

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 487/TT/2014

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member**

**Date of Hearing: 22.03.2016
Date of Order : 31.05.2016**

In the matter of:

Petition for determination of fees and charges for fibre optic communication system in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links (Part II) in Southern Region for tariff block 2009-14 under sub-section 4 of Section 28 & 79(1)(d) of the Electricity Act, 2003 and Regulation-86 of Central Electricity Regulatory Commission (Conduct of business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. NTPC Limited,
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110 003
2. Neyveli Lignite Corporation Limited,
P.O. Neyveli-607 801,
Cuddalore District, Tamil Nadu
3. Nuclear Power Corporation of India Limited,
Nabhkiya Bhawan, Anu-Shakti Nagar,
Mumbai-400 094



4. NTPC Tamil Nadu Energy Company Limited,
G-Block, 123 & 123A,
12th street, Anna Nagar (East),
Chennai-600 102
5. Meenakshi Energy Private Limited,
Meenakshi plot 119, Road # 10, Jubilee Hills,
Hyderabad-500 033
6. Simhapuri Energy Limited,
6-3-866/2, 3rd Floor, Begumpet,
Madhucon Green Lands,
Hyderabad-500 016
7. LANCO-Kondapalli Power Private Limited,
Plot No. 4, Software Units Layout,
Hitech City, Madhapur,
Hyderabad-500 081
8. Andhra Pradesh Power Co-ordination Committee,
APTRANSCO, Vidyut Soudha,
Hyderabad-500 082
9. Power Company of Karnataka Limited,
Room No; 503, KPTCL Building, Kaveri Bhavan,
Bangalore-560 009, Karnataka State
10. Kerala State Electricity Board,
Vydyuthi Bhavanam, Pattom,
Thiruvananthapuram-695 004
11. TANGEDCO,
7th Floor, Eastern Wing,
144, Anna Salai, Chennai-600 002
12. Electricity Department,
Government of Poducherry,
Poducherry-605 001
13. Electricity Department,
Government of Goa,
Curti-Ponda-Goa-403 401

.....**Respondents**



For petitioner : Shri M.M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL
Shri Anshul Garg, PGCIL

For respondents : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) under sub-section (4) of Section 28 and Section 79(1)(d) of Electricity Act, 2003 (Act) for Asset-I: 168.457 Km of Fibre Optic Communication System for Central Sector Portion and Asset-II: 3.262 Km of Fibre Optic Communication System for KSEB Portion for determination of annual fees and charges for fibre optic communication system in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Southern Region for the 2009-14 period.

Brief Background

2. 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. was created and POSOCO is responsible for system operation of National Load Despatch Centre (NLDC) and Regional Load Despatch Centres (RLDCs). Pursuant to Satnam Singh Committee's report, the assets pertaining to system operations have been transferred to POSOCO for which separate tariff orders had been issued by the Commission.



3. Government of India had also constituted a Task Force to look into the financial aspects for augmentation and up-gradation of the State Load Despatch Centres and issues related to emoluments for the personnel engaged in the system operation. The Task Force made certain recommendations with regard to the ownership of the assets. The petitioner constituted committees at the regional level, subsequent to the Task Force's report, 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) Auxiliary 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) Auxiliary power supply system.

ii. State Portion: Entire state portion which consists of the following equipment 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) Auxiliary power supply system (part)



4. Thereafter, the petitioner filed a Miscellaneous Petition No. 68/2010 under sub-section (4) of Section 28 of Electricity Act 2003 and Regulations 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 "Sub-Load Dispatch Centre system") to be retained/to be installed by the petitioner after formation of POSOCO for the period 2009-14 block.

5. The Commission in Petition No. 68/2010 vide order dated 8.12.2011, had observed as under:-

“9.....Since the communication system and SLDC system 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 to relaxation under Regulation 44 of the 2009 regulations since there is no provision 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.....”

“.....It clearly emerges from the above judgment 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.”

“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.”

6. As held in our order dated 8.12.2011 in Petition No.68/2010, in the absence of any provision in the 2009 Tariff Regulations regarding determination of tariff of communication system and ULDC system of the petitioner we would like to continue with the levelised tariff for these assets. Accordingly, the annual fees and charges of the optic fibre need to be determined as per the principles approved by the Commission vide order dated 8.12.2011 in Petition No 68/2010.

