

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

In the matter of:

UPCL, sole distribution licensee of the State, for not providing proper Neutral grounding in the Distribution Transformers and proper Earth wire along with the Overhead Lines of its Distribution System.

Coram

V.J. Talwar Chairman

Anand Kumar Member

Date of Order: October 27, 2008

ORDER

This order relates to non-compliance of Commission's directions on providing proper neutral grounding of distribution transformers and earthing of the overhead Distribution system in accordance with Rules 67(1-A)(a), 61(4), 90 and Rule 91 of the IE Rules, 1956 read with section 53 and 185(2)(c) of the Electricity Act, 2003. After issuing several reminders and licensee's failure to comply with Commission's above said direction, a Show Cause Notice dated 21.08.2008 was issued under section 142 of the Electricity Act, 2003 for violation of provisions of IE Rules, 1956.

2. The first direction for setting right the neutral grounding of Transformers in UPCL's system was issued by the Commission on 07.09.2006 almost two years back. Need to issue these directions to UPCL arose when it came to the notice of the Commission

that there are frequent and heavy voltage fluctuations in the distribution system of UPCL leading to damage of household equipment of number of consumers. Besides number of other reasons for such large scale fluctuations one of such reasons is improper or no grounding of neutral of distribution transformer, which leads to floating neutral. Accordingly, the Commission through its letter dated 07.09.2006 directed UPCL to provide proper neutral grounding of its distribution transformers in accordance with Rules 67 (1-A) (a) and 61(4) of the IE Rules, 1956 and the relevant portions of the same are reproduced below:

Rule 67(1-A)

“the neutral point of every generator and transformer shall be earthed by connecting it to the earthing system as defined in Rules 61 (4) and hereinabove by not less than two separate and distinct connections”

Rule 61(4) defines earthing system as:

“All earthing systems shall –

- (a) consist of equipotential bonding conductors capable of carrying the prospective earth fault current and a group of pipe/rod/plate electrodes for dissipating the current to the general mass of earth without exceeding the allowable temperature limits as per relevant Indian Standards in order to maintain all non-current carrying metal works reasonably at earth potential and to avoid dangerous contact potentials being developed on such metal works;*
- (b) Limit earth resistance sufficiently low to permit adequate fault current for the operation of proactive devices in time and to reduce neutral shifting.*
- (c) Be mechanically strong, withstand corrosion and retain electrical continuity during the life of the installation. All earthing systems shall be tested to ensure efficient earthing, before the electric supply lines or apparatus are energised.”*

3. Notwithstanding directions of the Commission as above to set right the neutral grounding of all distribution transformers as specified in the Indian Electricity Rules, 1956 within 3 months and report their compliances to the Commission, UPCL

failed to implement these directions and has not able to comply with the directions till date.

4. Another matter included in the show cause notice dated 21.08.2008 pertains to System of Earthing of the licensee's overhead line system in accordance with Rule 90 of the IE Rules, 1956 and the same is reproduced below:

"90. Earthing – (1) All metal supports and all reinforced and prestressed cement concrete supports of overhead lines and metallic fittings attached thereto, shall be permanently and efficiently earthed. For this purpose a continuous earth wire shall be provided and securely fastened to each pole and connected with earth ordinarily at three points in every km., the spacing between the points being as nearly equidistance as possible. Alternatively, each support and the metallic fitting attached thereto shall be efficiently earthed.

[(1A) Metallic bearer wire used for supporting insulated wire of low and medium voltage overhead service lines shall be efficiently earthed or insulated].

(2) Each stay-wire shall be similarly earthed unless insulator has been placed in it at a height not less than 3.0 metres from the ground."

5. Rule 90 provides for earthing arrangement of overhead line system and for this purpose it provides that a continuous earth wire should be installed by the licensee in its system. It was brought to the notice of the Commission that there is no earthing arrangement in UPCL's distribution system. Absence of earthing in UPCL's distribution system is not only violating the Rule 90 of the IE Rules, 1956 but is also putting the life of whole population of the State of Uttarakhand including tourists and pilgrims visiting the State, at a grave risk. The Commission from the very beginning is concerned with the safety of human being and decided not to compromise at any cost and appropriate and necessary measures should be taken, such as earthing, so as to avoid fatal accidents. Considering the seriousness of the matter the Commission decided to bring this matter to the notice of the Board of Directors of UPCL and passed specific Order on 16.05.2007 directing the Company Secretary of UPCL to place the matter before the Board within 10 days of receipt of

the order and get their view and time bound action plan for remedial measures and submit the same, to the Commission in person, by 31st May 2007. Later, it was informed by UPCL vide its letter dated 30.07.2007 that the matter was included in the agenda item of its Board meeting held on 28.06.2007. UPCL's Board took note of the Commission's Order dated 16.05.07 and considered the agenda item estimating the total expenditure of Rs. 117.95 Crore as the total cost for proper earthing of whole network of UPCL. The Board resolved that the proposal of expenditure of Rs. 117.95 Crore for proper earthing of whole network of UPCL be sent to Hon'ble UERC for its sanction. The Board has further directed that while sending the proposal to the Commission, it would be made clear that on sanction, the UPCL, will make proper earthing arrangement and in future it will be ensured that no new connection shall be given without any earthing arrangement in the premises of the consumers. A plain reading of the minutes of the meeting of the Board of Directors shows that the Board was not fully apprised by the officers of UPCL, of the legal requirement of the safety conditions which are to be complied with by UPCL while giving supply to the consumers. The lackluster attitude of the Company is further represented when no proposal for earthing was submitted by UPCL even after a year when a clear-cut direction was given by its management.

6. Therefore, the Commission decided to deliberate on this issue in a meeting held on 17.04.2008 with MD, UPCL along with all its functional Directors. Since no concrete response was given by Directors of UPCL in the meeting, the Commission directed UPCL to submit an action plan to carry out the neutral earthing of its transformers and laying of earth wire in its system. UPCL agreed to submit the action plan by 30.04.08. After repeated reminders and meetings, UPCL submitted an Action Plan on 24.06.2008 which besides other metering & billing/commercial issues covered a sketchy action plan that also only for earthing transformers and the same is reproduced below:

"Tenders for earthing of transformers (i) of 100 KVA & above for all districts of Uttarakhand and (ii) earthing of all 25 KVA and 63 KVA transformers of Udham Singh

Nagar, Roorkee & Dehradun Districts are floated. The earthing of balance transformers shall be taken up in second phase. Target completion: Phase I – December' 08 & Phase-II- June' 09."

7. Since the Action plan did not include any proposal on system earthing, including laying of earth wire, the Commission expressed its dissatisfaction in a second meeting held on 06.06.2008 with MD, UPCL along with its functional directors of UPCL for not filing of any proposal for earth wire inspite of repeated reminders. During the meeting, UPCL agreed to file its reply based on estimates for work, financing plan and targets for completion within one month. However, no reply was submitted by UPCL.
8. In the meantime, an accident report was received by the Commission from Almora division of UPCL stating that a fatal accident has occurred in Syali Village, Almora on 13.08.08 and the LT line was found broken at the incident spot. The Commission was deeply distressed to take note of this fatal accident and directed to summon MD, UPCL to appear before the Commission on 27.08.08 alongwith Director (Operations) & Director (Projects) and explain why action should not be taken under section 142 of Electricity Act, 2003 for violation of provisions of IE Rules, 1956 and Commission's directions. This incident not only proved that properly guarded system alongwith proper earthing as required under IE Rules, 1956 has not been provided by UPCL but also the necessity and urgency of having proper earthing system.
9. MD, UPCL along with Director (Operations), Director (Finance) and GM (RM) appeared on behalf of the licensee and submitted their written reply on the above matters under Affidavit No. 2146 UPCL/RM/F-3 dated 05.09.2008.
10. Reply was with regard to the Show Cause Notice dated 21.08.2008 under section 142 of the Electricity Act, 2003 for violation of provisions of IE Rules, 1956 and Commission's directions on providing proper Neutral grounding and system Earthing and the same is reproduced below:

"6. That, the applicant submits the reply to the above show cause notice before the Hon'ble Commission as follows:

- (i) the applicant company has initiated the process of field survey and actual physical verification/enumeration of all existing Distribution Transformers in order to assess the status of neutral grounding.*
- (ii) the actual status of the neutral grounding shall be available to the applicant Company Headquarters by 31st October, 2008 on which, the applicant company shall be able to assess the quantum of work to be executed.*
- (iii) Simultaneously, the applicant company had invited tenders to provide neutral grounding of all Distribution transformers in the State, but in the absence of qualified and responsive bids, the applicant company could not finalise the tender.*
- (iv) The applicant company shall submit a detailed phase-wise implementation plan for the above work to the Hon'ble Commission by 20th September 2008.*
- (v) The applicant company is also in the process of evolving a safety manual, which will be circulated and practiced by all the technical officers and employees of the Corporation. Further, seminars on adherence to safety rules and regulations are planned to be organized to educate the technical staff of Corporation about the safety provisions as stipulated in the Indian Electricity Rules, 1956, Which shall be intimated to the Hon'ble Commission shortly.*
- (vi) The facts about the accident occurred in Syali Village, Almora are as follows:*
 - (a) दिनांक 14.08.08 करे लगभग 02-00 बजे रात एक एल0टी0 लाईन के टूटे हुए जमीन पर गिरे तार के सम्पर्क में आने से एक व्यक्ति की दुःखद मृत्यु हो गयी।*
 - (b) दुर्घटना की सूचना प्राप्त होने पर अधिशासी अभियन्ता/उपखण्ड अधिकारी ने घटना स्थल का तुरन्त निरीक्षण किया एवं पाया कि—*
 - (अ) एक एल0टी0 लाईन का तार टूट कर जमीन पर पड़ा था एवं समीप ही लगे परिवर्तक की एम0सी0बी0 ट्रिप हो गयी थी एवं ग्राम स्याली की विद्युत आपूर्ति बंद थी।*
 - (ब) एल0टी0 लाईन टूटने का संभावित कारण, एल0टी0 लाइन के सम्पर्क में कई पेड आ रहे थे जिनकी काट-छांट नहीं की गयी थी जैसा कि अधिशासी अभियन्ता, वि0वि0 खण्ड, अल्मोडा की आख्या में उल्लेख है।*
 - (c) घटना की विस्तृत जांच हेतु उप महाप्रबन्धक, वि0वि0मं0 रानीखेत द्वारा जांच समिति का गठन कर दिया गया है।*

- (d) घटना की गंभीरता को देखते हुए उक्त एल0टी0 लाइन के अनुरक्षण के लिए उत्तरदायी संबंधित अवर अभियन्ता एवं लाइनमैन को तत्काल प्रभाव से निलम्बित कर दिया गया है।
- (e) मृतक की पोस्टमार्टम रिपोर्ट प्राप्त हो गयी है तथा उपमहाप्रबन्धक द्वारा गठित जांच समिति की आख्या दिनांक 09.09.2008 तक प्राप्त हो जायेगी एवं विद्युत निरीक्षक की आख्या प्राप्त होने पर दुर्घटना के वास्तविक कारण ज्ञात हो सकेंगे।

In view of the submissions made above, the applicant company is in the process of compliance of the directions issued by Hon'ble Commission for providing proper neutral grounding and earthing system of Transformers. The applicant company is fully serious to comply every direction issued by Hon'ble Commission from time to time and it has no intention not to comply with any direction issued by Hon'ble Commission.

7. *As regards provision of earthing LT systems as per Indian Electricity Rules, 1956, the applicant company submits the detailed phase-wise implementation plan for the same shall be submitted to the Hon'ble Commission by 20th September, 2008."*

11. In view of the above facts and circumstances stated above, UPCL has made the following prayer :

"....That Hon'ble Commission may graciously and sympathetically be pleased:

- (i) *not to take any action against the applicant company and its officers u/s 142 of the Electricity Act, 2003 for violation of provisions of the Indian Electricity Act, 2003 for violation of provisions of the Indian Electricity Rules, 1956 and the directions issued by Hon'ble Commission on provide proper neutral grounding and earthing system.*
- (ii) *Pass such order(s) as this Hon'ble Commission deems just and fit in the facts and circumstances of the present case."*

12. During the course of hearing MD, UPCL, with regard to neutral grounding of transformers, stated that UPCL has 30,000 distribution transformers under its possession in the State, out of these 10,000 transformers have relatively good neutral grounding arrangement. MD, UPCL further stated that in the first phase, UPCL proposes to provide proper neutral grounding arrangement in 10,000 transformers

and for this purpose notice inviting tenders has already been issued by UPCL. When MD, UPCL was asked about the Action Plan, he stated that it would be submitted at the earliest. On being categorically enquired about the date for submission of the Action Plan, MD, UPCL confirmed that by 20.09.2008, UPCL would submit the action plan on neutral grounding of transformers. As, UPCL seemed to be evading the system earthing matter, Commission desired to know about UPCL's specific proposal for system earthing as per Rule 90 of the IE Rules, 1956. On this MD, UPCL agreed to submit action plan on system earthing also by 20.09.2008. MD, UPCL also submitted that both the above works shall be completed in Project Mode of implementation.

13. Commission expressed its concern over a fatal accident that took place in Syali village under Almora division of UPCL recently and sought explanation from UPCL as to what remedial measures UPCL proposes to take to prevent such untoward incidents in future. Commission expressed anguish over the manner in which inspite of repeated reminders to comply with Commission's directions, on neutral grounding of transformers and proper earthing of licensee's overhead line system and innumerable assurances by the licensee on many occasions earlier, it has failed to provide proper earthing of its system. Commission reminded licensee that this accident, which took place due to breaking of LT line and its falling on the ground, would have been averted if the overhead lines had protective device rendering the line electrically harmless in case it breaks. Rule 91 of the IE Rules, 1956 provides for protective device and anti climbing device for every overhead line and the same is reproduced below:

"91. Safety and protective devices – (1) Every over head line, (not being suspended from a dead bearer wire and not being covered with insulating material and not being a trolley-wire) erected over any part of street or other public place or in any factory or mine or on any consumer's premises shall be protected with a device approved by the Inspector for rendering the line electrically harmless in case of it breaks.

(2)An Inspector may by notice in writing require the owner of any such overhead line wherever it may be erected to protect it in the manner specified in sub-rule (1).

[(3)The owner of every high and extra-high voltage overhead line shall make adequate arrangements to the satisfaction of the Inspector to prevent unauthorised person from ascending any of the supports of such overhead lines which can be easily climbed upon without the help of a ladder or special appliances. Rails, reinforced cement concrete poles and pre-stressed cement concrete poles without steps, tubular poles, wooden supports without steps, I-sections and channels shall be deemed as supports which cannot be easily climbed upon for the purpose of this rule].”

14. Such unsafe practices and installations of the licensee are prone to electrical accidents. The Commission, therefore, sought the guidelines, if any issued by Electrical Inspector under Rule 91 quoted above. The Electrical Inspector through its letter dated 12.9.08 (Annexure-1) has submitted that the Inspectorate has specified the form and manner of providing guarding and earthing system for electrical lines as required under Electricity Rules, 1956. Unfortunately, the same is not being adhered to in most parts of licensee's system. Under these circumstances, **the Commission is forced to invoke compliance of Rule 91 of the IE Rules, 1956 by the licensee and directs UPCL to provide protective device in accordance with Rule 91(1) and anti climbing device in accordance with Rule 91(2), latest by 31.3.2010. Proposal along with Action Plan to this effect should be submitted to the Commission within one month of this Order.**
15. The gravity of the matter can be gauged from a report sent by the Electrical Inspector to the Commission, which depicts the number of accidents in 2006-07 and 2007-08 and the reasons for the same. For instance, in 2007-08 out of total 140 accidents, 106 accidents were fatal and 34 accidents were non-fatal resulting in 56 human deaths, 55 human injuries and 60 deaths of animals. Similarly, in 2006-07, out of total 120 accidents, 95 were fatal and 25 were non-fatal resulting in 40 human injuries, 35 human deaths and 75 animal deaths. The reasons for such accidents

advanced revealed non-existence of proper earthing system as required in accordance with the Electricity Rules, 1956.

16. The Commission having considered the reply submitted by UPCL under affidavit in the matter and the explanation offered by MD, UPCL during the hearing has found that in case of neutral grounding of transformers in accordance with IE Rules, 1956 in contrast to MD, UPCL's categorical explanation that notice inviting tenders have already been issued for undertaking neutral grounding work of 10000 distribution transformers in first phase, in its written submission under affidavit UPCL, seems to be only beginning it, has stated to have initiated the process of field survey and actual physical verification/enumeration of all existing Distribution Transformers in order to assess the status of neutral grounding which shall be available to it by 31st October 2008 on the basis of which, it shall then be able to assess the quantum of work to be executed. With regard to tenders invited for the purpose, the affidavit says that in the absence of qualified and responsive bids, UPCL could not finalise the tender. Finally UPCL under affidavit has agreed to submit a detailed phase-wise implementation plan for the above work to the Commission by 20.09.2008. However, no such plan has been submitted till the issuance of this Order. **The licensee is hereby directed to submit the required Action Plan within one month of this order.**
17. With regard to system earthing including laying of separate earth wire for the purpose in accordance with IE Rules, 1956, UPCL, in its written submission under affidavit, does not refer to Commission's Order dated 16.05.2007 and various reminders and meetings in which UPCL was asked to submit detailed action plan approved by the Board. However, in its written submission under affidavit UPCL has reiterated what MD, UPCL agreed during the hearing to submit a detailed phase-wise implementation plan for the same to the Commission by 20.09.2008. The Commission has, however, not received any such plan till date. **UPCL is directed to submit a time bound action plan, for completing the works for providing proper earthing latest by 31st March 2010, giving milestones for geographical**

areas/activities, so as to reach the Commission within one month of this order. Commission is aware that day long shutdowns would be required to lay earth wire in the system and directs UPCL that while preparing the action plan care shall be taken to minimize the hardship likely to be faced by consumers. For this purpose UPCL should complete the works in plane areas (Dehradun, Haridwar, Kashipur etc) in winter months and should complete the work in hilly areas during summer months.

