

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.68/2010

**Coram: Shri V.S.Verma, Member
Shri M.Deena Dayalan, Member**

**Date of Hearing: 23.11.2010
Date of Order: 8.12.2011**

In the matter of

Miscellaneous petition under sub-section (4) of Section 28 of Electricity Act, 2003 and Regulation 44 "Power to Relax" of the CERC (Terms and Conditions of Tariff) Regulations, 2009 for fixation of Tariff norms for recovery of cost for the assets ("Communication system" and "SLDC system") to be retained/ to be installed by the petitioner after formation of POSOCO for the period 2009-14 block.

And in the matter of

Power Grid Corporation of India Ltd.,Gurgaon
Vs

.... Petitioner

1. Himachal Pradesh State Electricity Board, Shimla
2. Bihar State Electricity Board, Patna
3. West Bengal State Electricity Board, Kolkata
4. Grid Corporation of Orissa, Bhubaneshwar
5. Damodar Valley Corporation, Calcutta
6. Power Department, Govt of Sikkim, Gangtok
7. Jharkhand State Electricity Board, Ranchi
8. Assam State Electricity Board, Guwahati
9. Meghalaya State Electricity Board, Shillong
10. Government of Arunachal Pradesh, Arunachal Pradesh
11. Power & Electricity Deptt., Aizwal, Mizoram
12. Electricity Department, Manipur
13. Department of Power, Gov. Of Nagaland, Kohima, Nagaland
14. Tripura State Electricity Corporation Limited, Agartala
15. Rajasthan Rajya Vidyut Prasaran Nigam Limited Jaipur
16. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
17. Jaipur Vidyut Vitaran Nigam Ltd,Jaipur
18. Jodhpur Vidyut Vitaran Nigam Ltd, Jodhpur
19. Punjab State Electricity Board, Patiala
20. Haryana Power Purchase Centre, Panchkula
21. Power Development Department, Jammu (Tawi)
22. Uttar Pradesh Power Corporation Ltd., Lucknow
23. Delhi Transco Ltd, New Delhi
24. Chandigarh Administration, Chandigarh
25. Uttarakhand Power Corporation Ltd, Dehradun
26. BSES Yamuna Power Ltd., New Delhi
27. BSES Rajdhani Power Ltd., New Delhi
28. North Delhi Power Ltd., New Delhi
29. New Delhi Municipal Council, New Delhi
30. Northern Central Railway, Allahabad
31. Karnataka Power Transmission Corporation Ltd. (KPTCL), Bangalore
32. Bangalore Electricity Supply Company Ltd., (BESCOM), Karnataka
33. Gulbarga Electricity Supply Company Ltd., (GESCOM), Karnataka

34. Hubli Electricity Supply Company Ltd., (HESCOM), Karnataka
 35. MESCOM Corporate Office, Mangalore, Karnataka
 36. Chamundeswari Electricity Supply Corporation Ltd., (CESCO), Mysore, Karnataka
 37. Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO), Hyderabad
 38. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL), Vishakhapatnam, Andhra Pradesh
 39. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL), Chittoor District, Andhra Pradesh
 40. Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL), Hyderabad, Andhra Pradesh
 41. Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL), Kazipet, Warangal, Andhra Pradesh
 42. Kerala State Electricity Board (KSEB), Thiruvananthapuram
 43. Tamilnadu Electricity Board (TNEB), Anna Salai, Chennai
 44. Electricity Department, Govt. Of Pondicherry, Pondicherry
 45. Electricity Department, Govt. Of Goa, Panaji, Goa
 46. Madhya Pradesh Power Trading Co. Ltd., Jabalpur
 47. Madhya Pradesh Audyogik Kandra Vikas Nigam (Indore) Ltd., Indore
 48. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
 49. Gujarat Urja Vikas Nigam Ltd., Vadodara
 50. Electricity Department, Daman
 51. Electricity Department, Silvassa
 52. Chhatisgarh State Electricity Board, Raipur, Chhatisgarh
 53. Ministry of Communication & IT, New Delhi
-Respondents**

The following were present:

1. Shri Rajeev Gupta, PGCIL
2. Shri A. S. Kushwaha, PGCIL
3. Shri U. K. Tyagi, PGCIL
4. Shri N. S. Sodha, PGCIL
5. Shri M.M. Mondal, PGCIL
6. Shri Rakesh Prasad, PGCIL
7. Shri R. K. Gupta, PGCIL
8. Shri S. K. Soonee, POSOCO
9. Shri R. B. Sharma, Advocate for BSEB
10. Shri K. K. Agarwal, MP Trade Co. Ltd., Jabalpur
11. Shri V. K. Jain, TNEB
12. Shri R. P. Agarwal, UPPTCL

ORDER

The petitioner, Power Grid Corporation of India Ltd. has filed this petition under section 28(4) of the Electricity Act, 2003 and Regulation 44 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter "2009 regulations") for fixation of tariff norms for

recovery of cost of the assets comprising communication systems and SLDC systems retained by the petitioner after formation of Power System Operation Corporation (POSOCO).

