AGENDA of the
Portfolio Committee : Investment & Infrastructure
2 August 2023
(Also the agenda for the Mayoral Committee Meeting : 16 August 2023)

2.
OVERSTRAND MUNICIPALITY: NERSA FINDINGS FROM THE COMPLIANCE AUDITS CONDUCTED

SU Muller **Director: Infrastructure and Planning**
4 July 2023 **(028) 313 8019**

1. Executive Summary

The purpose of this report is to provide the findings from the electricity distribution industry compliance audits on the 2022 calendar year conducted by the National Regulator of South Africa (NERSA).

From 27 – 29 September 2022 NERSA conducted a compliance audit on the Overstrand Local Municipality in Hermanus. The objective was to determine the level of compliance with the legal, financial and technical conditions of the electricity distribution license.

2. Service Delivery and Budget Implementation Plan - IGNITE

Directorate of Infrastructure and Planning
Electrical Services

3. Compliance with Strategic Priorities

Provision of democratic, accountable and ethical governance
Provision and maintenance of municipal services
Creation and maintenance of a safe and healthy environment
Promotion of tourism, economic and social development

4. Delegated Authority

None

5. Legal Requirements

Electricity Regulation Act (Act 4 of 2006), ERA

6. Background/Discussion/Evaluation/Conclusion

Background

The National Energy Regulator (NERSA) is a regulatory authority established in Terms of Section 3 of the National Energy Regulator Act, 2004 (Act No 40 of 2004). NERSA's mandate includes regulation of the electricity supply industry.

Discussion

NERSA confirmed the audit dates with the Overstrand Local Municipality (OM) and a questionnaire that covers all aspects of the distribution licence, key company and network statistics and asset management information was sent to OM to be completed.

On 27 September 2022, NERSA visited OM and site inspections were conducted. The inspection focused on the network, including substations and mini-substations and overhead lines.

Conclusion

In the Final Compliance Audit Report NERSA came to the conclusion that "*The Overstrand Local Municipality is doing exceptional work to manage the electricity business in an efficient and reliable manner. It was observed that there were still some areas of concern where improvements need to be made. The main challenge facing the Electricity Department is financial constraints to fund it maintenance programmes and the rehabilitation of the older parts of the network."*

7. Financial Implications

None

8. Staff Implications

None

9. Comments from other Departments, Divisions and Administrations

None

10. Annexures

Annexure A: Final Compliance Audit Report of the Overstrand Municipality

RECOMMENDATION TO THE COUNCIL:

that Council takes cognisance of the findings received from NERSA.

RESPONSIBLE OFFICIAL : **S MULLER**

TARGET DATE FOR IMPLEMENTATION : **N/A**

AGENDA of the
Portfolio Committee : Investment & Infrastructure
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2.
OVERSTRAND MUNICIPALITY: NERSA FINDINGS FROM THE COMPLIANCE AUDITS CONDUCTED

SU Muller **Director: Infrastructure and Planning**
4 July 2023 **(028) 313 8019**

THIS MATTER SERVED BEFORE THE INVESTMENT & INFRASTRUCTURE PORTFOLIO COMMITTEE ON 2 AUGUST 2023, WHICH COMMITTEE RECOMMENDED AS FOLLOWS:

RECOMMENDATION TO THE COUNCIL:

that Council takes cognisance of the findings received from NERSA.

RESPONSIBLE OFFICIAL : **S MULLER**

TARGET DATE FOR IMPLEMENTATION : **N/A**

Annexure A
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NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

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Fax: 012 401 4781
Email: zingisa.mavuso@nersa.org.za
Ref: NERSA-1532172523-65587

Mr. Dean O'Neill
Municipal Manager
Overstrand Local Municipality
P.O Box 20
Hermanus
7200

By email: mm@overstrand.gov.za
Cc: kduplessis@overstrand.gov.za

Dear Mr. O'Neill

FINDINGS FROM THE COMPLIANCE AUDITS CONDUCTED ON THE ELECTRICITY DISTRIBUTION INDUSTRY IN 2022: OVERSTRAND LOCAL MUNICIPALITY

The National Energy Regulator of South Africa (NERSA) is pleased to inform you that on 30 January 2023, the Energy Regulator noted the consolidated report on the findings from the electricity distribution industry compliance audits conducted in the 2022 calendar year.

Accompanying this letter is the final audit report for the Overstrand Local Municipality, as well as a template of a corrective action plan (CAP) to rectify the instances of non-compliance identified in the compliance audit report.

Kindly peruse the final report and indicate, within 14 days of receipt of this letter, any issues that are regarded as confidential. Should NERSA not receive your response within the 14-day period, it will be concluded that the final audit report of the Overstrand Local Municipality does not

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contain any confidential information, and the consolidated report will be published on NERSA's website.

In addition, NERSA requests that you study the attached final audit report and lead your management team in the development of a time-bound corrective action plan. The electricity management team of the Overstrand Local Municipality must submit this corrective action plan to Mr Hendrick Mokhonoana at Hendrick.mokhonoana@nersa.org.za within 120 days from the date of receipt of this letter.

For any further information, please contact Mr Zingisa Mavuso at 012 401 4617 or Zingisa.Mavuso@nersa.org.za.

We look forward to your cooperation in this regard.

Yours sincerely

Adv. Nomalanga Sithole
CHIEF EXECUTIVE OFFICER

Date: 16/02/2023

Enclosed:

1. Final compliance audit report of the Overstrand Local Municipality
2. The corrective action plan template

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ANNEXURE 1

NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

FINAL COMPLIANCE AUDIT REPORT OF THE OVERSTRAND LOCAL MUNICIPALITY

Audit Dates: 27 to 29 September 2022

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All enquiries and correspondence to be directed at the Head of Department, unless indicated otherwise by means of a formal letter signed by the Head of Department: Electricity Licensing, Compliance and Dispute Resolution.

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DISCLAIMER

The content of this report is based on information and evidence obtained from both the licensee and site verification of the plant condition conducted during the electricity distribution compliance audit.

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ABBREVIATIONS

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AGSA	Auditor-General of South Africa
CAP	Corrective Action Plan
CT	Current Transformer
DC	Direct Current
DSM	Demand Side Management
FY	Financial Year
GIS	Geographic Information System
HV	High Voltage
IT	Information Technology
kV	Kilovolt
kVA	Kilovolt Ampere
LV	Low Voltage
MD	Maximum Demand
MV	Medium Voltage
MVA	Megavolt Ampere
NERSA	The National Energy Regulator of South Africa
NMD	Notified Maximum Demand
NRS	The National Rationalised Specification
OHS Act	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
ORHVS	Operating Regulations for High Voltage System
PMU	Project Management Unit
SLD	Single Line Diagram
SCADA	Supervisory Control and Data Acquisition

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EXECUTIVE SUMMARY

From 27 to 29 September 2022, the National Energy Regulator of South Africa (NERSA) conducted a compliance audit on the Overstrand Local Municipality ('the Licensee') in Hermanus, Western Cape Province. The objective was to determine the Licensee's level of compliance with the legal, financial and technical conditions of the electricity distribution licence.

After the audit, the findings were recorded in a draft report and sent to the Licensee for comments. A final report will be sent to the management of the Overstrand Local Municipality after the comments have been included, where relevant. The objective of the final report is to assist the Licensee in identifying possible areas for improvement and drafting a corrective action plan (CAP), outlining a programme that addresses the instances of non-compliance, to submit to NERSA.

The Licensee should submit this CAP to NERSA within 120 days of receiving the final report. NERSA will monitor the implementation of this CAP by the Licensee.

The Overstrand Local Municipality complies with the conditions of the electricity distribution licence. The audit team found no non-compliance that must be addressed.

The following observations pertaining to the compliance audit were noted and highlighted to the Licensee.

Resources

The Overstrand Local Municipality's Electricity Department organogram was aligned with the departmental needs and adequate to deliver on the objectives of the organisation. The organogram submitted to the NERSA audit team had 66 positions in the structure and six positions were vacant, which indicates a vacancy rate of 13%. The staff complement of the Electricity Department was adequate to achieve the mandate of the department.

The Licensee also reported that the field vehicles, tools and equipment were adequate for the teams to perform tasks effectively.

Financial Information

a) The Overstrand Local Municipality budgeted 6.6% of the total electricity expenditure for the maintenance of the electricity network, which is incompliance with the NERSA tariff guideline of 6%.
b) The Licensee received an unqualified opinion from the Auditor-General of South Africa (AGSA) for the 2019/20 financial year (FY).
c) The Licensee stated that the Electricity Department was ring-fenced.
d) The asset register was updated by the Asset Management Department and GIS updates are done by the Electrical Department.

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e) The tariffs for all customer categories had been approved by NERSA. Evidence in the form of invoices was submitted to the NERSA audit team.
f) The Licensee's bulk supply payment was up to date.

Network Condition

The Overstrand Local Municipality has Six main bulk supply points, listed as follows: Gansbaai, Stanford, Hermanus 11kV, Hermanus 66kV, Hawston and Kleinmond. The municipality maintains its' network. The network inspected during the audit was found to be in good condition. The network consists of approximately 234.55KM of Medium Voltage (MV) underground cables, 65.32KM of MV overhead lines, 301.13KM of Low Voltage (LV) underground lines and 77.37KM overhead lines.

The Licensee has 28 293 customers which are categorised as follows: 20 919 domestic prepaid, 5 649 domestic credit meters, 139 industrial, and 1 555 commercials. The average age of the network is estimated to be between 10 and 30 years.

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1. INTRODUCTION

1.1 Overview

The National Energy Regulator of South Africa (NERSA) regulates the energy industry in accordance with government laws and policies, standards and international best practices in support of sustainable development. The organisation issues licences with conditions to electricity distributors and, therefore, requires audits to be conducted to determine the level of compliance with the licence conditions.

NERSA is required to monitor and assess whether the electricity suppliers comply with the conditions of their licences. Section 4(a)(vii) of the Electricity Regulation Act, 2006 (Act No. 4 of 2006) ('the Act'), states that 'the Regulator must enforce performance and compliance; and take appropriate steps in the case of non-performance'. To implement the Electricity Regulation Act, the Energy Regulator approved a compliance monitoring framework for electricity distributors in 2011, which acts as a guideline on how compliance audits and monitoring must be conducted. NERSA conducts the compliance audits on licensed electricity distributors annually.

1.2 Audit Objectives

The key objectives of the compliance audit are to:

a) evaluate and review activities of the regulated entities;
b) determine the level of compliance of licensees with all the licence conditions governing their electricity business operations;
c) review the level of compliance with the quality of service standards and the quality of supply standards; and
d) inform the Energy Regulator of the quality of service and the quality of supply provided by the licensees across the country.

2. METHODOLOGY

After confirming the audit dates with the Overstrand Local Municipality ('the Licensee'), a questionnaire that covers all aspects of the distribution licence, key company and network statistics and asset management information was sent to the Licensee prior to the audit.

