



UNITED REPUBLIC OF TANZANIA
MINISTRY OF ENERGY
ENERGY AND WATER UTILITIES
REGULATORY AUTHORITY
(EWURA)



THE INSPECTION MANUAL FOR ELECTRICITY REGULATED ACTIVITIES, 2024

2024

[Made Under Section 30 and 31 of the Electricity Act, Cap. 131]

Third Version

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Is part of	Electricity regulatory tools for monitoring and measuring the performance of regulated entities
Related Documents	Electricity sub-sector legislation
Distribution	Electricity sub-sector regulated entities, EWURA staff, and other relevant stakeholders

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DEFINITIONS

“Accident” means an unplanned and unexpected event or occurrence that often results in damage, injury, harm or death.

“Applicable legislation” means any principal law, treaty, proclamation, regulation, rule, order, or by-law that is customarily treated in mainland Tanzania as having a legally binding force and which is relevant to matters about compliance monitoring inspection activities.

“Approved budget” means a financial plan that has undergone the necessary review and authorisation processes and has been officially sanctioned or accepted by the relevant governing authority.

“Audited financial statements” means a comprehensive report of an organisation's financial activities that have undergone an independent examination by a certified public accountant or an auditing firm.

“Authority” means the Energy and Water Utilities Regulatory Authority (EWURA), which is established under provisions of the Energy and Water Utilities Regulatory Authority Act.

“Average payable days” means the average duration in months that the utility took to settle/pay suppliers' bills.

“Average receivables days/Accounts receivable collection period” means the average duration in months that customers take to pay bills.

“Capacity of a grid substation” means the ability of the substation to handle and transmit electrical power.

“Capacity of a transmission line” means the ability of the transmission line to carry electrical power from one point to another.

“Cost variance” means project budget versus utilized amount.

“Creditors aging above 120 days” means the total value of payables that have lasted for more than 120 days.

“Current ratio” means a liquidity ratio that measures a company's ability to pay short-term obligations whose maturity falls within one year.

“Customer Average Interruption Duration Index (CAIDI)” means the average duration of each supply interruption per customer who experienced the interruption per year.

“Customer Complaint” means concerns raised by consumers regarding dissatisfaction with electrical service.

“Customer connections per year” means the number of new customers connected in a year.

“Customers per staff ratio” means the ratio of total customers served by a utility divided by the number of staff.

“Debtors aging above 90 days” means the total value of receivables from the sale of electricity that lasted for more than 90 days.

“Distribution Cost” means expenses associated with the distribution of electrical power.

“Distribution Losses” means the amount of electrical energy that is lost during the process of distributing electricity from a power source to end-users.

“Electrical installation activities” means activities that involve an assembly of associated electrical equipment supplied with power from a common point of origin to fulfil a specific purpose and have certain coordinated characteristics.

“EWURA Act” means the Energy and Water Utilities Regulatory Authority Act, Cap 414.

“Fatal accident” means an incident that results in the death of a person.

“Generation cost” means the total expenses associated with producing electrical energy from a power plant.

“Generation facilities” means infrastructure and installations used for the production of electric energy and power from any primary source of energy.

“Grid substation” means a substation designed to transform voltage levels and regulate the flow of electricity transmitted over long distances.

“Inspectors” means an officer of the Authority or an agent appointed by the Authority to carry out inspection activities.

“Interest Coverage Ratio (interest / EBIT)” is the ratio used to measure the ability of the company to pay the interest due on outstanding debt.

“Leverage ratio” means capital mix that shows proportional capital financing in terms of debt to equity.

“Licensee” means any person licensed by the Authority to conduct electricity-regulated activities and services.

“Major maintenance” means key maintenance projects or overhauls that involve significant efforts to inspect, repair, and upgrade key components of equipment or facilities.

“Net profit margin” means the ratio of the net income to the total revenue.

“Net-metering” means measuring the difference between imported and exported energy in kilowatt hours (kWh) over the applicable billing period.

“Non-fatal accident” means an incident where individuals involved sustain injuries but do not result in death.

“Operating ratio” means the ratio of operating costs to operating revenues.

