

National Electric Power Regulatory Authority Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad Ph: +92-51-9206500, Fax: +92-51-2600026 Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/DG(M&E)/LAD-10/196\

February 03, 2025

Chief Executive Officer Tribal Area Electricity Supply Company (TESCO), 213-WAPDA House, Shami Road, Sakhi Chashma, Peshawar

Subject:

ORDER OF THE AUTHORITY IN THE MATTER OF OF SHOW CAUSE NOTICE ISSUED TO TESCO UNDER REGULATION 4(1) AND 4(2) OF NEPRA (FINE) REGULATIONS, 2021, ON ACCOUNT OF FAILURE TO EXECUTE EARTHING/GROUNDING OF HT/LT POLES/STRUCTURES IN ITS SERVICE TERRITORY.

Please find enclosed herewith, the Order of the Authority (total 09 page) in the subject matter for information and compliance.

Enclosure: As above

(Wasim Anwar Bhinder)



National Electric Power Regulatory Authority

ORDER

IN THE MATTER OF EXPLANATION ISSUED TO TESCO UNDER REGULATION 4(1) AND 4(2) OF NEPRA (FINE) REGULATIONS, 2021, ON ACCOUNT OF FAILURE TO EXECUTE EARTHING/GROUNDING OF HT/LT POLES/STRUCTURES IN ITS SERVICE TERRITORY.

1. Tribal Areas Electric Supply Company Limited (TESCO) (the "Licensee") was granted a Distribution License (22/DL/2013) by the National Electric Power Regulatory Authority (the "Authority") on 12.08.2013, for providing Distribution Services in its Service Territory as stipulated in its Distribution License, pursuant to section 21 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 ("NEPRA Act").

Background:

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- 2. During the investigation conducted by NEPRA with respect to Fatal Accidents in DISCOs, it was observed that the distribution facilities of DISCOs such as poles/structures lack earthing/grounding which is one of the major causes of the occurrence of fatal accidents. The Authority while taking notice of such serious safety hazards directed the Licensee vide letter dated June 07, 2022, to submit the data pertaining to the total number of poles/structures, number of poles/structures already earthed/grounded, and number of poles/structures to be earthed/grounded. Accordingly, the Licensee submitted the required information vide its letter dated June 24, 2022 and email dated August 17, 2022.
- 3. The Authority after carefully examining the data submitted by the Licensee called CEO of the Licensee vide letter dated September 26, 2022, for a meeting/hearing via Zoom at NEPRA Head Quarter with the direction to come up with a comprehensive plan along with specific timelines pertaining to execution of earthing/grounding of HT/LT poles/structures in its service territory, in order to avoid fatal accidents in future. The Authority also directed that the Licensee shall submit the response to specific queries/questions including, SOP of the Licensee pertaining to earthing/grounding of the poles/structures, scope of earthing in the contracts at the time of their installation, checking of poles/structures grounding at the time of handing over of the system from construction to operation departments, tackling these hazards in the absence of proper earthing/grounding, and time required to execute the earthing/grounding of 100% of the remaining poles/structures.

In response, the Licensee vide its letter dated September 30, 2022, submitted its response against the aforementioned directions & queries of the Authority. The Licensee submitted that total time required to execute earthing/grounding of poles/structures will be 03 years subject to law & order situation of the area and availability of funds & materials. Moreover, the Licensee also submitted that more than

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45% of its distribution network is self-extended by the general public in FATA, which is not properly earthed.