On 27 September 2022, NERSA visited the Overstrand Local Municipality. An introductory session took place at the Electricity Department's office in Hermanus. NERSA gave a presentation that reviewed the audit scope, objectives, methods, procedures and communication channels necessary for the audit. The resources needed and the facilities to be inspected were confirmed. All unclear details were clarified.

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Overstrand Local Municipality also made a presentation which addressed, among others, the staff complement, asset management, infrastructure development, challenges, and infrastructure projects. The questionnaire and issues regarding compliance and non-compliance were noted and discussed. The files of evidence on responses to the questionnaire were provided before the audit. The Licensee was well-prepared for the compliance audit.

After the discussion of the questionnaire, site inspections were conducted. The physical plant condition was assessed in order to form a holistic view of the Licensee's network condition. The inspection focused on the licensee's network, including substations and mini-substations and overhead lines.

3. NERSA AUDIT TEAM AND THE LICENSEE'S REPRESENTATIVES

The audit team members from NERSA were:

Mr Gregory Hopkins	-	Compliance Monitoring Engineer
Ms Amanda Mtembu	-	Dispute Resolution Officer
Mr Thabo Manaka	-	Compliance Monitoring Technician
Mr Hendrick Mokhonoana	-	Compliance Monitoring Technician

The Overstrand Local Municipality was represented by:

Mr Jamie Klem	-	Senior Superintendent (Projects) - Electrical Services Hermanus
Ms Elmarie Hooneberg	-	Senior Manager: Revenue
Ms Veronica Allen	-	Manager: Financial Accounting
Mr Stephen Muller	-	Director: Infrastructure and Planning
Mr Danie Maree	-	Senior Manager: Electrical Services – Gansbaai and Stanford
Ms Marissa Radyn	-	GIS Administrator/Technician: Electrical Services - Gansbaai and Stanford
Mr Riaan Buckle	-	Senior Superintendent Metering and Distribution - Electrical Services - Kleinmond

4. GENERAL INFORMATION ON THE LICENSEE

The Overstrand Local Municipality is an electricity distribution licence holder with licence number NER/D/WC032. The supply areas listed in schedule 1 of the distribution licence corresponds with the areas that the Overstrand Local Municipality was supplying at the time of the audit.

The Licensee has six main bulk supply points with notified maximum demands (NMDs) and Maximum Demands (MDs) as listed below:

a) Gansbaai - has installed capacity of 54.02 MVA, NMD of 14 MVA and MD of 13.6 MVA;
b) Stanford - has installed capacity of 10.47 MVA, NMD of 3 MVA and MD of 1.8 MVA;

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c) Hermanus 11kV and Hermanus 66 KV- has installed capacity of 107.80 MVA, NMD of 20 MVA and MD of 17.6 MVA;
d) Hawston - has installed capacity of 10.14 MVA, NMD of 4 MVA and MD of 2.5 MVA; and
e) Kleinmond- has installed capacity of 22.48 MVA, NMD of 7 MVA and MD of 6.9 MVA

The Licensee has 28 293 customers which are categorised as follows: 20 919 domestic prepaid, 5 649 domestic credit meters, 139 industrial, and 1 555 commercials. The average age of the network is estimated to be between 10 and 30 years.

5. AUDIT FINDINGS

During the site and office audit, a factual account of what was observed was recorded and discussed.

5.1 Key Utility Statistics

5.1.1 Departmental Structure

The Electricity Department's structure was submitted during the audit. The organogram submitted to the NERSA audit team had 66 positions in the structure and six positions were vacant, which indicates a vacancy rate of 13%. The staff complement of the Electricity Department was adequate to achieve the mandate of the department.

Positions	Filled	Vacant	Advertised
Senior Manager: Electrotechnical Services	2		
Senior Superintendent Metering and Distribution	2		
Senior Superintendent (Electrical)		1	
Senior Superintendent (Projects)	1		
Senior Superintendent (Distribution)		1	
Principal Clerk: Electrical Services	2		
Senior Technician: Metering	1		
Senior Electrician	8	1	
Artisan: Electrician	7		
General Assistant (Electrical)	21	2	
Special Workman/Supervisor (Electrical)	4		
Supervisor: Electrical Services	3	1	
Artisan Assistant	8	3	
Streetlight Server	1		
Clerk: Electrical Services	1		
General Assistant (Cleaning)	1		
GIS Administrator/Technician	1		
Senior Clerk	1		
Office Assistant/Cleaner	1		
Handyman	1		

The Municipality also stated that the current field vehicles, tools and equipment were adequate for the teams to perform tasks effectively.

5.1.2 Training

The Licensee reported that employees are provided with training through the internal workplace skills plan. This includes, amongst others, power transformer maintenance, testing and condition monitoring. First Aid, OHS Act, basic firefighting, cherry picker and truck mounted crane. However, the Licensee does not have an apprenticeship programme in place.

5.1.3 Health and safety

The Overstrand Local Municipality appointed the Responsible Person in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) ('the OHS Act'). The Licensee reported that safety representatives are appointed and safety committees are operating and meeting on a regular basis. Operators on the 11 kV network are appointed and employees are trained in safety aspects. Operating permits are issued to contractors and staff when working on the network.

5.1.4 Areas of supply

The Overstrand Local Municipality is an electricity distribution licence holder with licence number NER/D/WC032. The supply areas according to schedule 1 of the distribution licence correspond with the areas that the Licensee was supplying at the time of the audit.

5.1.5 Financial conditions

5.1.5.1 <u>Separate electricity financial account</u>

The electricity distribution financial affairs of the Overstrand Local Municipality were ring-fenced from the other businesses of the municipality.

The Overstrand Local Municipality's 2019/20 financial statements were audited by the Auditor-General of South Africa (AGSA). The municipality received an unqualified audit opinion for the 2019/20 FY. A copy of the AGSA's report was submitted to the audit team.

5.1.5.2 <u>Tariff application and approval process</u>

The Overstrand Local Municipality's tariffs for the 2022/23 FY had been approved by NERSA and a copy of the approval letter

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was provided. Sample copies of customer bills sent to customers were submitted to the audit team.

5.1.5.3 Payment of bulk supply account

The municipality's Eskom account was up to date. A copy of the latest Eskom account for August 2022 was submitted to the audit team.

5.1.5.4 Promulgation of tariffs

The Overstrand Local Municipality makes use of a community participation process, social media (Facebook), local newspaper, Ward Councillors, as well as the municipal website to communicate tariff increases.

5.1.5.5 Budget versus actual spending on maintenance costs

Table 1: Total expenditure, budget and actual figures for maintenance

Financial year	Total expenditure (Electricity Department)	Maintenance budgeted figures	Maintenance actual figures
2020/21	441039887	33233743	31044926
2019/20	421063990	37630209	36812181
2018/19	365116882	23747158	23081653
2017/18	344304004	18969838	17644674
2016/17	331596065	17747297	17746811

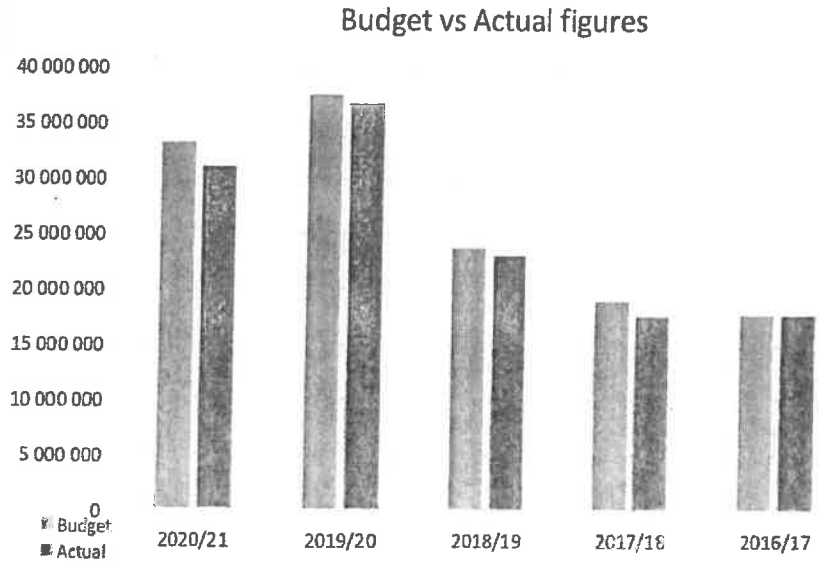

Figure 1: Comparison between budgeted and actual maintenance figures for the previous four years

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The graph shows the amount budgeted and actual amount spent on repairs and maintenance for the previous five years. The graph indicates that the Licensee had spent on what it had budgeted for repairs and maintenance. This was apparent during the network inspections. The amount budgeted for was incompliance with the 6% tariff guideline requirements.

5.1.5.6 Stores

The Licensee has sufficient critical spares in stock for the Electrical Network. The Licensee reported that the procurement unit is responsible for maintaining stock levels in line with approved stock value. Flagged items are evaluated (Stock on hand + orders in the system not delivered). If levels are less than the Minimum Order Level, then an order is placed. Outstanding orders are followed up on a weekly basis and the cycle is been repeated on weekly basis.

5.1.5.7 Contract and Project Management

The Licensee indicated that contract and project management are managed according to the MFMA and Supply Chain Management (SCM) regulations. The Contract Management Policy was submitted to the NERSA audit team.

5.1.5.8 Asset management

An asset management policy and asset register were available and copies of both were submitted to the audit team. The asset management policy was detailed as it specified the Licensee's policy on the purchasing, registration, maintenance and disposal of electrical assets.

During the office audit, the Licensee stated that the Asset Management Department updated the asset register annually. The Electricity Department has read-only access to the register.

The list of attributes found in the asset register are:

a) FAR_ID
b) Component ID
c) Accounting Group
d) Asset Category
e) Asset Sub Category
f) Asset Group Type
g) Asset Type
h) AR Component Type
i) SCOA Component Type
j) Asset Facility Name

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k) Descriptor Type
l) Descriptor General
m) General Comment
n) Size
o) Size Unit
p) Extent
q) Extent Unit
r) Latitude
s) Longitude
t) Area
u) Town
v) Suburb
w) Asset Location
x) Ward
y) Condition

The Overstrand Local Municipality did have a Geographic Information System (GIS) linked to network assets.

