	1.3	1.5	1.6
SUSTAINABILITY					
	Net Financial Liabilities Ratio	n.a.	n.a.	< 60%	32.6%
	Operating Surplus Ratio	n.a.	n.a.	0% - 10%	-2.9%
	Asset Sustainability Ratio	n.a.	n.a.	> 90%	108%
FINANCIAL PERFORMANCE					
EFFICIENCY					
	Accounting Surplus R'000	Break even or >0	Break even	> 0	1 342 498
	Cash Operating Surplus R'000	n.a.	Break even	> 0	-1 225 648
	Net Operating Surplus / Total Operating Revenue	>= 0%	Break even	> 0%	-2.9%
	Electricity Surplus / Total Electricity Revenue	0% - 15%	> 0%	> 15%	18.3%
	Water Surplus / Total Water Revenue	>= 0%	= 0%	> 0%	20.4%
REVENUE MANAGEMENT					
	% Increase in Billed Income p.a.	CPI	n.a	n.a	6.9%
	Operating Revenue Growth %	CPI	n.a	n.a	7.0%
	Annual Increase per Income Source: Equitable Share	n.a	n.a	n.a	7.1%
	Annual Increase per Income Source: Property Rates	n.a	n.a	n.a	10.0%
	Annual Increase per Income Source: Electricity Services	n.a	n.a	n.a	6.6%
	Annual Increase per Income Source: Water Services	n.a	n.a	n.a	4.1%
EXPENDITURE MANAGEMENT					
	Creditors Payment Period	30	30	30	159
	Contribution per Expenditure Item: Staff Cost (Salaries, Wages and Allowances)	25% - 40%	25% - 30%	25%	21%
	Contribution per Expenditure Item: Contracted Services	2% - 5%	2% - 5%	< 5%	7.5%
GRANT DEPENDENCY					
	Total Grants / Total Revenue	n.a.	n.a.	n.a.	14.7%
	Own Source Revenue to Total Operating Revenue	n.a.	n.a.	n.a.	89.3%
	Capital Grants to Total Capital Expenditure	n.a.	n.a.	n.a.	50.8%

13.2. PLANNING STRATEGIES

The CoE will assess the implication of its long-term planning processes on its financial sustainability.

13.3. ORGANISATIONAL STRATEGIES

The CoE will maintain an effective and efficient organisation and promote productivity of all its resources.

13.4. REVENUE RAISING STRATEGIES

The CoE will continue to work on diversifying and ensuring growth of its revenue base. The following revenue streams need to be maximised:

- Revenue from trading services
- Agency fees and fines
- Grants
- Donor funding
- Public-Private and Public-Public Partnerships

13.4.1. Debtors Collection Action Plan

The debt collection ratio never exceeded 90% during the historic assessment period and declined to 84% in FY2018/19. The city needs to put an action plan together to increase this rate in future. The Base Case assumes that the consumer collection rate will improve to 90% by the end of the planning period.

13.4.2. Service Charges Margins

The CoE is advised to safeguard the margins on its service charges from further decline and ensure that tariffs cover all associated costs, including increased repairs and maintenance costs of infrastructure. The tariffs should also cater for the depreciation charge of the infrastructure to start building up a Capital Replacement Reserve. The Base Case assumes that water tariffs will increase at 3% above the consumer inflation rate in future.

13.4.3. Enhance Potential Revenue

We recommend that:

- All consumers are captured, data is verified, billing is correct and monies due are collected

- Large consumers are billed correctly for all services used and payments made are correct
- Tariffs reflect cost, including depreciation, and that yields are safeguarded
- Zero based budgeting is applied
- Indigent support cases are verified independently
- Maintain indigent support levels at the minimum levels as funded by fiscal transfers

13.5. COST SAVING STRATEGIES

The CoE will align the expenditure budget not only to anticipated revenue growth, but very specifically to anticipated cash collections to generate both accounting and cash surpluses. Stringent expenditure management remains an important aim.

13.5.1. Productivity

Whereas the employee related expenses as a percentage of total expenditure are not excessive, the percentage of contracted services to Total Expenditure far exceeds any acceptable norms. There will be a need to become more efficient in future and work smarter. The CoE must ensure that its employment of staff and contractors is linked to its expected income.

13.6. FINANCIAL MANAGEMENT STRATEGIES

The sustainability and financial wellbeing of the CoE is linked directly to sound financial management. In this regard the CoE will continuously:

- Ensure that it complies with GRAP standards
- Review and update all policies and procedures annually
- Automate National Treasury reporting templates to ensure proper reporting
- Train and develop staff to minimize the use of the consultants
- Document processes to improve on the institutional memory
- Maintain an effective system of expenditure control, including procedures for approval authorization, withdrawal and payment of funds
- Prepare annual financial statements timeously and review performance and achievements
- Preserve and diversify its investment portfolio to maximize returns
- Ensure that multi-year forecasts are sustainable
- Aim for clean audits, but as a minimum launch a focussed approach to address aspects raised in the audit reports and improve the audit outcomes.

13.7. ASSET MANAGEMENT STRATEGIES

The CoE will ensure that its assets are properly accounted for and safeguarded. Leveraging on the municipal assets will drive the economic growth and sustainable development of the CoE. In particular:

13.7.1. Integrated Asset Management

Integrated asset management aims to meet a required level of service, in the most cost-effective manner, through the management of assets for present and future customers. This encompasses practices associated with considering management strategies as part of the asset lifecycle by minimizing long term costs. Such practices include management of assets, asset information (such as location and condition), demand forecasts, risk assessment and mitigation, maintenance, replacement, refurbishment and renewal programs and procedures.

We recommend that CoE collates an asset register that serves the needs of both the Financial- and Infrastructure Services Directorates. This would be a first step in implementing integrated asset management. We recommend that it then actively proceeds to migrate (over several years) to implementing integrated asset management where expenditure on new infrastructure, replacement infrastructure and repairs and maintenance expenditure are optimized.

