

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

- 1. Shri Bhanu Bhushan, Member**
- 2. Shri R. Krishnamoorthy, Member**

**Petition No. 100/2007**

**In the matter of**

Permission to undertake hot-line cleaning of insulators in Northern Region Transmission System through use of helicopter for a period of six months on experimental basis and to allow for reimbursement of consequential expenditure incurred on this account from the respondents.

**And in the matter of**

Power Grid Corporation of India Ltd., Gurgaon, ....**Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur
2. Ajmer Vidyut Vitran Nigam Ltd., Jaipur
3. Jaipur Vidyut Vitran Nigam Ltd., Jaipur
4. Jodhpur Vidyut Vitran Nigam Ltd., Jaipur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Power Generation Corporation Ltd., Panchkula
8. Power Development Department, Govt. of J&K Jammu
9. Uttar Pradesh Power Corporation Ltd., Lucknow
10. Delhi Transco Ltd., New Delhi
11. BSES Yamuna Power Ltd., Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttaranchal Power Corporation Ltd., Dehradun
16. North Central Railway, Allahabad ..... **Respondents**

**The following were present**

1. Shri U.K Tyagi, PGCIL
2. Shri C. Kannan, PGCIL
3. Shri Umesh Chandra, PGCIL

4. Shri Pankaj Kumar, PGCIL
5. Shri J. Mazumder, PGCI
6. Shri. R. Bahri, PGCIL
7. Dr. L Hari, PGCIL
8. Shri. V.K. Gupta, Consultant, PSEB
9. Shir. T.P.S. Bawa, PSEB
10. Shri S.N. Singh, UPPCL

**ORDER**  
**(Date of hearing 30.8.2007)**

The petitioner has filed this application for permission to undertake hot-line cleaning of insulators in Northern Region Transmission System through use of helicopters for a period of six months on an experimental basis and has prayed for reimbursement of the expenses in relaxation of the norms on O &M expenses in exercise of the powers of the Commission under Regulations 12 and 13 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004. The cleaning of insulators is presently done manually.

2. The petition already stands admitted by circulation. Replies to the petition have been filed by respondents No 3, 4 and 9 viz. Jaipur Discom, Jodhpur Discom and UPPCL. All these respondents have favoured the proposal but have suggested that the expenditure be borne by the petitioner.

3. During the hearing, the representative of the petitioner narrated the recent incidents in Northern Grid attributable to pollution, induced flashovers/breakdowns and highlighted the advantages of the proposed hot-line cleaning of insulators through helicopter. According to him, this method is

prevalent world wide and has the advantage of obviating or minimizing shutdown. He also intimated that the issue was discussed in several meetings from 6.1.2006 to 8.2.2007, with the constituents and officials of NRPC, who have accorded consent for experimenting the alternative technology. They, however advised the petitioner to approach the Commission for approval of necessary expenditure.

4. While explaining the plans for the current year, the representative of the petitioner clarified that during the current year the exercise was proposed to be implemented in collaboration with Pawan Hans Helicopter Ltd, a Government of India Enterprise, on experimental basis. He submitted that the critical lines and areas prone to tripping will be identified based on past history; tenders were likely to be opened in early September for selection of parties having the requisite expertise in the operation which is expected to start in mid-November. In the light of international experience in the field, he anticipated that about 5 km of line could be cleaned in an hour. Questioned about the confidence level of the experiment, he replied that being the first attempt of its kind it may not be possible to make any firm commitment. He, however, was optimistic of positive outcome, considering the international experience.

5. The representatives of PSEB urged that the cost-benefit analysis carried out by the petitioner was very sketchy. According to him, the proposed experiment would result in saving to the petitioner towards expenditure on

manual cleaning and by way of higher incentive due to increased availability of the transmission lines. He therefore suggested that 2/3 of the expenditure should be borne by the petitioner and the rest be shared by the beneficiaries of the region.

6. In reply to the above submission, the representative of the petitioner clarified that incentive due to increased line availability would be only marginal. According to him, there will have to be shutdowns still for various reasons, such as cutting of trees affecting availability of the transmission system. Besides, according to the representative of the petitioner, manual cleaning cannot be dispensed with totally. He apprehended that it is too early to quantify the cost and benefit, which will be known only after the proposed experimental cleaning of insulators using helicopter is carried out this year. He pleaded that cost burden should not be imposed on the petitioner.

7. On consideration of the pleadings and the submissions made during the hearing, we are convinced that the proposed line cleaning of insulators through helicopter is a step forward. Apart from cost considerations, it is expected that the proposed helicopter-borne cleaning will enhance grid security during foggy periods, which in the recent years has acquired a serious dimension in Northern grid. While the full impact of the proposed scheme of cleaning will be known only after it is experimented in the ensuing winter, it could reasonably be expected that the preventive measure proposed would save the Northern grid from one or

two major disturbances in the coming winter months. The advantages of the proposed scheme being so obvious and tempting, we would urge the petitioner to consider extending the preventive measure to the SEB lines, critical for regional grid security and for this purpose the petitioner may consult NRLDC.

8. As regards the cost-benefit analysis of the proposed measure, it is to be recognized primarily as a preventive measure against major grid disturbance in foggy conditions. It would not be prudent to try to gauge its benefits in terms of savings in manual cleaning cost and increase in incentive payment to the petitioner on account of reduced line outage. We are also of the opinion that sharing a part of the cost will induce the petitioner to organize the operation in a cost-effective manner. In view of this consideration, we direct that 20% of the cost be borne by the petitioner and the remaining 80% of the cost shall be shared by the Northern Region beneficiaries, in proportion to transmission charges being shared by them. The total cost of the proposed operation has been estimated by the petitioner as Rs. 8.19 crore.

9. With this Petition No 100/2007 is disposed of.

Sd/-  
**(R KRISHNAMOORTHY)**  
**MEMBRER**

Sd/-  
**(BHANU BHUSHAN)**  
**MEMBRER**

**New Delhi dated 28<sup>th</sup> September, 2007**