5.2 Key Network Statistics and Strategic Planning

5.2.1 Network information

The Licensee has six main bulk supply points with notified maximum demands (NMDs) and Maximum Demands (MDs) as listed below:

a) Gansbaai - has installed capacity of 54.02 MVA, NMD of 14 MVA and MD of 13.6 MVA;
b) Stanford - has installed capacity of 10.47 MVA, NMD of 3 MVA and MD of 1.8 MVA;
c) Hermanus 11kV and Hermanus 66 KV- has installed capacity of 107.80 MVA, NMD of 20 MVA and MD of 17.6 MVA;
d) Hawston - has installed capacity of 10.14 MVA, NMD of 4 MVA and MD of 2.5 MVA; and
e) Kleinmond- has installed capacity of 22.48 MVA, NMD of 7 MVA and MD of 6.9 MVA

The average age of the network is estimated (in percentages) to be as follows:

- Older than 50 years ≈ 0.45%
- Between 30 and 50 years ≈ 6.41%
- Between 10 and 30 years ≈ 74.40%
- Less than 10 years ≈ 18.74%

The total energy loss for the electricity business was reported as 6.42%. 5% technical losses and 1.42 non-technical losses.

5.2.2 Load forecasting

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The Overstrand Local Municipality had a masterplan and conducted load forecasting for future energy growth of the network.

5.2.3 Risk assessment and strategies

The Overstrand Local Municipality conducts risk assessments of its network to ensure that its network is able to meet the current and future demand, but neither had strategies in place.

5.2.4 Demand Side Management

The Licensee reported that it has Demand Side Management (DSM) systems or strategies in place.

5.2.5 Ring feeds

The Licensee stated that there are ring-feeds on the MV network. Copies of the single-line network diagrams (SLDs) were submitted to substantiate this.

5.2.6 Network diagrams

The SLDs submitted to the NERSA audit team were last updated in 2021 and the Licensee reported that the updates were done by a local engineering consultant.

5.2.7 Network planning

The Licensee reported that there was network planning conducted with regard to network reinforcement and strengthening and it is done according to the masterplan.

5.2.8 Simulation packages

The municipality have a software package to simulate network conditions for network planning and expansion. The licensee uses ReticMaster based program operating under Microsoft Windows and is used for modelling and analysis of medium and low voltage networks in radial or meshed networks. The application includes the following functionalities:

a) Volt drop calculations/conductor optimisation/thermal loading calculations
b) Simulations for MV and LV balanced and unbalanced systems, three and single phase
c) Planning studies for changes in load

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d) Network operational studies including independent source switching routines
e) Fault level calculations
f) Protection coordination.

5.2.9 Maintenance plans/policies

The Municipality had a maintenance plan/policy in place. A copy was submitted to the NERSA audit team and the maintenance plan is being implemented.

5.2.10 Network inspections

The Licensee stated that it conducted formal network inspections according to the list in the maintenance plan and routine tests and maintenance techniques as per checklists provided.

5.3 Quality of Service

5.3.1 Monitoring of quality of service

The Licensee does monitor the quality of service as required by the NRS 047 standard.

a) Meter readings

According to the Licensee, meter readings are done on a monthly basis. Estimations are only done in exceptional cases, such as during the Covid pandemic when it was not possible to read. When they do estimates, they use the average consumption of the previous year for the same period.

b) Billing/customer account

Billing is done by the Finance Department. The bills that were submitted to the NERSA audit team were user friendly, however they did not reflect the applicable tariff. These were therefore not in line with the requirements of the NRS 047.

c) Account queries/complaints

The Licensee indicated that customers are able to report complaints, enquiries or requests via telephone to any of our call centres or by visiting one of our municipal offices or by sending an email. The enquiry/complaint/request is then directed to the relevant official via our Collaborator system. Should it require action by a field worker, a works order is generated with a reference number provided to the customer. Once the field worker has completed the job, the information completed on the

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works order is captured on the works order system and is marked as completed. If it contains new/replacement meter information, the information is provided to the finance department for updating on their system.

d) Payment venues

The customers are able to pay their accounts at all the Overstrand municipal offices; EFT, banks; Pay@, Easy Pay and all the retail shops. The information was reflected on the customer invoices.

e) Meter auditing and calibration

The Electricity Department does not perform meter calibration but, exception and zero readings reports are done by the Electrical and Finance department on a regular basis. As they are a coastal town with a large number of holiday homes, the low usage identified on these reports are then checked against water usage. Worksorders are then made out for the remaining meters. Field personnel will then do a meter audit for each of the identified meters, checking if the connection is safe, if there is any illegal connections or tamper visible as well as logging the seal numbers, meter details, condition of the meter and the latest reading shown.

f) Disconnections

The Licensee explained that the electricity supply is disconnected in cases of non-payment. The credit control section issues a disconnection notice to the client and a disconnection fee is charged on the account as stipulated in the Municipal Credit Control Policy. Interest is charged on late payments and notices are issued on non-payments. The interest rate is prime + 4%, and forms part of our tariffs which is communicated with the public during April each year.

g) Reconnections

Reconnections are done immediately after payments are received or a payment arrangement is agreed to by the customer.

h) Quotations

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When a customer applies for new electricity supply, they can send an email, contact the municipality via telephone or visit any of the municipal offices. The customer will then be provided with the relevant application forms and fees. As soon as the fees have been paid, a works order is made out to the electrician who does the meter installations. The customer is provided with a quotation within 3 days and a deposit is payable prior to commencement of work. The Licensee stated that it keeps records as required by NRS 047.

i) Planned outages

The Licensee mentioned that planned outages are communicated as follows: where a localised area will be affected, notices are made out and hand delivered to each affected property 48 hours before the intended outage. For larger areas/ entire towns, SMS messages are sent out to affected customers as well as updates on our Municipal Facebook page and printed notices at all major shopping outlets.

j) Network Performance Statistics

The Municipality maintains a database of its performance on network statistics as required by the NRS 047 Standards.

5.4 Quality of Supply

5.4.1 Formal power quality management system

The Overstrand Local Municipality has a formal quality of supply management system that ensures it is supplying electricity within the standards of NRS 048-4.

5.4.2 Monitoring of quality of supply

The Licensee monitors the quality of supply. Certain instruments had been installed in all towns and at large customers.

5.4.3 Quality of supply contracts

The Overstrand Local Municipality did not have quality of supply contracts with key customers.

5.4.4 Emergency plan

The Overstrand Local Municipality had an emergency plan that lists its critical and essential loads on the network and key persons to be contacted during an emergency. Customers are informed of network

emergencies via SMS and updates are provided on facebook page on a continuous basis. Customers can also contact us via telephone or email or by visiting the nearest Municipal office.

5.5 Network Operation and Information Technology

5.5.1 Operation control system

The Overstrand Local Municipality did not have an operational control centre, neither computerised nor manual, to depict the configuration of the MV network. However, Telemetry services are available that show the MV Feeders and loads as well as Single Line Diagrams that show the entire MV Network.

5.5.2 Post-mortem incident reviews

The Licensee indicated that outages are discussed during departmental meetings and, if problems are identified, correction methods are discussed and investigations are conducted.

5.5.3 Information Technology Department

The Overstrand Local Municipality has an Information Technology (IT) Department that runs and maintains the organisation's information systems.

6. PLANT CONDITION

Sample condition assessments were conducted on selected electrical assets to gain an understanding of the condition of the Licensee's assets and electrical network. The Overstrand Local Municipality officials accompanied the NERSA audit team to the identified medium voltage (MV) substations, pole-mounted transformers and mini-substations, as well as to a number of distribution lines within the Licensee's areas of supply.

6.1 Substations Report: General Impression

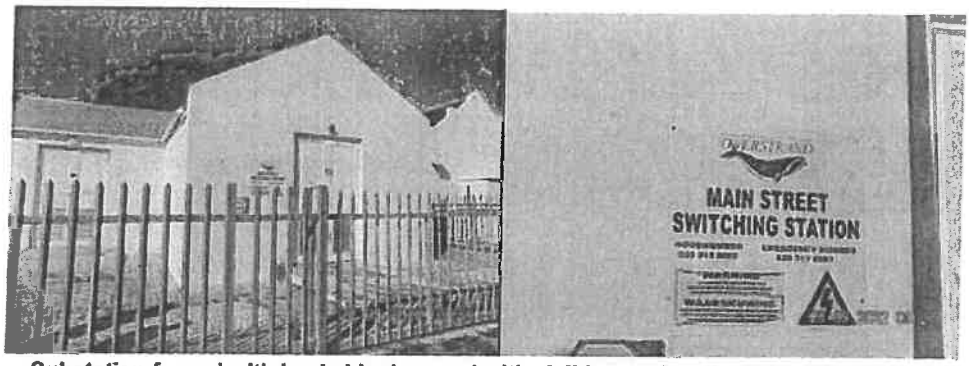
The substations inspected during the audit were found to be in good condition and routine maintenance was evident. The roads leading to all the substations were well maintained. The switching substation and intake substations inspected during the audit were properly fenced. The doors at the inspected substations were locked. The warning and danger signs were available and the inscriptions were legible. The general housekeeping at the substations attested to good practices by the Licensee. All fire extinguisher at the substations were serviced, batteries were maintained, single line

diagrams available and mounted on the wall of each substation inspected. The power quality instrumentation (CT Lab) was installed for power quality.

6.1.1 Hermanus Main Street Switching Station

This 66/11 kV switching station is fed from Eskom via 66 kV lines. The switching station building was in good condition. Unauthorised entry to the switching station premises was controlled as the building doors were locked with proper locks. The danger and warning signs were mounted. The vegetation around the substation was well maintained.

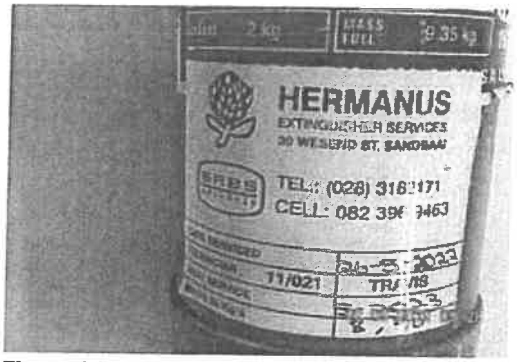
The pictures below illustrate the condition of the substation's building.



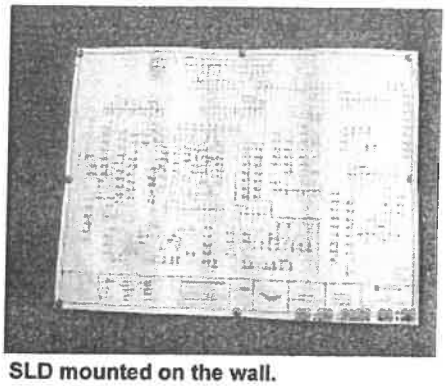
Substation fenced with Lockable door and with visible warning signs.

The switch room was clean and the lights inside the switch room were installed and in working condition. The switchgears were operational and clearly labelled. The warning and safety signs inside the switch room were available and the inscriptions were legible. The cable trench covers were available at all designated areas.

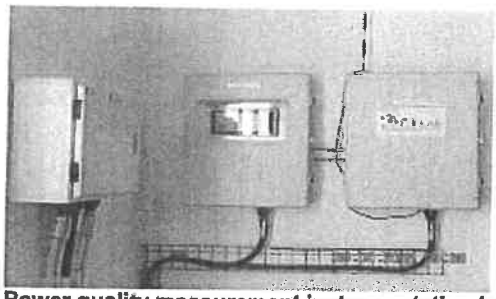
The fire extinguishers were available and serviced in May 2022. The switchgear was in good condition, the status indicators were functioning and the labelling was visible. The cables were embedded in the designated areas. The visitors' logbook was available and SLDs mounted on the wall. The pictures below illustrate the switch room's condition.

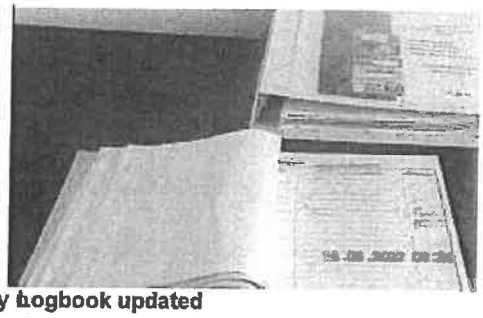


Fire extinguisher's serviced



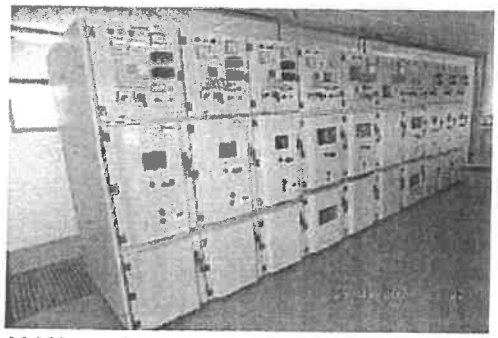
SLD mounted on the wall.





Power quality measurement instrumentation by logbook updated Ct Lab.

The pictures below depict the condition of the 11 kV switch gear, the condition of the batteries, and the transformer.



11 kV panels in good condition and status indicators.

Batteries well maintained and the battery in working condition.

6.1.2 *Industrial S.S substation*

This 11/66 kV switching substation was in good condition. The substation consisted of switchgear and Direct Current (DC) supply. The switchgear was protected with relays that were operational. The status indicators were operational and clearly readable. Bus coupler devise installed in such the licensee was able to perform maintenance on other circuit breakers associated with that busbar.

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The substation building interior was clean. Unauthorised entry to the switching station premises was controlled as the doors were locked with proper locks. The batteries were in a cabinet and maintained. The batteries' electrolyte levels were at maximum.

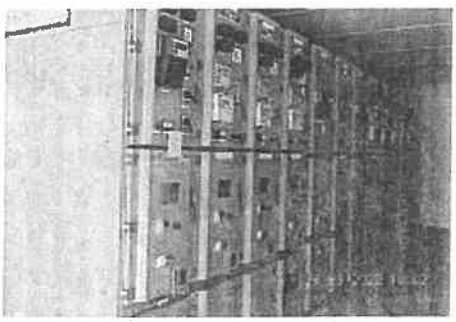
The following findings were noted:

a) The warning and safety signs outside and inside the switch room were available and the inscriptions were legible;
b) The cable trench covers were properly installed in all designated areas;
c) The fire extinguishers were available and serviced in May 2022;
d) The switchgears were operational and clearly labelled.
e) Retrofitted vacuum breakers
f) A Relay room for quality of supply was installed and operational

The pictures below illustrate the condition of the substation's building.

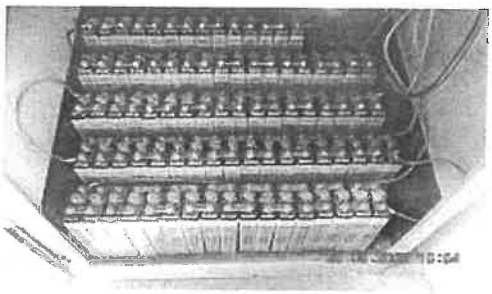
Unauthorised entry controlled by means of a fence, lockable gate and doors.

The pictures below illustrate the condition of the 11 kV switch gear and the condition of batteries.



11 KV Panels in good condition.

Cable Trenches covered at all areas



Batteries well maintained.

Fire extinguisher serviced, Logbook available and Single line diagram mounted on the wall.

6.1.3 Walkerbay substation

This 66/11 kV switching substation is fed from Eskom via 66 kV lines. The switching station building was in good condition. Unauthorised entry to the switching station premises was controlled as the building doors were locked with proper locks. The warning and safety signs were mounted at the entrance of the building and visible. The breaker panels were labelled, and the status indicators were functioning. The cable trenches were covered. The room housing the breaker panel was clean and free of dust. The fire extinguisher was serviced in May 2022. DC back-up batteries' electrolyte was at maximum level. Power quality instrumentation by CT lab was Installed. A 20 MVA transformer out of commission because of the fault between and Eskom Municipality at the time of the audit.

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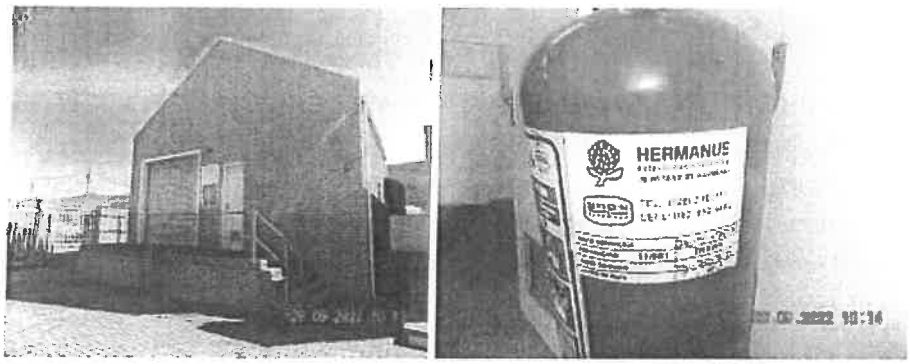
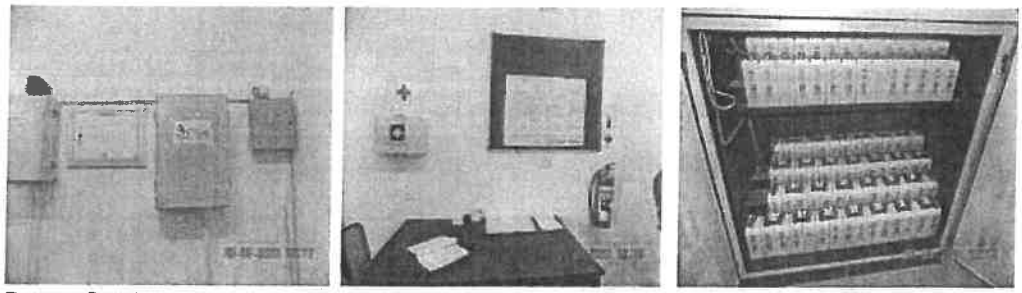


Unauthorised entry controlled by means of a fence, lockable gate and doors. Fire extinguisher service serviced in May 2022.

Instrumentation and 66 KV Bus coupler operational and batteries maintained.



Power Quality Instrumentation installed, single line diagram available and Battery electrolyte below at maximum level.

20MVA ABB Transformer manufactured in 2013 was out of service at the time of the Audit.

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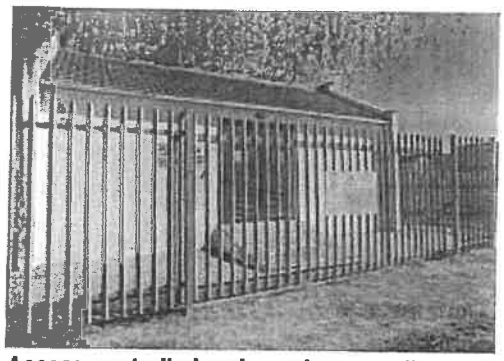
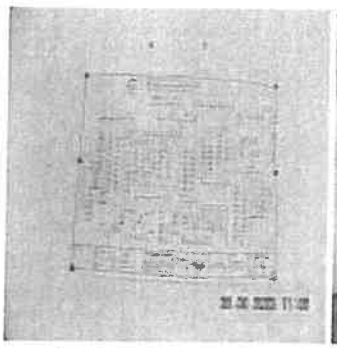
6.1.4 Zwelihle (Still Street Switching Substation)

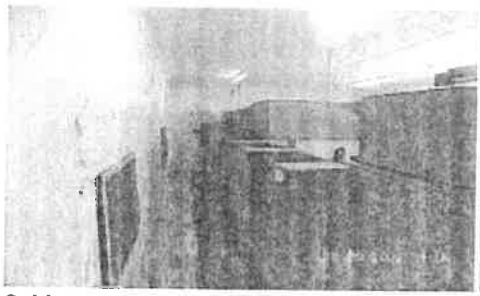
The switching station building was in good condition. Unauthorised entry to the switching station premises was controlled as the building doors were locked with proper locks. The warning and safety signs were mounted at the entrance of the building and visible. The breaker panels were labelled, and the status indicators were functioning. The cable trenches were covered. The room housing the breaker panel was clean and free of dust. The fire extinguisher was serviced in May 2022. DC back-up batteries' electrolyte was at maximum level.




Access controlled and warning as well as safety signs were available.


Battery electrolyte below at maximum level. SLD available and substation logbook available.



Cable trenches closed.

Switchgear labelled.

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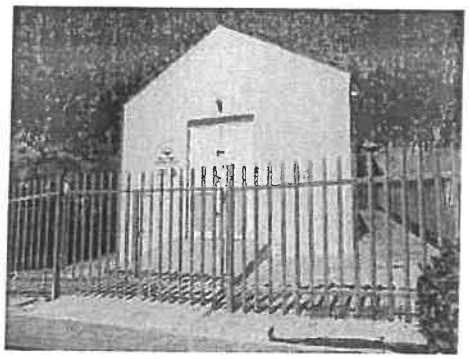
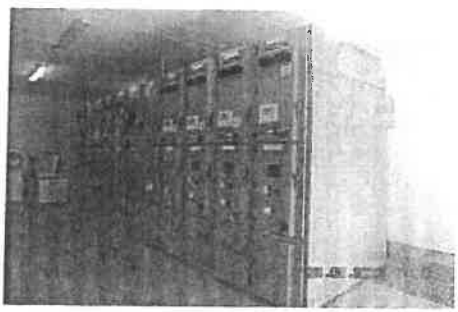
6.1.5 *Royal Switching Substation*

This 11 kV substation consisted of a switchgear panel, CTs and DC supply. Access to the premises was well controlled by means of the fence, gate and doors locked with padlocks. Safety and warning signs were visible at the entrance to the building.