13.7.2. Repairs and Maintenance

Budgeted repairs and maintenance expenditure of infrastructure on average at 3.9% over the MTREF period is below the recommended benchmark of 8% of the carrying value of PPE. This needs to increase in future to safeguard the effectiveness of infrastructure and prevent environmental degradation as a result of infrastructure failures. Due to the financial challenges experienced by the city, the Base Case assumes a 3.9% repairs and maintenance to PPE, the city is advised to address its revenue collection and manage its other expenditure (cost containment procedures) in order to be able to generate funds to invest in the repair and maintenance of its aged infrastructure.

13.7.3. Water Loss

The non-revenue water loss of 30.26% recorded for FY2020 is high when compared to the NT recommended norm range of 15% to 30%. The city will benefit from a reduction of this loss and should implement an integrated water loss management programme that incorporates: efficient leakage recovery, assessment and repair of aged infrastructure, monitoring of water network activities, water pressure management , combating illegal connections; training and education of community on the preservation of water as a scarce resource and the impact of vandalism of water network infrastructure.

13.7.4. Electricity Distribution Loss

CoE's electricity losses for FY2020 came to 14.12%, higher than the NT recommended maximum benchmark of 10%. As the CoE's main revenue source, high distribution losses have a severe impact on the municipality's financial sustainability. It is therefore imperative that the municipality implements a loss reduction strategy through: implementation of the recommendations of its updated network masterplan study; adequate repair and maintenance of current electricity network; prepare refurbishment plan for the current infrastructure to be incorporated into the updated network masterplan study (the study did not include the refurbishment plan); smart metering; education of the community of the impact of illegal connections and vandalism of electricity network infrastructure (financial impact and community safety).

13.8. CAPITAL FINANCING STRATEGIES

It is essential to prioritise the allocation of resources to strategic infrastructure assets as part of the long-term growth strategy. Public infrastructure such as roads and bulk services are key in terms of development and growth of the CoE. For the CoE to deliver on its core mandate and achieve its developmental goals it needs to explore different funding opportunities.

Notwithstanding the truism that municipal infrastructure has a long-term economic life and a general principle is that the future users of the infrastructure should contribute towards the payment for capital expenditure by servicing the loans taken up now for immediate implementation of that infrastructure, it is also true that the liquidity risks that CoE exhibits limits its choices of infrastructure funding to capital grants. This strategy can be amended once liquidity has improved.

13.8.1. Fund a Capital Replacement Reserve ("CRR")

We recommend that once liquidity improves, a CRR is cash backed and that tariffs are progressively increased to also include a depreciation charge that can be used to fund a cash backed CRR, which in turn can be applied towards the funding of the replacement of ageing infrastructure.

13.8.2. Capital Funding

If, in exercising its mandate, the CoE must extend its regional landfill site it can do so by either using internal- or external funding. We recommend that the CoE recovers its costs through an increase in its refuse removal tariffs and avoids increasing its operational expenditure (other than R&M) pursuant to the investment. We recommend the metro makes use of the LTFM and populate scenarios to assess the impact of the various funding choices as support for its strategic financial decision-making.

13.9. OPERATIONAL FINANCING STRATEGIES

Operational efficiency will be improved by maximising the collection rates and managing the underlying items of current assets and current liabilities optimally.

13.9.1. Focus on Core Functions

The tightening of liquidity requires that the CoE continuously assesses all the functions it delivers and re-focusses on its core functions even to the extent that it eliminates all unfunded mandates.

13.9.2. Working Capital Management

The number of days' receivable of 75 days and days payable of more than 148 days are both more than the allowed number of days recommended by National Treasury. The CoE is advised to reduce these days simultaneously to improve its working capital management. Whereas this cannot be done overnight, the Base Case assumes that Days Receivable will reduce progressively to reach 41 days in 2030 and that Days Payable will initially increase to a peak of 180 days by FY2022 and thereafter reduce progressively to reach 140 days by 2030.

13.9.3. Restructuring of Creditors

If the CoE were to immediately pay all its creditors it would deplete its cash reserves considerably. It therefore stands to reason to consider renegotiating with some or all its largest creditors. This restructuring should follow a rational process by ensuring that:

- Creditors' assertions are correct and validated
- Reconstruct creditors in relevant time periods by assessing affordability
- Negotiate restructured terms

13.10. FINANCIAL MANAGEMENT POLICIES

The aim of the financial policies is to provide guidance in terms of financial management and ultimately to ensure sound and sustainable management of the fiscal affairs of the CoE. The CoE will review its policies annually and very specifically adopt the following:

13.10.1. Adopt a Liquidity Policy

We recommend that CoE adopts a Liquidity Policy that requires the CoE to:

- Maintain a current ratio of at least 1.5:1.

- Maintain a cash backed liquidity reserve of at least one month's operational expenses in addition to unspent conditional grants, short term provisions and statutory reserves.

13.11.ACTION

It is recommended that the Municipal Manager with the oversight of the Mayoral Committee action each of the recommendations made once these are adopted.

ANNEXURE 1: INDEPENDENT FINANCIAL ASSESSMENT AGAINST THE BACKGROUND OF CITY OF EKURHULENI METROPOLITAN MUNICIPALITY'S DEMOGRAPHIC, ECONOMIC & HOUSEHOLD INFRASTRUCTURE SITUATION

[SEE SEPARATE DOCUMENT]