“Payment efficiency to creditors” means the effectiveness and speed with which an organisation meets its financial obligations to creditors.

“Power interruption notifications” means communications sent to electricity consumers to inform them of planned or unplanned disruptions in their electrical service.

“Power plant availability” means the percentage of time that a power generation facility is capable of producing electricity during a specific period.

“Qualified staff” means the potential employee with abilities to perform a task or be trained for a required skillset.

“Quality of power supply” means the characteristics of electrical power delivered to consumers.

“Regulated Activity” means the activity regulated by the Authority.

“Regulated Entity” means any person licensed to conduct a regulated activity.

“Reimbursed Amount” means a refund meant to any person who has paid for regulated activities beyond rates and charges approved by the Authority.

“Reimbursed Customer” means any person who has paid for regulated activities beyond rates and charges approved by the Authority.

“Reliability of an electricity distribution feeder” means the ability of the feeder to consistently and dependably deliver electrical power to end-users.

“Reliability of an electricity distribution system” means the ability of the system to consistently and dependably deliver electrical power to end-users.

“Reliability of Transmission Network” means the ability of the transmission network to consistently and dependably deliver electricity to consumers.

“Reserve margin” means the difference between the total available generating capacity and the peak demand for electricity.

“Returns on Asset” means a ratio of net income to total assets.

“Revenue Collection Efficiency” means the effectiveness and productivity of the processes and systems in place for collecting revenue.

“Strategic area” means an area that offers technical benefits to a Distribution Network Operator upon developing a power project.

“System Average Interruption Duration Index (SAIDI)” means the average duration (minutes) of supply interruptions per customer per year.

“System Average Interruption Frequency Index (SAIFI)” means an average number of supply interruptions per customer per year.

“Tariff” means rates and charges charged by a regulated entity to its customers as approved by the Authority.

“Temporary breakdown” means a short-term interruption or disruption in the supply of electrical power.

“Transmission Cost” means expenses associated with the transmission of electrical power.

“Transmission line” means a high-voltage line designed to transport electrical energy over long distances.

“Transmission Losses” means the amount of electrical energy that is lost during the process of transmitting electricity from a power source to end-users.

“Unserved energy” means the amount of energy demand that is not met or served by the power grid.

ABBREVIATIONS AND ACRONYMS

CAIDI	:	Customer Average Interruption Duration Index
DNOs	:	Distribution Network Operators
EBIT	:	Earnings Before Income Tax
EWURA	:	Energy and Water Utilities Regulatory Authority
GWh	:	Giga Watt Hour
HT	:	High Tension
HZ	:	Hertz
km	:	Kilometre
kV	:	Kilovolt
kVA	:	Kilovolt-Ampere
kW	:	Kilowatt
kWh	:	Kilowatt-hour
LOIS	:	Licence and Ordering Information System
MoE	:	Ministry of Energy
MV	:	Medium Voltage
MVA	:	Megavolt Ampere
MW	:	Megawatt
MWh	:	Megawatt-Hour
PPA	:	Power Purchase Agreement
PSMP	:	Power System Master Plan
REA	:	Rural Energy Agency
SAIDI	:	System Average Interruption Duration Index
SAIFI	:	System Average Interruption Frequency Index
TANESCO	:	Tanzania Electric Supply Company Limited

1. INTRODUCTION

- 1.1 The Inspection Manual for Electricity Regulated Activities 2023 “The Manual” is made under Sections 30 and 31 of the Electricity Act, Cap 131. It provides procedures for monitoring, inspecting, and investigating performance compliance of regulated entities in the electricity supply industry. Furthermore, it provides procedures for carrying out pre-licensing/pre-registration inspection for an entity that is required to be licensed or registered.
- 1.2 The performance of regulated entities is monitored and measured based on the applicable legislation, performance agreement, tariff orders, and licences.

2. OBJECTIVE

To provide procedures for monitoring, inspecting, and investigating performance compliance of regulated entities in the electricity supply industry.