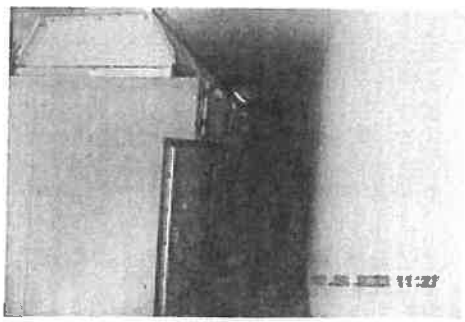
The building interior showed good housekeeping practices. The switchgear panels' labelling was visible and the status indicators were operational. The cable trenches were covered. The logbook was and the SLD were available at the substation. The batteries' electrolyte levels were at the maximum level and the fire extinguisher was serviced in May 2022.



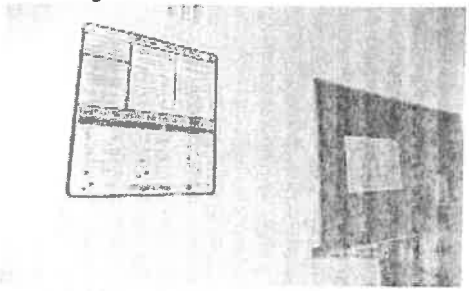
Access controlled and warning sign available.



Switchgear labelled.



Cable trenches covered.



Single Line Diagram available.

Fire extinguisher serviced in May 2022.

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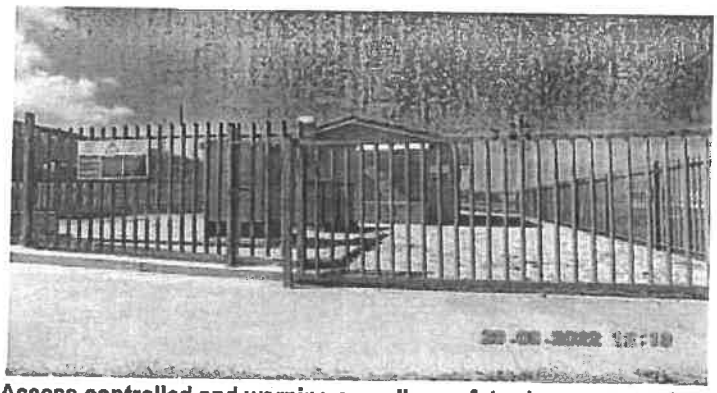
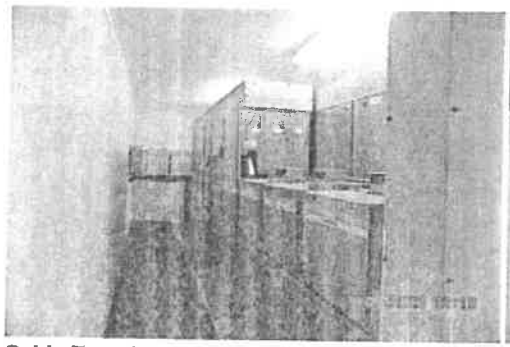
6.1.6 *Kleinmond Switching substation*

This 11 kV switching substation was in good condition. The substation consists of switchgear and DC supply. The switchgear was protected with relays that were operational. The status indicators were operational and clearly readable.

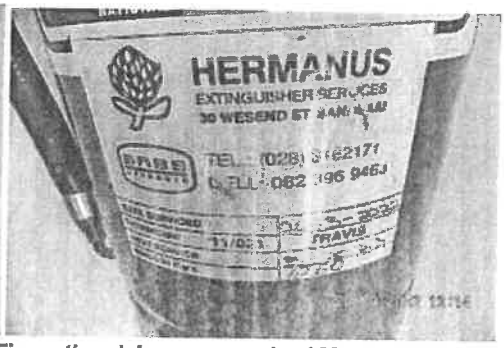
The building interior showed good housekeeping practices. The switchgear panels' labelling was visible and the status indicators were operational. The cable trenches were covered. The logbook was available and the SLD mounted on the wall. The battery for DC support was well maintained and the fire extinguisher was serviced in March 2022.



Access controlled and warning as well as safety signs were available.



Cable Trenches were covered.



Fire extinguisher was serviced March 2022.

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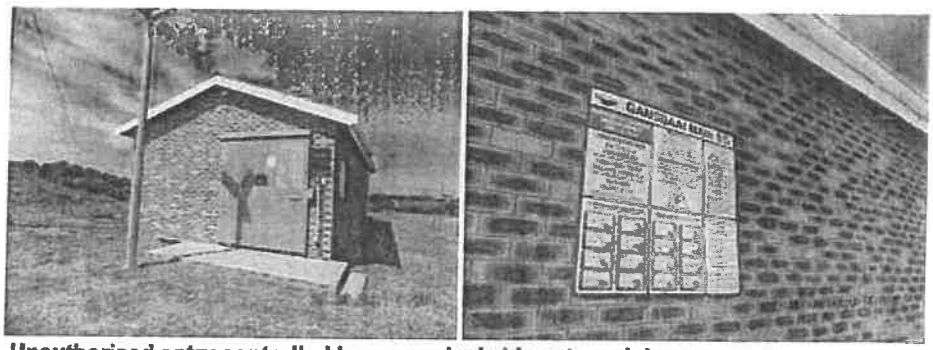
Instrumentation operational and batteries maintained and cable trenches closed at all designated areas.

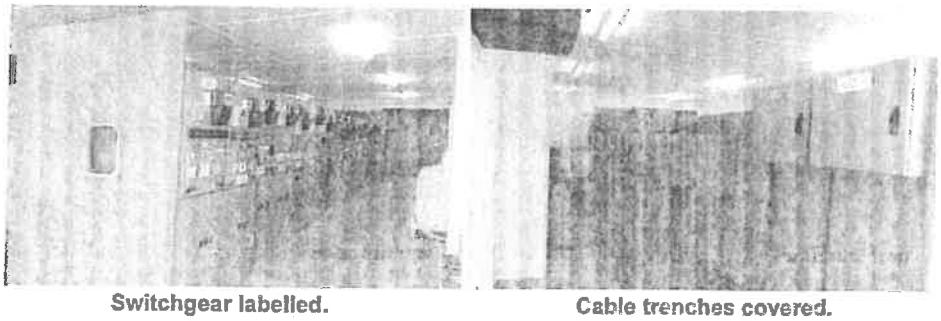
6.1.7 Gansbaai Main Switching substation

This 66/11 kV switching substation is fed from Eskom via 66 kV lines. The switching station building was in good condition. Unauthorised entry to the switching station premises was controlled as the building doors were locked with proper locks. The danger and warning signs were mounted. The vegetation around the substation was well maintained.

The pictures below illustrate the condition of the substation's building.



Unauthorised entry controlled by means lockable gate and doors



Switchgear labelled. **Cable trenches covered.**

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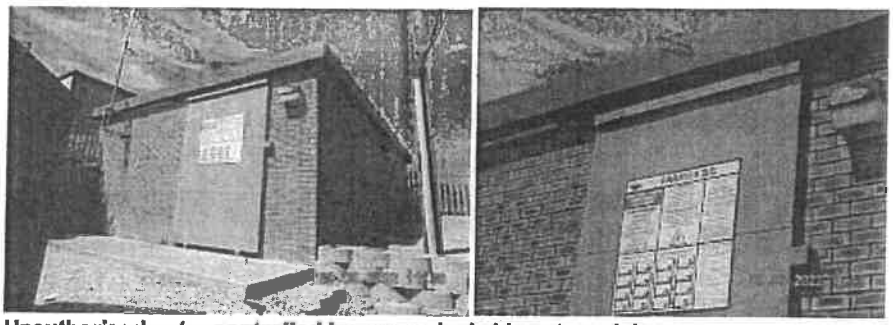
batteries maintained, logbook available and single line available and mounted on the wall.

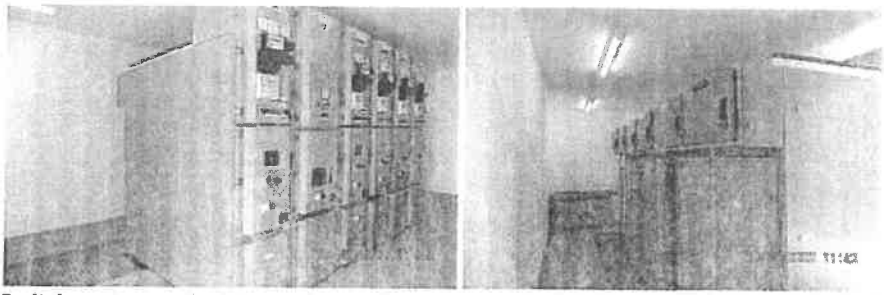
6.1.7 Gansbaai Fabriek Switching substation

This 11 kV switching station building was in good condition. Unauthorised entry to the switching station premises was controlled as the building doors were locked with proper locks. The danger and warning signs were mounted. The vegetation around the substation was well maintained.

The pictures below illustrate the condition of the substation's building.



Unauthorised entry controlled by means lockable gate and doors



Switchgear panels in good condition, status indicator operational and Cable trenches covered.

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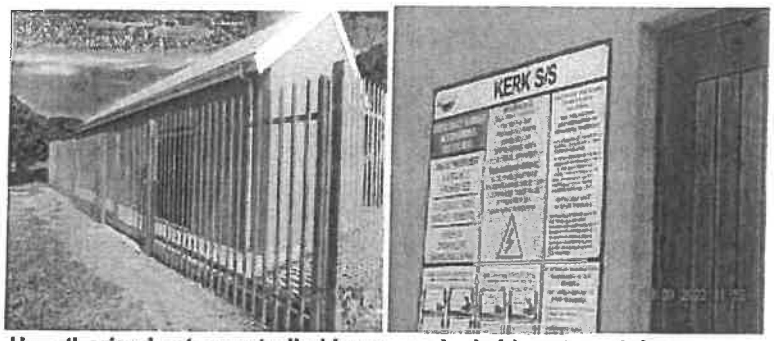
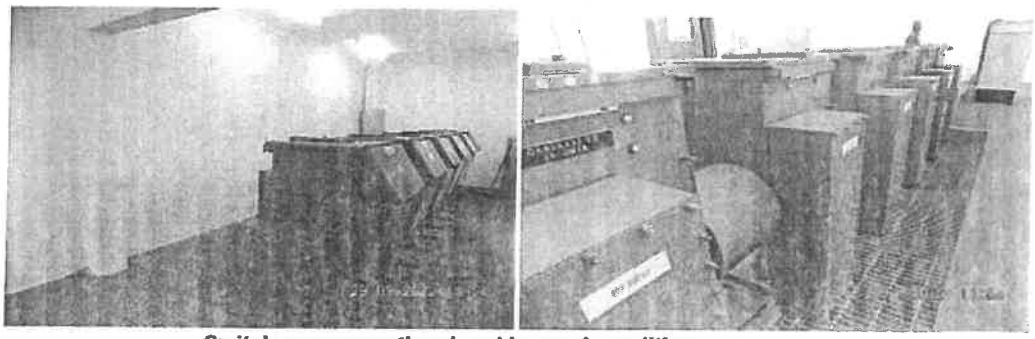
6.1.8 Kerk Switching substation

This 11 kV switching station building was in good condition. Unauthorised entry to the switching station premises was controlled as the building doors were locked with proper locks. The danger and warning signs were mounted. The vegetation around the substation was well maintained.



Unauthorised entry controlled by means lockable gate and doors

Fire extinguisher serviced, logbook available and single line available and mounted on the wall



Switch gear operational and in good condition

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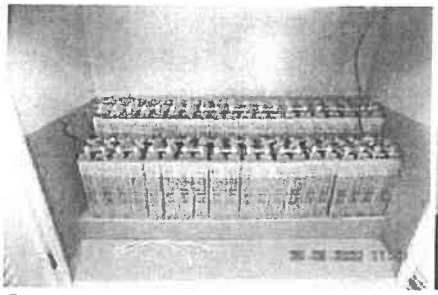
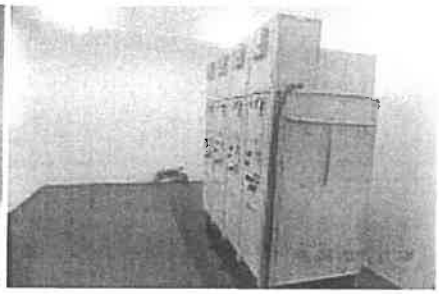


Batteries well maintained.



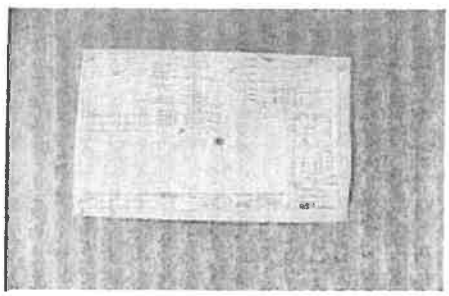
Switchgear panels in good condition

6.1.9 Stanford Switching substation

This 11 kV switching substation was in good condition. The substation consists of switchgear and DC supply. The switchgear was protected with relays that were operational. The status indicators were operational and clearly readable.

The building interior showed good housekeeping practices. The switchgear panels' labelling was visible and the status indicators were operational. The cable trenches were covered. The logbook was available and the SLD mounted on the wall. The battery for DC support was well maintained and the fire extinguisher was serviced in February 2022.

Unauthorised entry controlled by means lockable gate and doors



Single line diagram available.

Fire extinguisher serviced in February 2022.

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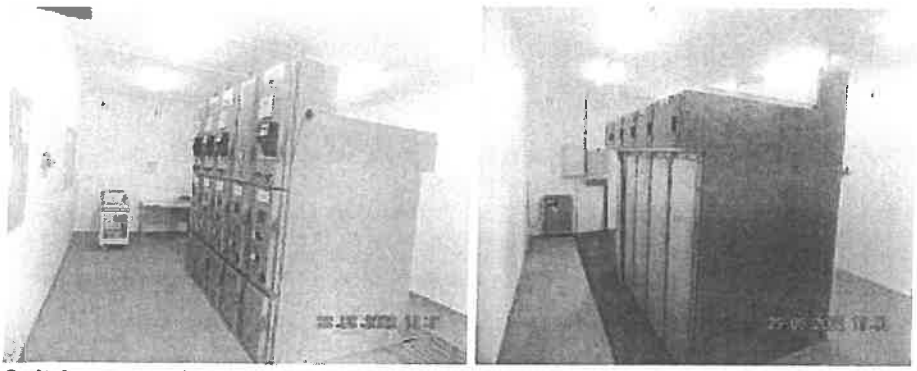


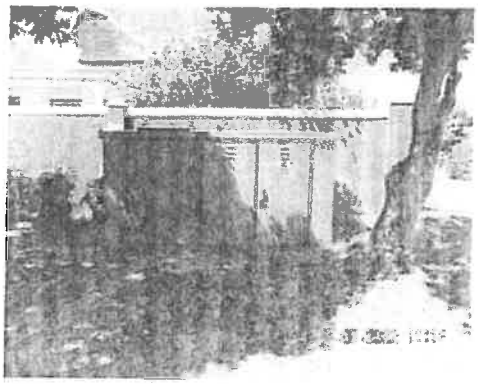
Switchgear panels in good condition, status indicator operational and Cable trenches covered.

6.2 Mini-Substations

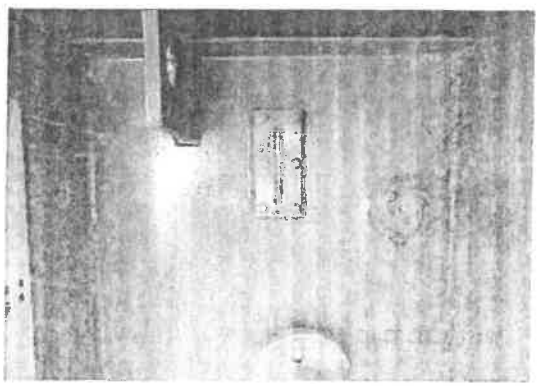
A sample of mini-substations was inspected at the Overstrand Local Municipality. The majority of the mini-substation enclosures that were inspected were in good condition. The inspected mini-substations were locked with padlocks and legible danger signs were available. The mini-substations were properly mounted on well-constructed plinths. All mini-substations inspected could easily be accessed by road.

6.2.1. Hermanus Cnr Plein and Kerk street mini-substation

This is a 500 kVA-rated mini-substation with a transformer manufactured by DPM Delta Power Matla in 2006. The mini-substation enclosure was secured on a proper plinth. The safety and warning signs were mounted onto the enclosure. The oil gauge indicated an acceptable oil level. The LV and MV panels were labelled to indicate interconnection. The various status indicators were in good functioning condition. The pictures below illustrate the condition of the 500 kVA mini-substation.



Mini-substation well secured.



Acceptable oil level.

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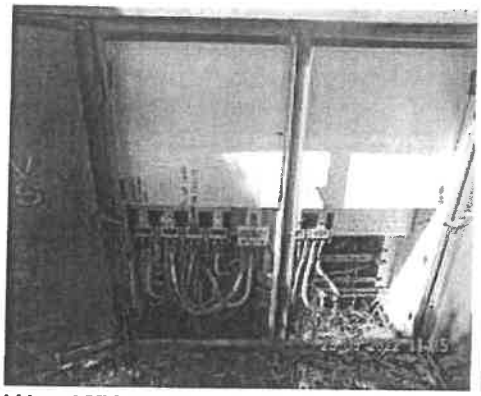
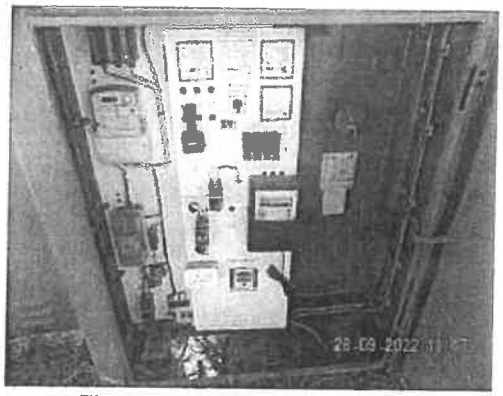


LV and MV panels were clearly labelled.

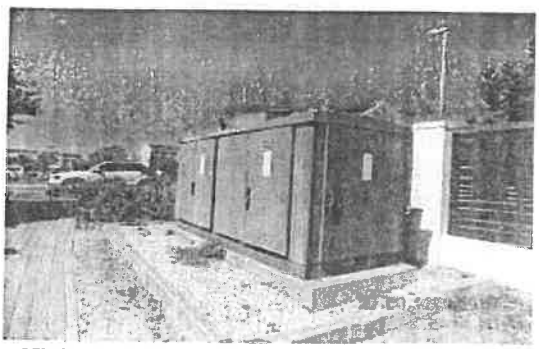


The status indicators were operational.

6.2.2. *Royal ST Mini-substation*

This mini-substation had a 630 kVA-rated transformer manufactured by Electro Inductive industries in 2008. The mini-substation's enclosure and the doors were locked. The safety and warning signs were visible and mounted on the enclosure. Both the LV and MV compartments of the mini-substation were in good condition. The transformer oil gauge indicated a good oil level.

Access to both the LV and HV compartments of the mini-substation was controlled through the relevant locks. The MV side was properly labelled and designated to indicate where it was fed from. The mini-substation indicated interconnections within the network. The pictures below illustrate the condition of the 630 kVA mini-substation.



Mini-substation well secured on a proper plinth.

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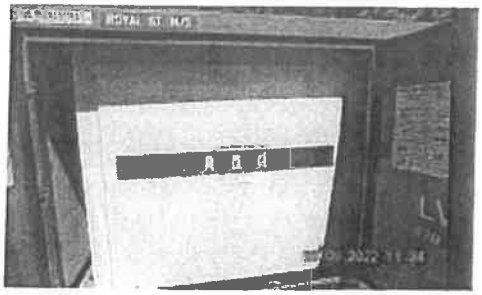
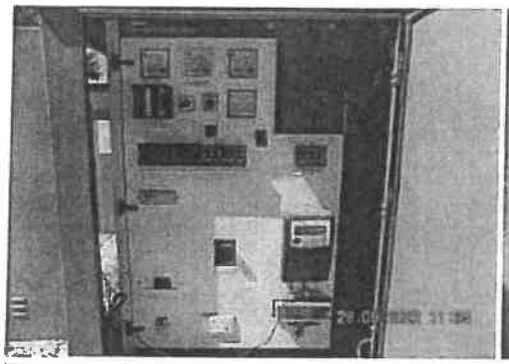
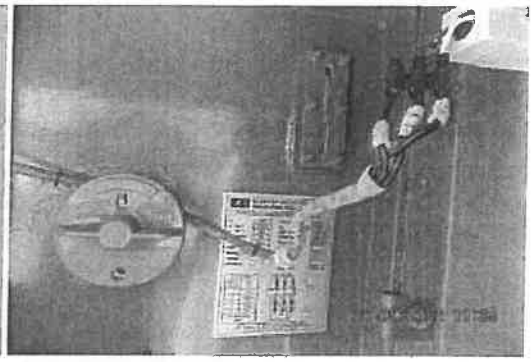


MV and LV compartments were in good condition.



The status indicators were operational.

