

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 240/TT/2013

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member**

Date of Hearing : 24.06.2014

Date of Order : 01.09.2015

In the matter of:

Determination of fees and charges for fibre optic communication system in lieu of existing Unified Load Despatch and Communication (ULDC) Microwave links in Northern Region for tariff block 2009-14 under sub-section 4 of Section 28 & 79(1)(d) of the Electricity Act, 2003 and Regulation-86.

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. National Hydro Power Corporation Limited,
NHPC Office Complex, Lodhi Road,
New Delhi
3. Satluj Jal Vidyut Nigam Limited,
Power Project, Jhakri, Rampur, District Shimla,
Himachal Pradesh-172 201
4. THDC India Limited,
Bhagirath Puram, Tehri,
Uttarakhand-249 001
5. Nuclear Power Corporation of India Limited,
Nabhkiya Bhawan, Anu-Shakti Nagar,
Mumbai-400 094



6. ADHPL,
Bhilwara Towers, A-12, Sector-1
Noida-201 301
7. Aravali Power Company Private Limited,
Indira Gandhi Super Thermal Power Project,
PO: Jharli, District Jhajjar, Haryana
8. Jaypee Karchan Hydro Corporation Limited,
Sector-128, Noida-201 304
9. Everest Power Private Limited,
1st Floor, Hall-1, NBCC Tower,
Bhikaji Cama Place,
New Delhi-110 066
10. Shree Cement Limited,
PO Box No. 33, Bangur Nagar,
Beawar-305 901, District: Ajmer (Rajasthan)
11. Chandigarh (Electricity Department),
UT Chandigarh, Sector-9,
Chandigarh-160 019
12. Delhi Transco Limited,
SLDC Building (Behind Jakir Husain College),
Tagore Hostel Lane, Minto Road,
New Delhi-110 002
13. Haryana Vidyut Prasaran Nigam Limited,
Room No.-213, Shakti Bhawan, Sector-6,
Panchkula-134 109, Haryana
14. Himachal Pradesh State Electricity Board,
Totu, Shimla-171 011, Himachal Pradesh
15. Power Development Department,
Government of J & K, Narwal Bala,
Gladni-180 004, Jammu
16. PSTCL,
SLDC Building, 220 kV Sub-station Ablowal,
Patiala-147 001, Punjab
17. Vidyut Bhawan, Jyoti Nagar,
Vidyut Marg,
Jaipur-302 015, Rajasthan



18. U.P. Power Corporation Limited,
Electricity Import-Export & Payment Circle,
11th Floor, Shakti Bhawan Extension,
14-Ashok Marg,
Lucknow-226 001, U.P
19. Northern Central Railway,
Nawabyusuf Road, Allahabad
20. Uttranchal Power Corporation Limited,
Kanwali Road, Urja Bhawan,
Dehradun-248 001, Uttarakhand
21. Powerlinks Transmission Limited,
10th Floor, DLF Tower-A,
District Centre, Jasola,
New Delhi-110 044

....Respondents

For petitioner : Shri S.K. Venkatesan, PGCIL
Ms. Sangeeta Edwards, PGCIL
Ms Seema Gupta, PGCIL
Shri S.S Raju, PGCIL
Shri A.S. Kushwaha, PGCIL
Shri S.P. Singh, PGCIL

For respondents : Shri R.K. Jain, RVPN
Shri Arvind Agrawal, RVPN
Shri Mishri Lal, North Central Railway
Shri Rakesh Sharma, PSTCL
Shri Amit Goenka, DELOITTE
Shri A.K. Pandey, NHPC
Shri S.K. Meena, NHPC
Shri R.B. Sharma, Advocate, BRPL
Shri N.N. Sadasivan, APCPL

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 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 Northern Region for the 2009-14 period.



2. The details of the assets covered in the instant petition are as under:-

| S. No. | Asset | Details of the Asset | Scheduled COD | Actual COD | Time over-run |
|--------|-----------|---|---------------|------------|---------------|
| 1 | Asset-I | 1099.803 km of Fibre Optic Communication system | 1.10.2012 | 1.4.2012 | None |
| 2 | Asset-II | 1628.966 km of Fibre Optic Communication system | | 1.1.2013 | 3 months |
| 3 | Asset-III | 493.064 km of Fibre Optic Communication system | | 1.4.2013 | 6 months |

3. The Investment Approval 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 NR dated 25.3.2010 at an estimated cost of ₹16131 lakh, including IDC of ₹1474 lakh (based on 4th Quarter, 2009 price level). The scheduled completion time of the project was 30 months from the date of investment approval i.e. 24.9.2012 say 1.10.2012.

4. The broad scope of work covered under the project is as follows:-

- “(i) Installation of OPGW fibre optic cable on the existing EHV transmission line of POWERGRID and constituents, the estimated length of such cable is approximately 4488 kms.
- (ii) Installation of approximately 18 kms 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. Three number of radio links are proposed. Further, in some portions of the proposed network around 14 kms of Aerial cable is also required.
- (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 nodes. To monitor the Network, Network Management System (NMS) would also be required.”



Brief Background

5. 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.

6. 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)

7. 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.

8. 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.”

9. As held in our order dated 8.12.2011 in Petition No.68/2010, we would like to continue with the levelised tariff for the existing assets in the absence of any provision in the 2009 Tariff Regulations regarding determination of tariff of communication system and ULDC system of the petitioner. 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.

10. BSES Rajdhani Power Limited (BRPL), vide affidavit dated 19.6.2014 has submitted that the petitioner has not mentioned whether all the fibre optic cable will be used for the petitioner's own data and communication or some dark fibre cable is also available to be leased to third parties. In addition, there is already number of EHV transmission lines having OPGW and the cost of OPGW is covered in the cost of these EHV transmission lines. BRPL has further submitted that as 50% of the tariff of communication system is to be borne by the distribution licensees and the buyers, it is necessary that the distribution companies are also made



respondents in the instant petition. During the hearing on 24.6.2014, the learned counsel for BRPL further submitted that the petitioner has made its claim under Regulation 44 "Power to Relax" of the 2009 Tariff Regulations. The estimated completion cost of the instant assets is ₹9172 lakh, as against the approved cost of ₹16131 lakh, resulting in a large savings. The project covers installation of 4488 km of OPGW in place of earth wire on the existing EHV transmission lines of the petitioner and constituents. The installation of OPGW would require replacement of the earth wire on the existing EHV transmission line which is required to be de-capitalized in this petition. He submitted that the decapitalisation should be on the basis of book value, and not on the salvage value. The petitioner vide rejoinder dated 15.7.2014, submitted that the scrap value of the Earthwire will be adjusted in the cost of the project at the time of truing up and further submitted that the decapitalisation of the existing ULDC Microwave links will be done on the basis of the book value and the amount realized will be adjusted in the capital cost of the instant assets. The petitioner submitted that some of the dark fibre is available in OPGW. However, the utilization of dark fibre on constituent's lines for state sector is to be decided by the respective constituent and the utilization of dark fibre on the petitioner's lines is being finalized. The petitioner further submitted that OPGW was not installed at initial stage on the lines covered in the petition and accordingly cost of OPGW is also not covered in the cost of transmission line as OPGW has been installed after the construction of lines in all cases. The petitioner, regarding cost, clarified that the cost of ₹9172 lakh pertains only to part of the project (3221 km out of 4488 km of the project) covered in the instant petition.

11. During the hearing on 24.6.2014, the representative of NHPC, Respondent No. 2, submitted that implementation of OPGW system has not been done in



respect of NHPC projects. The issue of providing Fibre Optic Communication System for the NHPC generating stations located in remote areas like Himalayan region was raised in the 27th TCC meeting and 30th NRPC meeting on 27.2.2014 and 28.2.2014, wherein the petitioner informed that remaining work of central sector will be completed in March, 2014. However, no confirmation has been received till date. He requested the petitioner to accord priorities to OPGW work for NHPC hydro generating station before coming winter season. The representative of the petitioner clarified that the NHPC projects are not the part of this scheme, and that the same will be covered under a subsequent scheme. It was also further submitted that this petition has been filed as per the Commission's order dated 8.12.2011 in Petition No. 68/2010.

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

13. The annual fees and charges claimed by the petitioner based on the actual date of commercial operation are as hereunder:-

(₹ in lakh)

| Asset-I | Central Portion | | State Portion | |
|---------------------------------------|------------------------|----------------|----------------------|----------------|
| Particulars | 2012-13 | 2013-14 | 2012-13 | 2013-14 |
| Annual Capital Recovery Charges-Total | 127.16 | 134.85 | 291.11 | 310.00 |
| Interest on working capital | 6.24 | 6.60 | 6.70 | 7.14 |
| O & M Expenses | 62.50 | 66.08 | - | - |
| Total | 195.90 | 207.53 | 297.81 | 317.14 |

(₹ in lakh)

| Asset-II | Central Portion | | State Portion | |
|---------------------------------------|-------------------------------|----------------|-------------------------------|----------------|
| Particulars | 2012-13 (pro-rata) | 2013-14 | 2012-13 (pro-rata) | 2013-14 |
| Annual Capital Recovery Charges-Total | 18.89 | 84.15 | 105.66 | 457.01 |
| Interest on working capital | 0.93 | 4.03 | 2.43 | 10.52 |
| O & M Expenses | 9.32 | 39.41 | - | - |
| Total | 29.14 | 127.59 | 108.09 | 467.53 |



(₹ in lakh)

| Asset-III | Central Portion | State Portion |
|---------------------------------------|------------------------|----------------------|
| Particulars | 2013-14 | 2013-14 |
| Annual Capital Recovery Charges-Total | 84.91 | 217.86 |
| Interest on working capital | 4.06 | 4.90 |
| O & M Expenses | 41.57 | - |
| Total | 130.54 | 222.76 |

Capital cost

14. The petitioner vide auditor's certificates dated 31.8.2012, 12.3.2013 and 9.5.2013 has 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 from COD to 31.3.2014 corresponding to Asset-I, Asset-II and Asset-III respectively. Accordingly, the gross value of assets as on COD, submitted by the petitioner have been considered for the purpose of Annual Fee & Charges for 2009-14 period as under:-

(₹ in lakh)

| Particulars | Asset-I (COD: 1.4.2012) | | Asset-II (COD: 1.1.2013) | | Asset-III (COD: 1.4.2013) | |
|--|------------------------------------|----------------------|-------------------------------------|----------------------|--------------------------------------|----------------------|
| | Central portion | State portion | Central portion | State portion | Central portion | State portion |
| Expenditure upto COD | 833.37 | 1898.83 | 497.00 | 2828.45 | 554.32 | 1387.22 |
| Additional capitalisation during 2012-13/2013-14 | 105.94 | 260.30 | 89.68 | 358.24 | 81.17 | 277.42 |
| Total | 3098.44 | | 3773.37 | | 2300.13 | |

15. As per the investment approval dated 25.3.2010, the instant assets were to be commissioned within 30 months from the date of investment approval by 24.9.2012 say 1.10.2012. The Asset-I, Asset-II and Asset-III in the instant petition have been commissioned on 1.4.2012, 1.1.2013 and 1.4.2013 respectively. Thus, there is no time over-run in the case of Asset-I but there is time over-run of 3



months and 6 months in the case of Asset-II and Asset-III respectively, in the instant petition.

16. The petitioner submitted the following reasons for delay in the case of Asset-II and Asset-III:-

a. Delay due to late confirmation by UPPTCL: Initially UPPTCL did not agree to participate in the above microwave replacement project due to funding reasons as UPPTCL wanted DOT to compensate for the project as Microwave Replacement was necessitated due to vacation of frequency spectrum mandate by DOT. UPPTCL subsequently confirmed its participation in January, 2011 and asked the petitioner to take up the work, i.e. 10 months after the award of the package. Out of 4488 km of the OPGW length, UPPTCL's share was 2039 km (almost 45%) thus causing substantial delay to the project.

b. Delay due to inclusion of PTCUL: Initially PTCUL was not part of the Project but was included in the project as per decision of NRPC in the month of September, 2011.

c. Delay due to heavy foggy condition: During the installation of the OPGW, almost 4 months i.e. from Mid December, 2011 to Mid February, 2012 and Mid December, 2012 to Mid February, 2013 were lost due to heavy foggy conditions. As OPGW installation work is carried out in live line condition, it is not safe to work as lines have tripped on many occasions due to failure of T&P on account of fog.

17. We have considered the submissions of the petitioner and also pursued the letters dated 17.4.2010, 31.4.2010 and 2.1.2011 submitted by the petitioner. As regards the initial refusal of UPPTCL's, it has already been dealt by us in order dated 8.12.2011 in Petition No. 68/2010 wherein it was clarified if the state portion is not being implemented by UPPTCL separately, the same shall be implemented by the petitioner and UPPTCL would be required to share the tariff in proportion to the assets being utilized by it. We have also noted that some portion of UPPTCL optic fibre (235.153km) was commissioned on 1.4.2013. It was made clear in the said order that the timeline for replacement of the digital microwave by optical fibre should be strictly complied with.

18. Asset-II includes State portion of PSEB-304.62 km, BBMB-3.16 km, RRVPNL-451.45 Km, HVPNL-2.884 km and UPPTCL 630.13 km and Asset-III includes State portion of RRVPNL-47.177 km and PSEB-68.029 km also apart from UPPTCL-235.153 km. There is delay in commissioning of both Asset-II and Asset-III i.e. comprising of RRVPNL and PSEB's portions. The petitioner has not submitted any documentary evidence in regard to delay caused in commissioning of optic fibre network of other constituents included in Asset-II and Asset-III. The Commission has further noted that though PTCUL was not a part of the project initially but was included in the project as per the decision of NRPC and the request of PTCUL, by the petitioner. However, the petitioner has not installed optic fibre for PTCUL in the instant petition but only Battery Bank and charger have been considered for existing communication system for PTCUL.