7. The Investment Approval (IA) for the Fibre Optic Communication System in lieu of existing ULDC Microwave links was accorded by Board of Directors of the petitioner company vide letter Reference No. C/CP/Fibre Optic in SR dated 15.2.2011 at an estimated cost of ₹4509 lakh, including IDC of ₹264 lakh (based on 3rd Quarter, 2010 price level). The scheduled completion time of the project was 30 months from the date of investment approval i.e. by 1.9.2013.

8. The broad scope of work covered under the project is as hereinafter:-



(i) Installation of OPGW Fibre optic cable on the existing EHV transmission line of POWERGRID and constituents except TNEB portion, the estimated length of such cable is approximately 1575 km.

(ii) Installation of approximately 120 km underground fibre optic to provide last mile connectivity to the control room where transmission line connectivity is not available. It is also envisaged that portion of the network which involves installation of the underground cable would be provided with radio based communication which operates in free band to back up the underground cable link of the network. Five number of radio links are proposed.

(iii) The terminal equipment for communication based upon Synchronous Digital Hierarchy (SDH) technology shall be installed in the substations of constituents and POWERGRID. The project would also involve installation of primary multiplexers at the new wide band modes. To monitor the Network, Network Management System (NMS) would also be required.

(iv) The constituent wise break-up of the scope of the work is as follows:-

S No.	Utility	OPGW Cable (in km)	SDH (Nos.)	Under ground/ FO Cable (km)	Radio Links (Nos.)	DCPS (Nos.)
1	Central Sector	1070	19	0	0	19
2	APTRANSCO	155	08	75	3	0
3	KSEB	280	06	30	1	0
4	Electricity Deptt, Puducherry*	70	03	15	1	0
	Total	1575	36	120	5	19



9. The Commission vide RoP dated 1.4.2016 directed the petitioner to submit break up of optical fibre length covered and claimed in various petitions and segregated apportioned cost for the assets and basis of apportionment. In response the petitioner vide affidavit dated 26.4.2016 has submitted the following:-

(₹ in lakh)					
Utility	Line length in km	Approved cost	Completion cost	Petition No.	DOCO
KSEB	238.304	575	437.60	181/TT/2013	1.2.2013
	3.262	150	128.98	487/TT/2014	1.2.2014
	0.697	10.18	3.54	255/TT/2015	1.6.2015
Balance		79	-	- Against total envisaged line length of 280KM, the actual executed line length is 242 3KM. Entire scope of the project has been completed with this and hence the balance apportioned cost cannot be utilised.	
Total	242.3	814	570.12		
APTRANSCO	146. 17	361.05	305.61	181/TT/2013	1.2.2013
	31.8	287.58	561.11	181/TT/2013	1.4.2013
	19.5	77.82	61.49	255/TT/2015	1.6.2015
Balance		97.55	-	- Against total envisaged line length of 230KM (155+75), the actual executed line length is 197.47 KM. Entire scope of the project has been completed with this and hence the balance apportioned cost cannot be utilised.	
Total	197.47	824	928.21		
Central Sector	906.041	2050	1837.99	181/TT/2013	1.4.2013
	168.457	420	357.63	487/1172014	1.1.2014
Balance		103		Nelamangala-Yelahanka OPGW link is yet to be commissioned for want of RoW clearance.	
Total	1074.50	2573	2195.62		
Puducherry		298		* Deleted from the scope	
Total	1514.27	44509	3693.95		



10. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Capital cost

11. The petitioner vide affidavit dated 26.6.2015 submitted details of actual expenditure incurred as on the date of commercial operation (COD) and additional capital expenditure incurred/projected to be incurred for the period for the period from COD to 31.3.2014 corresponding to Asset I: 168.457 km of Fibre Optic Communication System for Central Portion; and Asset II: 3.262 km of Fibre Optic Communication System for KSEB portion.

