



# National Electric Power Regulatory Authority Islamic Republic of Pakistan

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**Registrar**

No. NEPRA/DG(M&E)/LAD-09/ 1081

January 23, 2024

Chief Executive Officer  
Quetta Electric Supply Company Limited, (QESCO),  
Zarghoon Road, Quetta.

Subject: **ORDER OF THE AUTHORITY IN THE MATTER OF EXPLANATION ISSUED TO QESCO 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, Order of the Authority (total 07 pages) in the subject matter for information and compliance.

Enclosure: Order of the Authority

  
(Engr. Mazhar Iqbal Ranjha)



# National Electric Power Regulatory Authority

## ORDER

### IN THE MATTER OF EXPLANATION ISSUED TO QESCO 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. Quetta Electric Supply Company Limited (QESCO) (the "Licensee") was granted a Distribution License (No. DL/08/2023 dated 09.05.2023) by the National Electric Power Regulatory Authority (the "Authority") 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:

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, followed by reminders dated July 06, 2022, and August 02, 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 August 19, 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.
4. Accordingly, the said 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, followed by Reminder letter dated December 02, 2022, and various telephonic calls was also issued to the Licensee.

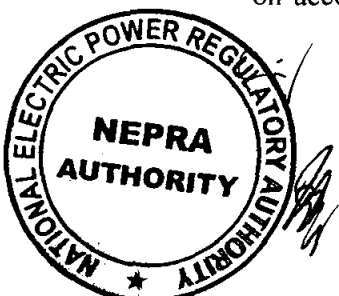
5. In addition to above, NEPRA Regional Office, Quetta, also reported and affirmed that in past contracts, the scope of earthing/grounding was only included in Steel Structures. However, in the latest contracts, the scope of earthing/grounding is being included in both the Steel Structures and PCC poles 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. The same was also endorsed by the Licensee in its submitted replies.
6. In response to NEPRA's letter dated October 28, 2022, the Licensee vide its letter dated December 21, 2022, inter alia, submitted that the exact period for execution and installation of earthing to HT poles/structures would be communicated after resurvey/confirmation that out of 310,562, how many are PCC poles and how many are steel structures. After that nothing was further submitted by the Licensee, which means that the said survey which had to be carried out by the Licensee is still awaited, despite the lapse of more than five months. The Licensee through various telephonic reminders was repeatedly directed to submit the required information, however, the Licensee did not bother to respond to the repeated directions of the Authority. This indicated the Licensee's non-seriousness with regard to execute the earthing plan on a war footing basis. The detail of poles/structures already earthed or to be earthed as submitted by the Licensee is as under:

Total Number of HT/LT Poles/ Structures	Details of HT Poles/Structures			Details of LT Poles/Structures			Total Number of HT/LT Poles/ Structures have Earthing	Total Number of HT/LT Poles/ Structures to be Earthed
	Total Number of HT Poles/ Structures	HT Poles/ Structures have Earthing	HT Poles/ Structures to be Earthed	Total Number of LT Poles/ Structures	LT Poles/ Structures have Earthing	LT Poles/ Structures to be Earthed		
644,047	303,349	160,990	142,449	340,698	172,585	168,113	333,485	310,562

7. The non-submission of any detail by the Licensee clearly indicated that the Licensee did not have any plan to execute this important task. 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. It is a matter of record that despite repeated and continuous correspondence, the Licensee failed to produce any concrete plan indicating specific timelines for executing the earthing/grounding of HT/LT poles/structures on a war footing basis.
8. Therefore, the Authority decided to initiate legal proceedings against the Licensee under NEPRA Fine Regulations, 2021.

**Explanation:**

9. In view thereof, an Explanation was served to the Licensee under Regulation 4(1) and 4(2) of NEPRA (Fine) Regulation, 2021, vide NEPRA's letter dated April 27, 2023, on account of violation of Performance Standards, Distribution Code, Power Safety



Code, and other applicable documents. The salient points of the Explanation are as under:

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 the 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:

*"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."*

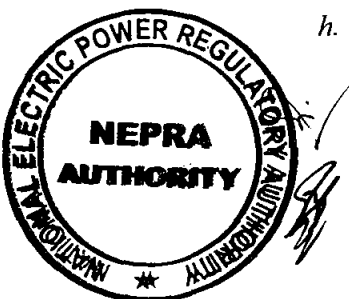
6. **WHEREAS**, as per clause DDC 4, Design Code- Earthing of Distribution Code:

*"...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 Co-ordination 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.*

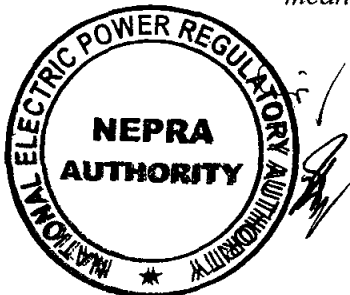
*12.2.5. The steel structure installed on the public places shall be earthed at one point through steel/copper conductor, in accordance with the DISCO laid down procedures.”*

9. **WHEREAS**, 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 letter dated August 19, 2022, and the detail is as under:

Total Number of HT/LT Poles/ Structures	Details of HT Poles/Structures			Details of LT Poles/Structures			Total Number of HT/LT Poles/ Structures have Earthing	Total Number of HT/LT Poles/ Structures to be Earthed
	Total Number of HT Poles/ Structures	HT Poles/ Structures have Earthing	HT Poles/ Structures to be Earthed	Total Number of LT Poles/ Structures	LT Poles/ Structures have Earthing	LT Poles/ Structures to be Earthed		
644,047	303,349	160,990	142,449	340,698	172,585	168,113	333,485	310,562

10. **WHEREAS**, a hearing/meeting on the matter was also held on October 04, 2022, wherein the representatives from all DISCOs including CEO QESCO 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. Moreover, the Authority 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

11. **WHEREAS**, vide NEPRA’s letter dated October 28, 2022, followed by a Reminder dated December 02, 2022, and through various telephonic calls, the Licensee was again directed to submit the said information. In response, the Licensee vide its letter dated December 21, 2022, inter alia, submitted that the exact period for execution and installation of earthing to HT poles/structures would be communicated after resurvey/confirmation that out of 310,562, how many are PCC poles and how many are steel structures. After that nothing has been further submitted by the Licensee till to date, which means that the said survey which was to be carried out by the Licensee is still



*awaited, despite the lapse of more than three months. The Licensee through various telephonic reminders was repeatedly directed to submit the required information, however, the Licensee did not bother to respond to the repeated directions of the Authority. This indicates the Licensee's non-seriousness with regard to execute the earthing plan on a war footing basis; and*

12. *WHEREAS, non-submission of any detail by the Licensee clearly indicates that the Licensee does not have any plan to execute this important task. 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. 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. Hence, it can be said that the Licensee has, prima facie, 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"*

10. The Licensee did not submit response within stipulated timelines, despite numerous reminders issued by NEPRA. However, after the lapse of almost five months, the Licensee vide its letter dated October 13, 2023, submitted its response. The summarized points of the same are below:

*"It is apprised that 303,349 HT and 340,698 LT Poles are in the jurisdiction of QESCO out of which about 40% HT/LT Poles are PCC having WAPDA Standard Specification being erected in the field from last 20 years.*

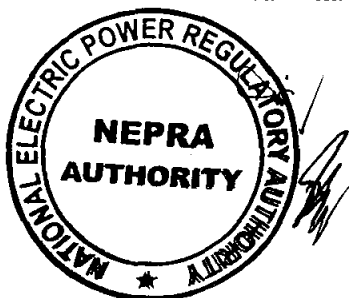
*Initially, there was no provision of earthing of PCC Poles for which advice was sorted from the NTDC (Standard Specification Department).*

*In response, the Design Department has furnished a drawing, after detailed deliberations with Planning & Construction formations, have been planned to be implemented soon through Project Director Construction.*

*Out of the remaining 142,449 HT and 168,113 LT structures, 40% have been rehabilitated and provided earthing where needed. Further a plan has been chalked out and forwarded to field formations with directions to carry out rehabilitation/provision of earthing on HT/LT structures either damaged or having no earthing within a time not more than six months."*

**Hearing:**

11. Furthermore, in order to satisfy the requirement of law, the Authority decided to provide an opportunity of a hearing to the Licensee in light of Regulation 4 (5) of NEPRA (Fine) Regulations, 2021, before further proceeding in the matter. Accordingly, the said hearing was held on October 17, 2023, wherein, CEO of the Licensee alongwith his team made following submissions:



- i. There are approximately 142,000 HT structures in the service territory of QESCO, out of which earthing of approximately 57,000 structures have been executed so far.
- ii. There are approximately 168,000 LT structures in the service territory of QESCO, out of which earthing of approximately 56,000 structures have been executed so far.
- iii. Approximately 40-45% networks of QESCO have earthing.
- iv. The execution work is delayed due to shortage of staff, however, the earthing of the remaining poles/structures will be executed within three months.

**Analysis/Findings:**

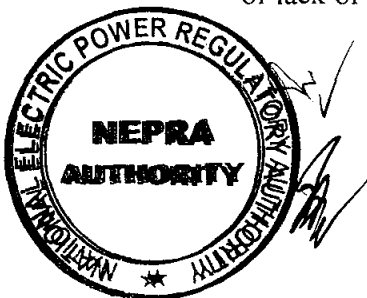
12. The Licensee has, interalia, submitted that 303,349 HT and 340,698 LT Poles/structures are in the jurisdiction of QESCO, out of which around 40% are HT/LT PCC Poles having WAPDA Standard Specification and erected in the field from last 20 years. QESCO has further submitted that initially there was no provision of earthing in PCC poles, however, later on design department of NTDC after detailed deliberations furnished a drawing and given the point of earthing, which QESCO has planned to implement through its construction department.

The Authority has considered the submissions of the Licensee and observes that compliance level by the Licensee towards its own or NTDC's SOPs is very poor. NTDC designed specifications pertains to earthing of PCC poles much earlier, however, the Licensee has still make a plan to execute the same. Being a distribution licensee, the Licensee should have realized that operation of poles or structures without earthing is highly dangerous especially in monsoon season which could result in the occurrence of electrocutions. The Authority further noted with concern that the Licensee has failed to share the authentic number of PCC poles even after a lapse of more than one&half year as the Licensee has submitted a approx. percentage. This all shows the level of seriousness of the Licensee towards the removal of such severe safety hazards.

13. QESCO has submitted that out of the remaining 142,449 HT and 168,113 LT structures, 40% have been rehabilitated and provided earthing where needed. Further a plan has been chalked out and forwarded to field formations with directions to carry out rehabilitation/provision of earthing on HT/LT structures either damaged or having no earthing within a time not more than six months.

The Authority has gone through the submissions of the Licensee and observes that progress of QESCO with respect to execution of earthing/grounding of HT/LT structures is very slow. It is pertinent to highlight that NEPRA has taken up this matter since June 2022 and repeatedly directed the Licensee to submit a concrete plan and subsequently provide monthly progress reports. However, neither any plan nor a single progress report has yet been submitted by the Licensee which again shows that the Licensee has not earthed any single pole/structure despite the lapse of more than one&half year. Therefore, on-ground performance on the part of the Licensee seems zero.

Collectively for PCC poles and structures, it is noted with concern that the percentage of lack of earthing/grounding of HT/LT poles/structures has been increased since last



year. As per the information submitted by the Licensee in August 2022, the number of remaining poles/structures that lack earthing was 310,562 (48%), however, as per its latest submissions after a lapse of more than one year, 60% of poles/structures still lack earthing. This reveals that either the earlier submitted number by the Licensee was not accurate or the earthing of poles/structures has been further deteriorated as the same is increasing rather than decreasing. The Licensee should have closely monitored such situation which it has failed to do.

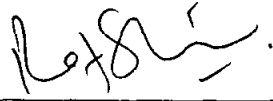
14. In addition to the above, the Licensee has taken up this matter in a very casual manner, as it has responded to the served Explanation after a lapse of more than five months, which is a clear question mark on the seriousness and its will to eliminate such severe safety hazards. Hence, it is constrained to believe that the Licensee has failed to inculcate safety culture in its service territory.

15. **Decision**

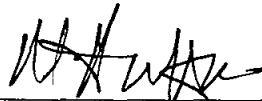
After due deliberations and taking into account the submissions/arguments made by the Licensee during the hearing and in light of the NEPRA Act, NEPRA (Fine) Regulations, 2021, and other applicable documents, the Authority is of the considered opinion that the Licensee has failed to provide any satisfactory reply to the Explanation served to it, therefore, the Authority hereby decides to issue a Show Cause Notice to the Licensee in terms of Regulations 4(8) & (9) of the NEPRA (Fine) Regulations, 2021.

**AUTHORITY**

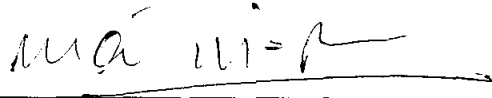
Rafique Ahmed Shaikh  
Member (Technical)



Engr. Maqsood Anwar Khan  
Member (Licensing)



Mathar Niaz Rana (nsc)  
Member (Tariff)



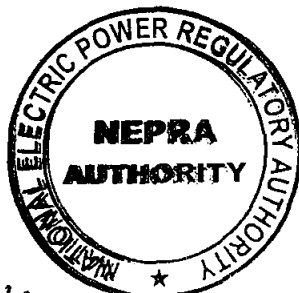
Amina Ahmed  
Member (Law)



Waseem Mukhtar  
Chairman



Dated 23/01/24, 2024



  
23/01/24