18. As far as MD, UPCL's proposal, for completing the works at Para 16 & 17 above through project mode, is concerned, the Commission is of the view that UPCL's management is free to choose any methodology for implementing the directions contained in this Order as long as specified timelines are met. However, the Commission feels that executing these works through project mode may cause serious coordination problems between the project team and operation & maintenance team. Further, the shut downs required for doing these works can be better managed by O&M staff, if the works are being executed through them for meeting the objective of having minimum scheduled outages for work execution. UPCL's management may accordingly decide on the mode of execution after properly weighing the *pros* and *cons* of available alternatives for complying with Commission's directions, Rules and Regulations in this behalf. The Commission advises the licensee that all related work towards providing earthing and guarding in lines should be staggered and should be done in phases in hills and plains separately. **The work in hilly area should preferably be taken in summer time and in plains, should be done in winter time so that people of the State face minimum inconvenience. It is suggested that this work can be taken up during such period and in such areas where power cut, if approved by the Commission, is done in period of shortage. Further, the work should be planned in such a manner that first priority should be given to the areas with dense population.**
19. With regard to fatal accident in Syali village, Almora, UPCL in its written submission under affidavit has reiterated what MD,UPCL stated during hearing that

Enquiry Committee has been constituted by concerned DGM, Ranikhet circle whose report would be available by 09.09.2008 and on receiving report of Electrical Inspector, the exact cause of the accident can be ascertained. **The Commission directs the licensee to complete the investigation and submit a detailed report, on the findings, cause(s) of accident, persons responsible as revealed by the investigation, action taken in the matter and precautionary measures taken by UPCL to prevent happening of such events in future, so as to reach the Commission within one month of this order.**

20. The Commission has carefully considered all aspects of this matter including the explanation offered by MD, UPCL during the hearing and has come to the conclusion that the present state of distribution system of UPCL is utterly lacking in requisite statutory arrangements for neutral grounding and earthing system, most of which has been transferred to it in legacy from the erstwhile UPPCL and UPSEB and cannot be improved overnight. However, UPCL also has made no serious attempt to implement Commission's directions with regard providing proper neutral grounding of transformers and system earthing including laying of separate earth wire, even in new installations/systems, in accordance with the provisions of IE Rules, 1956. Failure to implement these provisions, even after Commission's repeated reminders and UPCL's assurances during meetings and show cause notice dated 21.08.2008 to submit Action Plan in this regard reflects poorly on UPCL's indifferent attitude towards such important issues related to safety. It is a matter of serious concern that even after UPCL was given repeated directions in this regard, UPCL continued to treat the matter in a non serious manner forcing the Commission to issue notice under section 142 of the Electricity Act, 2003. It is also surprising that in spite of the Electrical Inspector of the State having specified the requisite arrangements for guarding of lines in the State as required in the Electricity Rules, 1956, UPCL never bothered to follow his guidelines even for new installations/lines. Further, from the cost estimates for LT, 11 kV and 33 kV works submitted by UPCL in some other matter, includes the cost of earth wire. Thus it appears that though the

cost of providing earth in distribution network is charged to the project but ground reality is that actually it is not provided. Commission has taken serious note of this and would get the matter investigated separately.

21. The Commission has also taken cognizance of the written and oral undertakings given by MD, UPCL on behalf of UPCL to comply with all directions of the Commission and Rules/Regulations with regard to safety in a time bound manner. The Commission, relying on this undertaking, has decided not to take any coercive measure this time. However, if during the course of time, the Commission finds that even after this opportunity given to UPCL for improving its neutral grounding and earthing system, UPCL is not making serious efforts/progress for meeting the targets set in their own action plan, the Commission will be forced to take further action u/s 142 and 146 of the Electricity Act, 2003 against the licensee company. **The licensee is directed to make concerted efforts till such time its system is meeting all statutory requirements for safety of life and property.**
22. Concluding the order, the following action is required to be taken up by the licensee:
- 1.To complete the works for providing proper earthing in lines in accordance with Rule 90 of IE Rules 1956- by 31st March 2010.
 - 2.To provide protective device in accordance with Rule 91(1) and anti climbing device in accordance with Rule 91(2) in electrical lines- by 31st March 2010.
Proposal along with Action Plan to achieve the above, giving milestones for geographical areas/activities, to reach the Commission within one month of this order i.e.27.11.2008.
 - 3.To submit a detailed report, after investigating the matter of accident in village Syali as given at para 19 of this order, within one month of this order i.e. 27.11.2008.