2. The petitioner has submitted that the petitioner has been notified by Government of India as the Central Transmission Utility and has been discharging the various statutory functions under various applicable provisions, including in particular section 28 and 38 of the Electricity Act, 2003 (hereinafter "the Act"). The petitioner has submitted that as per the directives of Government of India vide order dated 4.7.2008, Power System Operation Corporation Ltd. (POSOCO), a wholly owned subsidiary of Power Grid Corporation of India Ltd. has been created for system operation of National Load Despatch Centre and Regional Load Despatch Centres.

3. The petitioner has submitted that under the Unified Load Despatch & Communication (ULDC) scheme, communication systems comprising Power Line Carrier Communication (PLCC), Digital Microwave and Fibre Optic based communication systems were established during July, 2002 to February, 2006 in different regions. PLCC is used to transfer data from the RTU locations to the nearest wide band/ control centre locations. The information or data originate from sub-stations and power stations. Remote Terminal Units (RTUs) located at these points collect data from the field devices through suitable transducers and transmit the same towards control centres. The data from the central sector sub-stations and power stations is transmitted to the respective RLDCs. The data from the sub-stations and power stations from the state sector is

transmitted to either sub LDC or SLDC depending upon the area of jurisdiction. The control centres viz. sub-LDCs, SLDCs and RLDCs exchange data among themselves as per the operational requirements.

4. The petitioner has submitted that wideband communication system comprising microwave and fibre optics is being used for data transfer between control centres and from substations located in wideband nodes. Wideband communication system under ULDC projects comprising of Fibre Optic & Micro Wave systems was established for providing communication connectivity between the control centres and for accommodating large data volumes on certain sections. The communication systems established under ULDC projects were as under:

Region	Commercial operation for ULDC scheme	Control Centres	Fibre Optics (in Kms)	MW Hops (in Kms)
Northern	July, 2002	33	2142	78
Southern	August, 2002	15	2324	35
North Eastern	August, 2003	8	903	12
Eastern	September, 2005	11	1453	40
Western	February, 2006	11	2561	0

5. The petitioner has further submitted that the Pradhan Committee was constituted by Ministry of Power, Government of India vide order dated 4.2.2008 to examine issues relating to manpower, certification and incentives for the personnel employed in system operation at various levels and also for ring-fencing the load despatch centres to ensure their functional autonomy and give its recommendations. The Pradhan Committee recommended that the load despatch centres should be ring-fenced suitably to ensure their functional autonomy by taking certain steps. Firstly, the appropriate Government should

take suitable steps to facilitate independent functioning of load despatch centres in line with the Electricity Act, 2003 and National Electricity Policy. Secondly, the financial accounts should be separated for all load despatch centres by 31st March 2009 with appropriate Electricity Regulatory Commission specifying the fees and charges payable. Subsequently, Government of India, Ministry of Power vide its letter dated 13.10.2009 constituted a Task Force under the Chairmanship of Shri Satnam Singh, the then CMD, Power Finance Corporation to look into the financial aspects for augmentation and upgradation of the State Load Despatch Centres and issues related to emoluments for the personnel engaged in system operation. The Task Force made the following recommendations with regard to the ownership of the assets:

- (a) Ownership of new RTUs should rest with the entities in whose premises these RTUs would be located. Regarding ownership of existing as well as work-in-progress RTUs in central sector stations and state sector stations, these would rest with the CTU and STUs/SEBs respectively as per the prevailing arrangement. However in due course of time, modalities for their transfer to actual entities can be planned by mutual consent.
- (b) The responsibility of owning and providing the communication system from sub-station to the nearest control centres as well as between control centres should continue to be that of CTU or STUs/SEBs. However in case of any special requirements, the LDCs can assess, plan and take on lease such communication systems from other telecom service providers also.

- (c) The computer system alongwith software and peripherals located in the control centre buildings of NLDC/RLDCs and SLDC/sub-SLDCs should be transferred to the respective entities managing these LDCs.
- (d) The recovery of tariff in respect of the assets to be retained or created in future by CTU/STUs/SEBs as per the the above methodology could be appropriately charged as per the norms prevailing from time to time.

6. The petitioner has further submitted that subsequent to the Task Force's report, the petitioner constituted committees at the regional level to identify the assets to be transferred to POSOCO. The recommendations of the committees for asset transfer were as under:

(A) Assets to be transferred to POSOCO:

- (i) EMS/SCADA system (computer system, hardware and software)
- (ii) Auxillary power supply system comprising of uninterrupted power supply, diesel generating set etc.
- (iii) Building and civil works.

(B) Assets which will remain with petitioner

I. Central Portion

- (i) Fibre Optic Cables (overhead and underground)
- (ii) Fibre Optic Communication Equipment
- (iii) Digital Microwave Communication System (Tower, Antenna, Equipment etc.)
- (iv) PABX
- (v) Power Line Carrier Communication system;

- (vi) Auxilary power supply system

II. State Portion: Entire state portion which consists of the following equipments will remain with the petitioner:

- (i) EMS /SCADA System
- (ii) Fibre Optic system:
- (iii) Digital Microwave Communication System (Tower, Antenna, Equipment etc.)
- (iv) PABX
- (v) Power Line Carrier Communication System
- (vi) Auxilary power supply system (part)

7. The petitioner has submitted that the assets mentioned at B.I and B.II above are retained by the petitioner. Due to the nature of these assets and change in technology, the petitioner will have to invest in new assets for the replacements/expansion of the communication system in future. It is therefore necessary that there should be tariff regulations for these systems in order to recover the cost incurred by the petitioner. The petitioner has further submitted that in the absence of any provision in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter "2009 regulations"), the petitioner is not able to make application for tariff for the communication systems and SLDC systems under 2009 regulations. The petitioner has prayed that the Commission may extend the provisions of 2009 regulations for determination of tariff of the communication system and SLDC system to be retained/ additional assets to be created for expansion of communication system by the CTU with modification in depreciation, operation & maintenance, initial spares and timeline etc. by exercising the power of relaxation under Regulation 44 of 2009 regulations.

8. Respondent No.20, Bihar State Electricity Board, has submitted that the existence of Regulation 44 of 2009 regulations cannot be a substitute for non-existence of the regulations on the subject. It has been suggested that detailed regulations on the subject should be enacted after deliberations amongst the beneficiaries if such a division of works as envisaged in the petition is acceptable to the Commission. Respondent No.22, Uttar Pradesh Power Corporation Limited (UPPCL) has submitted that the prayer of the petitioner for relaxation of the provisions of 2009 regulations be rejected. Respondent No. 24, Madhya Pradesh Power Trading Company Limited has submitted that modifying the regulations at the instance of the petitioner in exercise of power to relax would considerably disturb the equilibrium being maintained under section 61(d) of the Act.

9. We have considered the submissions of the petitioner and objections of the respondents. The ULDC schemes were introduced in different regions between 2002 and 2006. The Commission had not specified any regulations as required under section 28(4) of the Act for determination of fees and charges for the assets under ULDC scheme during 2004-09 period. Therefore, the Commission determined the tariff of ULDC schemes in exercise of its powers under section 28(4) of the Act by adopting certain parameters modelled on the basis of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004. The Commission has specified the Central Electricity Regulatory Commission (fees and charges of Regional Load Despatch Centre and other related matters) Regulations, 2009 (hereinafter "the RLDC regulations") to determine the fees and charges for National Load

Despatch Centre and Regional Load Despatch Centres (RLDCs) which is applicable for a control period of 5 years from 1.4.2009 till 31.3.2014. Thus, the fees and charges for the assets created under ULDC scheme and transferred to Power System Operation Corporation (POSOCO) comprising RLDCs and NLDC would be covered under the RLDC regulations. However, the assets retained with the CTU consequent to creation of POSOCO, particularly the communication system and SLDC system are neither covered under the RLDC regulations nor under the 2009 regulations. Since the communication system and SLDC systems form part of the assets of the CTU, there is a requirement to specify regulations for determination of tariff of these assets. We direct the staff of the Commission to undertake the exercise separately and include these assets of CTU in the tariff regulations applicable for the next tariff period i.e.2014-19. As regards the tariff of these assets for the period 2009-14, we are not inclined to determine the tariff of these assets by exercising our power of relaxation under Regulation 44 of the 2009 regulations since there is no provisions for determination of tariff for the assets covered under the communication system and ULDC system. We are of the view that the tariff of these assets shall be determined under our general power of determination of tariff for inter-State transmission system under section 79(1)(d) of the Act. In this connection, we quote the following extract from the judgement of the Constitution Bench of the Supreme Court in PTC India Ltd v Central Electricity Regulatory Commission {JT2010(3)SC1}

“40.On reading Sections 76(1) and 79(1) one finds that Central Commission is empowered to take measures/steps in discharge of the functions enumerated in Section 79(1), like to regulate the tariff of generating companies, to regulate the inter-State transmission of electricity, to determine tariff for inter-State transmission of electricity, to issue licenses, to adjudicate upon disputes, to levy fees, to specify the Grid Code, to fix the trading margin in

inter-State trading of electricity, if considered necessary, etc.. These measures, which the Central Commission is empowered to take, have got to be in conformity with the regulations under Section 178, wherever such regulations are applicable. Measures under Section 79(1), therefore, have got to be in conformity with the regulations under Section 178. To regulate is an exercise which is different from making of the regulations. However, making of a regulation under Section 178 is not a pre-condition to the Central Commission taking any steps/measures under Section 79(1).Similarly, while exercising the power to frame the terms and conditions for determination of tariff under Section 178, the Commission has to be guided by the factors specified in Section 61. It is open to the Central Commission to specify terms and conditions for determination of tariff even in the absence of the regulations under Section 178. However, if a regulation is made under Section 178, then, in that event, framing of terms and conditions for determination of tariff under Section 61 has to be in consonance with the regulation under Section 178. One must keep in mind the dichotomy between the power to make a regulation under Section 178 on one hand and the various enumerated areas in Section 79(1) in which the Central Commission is mandated to take such measures as it deems fit to fulfil the objects of the 2003 Act.”

It clearly emerges from the above judgement that the Central Commission can specify the terms and conditions of tariff even in the absence of the regulations. Since no regulation was specified for determination of tariff of the communication system and the ULDC system, the Commission determined the tariff of these assets during the period 2004-09 on levelised basis by adopting some of the parameters of 2004 tariff regulations. We have decided to continue with the levelised tariff for the existing assets in the absence of any provision in 2009 regulations regarding determination of tariff of communication system and ULDC system of the petitioner. For the new assets, the tariff will be decided as per the regulations for communication systems to be framed. Accordingly we direct the staff of the Commission to take necessary action to prepare draft regulations for determination of tariff for the communication system and ULDC system of the petitioner.

10. Next we proceed to examine the specific issues raised by the petitioner which are as under:

- (a) Regulatory approval for replacement of Microwave links with Optical Fibre links;

- (b) Utilisation of assets;
- (c) Depreciation for communication system and SLDC system;
- (d) Operation and Maintenance;
- (e) Timeline for communication system;
- (f) Initial spares for communication systems;
- (g) Sharing of tariff.

(A)Regulatory Approval for Replacement of Microwave links with Optical Fibre Links

11. The petitioner has submitted that to meet the communication requirements under the ULDC projects, microwave links were implemented in four regions namely, Northern, Southern, North-Eastern and Eastern Region. These microwave links are working in the 2.3-2.5 GHz frequency band allocated by the Ministry of Communication (MOC). During August 2008, MOC informed that as per the Government of India Guidelines, 2.3-2.4 GHz band was to be allocated to Broad Band Wireless Access (BWA) services and therefore, the users of 2.3-2.4 GHz band would have to either shift to another frequency band of 2.7 to 2.9 GHz or to switch over to fibre optic based communication. In the meeting held between the Ministry of Power and the Ministry of Communication and IT on 4.11.2008, it was decided to vacate the 2.3-2.4 GHz frequency band being used for ULDC Micro Wave links and to establish fibre optics based communications within two years time period which has been subsequently extended by one more year i.e. upto end of 2011. The petitioner has further submitted that the tariff for the Digital Microwave system installed under the ULDC scheme was being recovered considering the 15 year

useful life of the project. On account of the change in Government Policy, the useful life of these microwave links have been reduced substantially to 6 to 9 years instead of 15 years. The petitioner has submitted that since it has already incurred the cost and the charges were being recovered considering 15 years of project life, it may be allowed to recover the accelerated depreciation to match the revised useful life for the Digital Microwave links till the end of the year 2011.

12. The petitioner has further submitted that the issue of installation of OPGW links in lieu of ULDC microwave links has also been discussed in the meetings of the Regional Power Committee of Northern, Eastern, Southern and North-Eastern Regions and after deliberations, most of the constituents have agreed for implementation of installation of OPGW links. The petitioner has submitted the length of optic fibre cables required and the indicative cost for the same as under:

Region	Fibre Optic cable to replace microwave links (in km)	Additional requirement of fibre optic cables (in km)	Total requirement (in km)	Indicative cost (Rs in crore)
Northern	2940	1580	4520	162
Southern	625	1070	1695	95.84
Eastern	1621	738	2359	85
North-Eastern	642	367	1009	54.76

13. The petitioner has submitted that since the Digital Microwave shall become redundant after installation of OPGW links, the credit to be passed on to the beneficiaries shall be equal to the salvage value of these Digital Microwave links at the end of the useful life of these equipments. The petitioner has prayed for regulatory approval for recovery of cost of installation of OPGW links all over the country and to be allowed to recover the

accelerated depreciation for the Digital Microwave links established under ULDC scheme.

14. The petitioner vide affidavit dated 14.5.2010 has submitted that Uttar Pradesh Power Transmission Corporation Limited (UPPTCL) has informed the petitioner vide its letter dated 27.4.2010 that Fibre Optic Network for UPPTCL portion be taken out of the project as Ministry of Power (MOP) has not accorded any grant and Department of Telecom (DOT) is not providing any compensation in lieu of withdrawal of frequency band for the digital microwave links. The petitioner has submitted that UPPTCL in its letter dated 17.4.2010 has indicated to go ahead with implementation of its portion on Public Private Partnership (PPP). The petitioner has further submitted that UPPTCL portion is approximately 45% of the total cost for Northern Region (₹ 68.44 crore out of the total of ₹ 161.31 crore). The petitioner has submitted that implementation of communication network on PPP route as contemplated by UPPTCL may not be feasible within the time schedule and there would be contractual problems since the petitioner has already issued the Letter of Award (LOA) and the contract does not have provision for such large variation.

15. UPPTCL in its affidavits dated 11.8.2010 and 21.8.2010 has submitted that it has not given any consent for making payment for installation of Optical Fibre system in lieu of Microwave links. Energy Task Force, a high powered committee of Government of Uttar Pradesh in its meeting dated 24.2.2010 has decided that the work as consequence of replacement of microwave system

may be executed through PPP method and accordingly, UPPTCL is executing the work of installation of OPGW on its own through PPP method.

16. The petitioner in its rejoinder dated 8.9.2010 has submitted that in the 17th meeting of NRPC held on 17.7.2010, it was decided that the petitioner would implement the Fibre Optic networks as approved in the 12th NRPC meeting for all the constituents except UPPTCL. However, UPPTCL would implement its portion of network on its own within the timeframe given by DoT for surrendering the Microwave frequencies in order to fulfil its obligation under Grid Connectivity Standards and IEGC. It has been further submitted that the fibre optic communication network in Uttar Pradesh area was finalised for the use of links by State sector as well as Central sector. In the absence of UP link, communication connectivity to PTCUL and Central sector stations in UP would be affected. The petitioner has submitted that to ensure connectivity to the petitioner's sub-stations in UP area and Uttaranchal SLDC, fibre optic links for about 360 km were proposed before Northern Regional Power Committee for approval. Apart from this, around 400 km of existing fibres are required to be shared with POWERGRID Telecom under the Central sector in order to ensure connectivity to the sub-stations of the petitioner and PTCUL system.

17. The petitioner in its affidavit dated 4.11.2010 has placed on record a copy of the letter dated 23.10.2010 written by Chairman, UPPTCL to Chairperson of the Managing Committee, Power System Development Fund and has submitted that UPPTCL in para 2(h) of the said letter has indicated uncertainty about any developer investing in the communication network and has

requested for allocation of funds for establishment of Optical Fibre Communication links in lieu of microwave links for Uttar Pradesh from Power System Development Fund created under CERC (Power System Development Fund) Regulations, 2010. UPPTCL in its affidavit dated 3.11.2010 has confirmed that it has taken up the matter with the Managing Committee of PSDF and has submitted that the time schedule for integration with the proposed OFC is expected to be met subject to the availability of the estimated amount from the PSDF.

18. TNEB vide affidavit dated 20.8.2010 has submitted that it had already taken initiatives to replace the DMW links in its territory and would have its own fibre network to replace the DMW networks. It has been submitted that the accelerated depreciation for DMW links would have impact on TNEB and hence recovery for DMW should be made as per original time period. The petitioner in its rejoinder dated 8.9.2010 submitted that petitioner has to replace these equipments under the force majeure condition i.e. change in government policies which is beyond the control of the petitioner and therefore the Commission may accord the regulatory approval for recovery of cost for installation of fibre optic cable in lieu of digital microwave links and accelerated depreciation should be allowed for digital microwave links under ULDC scheme.

19. During the hearing on 23.11.2010, the learned counsel for Bihar State Electricity Board (BSEB) submitted that the economic feasibility of laying fiber optic cable by the petitioner should be examined by comparing it with the

expenditure on lease of the fiber optic links already commissioned by BSNL, before granting regulatory approval for the project. In response, the representative of the petitioner submitted that BSNL network cannot be efficiently used since its network does not reach all sub-stations and there are issues of cyber security and reliability. The Chief Executive Officer of POSOCO also emphasized the need for dedicated and reliable communication system for the power system.

20. In its submission dated 20.12.2010, the petitioner has submitted that the royalty charges being paid to Ministry of Communication (MoC) for usage of microwave frequencies are presently approximately ₹ 6.37 crore per annum. Moreover, MoC had informed the petitioner that after the year 2011, these charges are to be paid at the commercial rate which is approximately ₹ 642 crores per Mhz amounting to few thousands of crores annually for the frequency band being used by the petitioner for all the four regions of the country, if these frequencies are not vacated.

21. We have considered the submission of the petitioner and the respondents. We are of the view that replacement of microwave links with fibre optic links should be implemented as agreed by the beneficiaries to ensure safe and reliable operation of the power system. Moreover, the petitioner has submitted that surrender of the microwave frequencies would save substantial cost and the fibre optic system would be beneficial in the long run as the fibre optic communication network is required for implementation of new technologies like Wide Area Measurement System (WAMS), Special Protection Schemes (SPS)

etc. in view of fast development and complexity of the power system in the country. As regards the regulatory approval, we are of the view that since the project has been agreed to be implemented by the constituents of each of the regions, regulatory approval is not considered necessary. The petitioner is granted liberty to approach the Commission for determination of tariff for the fibre optic network being installed in lieu of microwave links for each of the region separately. As regards the submission of UPPTCL, it is clarified that if the state portion is not being implemented by it separately as proposed earlier, the same shall be implemented by the petitioner and UPPTCL would be required to share the tariff in proportion to the assets being utilised by it. It is however made clear that the timeline for replacement of the digital microwave by optical fibre should be strictly complied with.

(B) Utilization of the assets:

22. The petitioner vide affidavit dated 23.6.2010 has submitted that under ULDC schemes, Fibre Optic (FO) Cables containing 24 nos of fibres were installed out of which six nos. of fibres are being utilized for ULDC usage and the balance for the petitioner's telecom business. Due to non-availability of 6 fibre FO cable and keeping in view the future usage, it was envisaged to put 24 fibre FO cable in most of the links for NR ULDC network with minimal incremental cost. As per the decision by Government of India in 2001, 50% of the total cost of the existing fibre optic system is being booked to the ULDCs scheme. Regarding the new Fibre Optic System to be installed, the petitioner has submitted that additional fibre optic communication system has been planned after deliberations with the constituents of the respective regions and

the requirement has been finalised after considering the operational needs such as the requirement for replacement of microwave links after withdrawal of microwave frequencies, requirement to meet the communication needs due to expansion of power systems after commissioning of ULDC projects and implementation of Wide Area Measurement System technology. The petitioner has submitted that commercially available OPGW cable has minimum 8 fibres and cost difference between 8 and 24 fibre cable is nominal. Therefore, keeping in view the future usage and in line with deliberations with constituents, the decision for installing the Fibre optic cables comprising 24 fibres has been taken at RPC level.

23. During the hearing on 23.11.2010 and in its submission vide affidavit dated 20.12.2010, the petitioner has submitted that apart from 6 nos. of fibres presently being used for ULDC purpose, it is envisaged that in future several new applications such as Wide Area Management Systems (WAMS), Special Protection Schemes (SPS), Line Protections based upon fibre technology and remote operation would require use of Fibre Optic based wide band communication network. With deployment of these new applications, the usage of Fibres for Power System Operation shall increase. The petitioner has submitted that the balance fibres may be shared by the telecom business based on the criteria of cost sharing as decided in Western Regional Power Committee (WRPC) meeting. As per documents submitted by the petitioner, in TCC meeting of WRPC held on 18.08.2010, it was decided that sharing mechanism of the OPGW project would be decided by CERC. It was also decided that the sharing of the fibres among Telecom Business and for use by

PGCIL and vice-versa, if any, would be done on the depreciated cost. The WRPC in its meeting held on 19.08.2010 approved the decision of TCC.

24. We have noticed that sharing of Optical Fibre cost between ULDC scheme and Telecom projects was decided by Government of India in the PIB meeting held on 12.10.2001. The relevant portion of para 11 of the Minutes of PIB Meeting is quoted as under:

“....Six(6) out of 12/24 fibres installed under this project shall be utilized for ULDC project only. The balance fibres shall be utilized by POWERGRID for telecom purpose. Accordingly, it is proposed to apportion (i) 50% of the optical fibre cost for 24 fibre cable and (ii) 25% of optical fibre cost for 12 fibre cable to the telecom venture. Apportionment as per the above methodology shall be made at the time of submission of tariff proposal to GOI/CERC.”

The actual booking of OPGW cost in ULDC scheme has been done as per the ratio decided in the PIB meeting held on 12.10.2001. The Commission has adopted the same sharing ratio while determining the fees and charges of ULDC of Northern Region. However, the TCC of WRPC and the WRP Committee in the meetings held on 18th and 19th of August 2010 have recommended that sharing mechanism will be as decided by the CERC. The petitioner in its affidavit dated 22.10.2010 has submitted that the utilization of remaining fibre has not yet been finalized and therefore, full cost of OPGW shall be capitalized under the proposed projects. As soon as the utilization of balance fibres is finalized, the Commission shall be apprised along with the apportionment of cost.