ANNEXURE 2: BASE CASE SUMMARY PROJECTED FINANCIAL STATEMENTS

Municipal Financial Model - Ekurhuleni
Statement of Financial Position

Model year	1	2	3	4	5	6	7	8	9	10
Financial year (30 June)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
R thousands										
Non-current assets:	62 806 885	62 963 309	64 003 383	65 053 648	66 205 758	67 389 048	68 604 127	69 851 890	71 133 492	72 450 326
Property, plant and equipment	58 869 852	60 011 670	61 051 301	62 109 123	63 192 551	64 301 148	65 434 752	66 593 494	67 777 797	68 988 381
Intangible assets	1 220 132	1 220 132	1 220 132	1 220 132	1 220 132	1 220 132	1 220 132	1 220 132	1 220 132	1 220 132
Investment properties	530 824	530 824	530 824	530 824	530 824	530 824	530 824	530 824	530 824	530 824
Investments	2 107 700	1 127 805	1 128 247	1 120 691	1 189 373	1 264 066	1 345 541	1 434 562	1 531 861	1 638 111
Long-term receivables	2 152	6 761	6 761	6 761	6 761	6 761	6 761	6 761	6 761	6 761
Other non-current assets	76 224	66 117	66 117	66 117	66 117	66 117	66 117	66 117	66 117	66 117
Current assets:	12 077 118	11 791 201	11 599 329	11 931 801	12 518 688	13 478 635	14 966 389	17 078 918	19 948 249	23 699 834
Inventories	1 462 185	1 593 447	1 753 573	1 882 503	1 995 191	2 129 373	2 276 599	2 438 450	2 616 558	2 812 570
Trade and other receivables	6 783 762	6 783 762	6 783 762	6 783 762	6 783 762	6 783 762	6 783 762	6 783 762	6 783 762	6 783 762
Cash & Short term investments	3 831 170	3 413 991	3 061 994	3 265 536	3 739 735	4 565 499	5 906 028	7 856 706	10 547 928	14 103 502
TOTAL ASSETS	74 884 003	74 754 510	75 602 712	76 985 449	78 724 446	80 867 683	83 570 516	86 930 808	91 081 740	96 150 161
Municipal Funds:	47 061 207	46 122 648	45 389 441	45 448 871	46 222 390	47 553 643	49 565 655	52 400 051	56 214 743	61 182 179
Housing development fund & Other Cash Backed Reserves	1 247 049	1 247 049	1 247 049	1 248 095	1 248 095	1 248 095	1 248 095	1 248 095	1 248 095	1 248 095
Reserves (Not Cash Backed)	(723 218)	(721 563)	(721 563)	(721 563)	(721 563)	(721 563)	(721 563)	(721 563)	(721 563)	(721 563)
Accumulated surplus	46 537 376	45 597 162	44 863 955	44 922 339	45 695 858	47 027 111	49 039 123	51 873 519	55 688 211	60 655 647
Non-current liabilities:	12 811 401	13 848 614	14 613 469	15 177 694	15 643 356	15 982 275	16 150 352	16 123 617	15 858 396	15 315 456
Long-term liabilities (Interest Bearing)	9 745 927	10 752 800	11 487 131	12 051 356	12 517 018	12 855 937	13 024 014	12 997 279	12 732 058	12 189 118
Non-current provisions	3 065 473	3 095 813	3 126 338	3 126 338	3 126 338	3 126 338	3 126 338	3 126 338	3 126 338	3 126 338
Current liabilities:	15 011 395	14 783 248	15 599 802	16 358 884	16 858 701	17 331 765	17 854 509	18 407 139	19 008 602	19 652 526
Consumer deposits	977 345	1 021 016	1 066 132	1 112 925	1 161 520	1 212 018	1 264 552	1 319 270	1 376 325	1 435 876
Provisions	3 591 585	571 826	588 310	646 659	646 659	646 659	646 659	646 659	646 659	646 659
Trade and other payables	9 901 013	12 520 190	13 132 465	13 625 387	13 893 902	14 109 699	14 333 787	14 566 821	14 808 213	15 056 047
Bank overdraft	–	–	–	–	–	–	–	–	–	–
Current portion of interest bearing liabilities	541 453	670 216	812 895	973 913	1 156 620	1 363 389	1 609 512	1 874 389	2 177 405	2 513 944
TOTAL MUNICIPAL FUNDS AND LIABILTIES	74 884 003	74 754 510	75 602 712	76 985 449	78 724 446	80 867 683	83 570 516	86 930 808	91 081 740	96 150 161

Municipal Financial Model - Ekurhuleni
Statement of Financial Performance

Model year	1	2	3	4	5	6	7	8	9	10
Financial year (30 June)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
R thousands										
Revenue										
Property rates	6 160 668	6 380 483	7 109 408	7 908 890	8 742 395	9 684 914	10 744 947	11 930 552	13 248 952	14 706 217
Service Charges	25 283 261	27 159 750	29 244 503	30 974 627	32 568 435	34 094 506	35 731 090	37 490 499	39 383 155	41 417 089
Service charges - electricity	16 582 381	17 965 902	19 617 374	20 897 012	22 011 384	23 023 037	24 105 540	25 266 896	26 513 796	27 851 295
Service charges - water	5 284 253	5 571 149	5 786 981	6 008 044	6 240 246	6 487 041	6 750 520	7 032 455	7 334 188	7 656 552
Service charges - sanitation	1 924 189	2 069 052	2 223 640	2 388 533	2 567 433	2 762 254	2 974 994	3 207 689	3 462 344	3 740 873
Service charges - refuse	1 492 437	1 553 647	1 616 508	1 681 037	1 749 373	1 822 174	1 900 035	1 983 459	2 072 827	2 168 369
Service charges - other	–	–	–	–	–	–	–	–	–	–
Rental of facilities and equipment	128 689	134 650	137 525	140 339	151 453	163 600	176 914	191 530	207 584	225 211
Interest earned - external investments	179 111	282 387	215 659	220 795	236 155	272 151	330 090	420 703	551 613	732 375
Interest earned - outstanding debtors	408 533	349 233	352 497	354 443	653 854	703 829	759 826	821 825	889 627	962 799
Dividends received	–	–	–	–	–	–	–	–	–	–
Fines, penalties and forfeits	579 647	579 685	579 685	579 685	625 592	675 769	730 762	791 134	857 449	930 257
Licences and permits	310 023	249 884	249 884	249 884	272 829	298 852	327 917	359 929	394 724	432 063
Agency services	–	–	–	–	–	–	–	–	–	–
Transfers and subsidies (operating)	5 555 007	4 952 925	5 273 291	5 443 839	5 801 859	6 190 120	6 612 426	7 072 549	7 574 077	8 120 282
Other revenue	2 953 451	3 175 473	3 387 059	3 531 210	3 810 855	4 116 514	4 451 509	4 819 271	5 223 237	5 666 753
Gain on disposal of PPE	–	–	–	–	–	–	–	–	–	–
Revaluation on investment property gain / (loss)	–	–	–	–	–	–	–	–	–	–
Total revenue before Capital Grants	41 558 390	43 264 470	46 549 511	49 403 711	52 863 427	56 200 255	59 865 481	63 897 991	68 330 418	73 193 044
Capital Grants	2 430 605	2 147 384	2 199 374	2 248 629	2 215 931	2 185 716	2 158 202	2 133 422	2 111 233	2 091 331
Public & developers contributions	165 718	257 163	291 265	324 067	354 839	388 889	426 660	468 623	515 277	567 133
Total Revenue after Capital Grants	44 154 713	45 669 017	49 040 150	51 976 407	55 434 197	58 774 860	62 450 342	66 500 036	70 956 928	75 851 508
Operating expenditure										
Employee related costs	9 876 051	10 261 652	11 109 426	11 177 798	11 862 493	12 607 419	13 419 990	14 307 815	15 278 198	16 337 847
Remuneration of councillors	142 795	155 879	162 426	169 573	178 270	187 682	197 902	209 017	221 103	234 228
Debt impairment	4 875 746	4 501 808	4 480 199	4 372 560	4 653 700	4 942 560	5 258 264	5 603 313	5 979 936	6 389 991
Depreciation and asset impairment	2 854 630	2 939 818	2 998 233	3 053 013	3 109 623	3 168 315	3 228 847	3 290 958	3 354 390	3 418 883
Finance charges	1 241 091	1 383 894	1 499 151	1 606 192	1 708 632	1 804 315	1 890 462	1 963 768	2 018 861	2 052 541
Bulk purchases	17 747 179	19 399 547	20 839 315	21 996 455	23 022 926	23 972 423	24 988 377	26 078 249	27 248 033	28 501 953
Other Materials	2 519 322	2 847 761	3 190 210	3 459 867	3 656 143	3 898 501	4 165 234	4 459 372	4 784 109	5 142 741
Contracted services	4 007 244	3 395 050	3 668 174	4 155 106	4 409 129	4 657 926	4 927 306	5 219 511	5 536 700	5 880 868
Transfers and subsidies	486 907	627 142	678 042	729 181	779 512	834 112	893 517	958 261	1 028 860	1 105 784
Other expenditure	1 086 744	1 082 025	1 134 480	1 182 791	1 264 429	1 352 994	1 449 353	1 554 374	1 668 889	1 793 666
Loss on disposal of PPE	13 000	13 000	13 702	14 442	15 822	17 360	19 079	21 002	23 157	25 571
Total Expenditure	44 850 708	46 607 576	49 773 357	51 916 977	54 660 678	57 443 607	60 438 330	63 665 639	67 142 237	70 884 071
Suplus/ (Shortfall) for the year	(695 996)	(938 559)	(733 207)	59 430	773 519	1 331 253	2 012 012	2 834 397	3 814 691	4 967 436