12. Based on the information submitted by the petitioner, gross value of the assets as on COD for the purpose of Annual Transmission Charges for 2009-14 period has been considered as under : -

(₹ in lakh)

Particulars	Asset-I: Communication Link of Central Portion (168.457 km)	Asset-II: Communication Link of State Portion (3.262 km)
	(COD :1.1.2014)	(COD : 1.1.2014)
Expenditure upto COD	269.22	97.90
Additional Capitalization from DOCO to 31.03.2014	54.77	9.56
Additional Capitalization during 2014-15	1.31	2.72
Additional Capitalization during 2015-16	32.33	18.80
Total	357.63	128.98



Time over-run

13. As per the investment approval dated 15.2.2011, the instant assets were to be commissioned within 30 months from the date of investment approval by 14.8.2013 i.e. 1.9.2013.

Asset	SCOD	DOCO	Delay	Remark
384.474 km Optic Fibre	1.9.2013	1.2.2013	No time overrun	Covered under petition No.181/TT/2013
937.841 km Optic Fibre		1.4.2013		
171.719 km Optic Fibre		1.1.2014	4 Months time overrun	Covered under current petition.
Total Optic Fibre		1494.34		

14. The Commission vide RoP dated 1.4.2016 directed the petitioner to submit the RLDC certificate on usage of assets and whether communication signal has been established. In response, the petitioner, vide affidavit dated 26.4.2016, has submitted that the data communication is established and the links are in operation. Since these assets have been declared under commercial operation during 2009-14 tariff period, RLDC certificate is not applicable and hence the same is not obtained.

15. As per the IA, the project was scheduled to be commissioned within 30 months from the date of investment approval i.e. by 14.8.2013 (DOCO as 1.9.2013) against which the assets were commissioned on 1.1.2014. Thus, there is a time over-run of 4 months in commissioning of the instant assets.



16. The petitioner has explained the reasons for time over-run as under:-

(a) During monsoon season, installation work of OPGW is required to be stopped, which reduces effective time available for execution of work. Further, the work of installation of OPGW was required to be done in geographically scattered locations over number of transmission lines under Central Sector and State Sector involving difficult and remote areas encompassing tough terrain, areas with water logging throughout the year, cultivation areas, and habitation areas.

(b) The work of installation of complete Optic fibre (OPGW) under the scheme is to be done under 'Live Line Conditions' which requires very highly specialized and skilled manpower/gangs.

(c) The progress further adversely affected due to long monsoon in Kerala. Also large number of activities (like coordination with RLDC, State Utilities, ROW issues, obtaining 'Permission to work etc).

17. We have considered the submissions of the petitioner regarding time over-run. The petitioner is well aware that installation of OPGW requires specialized and skilled manpower and the petitioner should have accordingly planned for installation of OPGW. Further, monsoon in Kerala is regular feature and the petitioner should have taken into consideration the normal weather conditions in planning stage. Moreover, the petitioner has not furnished any documents to substantiate the reasons for time over-run. We are not inclined to condone the time over-run of four months.



Treatment of IDC and IEDC

18. Petitioner has made claims of `8.35 Lakh and `3.04 lakh towards Interest During Construction period (IDC) for Asset-I and Asset-II respectively. The petitioner vide affidavit dated 26.6.2015 has submitted that the total IDC of `11.39 lakh has been discharged during 2013-14 (after COD). However, petitioner has not submitted any detailed working of IDC calculations as well as details of IDC paid after date of commercial operation. Therefore, IDC on cash basis has been considered based on the loan/s deployed for the assets as per details submitted by the petitioner vide affidavit dated 26.6.2015 assuming that petitioner has not made any default in the payment of interest. Further, in view of the non-condonation of delay of 4 months in the commissioning of both the Assets, IDC for the corresponding period has not been allowed. Thus, on the basis of above, IDC on cash basis up to the Scheduled date of commercial operation i.e. 01.09.2013 works out to NIL for both the Assets. The petitioner, vide affidavit dated 26.06.2015, has also submitted that no IDC has been discharged up to COD. Further, amount of IDC accrued as on COD and to be discharged after COD has not been considered in the capital cost. The undischarged liability pertaining to IDC would be considered once it is paid subject to prudence check and submission of adequate information at the time of truing up.

19. Similarly, the petitioner has claimed ₹4.87 lakh and ₹1.77 lakh towards Incidental Expenditure during Construction (IEDC) as on COD for Asset I and Asset II respectively.



The claim is within the percentage on Hard Cost as indicated in the Abstract Cost Estimate submitted by the petitioner.