- 5. In addition to above, NEPRA Regional Office, Peshawar, also reported and affirmed that in past contracts, the scope of earthing/grounding was only included in Steel Structures. However, in the latest contracts, the scope of earthing/grounding was included in both the Steel Structures and PCC poles and the same is present in the field too. The Regional Office further highlighted that Steel Structures installed in the past had earthing/grounding, however, the same has become ineffective due to deterioration and change of moisture contents at the sites over the passage of time.
- 6. Accordingly, the aforementioned meeting/hearing was held on October 04, 2022, wherein, the Authority directed the Licensee to submit complete details of PCC poles and steel structures with and without earthing/grounding. The Authority further directed the Licensee to submit a comprehensive plan of the execution of earthing/grounding of poles & structures along with concrete timelines. Moreover, the Authority also desired that the Licensee should provide a mechanism on how they will efficiently perform the execution task within the minimum possible time. A letter dated October 28, 2022 containing all above directions was also sent to the Licensee. However, the Licensee did not submit anything in this regard. However, the earlier submitted details of the Licensee are following:

Total Detail	s of HT Poles/Stru	ctures ,	Details of L	Γ Poles/Structi	ures	Total	Total
Number of Potal	HT Poles/	HT Poles	Total	LT. Poles/	LT.Poles/	Numberzof	Number of
HT/HT & Num	er Structures	Structures	Ñumber	Structures **	Structure	HT/LT	
Poles/	ÂHT. have	to be	of LT	have * .	s to be	Poles/	Poles
Structures Poles	Earthing	Earthed	Poles/	Earthing	Earthed	Structures	Structures
Struc	tures		Structures	, ,	<u>.</u>	Earthing *	Earthed
207,895 103,	065 45,011	58,054	104,830	48,432	56,398	93,443	114,452

- 7. Keeping in view the aforementioned submissions of the Licensee, it was observed that whether the Licensee owns the 45% extended distribution network, if yes, then it is the responsibility of the Licensee to ensure its proper earthing/grounding. Moreover, in order to execute earthing/grounding of 114,452 No. of poles/structures, a period of three years is huge time, which means that there will be a danger of occurrence of fatalities exists for these years, which is unjustified. Moreover, non-submission of the response, even after a lapse of six months clearly indicates the seriousness of the Licensee towards inculcating a safety culture in its service territory.
- 8. Therefore, the Authority decided to initiate legal proceedings against the Licensee under NEPRA Fine Regulations, 2021.

Explanation:

In view thereof, an Explanation was served to the Licensee under Regulation 4(1) and 4(2) of NEPRA (Fine) Regulations, 2021, vide NEPRA's letter dated April 27, 2023, on account of violation of Section 21(2)(f) of the NEPRA Act, Article 11 of the Distribution License read with Rule 4(g) of the NEPRA Performance Standards (Distribution) Rules, Clause 4 of Safety Requirements, Clause 4 of Design Code & Clause 1 of Protection Requirements of the Distribution Code and Clause 12.2 of Chapter 12 of the Consumer Service Manual.

10. The Licensee did not submit response within stipulated timelines, dispite numerous reminders issued by NEPRA. However, after the lapse of almost four months, the Licensee vide its letter dated August 17, 2023, submitted its response. Furthermore, in order to satisfy the requirement of law, a public hearing in light of Regulation 4(5) of NEPRA (Fine) Regulations, 2021, was held on August 17, 2023, wherein, CEO of the Licensee along with his team participated and made submissions.

Show Cause Notice

- 11. The Authority considered the submissions of the Licensee and after detailed deliberations rejected the response submitted by the Licensee against the Explanation served upon it and directed to issue a Show Cause Notice (SCN) to the Licensee under Regulation 4(8) & (9) of the NEPRA (Fine) Regulations, 2021 on account of violation of Performance Standards, Distribution Code, Power Safety Code, and other applicable documents.
- 12. Accordingly, NEPRA vide letter dated December 14, 2023, issued an SCN to the Licensee upon failure to execute earthing/grounding of HT/LT poles/structures in its service territory. The salient points of the served SCN are as follows:
 - 3. "WHEREAS, pursuant to section 21(2)(f) of the NEPRA Act, the Licensee is required to follow the performance standards laid down by the Authority for distribution and transmission of electric power, including safety; and
 - 4. WHEREAS, pursuant to Rule 4(g)(ii), Overall Standards 7-Safety of NEPRA Performance Standards (Distribution) Rules:
 - "A distribution company shall ensure that its distribution facilities do not cause any leakage of electrical current or step potential beyond a level that can cause harm to human life, as laid down in the relevant IEEE/IEC Standards; prevent accessibility of live conductors or equipment; and prevent development of a situation due to breakdown of equipment which results in voltage or leakage current that can cause harm to human life, property and general public including without limitation, employees and property of the distribution company."
 - 5. WHEREAS, according to clause SR 4 Safety Management Criteria of Distribution Code:



- b. "A distribution company shall ensure that its distribution facilities do not cause any leakage of Electrical Current or Step Potential beyond a level that can cause harm to human life, as laid down in the relevant IEEE/IEC Standards; prevent accessibility of live conductors or equipment; and prevent development of a situation due to breakdown of equipment which results in voltage or leakage current that can cause harm to human life, property and general public including without limitation, employees and property of the distribution company."
- 6. WHEREAS, as per clause DDC 4, Design Code- Earthing of Distribution Code:

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"...The earthing of a distribution transformer, the neutral, and body of the transformer should be connected to ground rods as per IEC and PSI Standards Design Specifications. Earthing of Consumer Service and its meter shall be as per design standards adopted by the Licensees; and consistent with IEC, and IEEE Standards. The earth resistance of the distribution transformers and HT/LT structures/poles shall not be more than 2.5Ω and 5Ω respectively."

7. WHEREAS, pursuant to clause PR 1 Protection System Practices and System Coordination of Distribution Code:

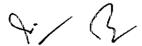
"The Licensee shall follow suitable and necessary provisions regarding protection system practices and co-ordination such as the following but not limited to achieve the aims of proper functioning of the distribution system of the Licensee at all times:

- h. ... Provide protective earthing devices."
- 8. WHEREAS, as per clauses 12.2.4 and 12.2.5 of Chapter 12 of the Consumer Service Manual:
 - "12.2.4. The earthing systems installed shall be dimensioned and regularly tested to ensure protection from shock hazards.
 - 12.2.5. The steel structure installed on the public places shall be earthed at one point through steel/copper conductor, in accordance with the DISCO laid down procedures."
- 9. WHEREAS, the Authority issued an Explanation to the Licensee under Regulation 4(1) and 4(2) of NEPRA (Fine) Regulation, 2021 on April 27, 2023, on account of failure to execute earthing/grounding of HT/LT poles/structures in its service territory. The salient points of the said Explanation are reproduced below:
 - 9. "WHEREAS, during the investigation conducted by NEPRA with respect to fatal accidents in DISCOs, it was observed that the distribution facilities of DISCOs particularly HT/LT poles/structures lack earthing/grounding which is one of the major causes of the occurrence of fatal accidents. The Authority took notice of such serious safety hazards and directed to obtain data from all the DISCOs including the Licensee, with respect to the total number of HT/LT poles/structures, the number of HT/LT poles/structures already earthed/grounded, and the number of HT/LT poles/structures to be earthed/grounded. The same was obtained vide Licensee's Email dated August 17, 2022 and the detail is as under:

Details o	f HT Poles/S	tructures , :	Details o	f LT Poles/S	tructures	Total	(* Tötál.* *)
Total Folal Number Number of HT/LT of HT Poles/ Poles/	HT Poles/* Structures have Earthing	HT Poles Structures to be Earthed	Number → of LT; → Poles/	LT Poles Structures 'have' Earthing	ET Poles/ Structures tò be Earthed	Number of HT/LH Poles/ Structuress haye	Nûmber ôf HT/LT Poles/ Structures : to be
207,895 103,065	45,011	58.054	Structures 104,830	48,432	56,398	Earthing 93,443	Earthed ≈ 114,452



- 10. WHEREAS, NEPRA vide letter dated September 26, 2022, while issuing the notice of hearing/meeting directed the Licensee to submit a comprehensive plan along with specific timelines for the execution of the earthing/grounding of the remaining structures along with certain queries of the Authority. In response, the Licensee vide its letter dated September 30, 2022, submitted that the total time required will be 03 years subject to law & order situation of the area and availability of funds & materials. Moreover, the Licensee also submitted that more than 45% of its distribution network is self-extended by the general public in FATA, which is not properly earthed. The submissions of the Licensee were considered and observed that whether TESCO owns the 45% extended distribution network, if yes, then it is the responsibility of TESCO to ensure its proper earthing/grounding. Moreover, in order to execute earthing/grounding of 114,452 No. of poles/structures, a period of three years is huge time, which means that there will be a danger of occurrence of fatalities exists for these vears, which is unjustified; and
- 11. WHEREAS, a hearing/meeting on the matter was also held on October 04, 2022, wherein the representatives from all DISCOs including CEO TESCO participated. During hearing/meeting, the Authority directed all DISCOs along with the Licensee to submit complete details of PCC Poles and steel structures with and without earthing/grounding. The Authority further directed the Licensee to submit a comprehensive plan of the execution of earthing/grounding of poles/structures along with concrete timelines. The Authority also desired that DISCOs should provide a mechanism on how they will efficiently perform the execution task within the minimum possible time. However, the Licensee did not submit anything in this regard; and
- 12. WHEREAS, vide NEPRA's letter dated October 28, 2022, the Licensee was again directed to submit the said information in the light of observations highlighted by NEPRA. However, despite the lapse of a considerable time period, the response from the Licensee has not yet been received. Non-submission of the response, even after a lapse of six months clearly indicates the seriousness of the Licensee towards inculcating a safety culture in its service territory. The Licensee should have realized that operation of poles/structures without earthing/grounding in the field is highly dangerous and can lead to the occurrence of fatal accidents at any time; and"
- 13. WHEREAS, it is a matter of record that despite repeated and continuous correspondence, the Licensee has failed to produce any concrete plan indicating specific timelines for executing the earthing/grounding of HT/LT poles/structures on a war footing basis. The Licensee has also failed to submit so far progress being achieved by the Licensee in this regard. Hence, it can be said that the Licensee has, prima facia, violated Section 21(2)(f) of the NEPRA Act, Article 11 of the Distribution License read with Rule 4(g) of the NEPRA Performance Standards (Distribution) Rules, Clause 4 of Safety Requirements, Clause 4 of Design Code & Clause 1 of Protection Requirements of the Distribution Code and Clause 12.2 of Chapter 12 of the Consumer Service Manual; and



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- 10. WHEREAS, the Licensee was given fifteen (15) days to either admit or deny the occurrence of the said violations and submit a reply against the aforementioned Explanation, failing which it shall be presumed that the Licensee has nothing to say in its defense and the Authority shall proceed based on the available record in accordance with NEPRA Act, Rules, and Regulations; and
- 11. WHEREAS, the Licensee submitted its response vide its letters dated August 17, 2023, against the Explanations served and a public hearing in the matter was also held on August 17, 2023. Consequently, the Authority after detailed deliberations concluded that the Licensee has failed to provide any satisfactory reply to the Explanation served to it; and
- 12. WHEREAS, the Licensee has failed to satisfy the Authority with its replies and prima facia, has committed the violations of Section 21(2)(f) of the NEPRA Act, Article 11 of the Distribution License read with Rule 4(g) of the NEPRA Performance Standards (Distribution) Rules, Clause 4 of Safety Requirements, Clause 4 of Design Code & Clause 1 of Protection Requirements of the Distribution Code and Clause 12.2 of Chapter 12 of the Consumer Service Manual. Therefore, the Authority hereby rejects the response of the Licensee against the Explanation served, and an Order dated December 14, 2023 is attached herewith, mentioning the reasons of rejection; and"
- 13. In response, the Licensee vide its letter dated January 31, 2024, submitted its reply. The salient points of the same are as follows:

"It is submitted that; TESCO being a distribution licensee, is dealing with the issues of earthing/grounding of distribution system in its service territory and that too on war footing basis, under the repair & maintenance head despite its financial constraints and extremely low budget.