Municipal Financial Model - Ekurhuleni
Cash Flow Statement

Model year	1	2	3	4	5	6	7	8	9	10
Financial year (30 June)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
R thousands										
Cash flows from Operating Activities										
Suplus/Deficit for the year *including* Capital Grants	(695 996)	(938 559)	(733 207)	59 430	773 519	1 331 253	2 012 012	2 834 397	3 814 691	4 967 436
Suplus/Deficit for the year *excluding* Capital Grants & Contributions	(3 292 319)	(3 343 106)	(3 223 846)	(2 513 266)	(1 797 251)	(1 243 351)	(572 850)	232 351	1 188 182	2 308 973
Capital Grants & Contributions	2 596 323	2 404 547	2 490 639	2 572 696	2 570 770	2 574 605	2 584 861	2 602 045	2 626 510	2 658 464
Adjustments for non-cash items:										
Depreciation, amortisation and impairment loss	2 854 630	2 939 818	2 998 233	3 053 013	3 109 623	3 168 315	3 228 847	3 290 958	3 354 390	3 418 883
Revaluation on investment property (gain) / loss	–	–	–	–	–	–	–	–	–	–
Increase / (Release from) current provisions & non-interest bearing liabilities	3 014 841	(3 019 759)	16 484	58 349	–	–	–	–	–	–
Increase / (Release from) other non-current provisions & non-interest bearing liabilities	(44 057)	30 340	30 525	–	–	–	–	–	–	–
(Increase) / Release from non-current interest bearing assets	(1 491 554)	979 895	(442)	7 556	(68 682)	(74 693)	(81 475)	(89 021)	(97 299)	(106 250)
Capitalised interest	–	–	–	–	–	–	–	–	–	–
Operating surplus before working capital changes:	3 637 864	(8 264)	2 311 593	3 178 347	3 814 460	4 424 876	5 159 383	6 036 333	7 071 783	8 280 069
Change in W/C Investment	910 366	2 487 916	452 149	363 993	155 827	81 615	76 861	71 183	63 284	51 822
(Increase)/decrease in inventories	(179 611)	(131 262)	(160 125)	(128 930)	(112 688)	(134 182)	(147 226)	(161 851)	(178 108)	(196 012)
(Increase)/decrease accounts receivable	228 693	–	–	0	0	–	(0)	0	–	0
Increase/(decrease) in trade payables	861 284	2 619 178	612 274	492 923	268 515	215 797	224 087	233 034	241 392	247 835
Net cash flow from Operating activities	4 548 230	2 479 651	2 763 741	3 542 340	3 970 287	4 506 491	5 236 244	6 107 516	7 135 067	8 331 891
Cash flows from Investing Activities										
Capital expenditure	(4 576 496)	(4 081 636)	(4 037 864)	(4 110 835)	(4 193 051)	(4 276 912)	(4 362 450)	(4 449 700)	(4 538 693)	(4 629 467)
Decrease/(Increase) in non-current receivables	(8 946)	5 498	–	–	–	–	–	–	–	–
(Additions) / Disposals of investment property	–	–	–	–	–	–	–	–	–	–
Net cash flow from Investing activities	(4 585 442)	(4 076 138)	(4 037 864)	(4 110 835)	(4 193 051)	(4 276 912)	(4 362 450)	(4 449 700)	(4 538 693)	(4 629 467)
Cash flows from Financing Activities										
New loans raised	1 712 993	1 677 089	1 547 225	1 538 139	1 622 281	1 702 308	1 777 589	1 847 654	1 912 184	1 971 004
Loans repaid	(1 388 556)	(541 453)	(670 216)	(812 895)	(973 913)	(1 156 620)	(1 363 389)	(1 609 512)	(1 874 389)	(2 177 405)
(Decrease) / Increase in consumer deposits	42 244	43 671	45 116	46 793	48 594	50 498	52 534	54 719	57 055	59 551
Net cash flow from Financing activities	366 681	1 179 307	922 126	772 037	696 963	596 186	466 734	292 861	94 849	(146 850)
Change in Cash	329 469	(417 179)	(351 997)	203 542	474 198	825 765	1 340 528	1 950 678	2 691 222	3 555 574
Cash/(Overdraft), Beginning	3 501 701	3 831 170	3 413 991	3 061 994	3 265 536	3 739 735	4 565 499	5 906 028	7 856 706	10 547 928
Cash/(Overdraft), Ending	3 831 170	3 413 991	3 061 994	3 265 536	3 739 735	4 565 499	5 906 028	7 856 706	10 547 928	14 103 502