20. Thus, the capital cost being allowed in case of Asset I and Asset II are given below:-

Particulars	(₹ in lakh)	
	Asset-I (Central Portion)	Asset-II (State Portion)
(1) Expenditure up to DOCO (claimed)	269.22	97.90
(2) IDC Disallowed due to Undischarged Liability and Time Overrun	8.35	3.04
(3) IEDC Disallowed due to Time Overrun	0.57	0.21
(4) Capital Cost as on DOCO (allowable)[1-(2+3)]	260.30	94.65

21. The undischarged liabilities will be allowed after the same are discharged. As the required information with regard to the IDC and IEDC actually discharged is not available, we are not inclined to allow the amount of IDC and IEDC as claimed by the petitioner. The petitioner is directed to submit the amount of IDC and IEDC paid specific to the transmission asset considered in this petition upto date of commercial operation and balance IDC discharged after date of commercial operation. IDC and IEDC allowed will be reviewed at the time of truing up on submission of adequate and proper information by the petitioner in respect of interest during construction and incidental expenses during construction at the time of truing-up.

Additional Capital Expenditure during the tariff period 2009-14:

22. The petitioner, vide affidavit dated 26.06.2015 has claimed the revised additional capitalisation for Asset I and Asset II as under:-



(₹ in lakh)

Expenditure	State Portion	Central Portion
Additional capitalization during 2013-14	9.56	54.77
Additional capitalization during 2014-15 & 2015-16	21.52	33.64
Total	31.08	88.41

The additional capital expenditure claimed by the petitioner on account of balance and retention payments for the period 2013-14 have been considered for computation of fee and charges. The additional capital expenditure beyond 31.3.2014, shall be considered for the purpose of computation of “Fees and Charges” during 2014-19 period.

Debt-equity ratio

23. The details of debt-equity as on COD and as on 31.3.2014 of the asset are considered as per Regulation 12 of the 2009 Tariff Regulations. The details of debt-equity considered for computation of fee and charges are as follows:-

(₹ in lakh)

Particulars (As on DOCO)	Percent (%)	Asset-I (Central Portion) (DOCO: 01.01.2014)	Asset-II (State Portion) (DOCO: 01.01.2014)	Asset-I (Central Portion) (As on 31.3.2014)	Asset-II (State Portion) (As on 31.3.2014)
Loan	70.00	182.21	66.26	220.55	72.95
Equity	30.00	78.09	28.40	94.52	31.26
Total		260.30	94.65	315.07	104.21

The add cap allowed during 2013-14 has been considered in the debt-equity ratio of 70 : 30.



Rates for Recovery of loan and equity:

24. The Commission had approved the recovery of loan and equity based on the weighted average rate of interest & return on Equity using a Recovery Factor for loan and equity for 15 years (i.e. 180 months)

$$\text{Recovery Factor} = \frac{i \times (1+i)^n}{(1+i)^n - 1}$$

Where, n = period and
i = rate

Weighted average rate of interest works out to be 8.8000% for loan in respect of the assets for Central Portion as well as State Portion. For the reasons cited at para 30 of Commission's order dated 05.09.2015 in petition no. 240/TT/2013, the Capital Recovery Factor for equity has been considered on post-tax return on equity of 15.50%.

25. We are of the view that there is a need to review the Capital Recovery Factor methodology applied while determining fee and charges for Communication system. Accordingly, Commission directs the staff to examine the issue and submit to the Commission for appropriate directions.

Monthly Capital Recovery Charges: -

26. Monthly Recovery factors, as on COD, for Asset-I and Asset-II, have been arrived as under:-



Particulars	Asset-I (Central Portion)	Asset-II (State Portion)
Loan	0.010024	0.010024
Equity	0.014340	0.014340
Total	0.024364	0.024364

27. Monthly Capital recovery charges, as on COD, for Asset-I and Asset-II, have been worked out as under:-

(₹ in lakh)

Particulars	Asset-I (Central Portion)	Asset-II (State Portion)
Loan	1.83	0.66
Equity	1.12	0.41
Total	2.95	1.07

Operation & Maintenance Expenses (O&M Expenses)

28. The petitioner, vide affidavit dated 26.06.2015, has claimed ₹0.90 lakh as O&M expenses for 2013-14 in respect of Asset-I (Central Sector) only. However, the petitioner has not claimed any O&M charges for the State portion. The amount of ₹0.90 lakh claimed as actual O&M Expenses incurred is 0.14% of the total approved cost and it is accordingly allowed.