25. In our view, status quo should be maintained as regards the criteria for sharing of cost of the fibre optic cables as decided by Government of India in the PIB meeting dated 12.10.2001 and adopted by the Commission for the

existing ULDC schemes. However, the Commission will take a final decision at the time of determining the tariff of the ULDC system based on the actual usage of the optical fibre cable for power system operation and for commercial purposes by other agencies including the petitioner.

(C) O&M Charges:

26. The petitioner has submitted that the responsibility for maintenance of RTUs and communication systems under ULDC scheme rests with the petitioner. In the absence of any regulations for the communication system, the petitioner has suggested that 10 % of the capital cost per annum subject to actual after prudence check by the Commission may be considered for the communication system. The petitioner in its affidavit dated 23.6.2010 has submitted the actual O&M expenses for the period 2002-03 to 2009-10 in respect of the communication system installed under the ULDC scheme. Based on these details and the capital cost, which is to be provided by the petitioner, the O&M can be allowed. UPPTCL in its affidavit dated 11.8.2010 has submitted that as per the MOU signed in 1994, O & M @ 7.5% of the capital cost of the communication system which itself was much more than what was required since the petitioner was to undertake only special maintenance. The petitioner In its rejoinder dated 8.09.2010 has submitted that the MOU was signed in 1994 whereas the ULDC project was commissioned in 2002. Due to technological advancement, the cost of communication equipment has come down substantially and the cost of human resources has increased. In a communication project, the O & M charges include electronic items and services which involve skilled IT and Telecom personnel. The petitioner has

submitted that though O & M charges @ 7.5% has been allowed by the Commission for ULDC tariff. However, in the present petition O & M charges @ 10% of the capital cost of the project per annum subject to actual has been proposed for the communication system and SLDC system based on experience.

27. We have examined the data submitted by the petitioner regarding actual O&M expenses during 2002-03 to 2009-10 for the communication system. It is observed that O&M charges for the year 2008-09 vary from 3.54% to 8.59% of the capital cost as on 31.03.2009 for different regions. We are of the view that the petitioner should be allowed O & M expenses on actual for the communication systems already in operation under ULDC schemes in different regions. However, for the new systems, the O&M norms would be decided at the time of framing of regulation for communication system.

(D) Initial Spares:

28. The Petitioner has prayed that initial spares @3.5% be allowed for the communication system. UPPTCL in its reply has submitted that communication equipments are part of the transmission system and therefore, initial spares for the communication system should be covered under the ceiling of 2.5% of the original capital cost of the entire project in accordance with Regulation 8 of 2009 regulations. The petitioner in its rejoinder dated 08.09.2010 has submitted that initial spares @3.5% have been considered for use during commissioning and maintenance to ensure high availability of the communication system.

29. In its affidavit dated 25.10.2010, the petitioner has submitted that OPGW based communication project mainly consists of OPGW and communication equipment (SDH/Mux). The petitioner has further submitted that the manufacturers (OEM) were requested to give their recommendations regarding the initial spares. The OPGW manufacturer has informed that initial spares should be in the range of 3 to 5% of the OPGW quantity to be installed, and the manufacturer of the communication equipment has informed that the initial spares for this equipment should be in the range of 10% of the main equipment quantity. The petitioner has submitted that normally in a project, the share of communication equipment cost is approximately 20% and balance is OPGW and hence the initial spares of 3.5% proposed is reasonable.

30. We direct the petitioner to furnish the actual expenses incurred on spares from 2002-03 onwards while filing the tariff petitions for each of the regions. For the new assets, the initial spares would be decided at the time of framing of regulations for the communication system.

(E) Life of the Assets and Depreciation:

31. The petitioner has submitted that Digital Microwave systems were installed under the ULDC scheme and tariff for the assets is being recovered considering 15 year as useful life of the assets. Since the petitioner is required to replace these assets under Force Majeure condition i.e. change in government policy which is beyond the control of the petitioner, the useful life of the assets has been reduced substantially to 6 to 9 years instead of 15 years. The petitioner has requested for being allowed to recover accelerated

depreciation to match the revised useful life for the Digital Microwave links till the end of the year 2011. Moreover, since this equipment shall become redundant, the petitioner has submitted that the credit to be passed on to the beneficiaries shall be equal to the salvage value of the Digital Microwave links at the end of the useful life of these equipments.