ANNEXURE 3: RATIO ANALYSIS

YEAR			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
FINANCIAL POSITION												
ASSET MANAGEMENT												
R29	**Capital Expenditure / Total Expenditure**	10% - 20%	9.3%	7.5%	7.1%	6.7%	6.5%	6.3%	6.1%	9.3%	7.5%	7.1%
R27	**Repairs and Maintenance as % of PPE and Investment Property**	8%	3.9%	3.9%	4.0%	4.0%	4.0%	4.0%	4.0%	3.9%	3.9%	4.0%
DEBTORS MANAGEMENT												
R4	**Gross Consumer Debtors Growth**		22.4%	13.8%	11.0%	10.0%	9.6%	9.3%	9.0%	22.4%	13.8%	11.0%
R5	**Payment Ratio / Collection Rate**	95%	86.1%	89.0%	90.0%	90.0%	90.0%	90.0%	90.0%	86.1%	89.0%	90.0%
	Net Debtors Days	30	75	65	56	50	47	44	41	75	65	56
LIQUIDITY MANAGEMENT												
R49	**Cash Coverage Ratio (excl. Working Capital)**		0.7 : 1	1.4 : 1	1.7 : 1	2.7 : 1	3.5 : 1	4.7 : 1	6.3 : 1	0.7 : 1	1.4 : 1	1.7 : 1
R50	**Cash Coverage Ratio (incl. Working Capital)**		0.4 : 1	0.5 : 1	0.6 : 1	0.9 : 1	1.2 : 1	1.5 : 1	1.9 : 1	0.4 : 1	0.5 : 1	0.6 : 1
R51	**Cash Surplus / Shortfall on Minimum Liquidity Requirements**		-R4 715.0 m	-R2 605.3 m	-R2 390.1 m	-R650.8 m	R1 060.8 m	R3 494.1 m	R6 771.6 m	-R4 715.0 m	-R2 605.3 m	-R2 390.1 m
R1	**Liquidity Ratio (Current Assets : Current Liabilities)**	1:1.5 - 1:2.1	0.8 : 1	0.7 : 1	0.7 : 1	0.8 : 1	0.9 : 1	1 : 1	1.2 : 1	0.8 : 1	0.7 : 1	0.7 : 1
LIABILITY MANAGEMENT												
R45	**Debt Service as % of Total Operating Expenditure**	6% - 8%	5.9%	4.4%	4.9%	5.4%	5.6%	5.8%	6.0%	5.9%	4.4%	4.9%
R6	**Total Debt (Borrowings) / Operating Revenue**	45%	24.8%	26.4%	25.9%	24.4%	23.3%	21.8%	20.1%	24.8%	26.4%	25.9%

YEAR			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
R7	Repayment Capacity Ratio		3.11	9.73	6.05	4.37	3.59	2.91	2.34	3.11	9.73	6.05
R46	Debt Service Cover Ratio (Cash Generated by Operations / Debt Service)		1.7 : 1	1.3 : 1	1.5 : 1	1.6 : 1	1.7 : 1	1.8 : 1	2 : 1	1.7 : 1	1.3 : 1	1.5 : 1
SUSTAINABILITY												
	Net Financial Liabilities Ratio	< 60%	37.9%	40.0%	37.8%	31.8%	27.3%	21.8%	15.4%	37.9%	40.0%	37.8%
	Operating Surplus Ratio	0% - 10%	-7.9%	-6.9%	-3.4%	-1.0%	0.4%	1.7%	3.2%	-7.9%	-6.9%	-3.4%
	Asset Sustainability Ratio	> 90%	130.3%	98.9%	97.0%	97.2%	97.3%	97.4%	97.4%	130.3%	98.9%	97.0%
FINANCIAL PERFORMANCE												
EFFICIENCY												
R42	Net Operating Surplus / Total Operating Revenue	>= 0%	-7.9%	-6.9%	-3.4%	-1.0%	0.4%	1.7%	3.2%	-7.9%	-6.9%	-3.4%
R43	Electricity Surplus / Total Electricity Revenue	0% - 15%	20.3%	18.1%	18.1%	18.1%	18.1%	18.1%	18.1%	20.3%	18.1%	18.1%
R44	Water Surplus / Total Water Revenue	>= 0%	14.2%	17.6%	20.0%	22.4%	23.5%	24.6%	25.8%	14.2%	17.6%	20.0%
REVENUE MANAGEMENT												
R8	Increase in Billed Income p.a. (R'm)		R 2 723.7 m	R 2 816.6 m	R 2 438.4 m	R 2 709.9 m	R 2 959.6 m	R 3 227.1 m	R 3 508.8 m	R 2 723.7 m	R 2 816.6 m	R 2 438.4 m
R9	% Increase in Billed Income p.a.	CPI	9.4%	8.4%	6.2%	6.2%	6.3%	6.5%	6.6%	9.4%	8.4%	6.2%
R12	Operating Revenue Growth %	CPI	11.4%	7.6%	7.0%	6.5%	6.7%	6.9%	7.1%	11.4%	7.6%	7.0%
R14	Contribution per Income Source: Equitable Share		10.5%	9.4%	9.0%	9.1%	9.1%	9.2%	9.2%	10.5%	9.4%	9.0%