3. METHODOLOGY

- 3.1 The following methods shall be used to monitor, inspect, and investigate performance compliance of regulated entities in the electricity supply industry:
- a) Physical inspection of the regulated entity's electricity facilities/infrastructure.
 - b) Review of regulated entities' documents/reports.
 - c) Interview with employees of the regulated entities.
 - d) Interview with customers.
 - e) Testing and measurement of the regulated entity's facilities/equipment.
- 3.2 The Authority may hire an inspector to carry out compliance monitoring inspection on its behalf when deemed necessary.

4. TYPES OF INSPECTION

- 4.1 Two types of inspections are considered to be applicable in this Manual:
- a) Routine inspections: conducted in accordance with the inspection plan.

- b) Ad-hoc inspections: conducted based on circumstances that necessitate immediate intervention, such as an event of an accident in electricity infrastructure that may jeopardise the security of electricity supply.

4.2 Inspections will be conducted in accordance with Section (30-33) of the Electricity Act 2008, and will focus on the following:

- a) Performance of the regulated entity.
- b) Prerequisite for licensing/registration.

5. NOTIFICATION

5.1 For routine inspections, official notification (email or letter) will be issued at least five (5) working days before the date of commencement of the inspection.

5.2 For Ad-hoc inspections, immediate notification (phone or email) will be issued before the inspection.

5.3 The notification shall have an inspection plan, which will include among others:

- a) Inspection team and Coordinator.
- b) Objective of Inspection.
- c) Regulated entity's composition team required at the site
- d) Duration of Inspection.
- e) Facilities to be inspected.
- f) Data Required.
- g) Date of the Entry Meeting.
- h) Date of Exit Meeting.

6. PROCEDURES

The following are general procedures, among others, which will be adhered to during the inspection:

- a) Conduct entry meeting.
- b) Conduct inspection of on-site/facilities.
- c) Carry out data analysis.

- d) Prepare a draft inspection report.
- e) Conduct an exit meeting.
- f) Prepare final inspection report incorporating comments from exit meeting.
- g) Sign the final inspection report (both parties).

7. KEY PERFORMANCE INDICATOR

The inspection shall be carried out based on the requirement of legislation, performance agreement, license conditions, and industrial best practices.

8. INSPECTION REPORT

8.1 The report shall be signed by the parties during the exit meeting.

8.2 Report shall be submitted to:

- a) Regulated entity's representative office at the site of the inspection after the exit meeting.
- b) Head office of the regulated entity within fourteen (14) working days from the date of signing the report.

8.3 The signed report shall include signed entry and exit meeting minutes.

8.4 Regulated entity shall submit to the Authority, an action plan for rectifying observed anomalies within 14 days from the date of receiving report.

8.5 The Authority shall make a follow-up on the implementation of the action plan depending on the timeframe provided in the action plan.

8.6 The Authority shall take legal action against the regulated entity for failing to rectify observed anomalies based on the timeframe specified in the action plan.

8.7 The report formats shall be as follows:

- a) Performance of the Regulated Entity as per **Annex 1**.
- b) Prerequisite for licensing/registration as per **Annex 2**.

9. ANNEXES

Annex 1: Inspection Report on Performance of Licensee/Registered Entity

Title: e.g., **COMPLIANCE MONITORING INSPECTION OF TANESCO IN SINGIDA REGION**

1. INTRODUCTION

EWURA conducted compliance monitoring inspection in (e.g. TANESCO in Singida Region) fromto to monitor and measure licensees' performance by applicable legislations, performance improvement agreements, tariff orders, license conditions, and applicable regulatory tools.

2. OBJECTIVE

The objective of the inspection is to monitor and measure licensees' performance in the electricity supply industry concerning efficiency of operation, quality and reliability of electricity supply, customer service, access to electricity, market competition, least cost investment, and security of electricity supply, among others.

3. SCOPE

This inspection covers regulated electricity generation, transmission, distribution, electricity supply, and electrical installation activities.

4. METHODOLOGY

The methodologies used include, among others, physical inspection, review of licensee's documentation, interview with licensee's employees, interview with customers, as well as testing and measurements.

5. INSPECTION FINDINGS

Inspection findings on KPIs below the agreed target are summarized below. Details are as per **Annex 1**.

