



Liberia Electricity Regulatory Commission

TOTOTA ELECTRIC CORPORATIVE DISTRIBUTION SERVICE AREA (TOTOTA, BONG COUNTY) INSPECTION REPORT

Submitted by:

The Technical Regulations Directorate (TRD)

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1.0 Introduction

The Liberia Electricity Regulatory Commission (LERC) is mandated under Section 3.3 B (3)(4) of the 2015 Electricity Law of Liberia (ELL) to conduct audits and inspections of records, facilities, and equipment of licensees as well as to establish, maintain, review, and amend, as appropriate, customer care standards. The Electricity Distribution Code of Liberia (EDCL 16.22.1) mandates a Distribution Licensee to maintain its distribution network in accordance with good utility practice and performance standards to ensure reliability and quality of electricity service, on both a short-term and long-term basis.

In compliance with the 2015 ELL and the 2020 EDCL, the Inspectorate Unit of the Technical Regulation Directorate, assisted by the Public Affairs, inspected the Totota Electric Corporative Distribution service areas located in Bong County. As dictated by the Inspection Manual, the inspection began with an initial Opening Meeting held on October 21, 2025, at the TEC Bong Office in Totota and followed by field verification exercises on October 21, 2025 respectively.

The Inspections were based on the identified indices and Regulatory Compliance Score Card outlined in Table 1.0 and Table 2.0.

1.1 Objectives of the Inspection

The Inspection exercises included Verification of Documents, Field inspection of the 0.4/0.23 kV low-voltage distribution networks, and evaluation of Safety coordination. The inspections were conducted to accomplish the following objectives:

- To identify obvious structural problems and hazards such as leaning power poles, damaged equipment enclosures, and vandalism.
- To confirm operational equipment functionality and conformity to the technical and safety standards.
- To work with the licensed service provider in the development of a compliance Plan to cure problems identified during the inspections.
- To ensure that appropriate follow-up and corrective action is taken regarding problems identified so as to improve reliability and quality-of-service delivery to customers.
- To ensure licensed Service providers maintain their distribution network in accordance with good utility practice and performance standards for maintaining reliability and quality of electricity service, on both a short-term and long-term basis.

Table 1.0: Regulatory Compliance Score Card

No.	Compliance Status	Grading (%)	Rating	Risk level	Description	Action
1	Compliant (High)	95-100	1	Insignificant	Still operable.	No Action- capture that the asset is still in excellent working condition.
2	Compliant (Medium)	85-94	2	Low	Still operable with reduced performance.	Noteworthy- capture in the next inspection cycle and adjust ranking as needed.
3	Compliant (Low)	75-84	3	Medium	Still operable with degraded performance.	Caution- important action required to address identified issues.
4	Non-compliant	60-74	4	High	Almost inoperable, poor performance.	Urgent- Action required
5	Significantly non-compliant	0-59	5	Very high/ Already failed	Inoperable.	Critical- immediate action required.

Table 2.0: Overall Regulatory Compliance Score

No.	Inspection Index	Compliance Status				
		1	2	3	4	5
1	Overall Compliance					

Table 3.0: Inspection Index

No.	Inspection Index
1	Documentation Checklist
2	Low voltage (0.4/0.230kV) Network Checklist
3	Metering Checklist
4	Safety Coordination

2.0 Methodology

The inspections were carried out by both teams from the LERC and TEC. The three core activities summarize the methodology followed during the inspection exercises.

- a) **Preliminary Meeting** - The inspection commenced with a briefing session between the LERC and TEC teams. The LERC staff outlined the primary objectives of the inspection, emphasizing its significance in ensuring the reliability and quality of service delivery.
- b) **Documentation Review** - Following the preliminary meeting, TEC was requested to submit the necessary documentation by the end of the inspection, as outlined in the Inspection Manual's "Documentation Checklist". Reports were captured in their original forms to help the team ascertain and validate the integrity of data collected during the inspection exercise.
- c) **Physical Inspection Using the Inspection Manual** - Field inspection was carried out using the checklists from the Inspection Manual, with random selection for inspection.

3.0 Summary of Regulatory Compliance Scores for Inspections Conducted

Table 4 provides a summary of Regulatory compliance scores for inspections conducted from October 20 to October 21, 2025, in the selected areas of the TEC distribution service areas of Totota, Bong County. Compliance in this scorecard is measured on a scale from 1 to 5. Where 1 represents High Compliance and 5 represents significant noncompliance. Table 5 provides the overall Regulatory Compliance score of TEC distribution service areas of Bong County for the same period under review.