(Anand Kumar)
Member

(V.J. Talwar)
Chairman

Annexure 1

दूरभाष (05946) 262839
फैक्स नं०--(05946) 261913

कार्यालय
विद्युत निरीक्षक, उत्तराखण्ड शासन,
पंचायतघर, बड़ी मुखानी, निकट हीरा कान्वेन्ट स्कूल
हल्द्वानी (नैनीताल)

संख्या-655 वि०नि०उ०/ निरीक्षण - नियामक आयोग
सेवा में,

दिनांक 12/9/

सचिव,

राज्य विद्युत नियामक आयोग,

उत्तराखण्ड देहरादून।

विषय भारतीय विद्युत नियमावली 1956 के नियम 88 एवं 91 के सम्बन्ध में।

प्रसंग आपका पत्र सं० 732 / यू.ई.आर.सी./08 दिनांक 10-09-08।

महोदय,

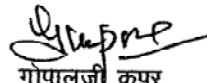
निवेदन है कि उपरोक्त विषयक प्रासांगिक पत्र के सन्दर्भ में भारतीय विद्युत नियमावली 1956 के नियम 88 एवं 91(1) के अन्तर्गत द्वारा अनुमोदित सुरक्षा साधन /युक्तियों का विवरण निम्न है :-

- 1- उच्च वोल्टेज ओवर हेड लाईन में गार्डिंग की व्यवस्था इस प्रकार की जानी चाहिये कि गार्ड वायर उस प्रत्येक बिन्दु पर जहाँ कि इलैक्ट्रिकल कन्टीन्यूटी ब्रेक होती हो वहाँ पर अर्थ से कनेक्ट किया जाना चाहिये। गार्ड वायर एवं क्रॉस कनेक्टेड वायर की करेन्ट कैरिंग क्षमता पर्याप्त होनी चाहिये ताकि सजीव तार गिरने की स्थिति में लाईन के निर्जीव होने के पूर्व गार्ड वायर के टूटने अथवा पिघलने की स्थिति न हो। गार्ड वायर की ब्रेकिंग स्ट्रेन्थ 635 के०जी० से कम न हो। ड्राईंग सलमन है। गार्डिंग इस प्रकार की जायेगी कि सजीव वायर के टूटने की स्थिति में जमीन पर गिरने के पूर्व ही निर्जीव हो जाये।
- 2- एल०टी० एवं मीडियम वोल्टेज ओवर हेड लाइन में सेप्टी लूप गार्ड की व्यवस्था पोल के दोनों ओर " 1 मीटर से 1.5 मीटर की दूरी पर इस प्रकार की जायेगी कि सजीव तार टूटने की स्थिति में जमीन पर गिरने से पूर्व निर्जीव हो जाये। ड्राईंग संलग्न है तथा एल०टी० ओवर हेड लाईनों में उक्त युक्ति हेतु स्पेशर की व्यवस्था भी कराई जा सकती है।
- 3- ओवर हेड लाइन में लगे कन्टीन्यूस अर्थ वायर से गार्ड वायर को एक कि०मीटर में कम से कम तीन बिन्दुओं पर भूयोजित कराया जाय।
- 4- हाई एवं एक्स्ट्रा हाई वोल्टेज लाइनों के पोल्स पर एन्टीकलाइम्बिंग डेवाइस /कटीले तार की व्यवस्था कराई जाय ताकि अनाधिकृत व्यक्ति पोल पर न चढ़ सके। एल०टी० ओवर हेड लाइन के पोल्स पर भी ध्यानाकर्षक स्थानों पर अनाधिकृत व्यक्तियों के पोल पर न चढ़ने की चेतावनी अंकित हो।

उपरोक्त आपकी सेवा में सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है।

संलग्नक- यथोपरि

भवदीय


गोपालजी कपूर
विद्युत निरीक्षक उत्तराखण्ड शासन

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