32. In view of the circumstances, we are satisfied that the higher depreciation for the Microwave links is justified. However, salvage value of the asset is to be determined by CTU in consultation with beneficiaries and the credit should be passed on to beneficiaries.

33. The petitioner has further submitted that most of the assets of the communication system are having shorter period of useful life and have nil salvage value. This is particularly so in the case of information technology and communication equipment and software. Upgradation, augmentation and modernisation of the assets is a continuous process. On account of various reasons such as fast changes in technology, up-gradation/obsolescence of the communication equipment, there is a need to review the useful life/depreciation rates of these equipments. The petitioner has placed on record the copies of the correspondence from the OEMs of Digital Microwave equipment, Optical Fibres and RTU equipments in support of its contention that maintenance services are not available since these equipment have become obsolete. The petitioner has suggested the useful life and depreciation rates of the communication equipment and items of SLDC system in para 7.1.3 of the petition and has prayed that the same may be included in the depreciation

schedule at Appendix III of the 2009 regulations in exercise of the power to relax under Regulation 44 of the 2009 regulations.

34. UPPTCL has submitted that salvage value of the equipments proposed by the petitioner is not in tune with Regulation 17 of 2009 regulations. It has been further submitted that the life of equipments of ULDC has been agreed as 15 years as per MoU of 1994 executed between Power Grid and UPSEB; therefore, the depreciation should be only 6% per annum. The petitioner in its affidavit dated 08.09.2010 has submitted that in the Satnam Singh Report, the life of IT equipment has been recommended as 3 years and other communication equipments as 5 to 7 years. Since the communication system has similar components, the life of communication system has been considered as per recommendation of Satnam Singh report. The petitioner in its affidavit dated 22.10.2010 has submitted that as per the communication received from the Original Equipment Manufacturer(OEM), the designed life of the OPGW cable is around 25 years; however, as per the practical experience, the life of OPGW is 15 years. Similarly, the useful life spans of the communication equipments are up to 10 years; however the practical life of the entire system is considered around 7 years.

35. As we have already clarified, we are not inclined to relax any of the provisions of 2009 regulations. The submissions of the petitioner shall be kept in view while framing the regulations for the new communication assets. For existing assets excluding Microwave links, the methodology adopted for ULDC schemes shall be continued till the period already specified in the respective orders for ULDC Scheme in different regions. For Microwave Links, accelerated

depreciation shall be considered keeping in view the reduced life of these assets as per decision of MoC/DoT.

(F) Time Line for installation of Communication System:

36. The petitioner has proposed a time line of 30 months for completion of the communication system projects. UPPTCL has submitted that in 2009 regulation, the time line for transmission system has been specified as 18 months for plain area and 21 months for hilly terrain for a new 220 kV AC sub-station. This timeline should be made applicable for communication system of the petitioner also. BSEB has submitted that the timeline for completion of projects of communication system cannot be 30 months especially when the redundancy of such equipment is very fast.

37. The petitioner in its affidavit dated 8.9.2010 has submitted that the OPGW is installed either along with the construction of new line or on the existing line. In case of installation of OPGW cable on new line, it will be commissioned along with the transmission line in 20 to 36 months depending on the terrain and type of line as per 2009 regulations. In OPGW projects, manufacturing of OPGW Cable can be taken up after the physical survey of complete transmission line by the contractor. Further, integrated testing of the complete network is required, which can be completed only when the whole system is complete. Based on the experience, 22 to 24 months are generally required for completion of project on existing lines after placement of order. Further, 6 to 8 months are required for pre-award activities such as NIT, bid evaluation and placement of award. Since, OPGW projects involve combination

of new and existing lines in different terrains; therefore, the total time line has been proposed as 30 months.

38. We are of the view that the time-lines for the OPGW projects for existing lines and for new lines are required to be prescribed separately which will be considered at the time of framing regulations for new communication assets.

Sharing of Tariff:

39. The petitioner has submitted that the generating companies, distribution licensees, buyers and sellers are users of the communication system. Accordingly, the petitioner has proposed that 50% of the tariff of the communication system should be borne by the generating companies and sellers and the balance 50% should be borne by the distribution licensees and buyers. The petitioner has further submitted that the sharing of the tariff for SLDC system (State portion) would be in proportion to the capital cost incurred for the respective state portion.

40. In our view, all users of the communication system including the transmission licensee should share the tariff as the communication system would also be used to transmit operational data of the assets of the users. We direct that the sharing of tariff of the communication system shall be on similar lines as the system operation charges for the Regional Load Despatch Centres under RLDC Regulations.

41. Petition No. 68/2010 stands disposed of in terms of the above directions.

sd/
(M.DEENA DAYALAN)
MEMBER

-sd/-
(V.S.VERMA)
MEMBER