Table 4.0: Summary of Regulatory Compliance Score Card

No.	Inspection Index	Compliance Status				
		1	2	3	4	5
1	Documentation Checklist			X		
2	Low voltage (0.4/0.230kV) Network Checklist		X			
3	Metering Checklist	X				
4	Safety Coordination			X		

Table 5.0: Overall Regulatory Compliance Score of TEC Distribution Network Areas

No.	Inspection Index	Compliance Status				
		1	2	3	4	5
1	Overall Compliance of TEC Network		X			

The overall Compliance status of TEC selected distribution service areas inspected in Totota, Bong County is Compliant (Medium), has a Low risk level, and is still operable with reduced performance. Required Action is **Noteworthy**- capture in the next inspection cycle and adjust ranking as needed. Refer to Table 1.0 for explanatory notes on the various ratings of the scorecard and Table 2.0 for the compliance rating.

4.0 Detail of the inspection exercise

4.1 Inspection Index Findings for TEC Distribution Network Corridors

The Totota Electric Cooperative (TEC) operates a Hybrid solar PV -Diesel power plant with an installed capacity of 70 kWp solar and 70.4kW standby diesel. The current peak demand of 55 kW is mostly during evening hours. The micro-utility currently serves a customer base of 412 and an estimated unserved demand of 40kW.

(a) Documentation Checklist

The Documentation Checklist outlines the required documents that TEC must submit to the Liberia Electricity Regulatory Commission (LERC) as evidence of its documentation management system. TEC has submitted several documents to the Commission that fall short of the reporting requirement. The Commission will collaborate with TEC to develop standardized templates in compliance with the Inspection Manual, Minigrid Code, and the Electricity Distribution Code of Liberia. Other areas of collaboration will include the development of the TEC Annual Distribution Planning Report/Network Expansion Plan, System Study Report, and publication of network performance reports.

(b) Low Voltage (LV) Network Checklist

TEC's distribution network serves the town of Totota in Bong County, operating at a low voltage of 0.4/0.230 kV and covering a distance of 8 km. The network comprises four LV feeders. During these inspections, voltage levels confirmed at the feeders' dead ends ranged from 235 V to 240 V. Low-voltage network installations violate right-of-way (ROW) in most locations.

(c) Metering Checklist

TEC metering system is user-friendly and technologically advanced. Through a mobile application, TEC staff can monitor electricity consumption, disconnect and reconnect meters, and reset meters as needed.

(d) Safety Coordination

Vegetation management within the TEC service area is well maintained, ensuring safe and reliable operation of the distribution network. Personnel safety and awareness are evident, but at a low level.

Appendix A. Punch list of key defects, curing actions, and timelines for curing defects in the Bong Distribution network

No.	Key Defects	Locations	Corrective Actions Required	Completion Dates
a	Documentation			
1	Some documents were provided to the Inspection Team for review.	Totota Electric Cooperative	LERC will work with TEC to develop templates for the documents submitted.	Feb. 2026
2	Lack of Annual Distribution Planning Report/Network Expansion Plan, System Study Report, and published weekly network performance on its website.	TEC	LERC will work with TEC to develop its network expansion plan and system study report.	April 2026
3	The logbook has not been used since April 2025.	TEC	Ensure the usage of log books.	October 2025
b	Low voltage (0.4/0.230kV) Network Checklist			
4	Bird nesting in meters.	Mulbah Hill Community and others.	Remove bird nests and implement preventive measures.	Oct. 2025
5	Service drops on sticks.	BRAC Office, Mulbah Hill Community.	Install proper utility poles for affected customers.	October 2025
	Metering Checklist			
6	Two damaged meters due to ants.	Mulbah Hill Community	Replace damaged meters and apply pest control measures.	Feb. 2026
	Safety Coordination			
7	Staff are not properly equipped with PPE.	TEC	Provide appropriate PPE to all staff.	December 2025
8	Environmental concern: Fuel spill observed on-site.	TEC power plant	Clean up the spill and implement environmental safeguards.	Nov. 2025
9	Permit-to-Work system not in place.	TEC	Establish and implement a Permit-to-Work system	Oct. 2025

4.0 Limitations in Inspection

Our inspection was dependent on the available records provided by TEC. Additionally, the use of the naked eye could not verify the actual conditions of Pin Insulators, machine bolts, washers, and other network components. Also, the use of landmark locations could not allow the team to be exact, as the main spots' deficiencies were observed.

The findings outlined in this report were those observed only during the period of inspection in the TEC distribution network areas from October 20 - 21, 2025.

5.0 Recommendations

It is expected that TEC will work towards the attainment of full regulatory compliance in its distribution network service areas in Bong County.

Below are lists of recommendations for consideration and actions:

1. The Commission mandates TEC to fully implement and submit to the Commission the list of documents outlined in the Inspection Manual, which are requirements in network data management.
2. That the Commission mandates TEC to correct and take all appropriate actions, as highlighted in the punch list, to resolve defective and damaged equipment and improve the network to serve citizens within the network zones.
3. The Commission conducts workshops for TEC staff in inspections, reporting, Community engagement, and awareness aimed at improving regulatory compliance.

APPENDIX B. Pictorials from TEC Distribution Network Areas



LERC & TEC During Field Inspection



Damaged Meters



Service Drop on Plank



Inspection of Solar Panels



Inspection of TEC Diesel



Field Inspection of TEC Facility



LV Pole