Example:

a) Improvement in safety

Compliance with safety is 77%. This is contributed by poor workmanship which led to fatal accidents.

b) Timely completion of projects

.....

c) Timely Inspection and Testing of Meter(s)

.....

6. RECOMMENDATION

EWURA recommends that the anomalies be rectified timely by... (due date) to meet the requirement of legislation, performance improvement plan, tariff order, licenses, and applicable regulatory tools.

7. CONCLUSION

Rectify anomalies that require immediate attention and submit an implementation plan for the remaining ones within 21 days from receipt of this report.

8. DECLARATION AND SIGNATURE

EWURA officials

- 1. Name :
- Position :
- Signature :
- Date :
- 2. Name :
- Position :
- Signature :
- Date :

Licensee Officials

The contents of the report have been served upon me by the above-named EWURA Official.

- 1. Name :
- Position :
- Signature :
- Date :

- 2. Name :
- Position :
- Signature :
- Date :

Pre-licensing/pre-registration inspection is conducted on licensees for authentication of information submitted during application and physical site verification as detailed below.

Annex 2: Pre-Licensing/Pre-Registration Inspection Report

1. Particulars of the Applicant

- a) Name and Address
- b) Application Reference
- c) Registration
- d) Shareholders and shares

2. Details of Inspection

- a) Date of Inspection
- b) Objective of Inspection
- c) Inspection Team
- d) Client Representative on Site During Inspection (**Include contacts: email, cell phone numbers**)

3. Details of Licence Application

- a) Date of Submitting Application
- b) Date of Completing Application
- c) Type of License Applied
- d) Plant Description/Generation Facility
(Include: project description in brief, Plant installed capacity, type of fuel, etc.)
- e) Location of Generation Facility
- f) Proposed Term of Licence
- g) Off-taker
- h) Project cost (TZS or \$)

4. Verification of site location

- a) Project site description
- b) Site Photos (**Attach Appendix**).

- c) Pre-Licensing site inspection Checklist Form (**Attach Annex**)
- d) Interference with other Human Activities
- e) Availability and quality of Access Road
- f) Availability of Power Infrastructure
- g) Availability of Water Infrastructure
- h) Availability of Gas Supply Infrastructure

5. Land Acquisition:

Example: Nandela Company Ltd. holds a Certificate of occupancy of the area issued by the responsible Authority (**Attach Appendix**).

6. A Letter of support for the initiative from the Ministry of Energy (MoE)

Example: The Ministry of Energy (MoE) supports the development of the project through its letter to Nandela Company Limited of 28th August 2017 with Ref. No BE.87/88/01/A (**Attach the letter as an Appendix**) as per the requirement of the Electricity (Development Small Power Projects) Rules,2020 and the Electricity (Generation, Transmission and Distribution) Rules, 2023.

7. Power Purchase Agreement, Memorandum of Understanding, or Letter of Intent from off-taker

Example: The Power Purchase Agreement (PPA) is not required since the generated power will be for its own use. If the PPA has been signed, state (**provide it as an Appendix**)

8. Water Right, If Applicable

Example: Nandela Company Ltd holds water use permit number 95100456 issued on 17th January 2016 and the date of expiration is 16th January 2022) (**provide it as an Appendix**).

9. An Environmental Impact Assessment Certificate or An Initiation of The Process to Acquire the Certificate

Example: Nandela Company Ltd holds a registration number EAC/EAR/3045 certificate number 70 issued on 5th April 2010 by the National Environmental Management Council (NEMC). (**provide it as an Appendix**).

10. Public Notice and Awareness of the Villages on the Projects

Example: The public notice was published on 31st August 2022 in Daily News and Habari Leo newspapers. **(provide it as an Appendix)**

11. Conclusion and Recommendations

Example: Nandela Company Ltd has met all requirements for issuance of the 23MW operational electricity generation license/registration. It is recommended that the applicant be issued the license/registration.

Signatures

12. Declaration and Signature

I acknowledge the contents of this document.

S/N	Name	Position	Signature
1.
2.
3.

Date: