



National Electric Power Regulatory Authority Islamic Republic of Pakistan

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Registrar

No. NEPRA/DG(M&E))/LAD-07/ 38457

December 14, 2023

Chief Executive Officer,
Peshawar Electric Supply Company (PESCO),
WAPDA House, Shamsi Road,
Sakhi Chashma, Peshawar.

Subject: **ORDER OF THE AUTHORITY IN THE MATTER OF EXPLANATION ISSUED TO PESCO UNDER REGULATIONS 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 dated 14th December 2023 (total 08 pages) in the subject matter for information and compliance.

Enclosure: Order of the Authority


(Engr. Mazhar Iqbal Ranjha)



National Electric Power Regulatory Authority

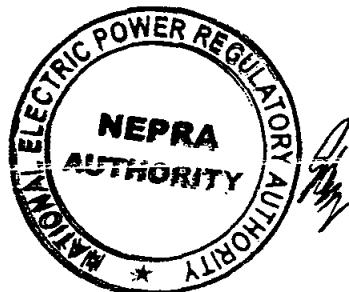
ORDER

IN THE MATTER OF EXPLANATION ISSUED TO PESCO 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. Peshawar Electric Supply Company Limited (PESCO) (the "Licensee") was granted a Distribution License (No. 07/DL/2002) by the National Electric Power Regulatory Authority (the "Authority") on 30.04.2002, 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 email dated August 12, 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

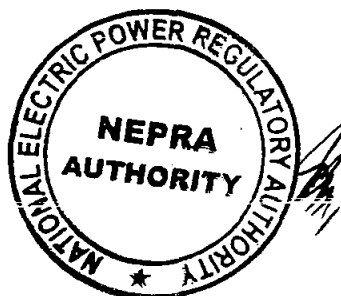


that the Licensee should provide a mechanism on how they will efficiently perform the execution task within the minimum possible time. A letter dated October 28, 2022 containing all above directions was also sent to the Licensee.

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. 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 November 03, 2022, submitted its response against the aforementioned directions & queries of the Authority. The Licensee submitted that around 108,000 earth rods will be installed each year after procurement and work will be executed after outsourcing through vendors/contractors. The tentative timelines to complete the said work will be three years i.e., from Feb-2023 to Feb-2026. 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		
851,751	342,342	177,507	164,835	509,410	243,019	266,391	420,526	431,226

7. The submissions of the Licensee were carefully analyzed and some observations were noted particularly related to the execution time period (Feb-23 to Feb-26) which seemed too long. The said observations were communicated to the Licensee vide letter dated January 13, 2023. In response, the Licensee vide its letter dated February 06, 2023, submitted a revised plan by keeping in view the observations of the Authority. The Licensee further claimed that it will complete this task by January 2024, instead of February 2026, by hiring 10 No. of labor per sub-division specifically for this purpose. The Licensee also submitted that the time schedule will be changed subject to approval accorded by BoD of the Licensee and the participation of Bidders in the tender.
8. Keeping in view the aforementioned submissions of the Licensee, it was noted that although the Licensee has revised its plan, but again the same is based on some conditions such as approval of BoD and participation of bidders. Being prudent utility, the Licensee should have realized the sensitivity of the issue and should have submitted concrete plan along with approval of BoD which it failed to do so. It was further observed that despite lapse of six months, it has not started the execution process and claiming that it will complete all this by January 2024, which seems impractical. The Licensee should have understood that the 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.



9. Therefore, the Authority decided to initiate legal proceedings against the Licensee under NEPRA Fine Regulations, 2021.

Explanation:

10. 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:

2. **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

3. **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."

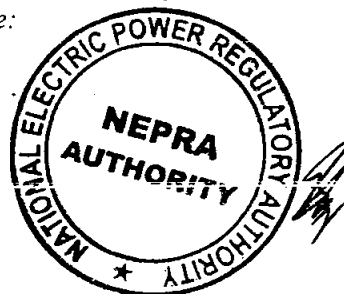
4. **WHEREAS**, according to clause SR 4 Safety Management Criteria of Distribution Code:

"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."

5. **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."

6. **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."

7. **WHEREAS**, as per clauses 12.2.4 and 12.2.5 of Chapter 12 of the Consumer Service Manual:

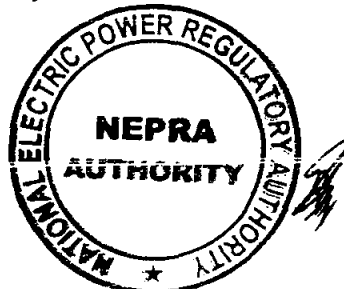
"12.2.4. The earthing systems installed shall be dimensioned and regularly tested to ensure protection from shock hazards.

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."

8. **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 12, 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		
851,751	342,342	177,507	164,835	509,410	243,019	266,391	420,526	431,226

9. **WHEREAS**, a hearing/meeting on the matter was also held on October 04, 2022, wherein the representatives from all DISCOs including CEO PESCO 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
10. **WHEREAS**, vide NEPRA's letter dated October 28, 2022, the Licensee was again directed to submit the said information. In response, the Licensee vide its letter dated November 03, 2022, submitted that it will carry out earthing of around 108,000 poles/structures per year and the whole task will be completed



by 2026. In this regard, it was observed that approximately 9,000 poles/structures will only be grounded per month, which does not seem sufficient to execute the task on a war footing basis. Hence it can be said that the performance of the Licensee appears below par as compared to some other DISCOs, who have committed to ground 40,000 to 50,000 poles/structures per month. This also shows the level of seriousness towards inculcating a safety culture by the Licensee in its service territory; and

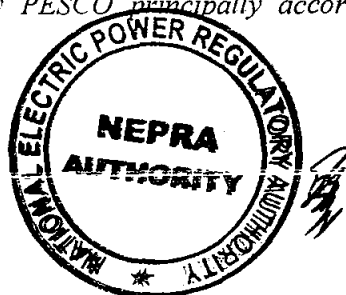
11. **WHEREAS**, vide NEPRA's letter dated January 13, 2023, the Licensee was again directed to revisit its plan in the light of observations highlighted by NEPRA. In response, the Licensee vide its letter dated February 02, 2023, revised its plan and submitted that it will complete this task by January 2024, instead of February 2026 by hiring 10 No. labor per sub-division. The Licensee also submitted that the time schedule will be changed subject to approval accorded by BOD PESCO and the participation of Bidders in tender. In this regard, it is noted that although the Licensee has revised its plan, but still has not started the execution process despite the lapse of almost 06 months and claiming that it will complete all this by January 2024, which seems impractical. Further, the Licensee has prepared its plan subject to the approval of its BOD, however, the Licensee should have realized the sensitivity of the issue and already should have gotten approval from its BOD before forwarding the same to NEPRA. 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

12. **WHEREAS**, it is a matter of record that despite repeated and continuous correspondence, the Licensee has failed to produce any concrete plan along with so far progress in the field 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...

11. The Licensee vide its letter dated June 26, 2023, submitted its response. The summarized points of the same are below:

"With veneration and respect, it is submitted for your kind information that survey was carried out by all SEs (O) PESCO circles and reported that total, 431, 226 No HT/LT Poles /structures were found unearthed. It was observed that 177,507 No. HT Poles/structures and, 266, 391 LT Poles/ structures required to be earthed in PESCO's distribution system. It is further added that PESCO submitted the complete and comprehensive mechanism/plan along with scheduled time frame for its completion i-e around one lakh Earth rods will be connected to HT/LT poles each year and the execution of work will be carried out through registered vendors/contractors, the tentative time as scheduled will be three years i.e., (Feb 2023 to Feb 2026).

BOD PESCO in its 180th BOD meeting dated 18/10/2022 issued the resolution, 177-BOD-R14 in which BOD PESCO principally accorded approval for



procurement of 431,226 Earth Rods along with accessories and GSL wire as part of Annual Procurement Plan for FY 2022-23.

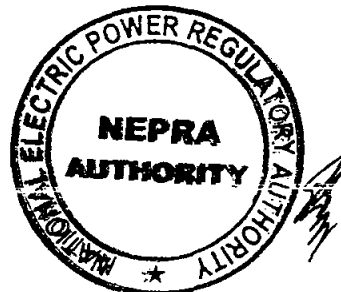
NEPRA vide its letter No. NEPRA/ DG (M&E) / LAD-07/571 dated 13th January 2023 raised the observation that grounding / earthing of one lac Poles / structures, per year seems not sufficient as MEPCO in its plan, has claimed that MEPCO awarded circle wise contracts to execute approximately 40,000 to 50,000 poles/ structures per month, which means around 5 to 6 lac Poles/ structures will be grounded in one year and K-Electric has also executed 216,000 Poles/structures in one year.

NEPRA directed PESCO to revise its plan for earthing/ grounding of all remaining poles/structures within least possible time. The revised plan was submitted to director NEPRA vide chief, operation officer, office letter No. 713-16 dated 06-01-2023. In plan, the time period for execution of work shortened to one year instead of three years. After considering the sensitivity of subject issue, the competent Authority released total, 17,000 No earth rods along with accessories to all PESCO Circles for its installation through own source/field staff for the protection of employees as well as general public and procurement of more earth rods is under process.

Company Secretary vide his office letter No 484-85 dated 27-03-2023 reported that BOD PESCO issued the directions (185 BOD-DIO) that management may prepare the case on IESCO model by hiring ten No employees per subdivision purely for installation of earthing/grounding of the remaining Poles/ structures of the PESCO distribution network with comparison off the financial implication, timeline and work quality, with the existing plan, and the plan on IESCO like model be presented in next steering committee/board meeting.

PESCO revised the plan and presented to BOD PESCO for approval. The main content of the plan is as under;

- i. Each operation circle may hire casual labor (unskilled) per subdivision as per attached plan.*
- ii. Each candidate may be in the age bracket of 18-30 years, and having domiciled of the concerned district. The arrangement of casual labor shall be purely on temporary basis for the period specified in the plan. But each spell will not be exceeded than 89 days.*
- iii. The hiring of unskilled casual labor at PESCO level shall not be approved from BOD PESCO.*
- iv. Each gang shall consist of 02 No. unskilled casual labor under the supervision of one-line man of the concerned subdivision.*
- v. The capacity for installation of earthing per gang is estimated to be 15 No earth rods per day in plan areas and 10 Nos in hilly areas.*
- vi. The supervision of the job at subdivision level shall be the responsibility of SDO/LS of the concerned subdivision and progress will be submitted by each DDT of the circle to the office of chief operation officer. It is revealed from the new plan that period of execution of work again, shortened it to maximum spell of 89 days instead of one year plan attached.*



- vii. *PESCO board of directors in its 187th board meeting held on dated 23-05-2023 pass the resolution/direction "RESOLUTION 187-BOD-RO2" that board resolved and accorded in principle approval for hiring of 05 persons per subdivision purely on temporary basis for spell of 89 days for installation of 431,226 No Earth Rods."*

Hearing:

12. 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 public hearing was held on August 17, 2023, however, the CEO of the Licensee, was not available during the hearing without informing NEPRA. The Authority took serious notice of the absence of the CEO of the Licensee and ordered that the CEO of the Licensee will bear a cost of Rs. 0.5 Million, on account of time and resources spared by the Authority, professionals, and the general public. Afterwards, a Show Cause Notice dated October 18, 2023, was also issued to the Licensee in this regard.

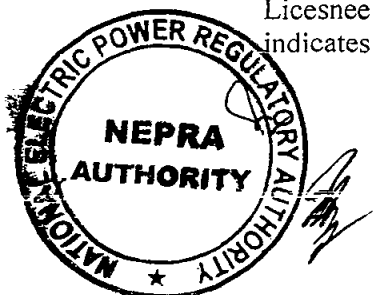
Analysis/Findings:

13. The Authority after carefully considering the submissions of the Licensee is of the view that the response of Explanation submitted by the Licensee clearly indicates an admittance that a total number of 431,226 HT/LT Poles/Structures are unearthed in its distribution system, which is very alarming and the consumers of the Licensee are always at risk, especially during Monsoon rains.

Earlier, the Licensee submitted that around 100,000 HT/LT Poles/Structures will be grounded every year, and this way three years time will be required to execute the assigned task. However, if 100,000 poles will be earthed in each year, it would take more than four years time as per the number of poles admitted by the Licensee rather than the three years time as claimed. Hence, it can be said that the submissions of the Licensee are not based on facts.

14. Moreover, upon the direction of the NEPRA Authority, the Licensee submitted a revised plan wherein it has claimed that it will take only one year time to execute earthing/grounding of 431,226 No. of poles/structures, instead of three years. The Authority has considered the submissions of the Licensee and observes that the execution plan of the Licensee seems impractical as it has itself admitted that only 17,000 earth rods have been released from store so far. The procurement of only 17,000 rods against the task of carrying out earthing/grounding of 431,226 No. of poles/structures is much lesser which shows poor commitment on Licensee's part. This further reveals that the Licensee is not serious about the removal of such severe safety hazards which could lead to any fatal accident in the future.
15. In addition to the above, the Licensee has also submitted that it has been directed by its BoD to adopt IESCO's model by hiring ten employees per subdivision purely for earthing. Accordingly, the Licensee has devised a plan and presented it before its BoD and the same has been approved by its BoD vide resolution dated 23.05.2023.

The Authority has examined the submissions of the Licensee and observes that the Licensee has changed its stance fourth time in order to execute the work which clearly indicates that the Licensee is completely non-serious and applying delay tactics towards



the execution of earthing. The second time revised plan of the Licensee upon the directions of BoD has also been gone through and it is observed that the timelines have further been reduced from one year to only eighty-nine days which seems totally unrealistic. If this timeline of eighty-nine days is assumed to be true then the said task should have been completed now as the period of eighty-nine days has already been lapsed. This depicts that the Licensee is trying to mislead the Authority by manipulating and fabricating its statements time and again.

16. It is a matter of record 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, no single progress report has yet been submitted by the licensee, and it only changes its plans from four years to three years to one year and now 89 days. This again shows that the Licensee has not earthed any single pole/structure despite the lapse of more than one year. Consequently, it appears that the Licensee's submissions exist predominantly on paper only and lack tangible implementation on the ground. Hence, it is constrained to believe that the Licensee has failed to inculcate safety culture in its service territory.
17. The submission made in response to the explanation is evasive and fails to recognize this imperative obligation.

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

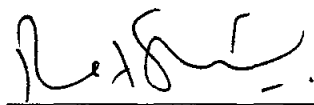
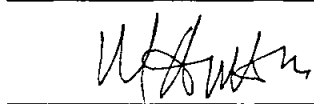
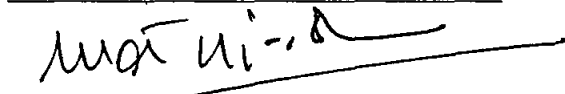

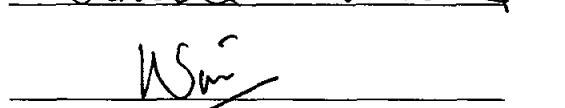
Rafique Ahmed Shaikh
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Engr. Maqsood Anwar Khan
Member (Licensing)

Mathar Niaz Rana (nsc)
Member (Tariff & Finance)

Amina Ahmed
Member (Law)

Waseem Mukhtar
Chairman

Dated 14/12/2023