YEAR			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
R15	Contribution per Income Source: Conditional Operating Grants		2.9%	2.0%	2.0%	1.9%	1.9%	1.9%	1.9%	2.9%	2.0%	2.0%
R16	Contribution per Income Source: Property Rates		14.8%	15.3%	16.5%	17.9%	18.7%	19.4%	20.1%	14.8%	15.3%	16.5%
R17	Contribution per Income Source: Electricity Services		39.9%	42.1%	41.6%	40.3%	39.5%	38.8%	38.1%	39.9%	42.1%	41.6%
R18	Contribution per Income Source: Water Services		12.7%	12.4%	11.8%	11.3%	11.0%	10.7%	10.5%	12.7%	12.4%	11.8%
R19	Contribution per Income Source: Interest on Investments		0.4%	0.5%	0.4%	0.6%	0.7%	0.8%	1.0%	0.4%	0.5%	0.4%
R20	Annual Increase per Income Source: Equitable Share		25.4%	8.1%	6.9%	7.1%	7.2%	7.4%	7.5%	25.4%	8.1%	6.9%
R21	Annual Increase per Income Source: Property Rates		8.7%	11.4%	10.5%	10.9%	11.0%	11.1%	11.0%	8.7%	11.4%	10.5%
R22	Annual Increase per Income Source: Electricity Services		12.3%	9.2%	5.3%	4.7%	4.8%	4.9%	5.0%	12.3%	9.2%	5.3%
R23	Annual Increase per Income Source: Water Services		3.1%	3.9%	3.9%	4.1%	4.2%	4.3%	4.4%	3.1%	3.9%	3.9%
R24	Annual Increase per Income Source: Interest on Investments		-41.6%	-23.6%	7.0%	21.3%	27.5%	31.1%	32.8%	-41.6%	-23.6%	7.0%
R47	Cash Generated by Operations / Own Revenue		12.6%	6.6%	8.4%	9.8%	10.7%	11.6%	12.7%	12.6%	6.6%	8.4%
R48	Cash Generated by Operations / Total Operating Revenue		10.9%	5.9%	7.5%	8.7%	9.6%	10.4%	11.4%	10.9%	5.9%	7.5%
EXPENDITURE MANAGEMENT												
	Creditors Payment Period	30	150	180	175	170	165	160	155	150	145	140
R30	Contribution per Expenditure Item: Staff Cost (Salaries, Wages and Allowances)	25% - 40%	20.3%	20.9%	20.5%	21.0%	21.3%	21.6%	21.9%	20.3%	20.9%	20.5%
	Contribution per Expenditure Item: Contracted Services	2% - 5%	8.1%	6.8%	7.5%	7.6%	7.7%	7.7%	7.8%	8.1%	6.8%	7.5%
R31	Contribution per Expenditure Item: Electricity Services		26.7%	29.9%	30.6%	30.5%	30.4%	30.3%	30.2%	26.7%	29.9%	30.6%

YEAR			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
R32	Contribution per Expenditure Item: Water Services		9.2%	8.9%	8.5%	8.1%	7.9%	7.7%	7.5%	9.2%	8.9%	8.5%
R33	Contribution per Expenditure Item: Repairs & Maintenance		4.7%	4.4%	4.3%	4.0%	3.9%	3.8%	3.7%	4.7%	4.4%	4.3%
R34	Contribution per Expenditure Item: Depreciation and Asset Impairment		5.8%	5.6%	5.3%	5.0%	4.8%	4.7%	4.5%	5.8%	5.6%	5.3%
R35	Contribution per Expenditure Item: External Interest Charged		2.5%	2.8%	2.9%	2.9%	2.9%	2.8%	2.7%	2.5%	2.8%	2.9%
R36	Annual Increase per Expenditure Item: Staff Cost (Salaries, Wages and Allowances)		12.4%	8.2%	6.1%	6.4%	6.6%	6.8%	6.9%	12.4%	8.2%	6.1%
R37	Annual Increase per Expenditure Item: Electricity Services		14.5%	9.2%	5.3%	4.7%	4.8%	4.9%	5.0%	14.5%	9.2%	5.3%
R38	Annual Increase per Expenditure Item: Water Services		3.2%	1.9%	2.3%	2.5%	2.6%	2.8%	2.9%	3.2%	1.9%	2.3%
R39	Annual Increase per Expenditure Item: Repairs & Maintenance		-48.4%	7.7%	1.7%	1.8%	1.8%	1.8%	1.8%	-48.4%	7.7%	1.7%
R40	Annual Increase per Expenditure Item: Depreciation		7.4%	2.0%	1.9%	1.9%	1.9%	1.9%	1.9%	7.4%	2.0%	1.9%
R41	Annual Increase per Expenditure Item: External Interest Charged		4.5%	8.3%	6.4%	4.8%	3.9%	2.8%	1.7%	4.5%	8.3%	6.4%
GRANT DEPENDENCY												
R10	Total Grants / Total Revenue		18.1%	15.2%	14.5%	14.0%	13.8%	13.6%	13.5%	18.1%	15.2%	14.5%
R11	Own Source Revenue to Total Operating Revenue		87.0%	89.3%	89.7%	89.7%	89.7%	89.7%	89.7%	87.0%	89.3%	89.7%
	Capital Grants to Total Capital Expenditure		53.1%	54.5%	52.8%	49.5%	47.9%	46.5%	45.2%	53.1%	54.5%	52.8%

These ratios are calculated from the output of the model and can at best only approximate the calculation based on actual accounts.