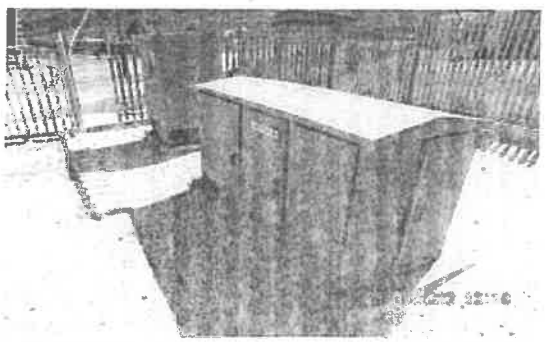


Acceptable oil level.

6.2.3. Kleinmond Skakel Stasie mini-substation

This is a 500 kVA-rated mini-substation with a Power Transformers manufactured in 2001. Access to its interior was controlled with lockable doors. The safety and warning signs were properly mounted and their inscriptions were legible.

Both the LV and MV compartments of the mini-substation were labelled and designated to indicate where it was fed from. The mini-substation indicated interconnections with other mini-substations. The mini-substation was secured on an incorrect plinth. The pictures below illustrate the condition of the 500 kVA mini-substation.



Enclosure was not mounted on a proper plinth.

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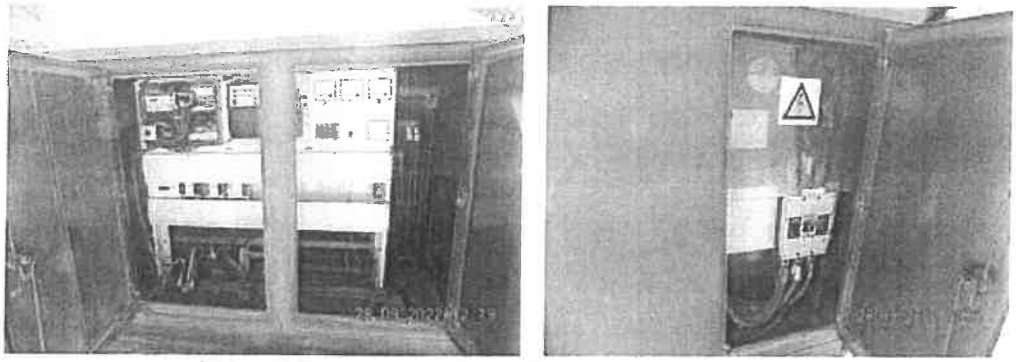

MV and LV compartments were in good condition.

RMU labelled

6.2.4. Kleinmond 12 De Straat Mini-Substation

The mini-substation had a 500 kVA-rated transformer manufactured by Power Tech Transformers in 2009. The mini-substation's enclosure and the doors were locked. The safety and warning signs were visible and mounted on the enclosure. Both the LV and MV compartments of the mini-substation were in good condition. The transformer oil gauge indicated good oil level.

Access to both the LV and HV compartments of the mini-substation was controlled through the relevant locks. The MV side was properly labelled and designated to indicate where it was fed from. The mini-substation indicated interconnections within the network. The pictures below illustrate the condition of the 500 KVA mini-substation.

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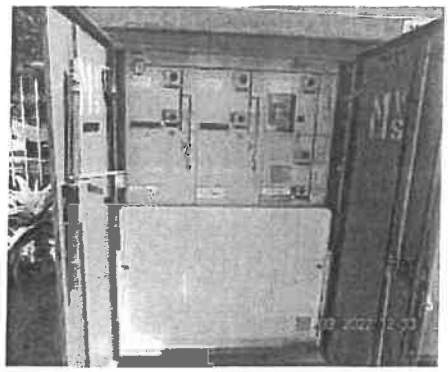
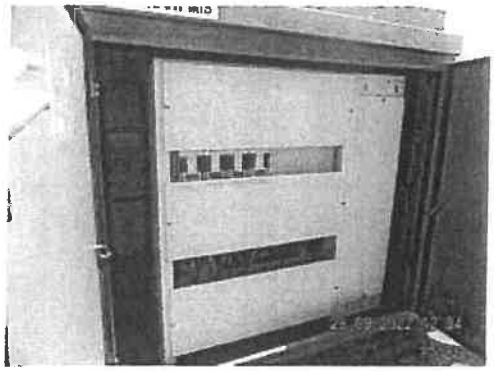
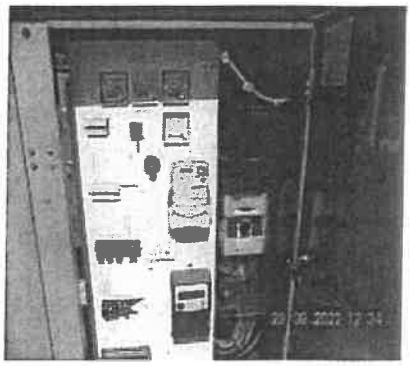
Enclosure was not mounted on a proper plinth.



RMU clearly labelled.





MV and LV compartments were in good condition.

6.2.5. Kleinmond 11 De Straat Mini-Substation

The mini-substation had a 500 kVA-rated transformer manufactured by Power Tech Transformers in 2009. The mini-substation's enclosure and the doors were locked. The safety and warning signs were visible and mounted on the enclosure. Both the LV and MV compartments of the mini-substation were in good condition. The transformer oil gauge indicated good oil level.

Access to both the LV and HV compartments of the mini-substation was controlled through the relevant locks. The MV side was properly labelled and designated to indicate where it was fed from. The mini-substation indicated interconnections within the network. The pictures below illustrate the condition of the 500 KVA mini-substation.

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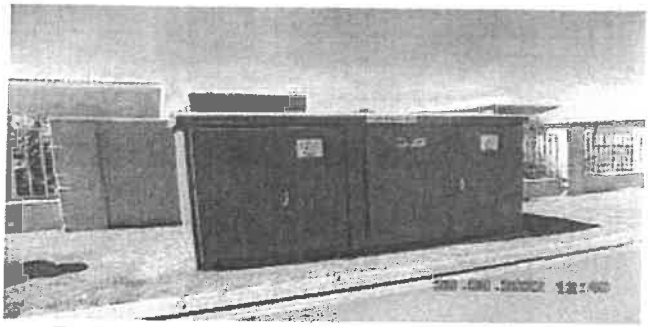

Enclosure was not mounted on a proper plinth

MV and LV compartments were in good condition.

6.2.6. *Gansbaai Fabriek mini-substation*

The mini-substation had a 315 kVA-rated transformer manufactured by Power Engineers in 1994. The mini-substation's enclosure and the doors were locked. The safety and warning signs were visible and mounted on the enclosure. Both the LV and MV compartments of the mini-substation were in good condition. The transformer oil gauge indicated good oil level.

Access to both the LV and HV compartments of the mini-substation was controlled through the relevant locks. The MV side was properly labelled and designated to indicate where it was fed from. The mini-substation indicated interconnections within the network. The pictures below illustrate the condition of the 315 KVA mini-substation.

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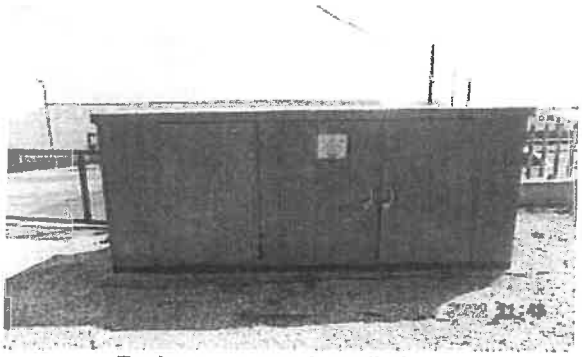
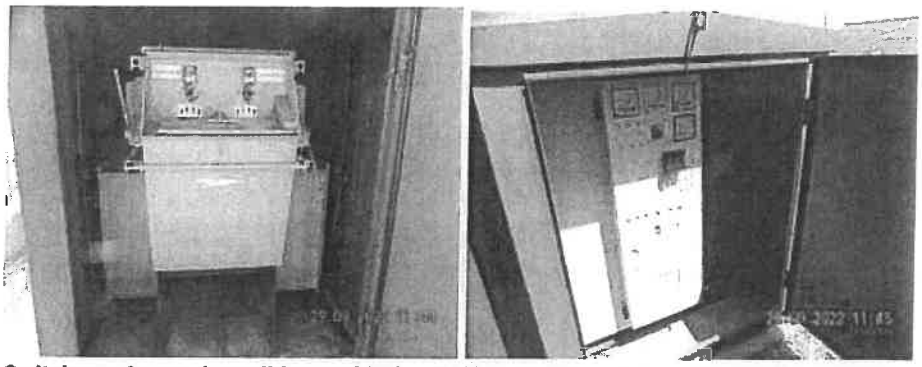


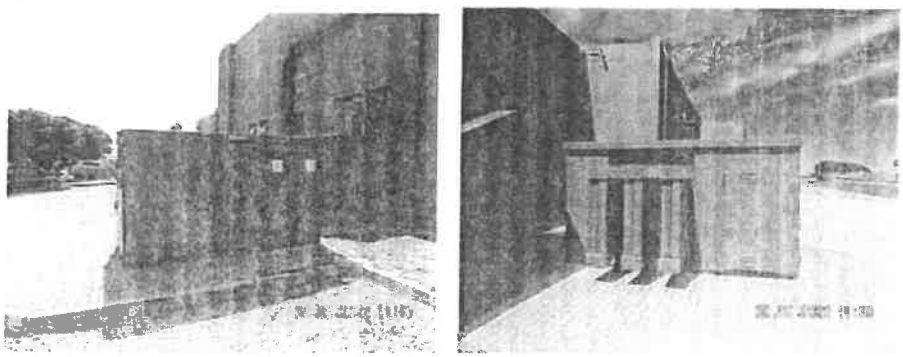
Enclosure secured on plinth.



Switchgear in good condition and MV and LV compartments were in good condition.

6.2.7 *Gansbaai MS Gateway mini-substation*

This 1000 kVA mini-substation was manufactured by Power Engineers in 2004 and was in good condition. It was secured on a proper plinth and its doors were locked. The enclosure was in good condition. The safety and warning signs were visible. No oil leaks were observed at the mini-substation. The pictures below illustrate the mini-substation's condition.



Enclosure secured on plinth.

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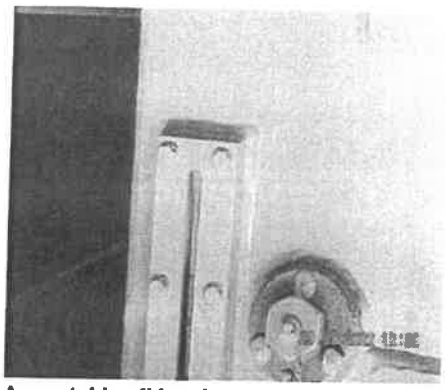

Acceptable oil level.

Switchgear in good condition.