29. The petitioner has further submitted that the wage revision of employees has been implemented since 1.1.2007 and the actual impact of wage hike has not been factored in fixation of the normative O&M rates specified for the tariff block 2009-14.



The petitioner has submitted that it would approach the Commission for suitable revision in norms for O&M Expenses due to impact of wage revision, if any. While specifying the norms for the O & M Expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M Expenses as per the existing norms.

Interest on working capital

30. In accordance with Regulation 18(3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, SBI Base Rate Plus 350 bps as on 1.4.2013 (i.e. 13.20%) has been considered as the rate of interest on working capital for the asset for Central Portion as well as State Portion.

Filing fee

31. The petitioner has sought reimbursement of filing fee paid by it. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the 2009 Tariff Regulations. The petitioner shall recover the filing fee in connection with the present petition, directly from the beneficiaries on pro-rata basis.



Service tax

32. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. The petitioner has clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Annual Fees and Charges

33. The fees and charges for Fiber Optic Communication system shall be shared on similar lines as system operation charges by the users in the ratio of 45:45:10 as per Regulation 22 (1) of Fees and charges of Regional Load Despatch Centre and other related matters Regulations, 2009 as under:-

- a) Distribution licensees and buyers : 45% of system operation charges;
- b) Generating stations and sellers : 45% of system operation charges;
- c) Inter-state Transmission licensees: 10% of system operation charges"

34. The fees and charges allowed for the instant assets for the year 2013-14 are given in Annexure-I.



35. The fees and charges for state sector shall be recovered from respective states. Further, as specified under Regulation 5 of Central Electricity Regulatory Commission (sharing of revenue derived from utilization of transmission assets for other business) Regulations, 2007, the revenue earned by the petitioner from utilization of these assets for other business shall be adjusted on monthly basis in the bills of the respective month in the proportion given in Para 33 above.

34. This order disposes of Petition No. 487/TT/2016.

Sd/-

(Dr. M.K. Iyer)
Member

Sd/-

(A.S. Bakshi)
Member

Sd/-

(A.K. Singhal)
Member

Sd/-

(Gireesh B. Pradhan)
Chairperson



Annexure I

Name of the Company:	PGCIL
Name of the Element:	Asset-I: Central Portion (168.457 km) Fibre Optic in lieu of existing Microwave in SR
Actual DOCO:	01.01.2014
Petition No.:	487-TT-2014
Tarrif setting Period:	2009-14

Fee & Charges (2009-14)

Central Portion

Particulars	On Capital expenditure upto DOCO i.e.01.01.2014	2013-14
Gross Capital Cost	260.30	54.77
Gross Notional Loan	182.21	38.34
Gross Equity	78.09	16.43
Years	15.00000	14.75000
Months	180.00	177.00
Weighted Average Rate of Interest p.a.	8.8000%	8.8000%
Weighted Average Rate of Interest p.m.	0.7333%	0.7333%
Monthly Recovery Factors -Loan	0.010024	0.010106
Monthly Capital Recovery Charge - Loan	1.83	0.39
Annual Capital Recovery Charge - Loan	21.92	4.65
Rate of Return on Equity p.a. (As per Regulation 2009)	15.50%	15.50%
Rate of Return on Equity p.m.	1.29%	1.29%
Monthly Recovery Factors -Equity	0.014340	0.014402
Monthly Capital Recovery Charge - Equity	1.12	0.24
Annual Capital Recovery Charge - Equity	13.44	2.84
Monthly Capital Recovery Charge - Total	2.95	0.62
Annual Capital Recovery Charge - Total	35.35	7.49

Total Fee & Charges (Annualized):

Particular	2013-14
Annual Capital Recovery Charge - Loan	21.92
Annual Capital Recovery Charge - Equity	13.44
Annual Capital Recovery Charge - Total	35.35
O&M Expenses (Annualized)	3.60
Interest on Working Capital ⁺	0.99
Total Fee & Charges (Annualized)	39.94



Interest on Working Capital (Annualized)