DEFINITIONS	
Liquidity Ratios	
Current Ratio	*Current Assets / Current Liabilities*
Quick Liquidity Ratio	*(Current Assets - Debtors > 30 days) / Current Liabilities*
Minimum Liquidity Level (or Cost Coverage)	*((Cash and Cash Equivalents - Unspent Conditional Grants - Overdraft) + Short Term Investment) / Monthly Fixed Operational Expenditure excluding (Depreciation, Amortisation, Provision for Bad Debts, Impairment and Gain and Loss on Disposal of Assets)*
Overdraft to Total Income	*Overdraft / Total Operating Revenue*
Operational Ratios	
Accounting Surplus	*Total Operating Revenue + Conditional Grants - Total Operating Expenditure*
Cash Operating Surplus	*Total Operating Revenue - Total Operating Expenditure + Working Capital*
Cash from Operations as a % of own Revenue	*Operating Cash / Operating Revenue*
Repairs and Maintenance to PPE	*Total Repairs and Maintenance Expenditure / Carrying Value of PPE x 100*
Debtors Payment Ratio	*(Gross Debtors Closing Balance + Billed Revenue - Gross Debtors Opening Balance + Bad Debts Written Off) / Billed Revenue x 100*
Staff Costs	*Remuneration (Employee Related Costs and Councillors' Remuneration) / Total Operating Expenditure x 100*
External Gearing Ratios	
External Loan Liability Paid Coverage Ratio	*(Total Operating Revenue - Total Operating Expenditure (excluding non-cash items)) / Capital Cost (Interest Paid and Redemption)*
External Interest and Capital Paid to Total Expenditure	*Capital Cost (Interest Paid and Redemption) / Total Operating Expenditure x 100*
External Gearing Ratio (or Debt as a % of Own Revenue)	*(Overdraft + Current Finance Lease Obligation + Non Finance Lease Obligation + Short Term Borrowings + Long Term Borrowings) / Total Operating Revenue*
Other Ratios	
Level of Grant Dependency	*(Total Grants) / (Total Operating Revenue)*
Operating Surplus Ratio	*(Operating Revenue - Operating Expenditure) / Operating Revenue*
Net Financial Liabilities Ratio	*(Total Liabilities - Current Assets) / Operating Revenue (excl Capital Grants)*
Asset Sustainability Ratio	*Capex for Replacement / Depreciation*

ANNEXURE 4: ASSETS EARMARKED FOR REPLACEMENT

The asset register of the municipality was analysed mechanistically (without engineering judgement) and a replacement schedule of the Annual Replacement Cost of different asset classes was determined. This was done with reference to the information in the municipality's asset registers for each of 14 categories of assets. Asset categories "Land", "Heritage Assets" and "Intangible Assets - Servitudes" were excluded from assessment. The values in the Tables below are in nominal Rand values, escalated to the date of replacement.

TABLE 4.1: EKURHULENI: ESTIMATED ANNUAL REPLACEMENT COST AS EXTRACTED FROM THE ASSET REGISTER (RM NOMINAL)

	TOTAL	2020/21 and before	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Community assets	5 181.90	0.0	1 549.2	64.6	978.0	59.1	1 019.3	638.3	642.2	177.8	53.4
Electricity assets	1 640.60	0.0	425.6	3.2	738.5	3.4	93.0	154.7	49.8	154.7	17.7
ICT assets	2 213.80	0.0	393.5	8.6	282.4	43.2	59.1	208.4	122.3	862.1	234.2
Intangible assets - Software	106.30	45.5	0.0	0.0	34.7	25.4	0.0	0.0	0.7	0.0	0.0
Investment Property	627.50	0.0	125.4	124.9	0.1	39.9	0.0	93.9	202.3	4.0	37.0
Moveable assets	12 305.40	6 466.0	3.5	3.2	36.1	980.7	319.1	674.2	1 294.0	579.7	1 948.9
Other assets	4 487.10	0.0	1 341.4	318.7	158.2	184.6	552.0	1 250.9	353.7	150.8	176.8
Roads & Stormwater assets	24 261.10	0.0	14 429.1	415.0	920.1	90.3	2 135.5	1 472.3	1 306.2	2 759.6	733.0
Sanitation assets	1 181.20	0.0	166.5	2.4	417.4	0.1	4.9	72.4	50.9	330.5	136.1
Water assets	7 194.60	0.0	1 112.4	6.4	4 602.5	73.0	106.9	132.2	472.1	205.1	484.0
Total AR Cost as per Asset Register Rm	**59 199.50**	**6 511.50**	**19 546.60**	**947.00**	**8 168.00**	**1 499.70**	**4 289.80**	**4 697.30**	**4 494.20**	**5 224.30**	**3 821.10**

We have amended the estimated replacement costs. This was achieved by:

- Assuming that the actual remaining life of assets will exceed the life recorded for some of the assets in the asset register,
- Assuming that only a percentage of assets will be replaced when their estimated useful life expires,
- Spreading replacement not done in the past over several future years, and
- Smoothing the constant 2021 value over the Planning Period and reverting these back to nominal values.

The outcome of this analysis is presented in the Table below:

TABLE 4.2: EKURHULENI: SPREAD, REVISED, REDUCED AND SMOOTHED ESTIMATED ASSET REPLACEMENT COST (RM NOMINAL)

		1	2	3	4	5	6	7	8	9	10
	TOTAL	***2021***	***2022***	***2023***	***2024***	***2025***	***2026***	***2027***	***2028***	***2029***	***2030***
ARC (Rm Nominal) Original	**59 199.80**	6 511.5	19 546.7	947.0	8 167.9	1 499.8	4 289.8	4 697.3	4 494.2	5 224.3	3 821.3
ARC (Rm Nominal) Revised & Reduced	**53 454.50**	0.0	20 334.7	2 533.7	9 477.2	1 223.1	3 707.9	4 010.0	3 806.6	5 005.1	3 356.2
ARC (Rm Constant 2021)	**42 956.40**	0.0	19 093.6	2 233.9	7 845.7	950.7	2 706.3	2 748.2	2 449.6	3 024.2	1 904.2
ARC (Rm Constant)(Smoothed)	**46 287.90**	0.0	5 143.1	5 143.1	5 143.1	5 143.1	5 143.1	5 143.1	5 143.1	5 143.1	5 143.1
ARC (Rm Nominal)(Smoothed)	**64 259.50**	0.0	5 477.4	5 833.4	6 212.6	6 616.4	7 046.4	7 504.4	7 992.2	8 511.7	9 065.0

ANNEXURE 5: NEW CAPITAL INVESTMENTS

The City of Ekurhuleni's Integrated Infrastructure Masterplan estimate capital expenditure demand based on the following scenarios:

1. The Best-Case Scenario: assumes that the catalytic projects are implemented. This scenario assumes that there is economic and development in the municipality. Although it is termed the best-case scenario, there is a massive demand in terms of infrastructure and capital investment. In other words, in this scenario, demand for infrastructure is at its highest.