It is further added here that; after directives of the Authority in a hearing conducted on Aug 17, 2023, it was decided to complete/set right the earthing/grounding of HT/LT poles/structures in densely populated areas on top priority basis from own limited resources. The details of the earthing/grounding completed/set right during the last four months and the office orders of the gangs involved are attached herewith as Annex-A and B respectively.

The execution of full scope of the work will be delayed due to the paucity of funds as already intimated vide No.6570 dated 14/09/2023 that this project worth, PKR 788.8Mln for earthing of self-extended 11kV line has already been approved by the TESCO Board of Directors, subject to release of funds by the authority, as a part of distribution Margin.

TESCO is also taking measures to control accidents by taking rigorous safety measures through awareness campaigns both for ensuring safety of its employees & public. TESCO decreased the safety mishaps/accidents by more than 90% during the last two years.

Furthermore, TESCO will also update the authority regarding the progress of completion/installation of earthing/grounding of HT/LT poles/structures on quarterly basis.

In light of the above and keeping in view the TESCO's Progress regarding set rightening the earthing till date, and its strenuous efforts, despite its financial constraints, precarious law & order situation, TESCO may kindly be exonerated from the leveled charge, please."

Hearing

- 14. In order to fulfill the requirement of law, the Authority decided to provide an opportunity for a hearing to the Licensee in light of Regulation 4(11) of NEPRA (Fine) Regulations, 2021, before finalizing the proceedings in the matter. Therefore, the hearing in the matter of SCN issued to the Licensee was held on September 24, 2024, wherein, the CEO of the Licensee along with his team, made the following submissions:
 - i. The total Structures in TESCO's territory are 207,895, out of which 109,000 are required to be earth.
 - ii. TESCO has floated the tenders three times earlier. At the first attempt, no bidder participated, however, at the second and third time higher prices were quoted by the bidders.
 - iii. In the period of war and terror, there were self-extensions of the network by the native people. The major issue is on those structures which were self-extended by the natives.
 - iv. The provincial government reserved Rs. 1500M for rehabilitation of the system, however, not a single rupee was provided to TESCO.
 - v. Now the tenders have again been floated 4th time. Otherwise, TESCO will execute the task through its own resources.

Findings/Analysis:

AUTHORITY

15. The Licensee has submitted that being a distribution licensee, it is dealing with the issues of earthing/grounding of distribution system in its service territory, and that too on war footing basis, under the repair & maintenance head despite its financial constraints and extremely low budget. The Licensee has further added that, after directives of the Authority in a hearing conducted on August 17, 2023, it was decided to complete/set right the earthing/grounding of HT/LT poles/structures in densely populated areas on a top priority basis from own limited resources.

The Authority while considering the submissions of the Licensee observes that the forementioned statement by the Licensee is not factual. The matter has been taken up NEPRA since June 2022, and since then not a single structure has been earthed by the Licensee despite the lapse of more than two years as it has not submitted any single progress report showing the earthing of structures. Therefore, the statement of the Licensee regarding the execution of the task on a war footing basis is on paper only but not on the ground. Moreover, financial limitations and budgetary constraints should not

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be used as justifications for non-compliance with regulatory standards, as ensuring safe and reliable infrastructure is a fundamental obligation of the Licensee. Additionally, prioritizing densely populated areas should not be the only focus of the Licensee; the overall system hazards needs to be addressed.

16. The Licensee has submitted that the execution of full scope of the work will be delayed due to the paucity of funds as already intimated vide No.6570 dated 14/09/2023 that this project worth, PKR 788.8Mln for earthing of self-extended 11kV line has already been approved by the Licensee Board of Directors, subject to release of funds by the authority, as a part of distribution Margin. Moreover, the Licensee has submitted that it is also taking measures to control accidents by taking rigorous safety measures through awareness campaigns to ensure the safety of its employees & public. The Licensee has further claimed that the safety mishaps/accidents by more than 90% during the last two years has been decreased.