Particular	2013-14
Maintenance Spares	0.54
O&M Expenses (1 Month)	0.30
Receivables	6.66
Total	7.50
Rate of Interest on Working Capital (SBI Base rate as on 01.04.2013 plus 350 points)	13.20%
Total Interest on Working Capital (Annualized)	0.99

Allowable Fee & Charges (2009-14)

Particulars	2013-14 (For 3 Months)
Annual Capital Recovery Charge - Loan	5.48
Annual Capital Recovery Charge - Equity	3.36
Annual Capital Recovery Charge - Total	8.84
O&M Expenses	0.90
Interest on Working Capital ⁺	0.25
Total Allowable Fee & Charges (2009-14)	9.99

Note: Additional Capitalisation after date of commercial operation shall be considered in the next period (As per prevailing practice in respect of ULDC petitions).

Weighted Average Rate of Interest on DOCO (for 2009-14) as per loans submitted by the petitioner

(₹ in Lacs)

Loan	Amount of Loan as on DOCO	Rate of interest as on DOCO	Interest	Weighted Average Rate of Interest
Bond XLII	188.45	8.80%	16.58	
Total Loan	188.45		16.58	8.8000%



Annexure II

Name of the Company:	PGCIL
Name of the Element:	Asset-II: State Portion (3.262 km) Fibre Optic in lieu of existing Microwave in SR
Actual DOCO:	01.01.2014
Petition No.:	487-TT-2014
Tarrif setting Period:	2009-14

Fee & Charges (2009-14)

State Portion

Particulars	On Capital expenditure upto DOCO i.e.01.01.2014	2013-14
Gross Capital Cost	94.65	9.56
Gross Notional Loan	66.26	6.69
Gross Equity	28.40	2.87
Years	15.00000	14.75000
Months	180.00	177.00
Weighted Average Rate of Interest p.a.	8.8000%	8.8000%
Weighted Average Rate of Interest p.m.	0.7333%	0.7333%
Monthly Recovery Factors -Loan	0.010024	0.010106
Monthly Capital Recovery Charge - Loan	0.66	0.07
Annual Capital Recovery Charge - Loan	7.97	0.81
Rate of Return on Equity p.a. (As per Regulation 2009)	15.50%	15.50%
Rate of Return on Equity p.m.	1.29%	1.29%
Monthly Recovery Factors -Equity	0.014340	0.014402
Monthly Capital Recovery Charge - Equity	0.41	0.04
Annual Capital Recovery Charge - Equity	4.89	0.50
Monthly Capital Recovery Charge - Total	1.07	0.11
Annual Capital Recovery Charge - Total	12.86	1.31

Total Fee & Charges (Annualized):

Particular	2013-14
Annual Capital Recovery Charge - Loan	7.97
Annual Capital Recovery Charge - Equity	4.89
Annual Capital Recovery Charge - Total	12.86
O&M Expenses (Annualized)	0.00
Interest on Working Capital ⁺	0.29
Total Fee & Charges (Annualized)	13.15



Interest on Working Capital (Annualized)

Particular	2013-14
Maintenance Spares	0.00
O&M Expenses (1 Month)	0.00
Receivables	2.19
Total	2.19
Rate of Interest on Working Capital (SBI Base rate as on 01.04.2013 plus 350 points)	13.20%
Total Interest on Working Capital (Annualized)	0.29

Allowable Fee & Charges (2009-14)

Particulars	2013-14 (For 3 Months)
Annual Capital Recovery Charge - Loan	1.99
Annual Capital Recovery Charge - Equity	1.22
Annual Capital Recovery Charge - Total	3.21
O&M Expenses	0.00
Interest on Working Capital [†]	0.07
Total Allowable Fee & Charges (2009-14)	3.29

Note: Additional Capitalisation after date of commercial operation shall be considered in the next period (As per prevailing practice in respect of ULDC petitions).

Weighted Average Rate of Interest on DOCO (for 2009-14) as per loans submitted by the petitioner

(₹ in Lacs)				
Loan	Amount of Loan as on DOCO	Rate of interest as on DOCO	Interest	Weighted Average Rate of Interest
Bond XLII	68.53	8.80%	6.03	
Total Loan	68.53		6.03	8.8000%