2. Worst Case Scenario: assumes that the economic situation of the City of Ekurhuleni becomes worse than its current state. Although the demand for infrastructure in this scenario is reduced as compared to the current demand, it should be noted that there may be a number of social issues resulting from unemployment and poor quality of living.

3. Expected (As-Usual) Scenario: is based on the historical trends. In other words, the status quo would continue. Some of the drivers of change would take effect, while the other projects are not implemented.

The outcomes from the Infrastructure Masterplan and Financial Model indicate the following capital expenditure demand for the scenarios above:

Best Case Scenario

		0-5	6 -10
	TOTAL	***2020-2025***	***2025 – 2030***
Energy Sources (Rm)	**8 910**	3 675	5 235
Water Management (Rm)	**460**	248	212
Sewer (Rm)	**8 767**	3 627	5 140
Storm Water	**2 942**	1 055	1 887
Waste Management	**1 420**	979	441
Transportation	**0**	0	0
Other	**75 893**	32 496	43 397
	98 392	**42 080**	**56 312**

Worst Case Scenario

		0-5	6 -10
	TOTAL	***2020-2025***	***2025 – 2030***
Energy Sources (Rm)	**8 401**	3 465	4 936
Water Management (Rm)	**434**	234	200
Sewer (Rm)	**8 266**	3 420	4 846
Storm Water	**2 774**	995	1 779
Waste Management	**1 339**	923	416
Transportation	**0**	0	0
Other	**71 555**	30 638	40 917
	92 769	**39 675**	**53 094**

Expected (As-Usual) Case

		0-5	6 -10
	TOTAL	***2020-2025***	***2025 – 2030***
Energy Sources (Rm)	**8 485**	3 500	4 985
Water Management (Rm)	**438**	236	202
Sewer (Rm)	**8 349**	3 454	4 895
Storm Water	**2 802**	1 005	1 797
Waste Management	**1 353**	933	420
Transportation	**0**	0	0
Other	**72 279**	30 948	41 331
	93 706	**40 076**	**53 630**

ANNEXURE 6: VIABILITY FRAMEWORK

1. A proposed framework is provided below, within which to manage liquidity, operational performance and external gearing and is aligned to MFMA Circular No. 71.

2. The municipality is advised to include these ratios in the relevant revised financial policies:

Liquidity Ratios

3. Standard Liquidity Ratio (The ability to fully provide for current liabilities with current assets.)

   Minimum norm: 1:1
   Healthy norm: 2:1
   MFMA norm: 1.5 – 2:1

4. Quick Liquidity Ratio (The ability to provide for current liabilities with liquid current assets therefore current assets including only 30-day debtors.)

   Minimum norm: 1:1
   Healthy norm: 2:1
   MFMA norm: None

5. Minimum Liquidity Level (Holding sufficient cash and investments to fully provide for the sum of unspent conditional grants, short term provisions, ceded investments, cash backed reserves and provisions and at least one month of operating expenditure (excluding non-cash expenses).

   Minimum norm: 1:1
   Healthy norm: 1:1 plus an additional month's operational expenditure
   MFMA norm: 1 – 3 months

   MFMA calculation excludes cash backed reserves and short-term provisions; however, an additional ratio is stipulated in Circular 71 regarding the Level of Cash Backed Reserves.

6. Overdraft to Total Income (Preferably a municipality should not have an overdraft facility at all at year end, however should an overdraft facility be used it should not exceed 5% of Total Income.)

   Maximum norm: 5%

Healthy norm: 0%
MFMA: None

7. Other ratios as stipulated below are to be managed at levels applicable to the Municipality and although industry benchmarks exist it is more prudent to set objectives given the current financial context of the Municipality. The following ratios are recommended for consideration and it would be prudent to report hereon on a quarterly basis to the Finance Committee:

Operational Ratios

8. Total Accounting Surplus (The ability to post an accounting operational surplus where Total Income exceeds Total Expenditure with a positive margin.)

   Minimum norm: Break-even of the above calculation
   Healthy norm: Positive margin that is maintained
   MFMA norm: Break-even or >0

9. Cash Operating Surplus (The ability to generate surplus cash from operational performance therefore Total Income less conditional transfers less total expenditure excluding non-cash items adjusted for changes in working capital should be positive.)

   Minimum norm: Break-even of the above calculation
   Healthy norm: Positive margin that is maintained
   MFMA norm: None

10. Repairs and maintenance to Total Expenditure (The ability of the municipality to effectively maintain the infrastructure assets from which it derives its primary income.)

    Minimum norm: 5%
    Healthy norm: 7%
    MFMA norm: 8%

    MFMA calculation differs in using the Property, Plant and Equipment (carrying value) as the base of the ratio instead of Total Expenditure.

11. Consumer Collection Levels (For a municipality to maintain its viability it should maintain its collection levels at least above 90%. Growth in gross consumer debtors including debts written off in the financial year as a percentage of billed income including equitable share, will provide the non-collection level therefore the difference will indicate the consumer collection level.)

    Minimum norm: 90%

Healthy norm: 95%+
MFMA norm: 95%

12. Staff Costs, Allowances and Wages (The level of staff costs, allowances and wages to total operational expenditure needs to be effectively managed to ensure that costs aren't considered too high, but also that the municipality is not under capacitated and employment levels are too low.)

    Minimum norm: 25%
    Healthy norm: 25% to 30%
    MFMA norm: 25% to 40%

External Gearing Ratios

13. Proposed External Gearing ratios are subject to Liquidity ratios being within recommended levels.

14. External Loan Liability Paid Coverage Ratio (The ability to at least cover the External Interest and Capital Payable with the cash generated from operations before interest.)

    Minimum norm: 1:1
    Healthy norm: 2:1
    MFMA norm: None

15. External Interest and Capital Paid to Total Expenditure (The percentage of Total Expenditure utilised to service external loan repayments.)

    Maximum norm: 10%
    Healthy norm: 7.5%
    MFMA norm: 6% - 8%

16. External Gearing Ratio (The level to which the municipality has geared itself is calculated as Total External Interest-Bearing Debt as a percentage of Total Income less conditional grant funding.)

    Maximum: 40%
    Healthy norm: 35%
    MFMA norm: 45%