The Authority has gone through the submissions of the Licensee and is of the view that delay in completing the full scope of work due to lack of funds, even after board approval, points to a failure of the Licensee in the execution of the task. The Licensee had sufficient time to anticipate the financial requirements for such critical tasks. Moreover, the reliance on future funding does not excuse the current non-compliance, as the safety of the public and the infrastructure cannot be compromised or delayed indefinitely. Additionally, the Licensee claims to have reduced accidents by more than 90% over the last two years through safety campaigns, these campaigns alone are not a substitute for proper earthing/grounding of HT/LT structures. The decrease in accidents seems appropriate but it does not address the root issue of faulty infrastructure that poses ongoing risks. Proactive and immediate action on infrastructure improvements is necessary to ensure lasting safety.

During hearing, the Licensee submitted that the total Structures in it's territory are 207,895, out of which 109,000 are still required to be earthed. The Licensee further added that it has floated the tenders three times earlier. At the first attempt, no bidder participated, however, at the second and third time higher prices were quoted by the bidders as compared the the other DISCOs. Moreover, the provincial government reserved Rs. 1500M for rehabilitation of the system, however, not a single rupee was provided to the Licensee.

The Authority while analyzing the submissions of the Licensee observes that despite identifying a significant backlog of unearthed structures (109,000 out of a total of 207,895), the Licensee has failed to effectively address the issue and has not executed the earthing of a single structure after the lapse of more than two years. The auguments put forth by the Licensee cannot absolve it's responsibility to ensure proper earthing of its structures as the precious human lives are involved. The Licensee should have anticipated that such challenges in tendering process could be occurred and the Licensee should have started such activities in a timely manner, which it failed to do so. Further, the Licensee's reliance on anticipated funding from the provincial government, which was ultimately not provided, demonstrates a lack of proactive financial planning for critical infrastructure work. NEPRA has already provided sufficient funds to the Licensee under O&M and Investment heads, therefore, the Licensee could have executed the task through such funds. Therefore, the submissions of the Licensee do not merit consideration.

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NEPRA AUTHORITY

18. Decision

- i. After due deliberations and taking into account the submissions/arguments made by the Licensee during the hearing and in light of the NEPRA Act, NEPRA (Fine) Regulations, 2021, and other applicable documents, the Authority is of the considered opinion that the Licensee has failed to provide any satisfactory reply to the Show Cause Notice served to it, therefore, the Authority hereby decides to impose a fine amounting to PKR 10,000,000/- (Ten Million) on the Licensee due to its failure pertaining to 100% execution of earthing/grounding of its HT/LT poles/structures in its service territory. The Authority hereby further directs the Licensee to earth/ground all remaining (100%) steel structures within three months and PCC Poles within one year. Failure to comply with the directions of the Authority may lead towards further penalty on the Licensee which will be decided after the completion of specified timelines.
- ii. The Licensee is directed to pay the fine amount of PKR 10,000,000/- (Ten Million) in designated bank of the Authority within a period of 15 days from the date of issuance of this order and forward a copy of the paid instrument to the Registrar Office for information, failing which the Authority may recover the amount due under section 41 of the NEPRA Act as arrears of the land revenue or through any other appropriate legal means in addition to taking any other appropriate legal action against the Licensee for non-compliance.

AUTHORITY

Rafique Ahmed Shaikh Member (Technical)	<u>N.S.</u>
Engr. Maqsood Anwar Khan Member (Licensing)	Uthur.
Mathar Niaz Rana (nsc) Member (Tariff & Finance)	
Amina Ahmed Member (Law)	- amin ahmed
Waseem Mukhtar Chairman	way as to
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