6.2.8 *Stanford MS Caledon mini-substation*

This 500 kVA mini-substation was manufactured by JoCastro in 2007 and was in good condition. It was secured on a proper plinth and its doors were locked. The enclosure was in good condition. The safety and warning signs were visible. No oil leaks were observed at the mini-substation. The pictures below illustrate the 500KVA mini-substation's condition.

Enclosure secured on plinth.

Switchgear in good condition and MV and LV compartments were in good condition

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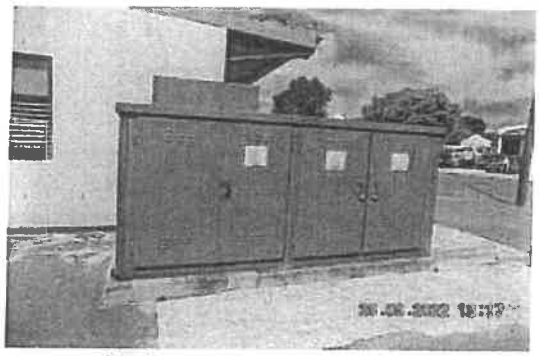
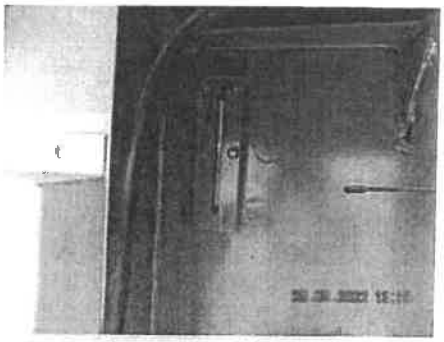
6.2.9 *Stanford (Stanford Hotel) mini-substation*

This 500 kVA mini-substation was manufactured by Jocastro in 1982 and was in good condition. It was secured on a proper plinth and its doors were locked. The enclosure was in good condition. The safety and warning signs were visible. No oil leaks were observed at the mini-substation. The pictures below illustrate the 500KVA mini-substation's condition.



Enclosure secured on plinth.

Metering instrumentation functioning.



Oil Level on acceptable level.

Switchgear in good condition and MV and LV compartments were in good condition

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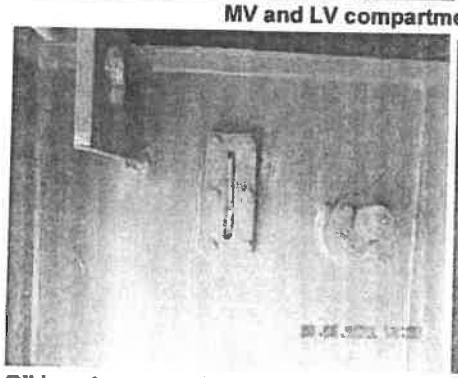
6.2.10. Stanford MS Market mini-substation

The mini-substation had a 500 kVA-rated transformer manufactured by Delta Power Matla in 2007. The mini-substation's enclosure and the doors were locked. The safety and warning signs were visible and mounted on the enclosure. Both the LV and MV compartments of the mini-substation were in good condition. The transformer oil gauge indicated good oil level.

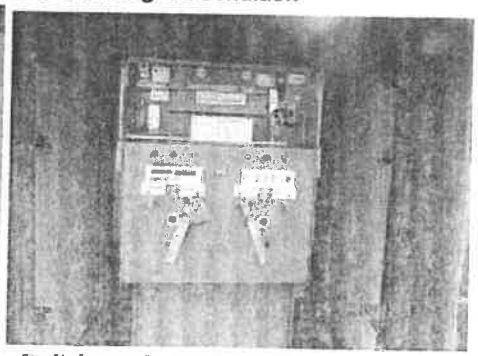
Access to both the LV and HV compartments of the mini-substation was controlled through the relevant locks. The MV side was properly labelled and designated to indicate where it was fed from. The mini-substation indicated interconnections within the network. The pictures below illustrate the condition of the 500 KVA mini-substation.

Enclosure secured on plinth.

MV and LV compartments were in good condition



Oil Level on acceptable level.



Switchgear in good condition.

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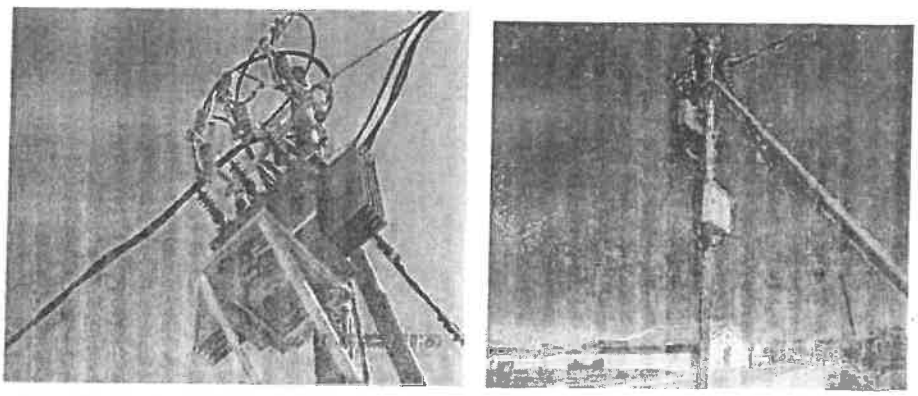
6.3 Pole-Mounted Transformers and Overhead Lines

6.3.1. Pole-mounted transformers

In general, the inspected pole-mounted transformers of the Overstrand Local Municipality were in good condition. The pole structures inspected during the audit were mainly wooden. All the transformers inspected had earth wires, there were no indications of oil leaks on the transformers. The lines were at acceptable heights and according to standards, however there were illegal connections from the lines in the area of Zwelihle, with illegal lines running on the ground, this illegal connection poses a great danger to the community and the network. The licensee mentioned that is working with other partners including the law enforcement to eradicate illegal connections around the community and to arrest the situation.

6.3.1.1 Police Transformer.

This 50 kVA Electro Inductive transformer was installed on the Zwelihle 11 kV overhead line. The transformer was earthed and secured on a wooden pole structure. The transformer bushing, insulations and surge arrestors were in good condition. The drop-out fuses were in place and operational. The pole-mounted transformer and pole structure were in good condition. The pictures below illustrate the pole-mounted transformer's condition.



The Electro Inductive transformer and the wooden pole structure in good condition.

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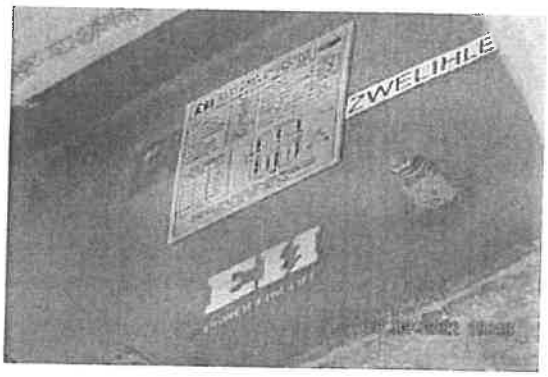
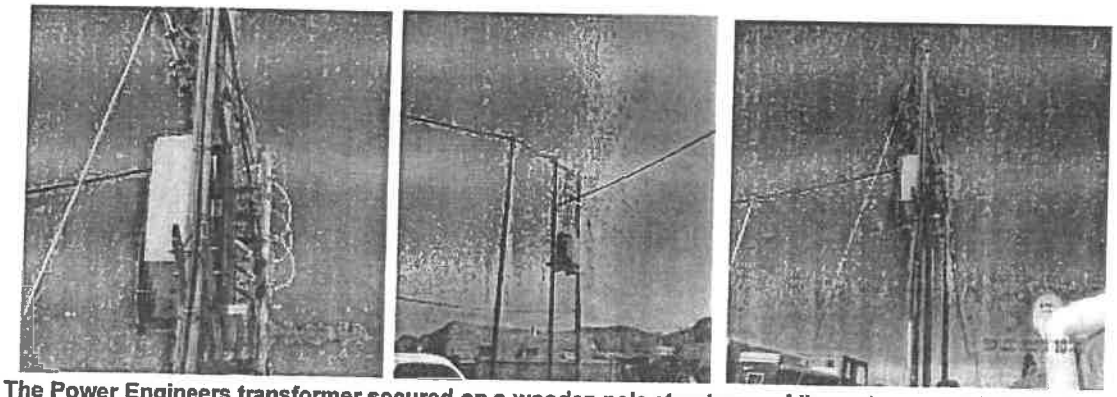


50KVA Electro Inductive transformer.

6.3.1.2 New Camp Mzilikazi Street pole-mounted transformer

This 200 kVA Pole mounted transformer was manufactured by Power Transformers and was installed in New Camp area on Mzilikazi street on an 11 kV overhead line. The transformer was earthed and secured on a wooden pole structure. The transformer bushing, insulations and surge arrestors were in good condition. The drop-out fuses were in place and operational. The pole-mounted transformer, supported in position by a wooden pole, and pole structure were in good condition. The pictures below illustrate the pole-mounted transformer's condition.



The Power Engineers transformer secured on a wooden pole structure and lines at acceptable heights.

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7. CONCLUSION

The Overstrand Local Municipality is doing exceptional work to manage the electricity business in an efficient and reliable manner. It was observed that there were still some areas of concern where improvements need to be made. The main challenge facing the Electricity Department is financial constraints to fund its maintenance programmes and the rehabilitation of the older parts of the network.

8. RECOMMENDATIONS

None

9. THE WAY FORWARD

This final report is considered a true reflection of the findings of the audit that took place from 27-29 September 2022. The Energy Regulator instructs the management of the Overstrand Municipality to draft a remedial/corrective action plan that outlines steps to be taken to rectify the instances of non-compliance identified in this report within 120 days of receipt of the final report.

Once NERSA has agreed with the corrective action plan from the Overstrand Local Municipality, a monitoring process shall be instituted to enforce the implementation of the corrective action plan.

All communication should be forwarded to the Head of the Electricity Licensing, Compliance and Dispute Resolution Department, unless indicated otherwise by means of a formal letter signed by the Head of Department.
All communication should be sent to the Head of the Electricity Licensing, Compliance and Dispute Resolution Department, unless indicated otherwise by means of a formal letter signed by the Head of Department.

The Head of Department
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National Energy Regulator of South Africa
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0007

Tel: +27 (0)12 401 4600
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ATTACHMENT 3
CORRECTIVE ACTION PLAN TEMPLATE
(NOT TO BE SIGNED)

Annexure 2

CORRECTIVE ACTION PLAN		
Municipality:	**Overstrand Local Municipality**	
Date of Audit:	**27 to 29 September 2022**	**Date of Corrective Action Plan:**

Non Compliances	Corrective action planned	Financial Implications	Target date for starting of action	Target date for completion

Corrective action plan drafted by:

_____

Designation: _____

Signature _____

Date: _____

Corrective action plan approved by:

_____

Designation: _____

Signature _____

Date: _____

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