19. As regards the fog in Northern Part of India adversely affecting various services like transportation and communication and that demobilizing and re-



mobilizing of manpower due to this intermittent condition at regular intervals also affected the progress of the work for which the petitioner has also submitted the extracts of log book for 58 days maintained by control room indicating the condition of fog in various parts of Northern Region. We are of the view that foggy conditions during winter season is a normal phenomenon in parts of Northern Region and that the impact of fog could not be so much that the work of laying OPGW was held up for entire 2 months, both in 2011-12 and 2012-13. Therefore, we are not inclined to condone the delay of 3 months and 6 months in commissioning of both Asset-II and Asset-III respectively.

Treatment of IDC and IEDC

20. The petitioner has made a claim of ₹94.18 lakh, ₹179.36 lakh and ₹239.92 lakh towards IDC for Asset-I, Asset-II and Asset-III respectively. However, detailed working of IDC calculation as well as details of IDC paid after COD are not available. In the absence of the required information, IDC on cash basis has been considered based on the loans deployed as per Form 13 submitted for the instant assets, assuming that the petitioner has not made any default in the payment of interest. Further, in view of non-condonation of delay in the commissioning of Asset-II and Asset-III, the IDC for the delayed period of 3 months and 6 months in the case of Asset-II and Asset-III respectively, has not been allowed. Thus, IDC upto COD has been considered as ₹37.13 lakh, ₹86.26 lakh and ₹90.49 lakh against the claim of the petitioner for ₹94.18 lakh, ₹179.36 lakh and ₹239.92 lakh towards IDC for Asset-I, Asset-II and Asset-III respectively. Thus, the amount of IDC accrued as on COD and to be discharged after COD has not been considered in the capital cost due to non-availability of adequate information.



21. Similarly, the petitioner has claimed Incidental Expenditure during Construction (IEDC) as on COD. The claim is within the percentage on Hard Cost as indicated in the Abstract Cost Estimate submitted by the petitioner. The amount of IEDC allowed in the case of Asset-I is as claimed and the amount of IEDC claimed, disallowed on account of delay in the commissioning and allowed in case of Asset-II and Asset-III are as below:-

| Particulars | IEDC Claimed | IEDC Disallowed | | | IEDC Allowed |
|-------------|--------------|-----------------|---------------|-------|--------------|
| | | Central Portion | State Portion | Total | |
| Asset-I | 47.05 | - | - | - | 47.05 |
| Asset-II | 100.72 | 1.42 | 7.73 | 9.16 | 91.56 |
| Asset-III | 99.11 | 4.56 | 11.96 | 16.52 | 82.59 |

22. Undischarged liabilities will be allowed after the same are discharged. However, as the required information with regard to the IDC/IEDC actually discharged is not available, we are not inclined to allow the amount of IDC/IEDC as claimed by the petitioner. The petitioner is directed to submit the amount of IDC/IEDC paid specific to the transmission asset considered in this petition upto date of commercial operation and balance IDC/IEDC discharged after date of commercial operation. IDC/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.

23. The capital cost considered for the purpose of annual fee and charges, after adjusting the disallowed amount of IDC and IEDC, is as overleaf:-

(₹ in lakh)

| Particulars | Asset-I | | Asset-II | | Asset-III | |
|--|-----------------|----------------|-----------------|----------------|-----------------|----------------|
| | Central Portion | State Portion | Central Portion | State Portion | Central Portion | State Portion |
| Expenditure up to COD (claimed)-(A) | 833.37 | 1898.83 | 497.00 | 2828.45 | 554.32 | 1387.22 |
| IDC disallowed due to Undischarged Liability and Time over-run-(B) | 17.40 | 39.65 | 13.91 | 79.19 | 42.66 | 106.77 |
| IEDC disallowed due to Time over-run-(C) | - | - | 1.42 | 7.73 | 4.56 | 11.96 |
| Capital Cost as on COD (allowed)[A-(B+C)] | 815.97 | 1859.18 | 481.66 | 2741.53 | 507.10 | 1268.50 |

Projected additional capital expenditure

24. The petitioner vide affidavit dated 18.3.2014 submitted revised claim for additional capital expenditure of ₹258.59 lakh, ₹447.92 lakh and ₹366.24 lakh in respect of Asset-I, Asset-II and Asset-III respectively for both the financial years 2012-13 and 2013-14. The additional capital expenditure claimed is for balance and retention payment. However, in the absence of auditors'/management certificate indicating segregation of additional capitalisation into Central and State portions, we are constrained to consider the additional capitalisation details submitted by the petitioner in the original petition vide auditors' certificate dated 31.8.2012, 12.3.2013 and 9.5.2013 in respect of Asset-I, Asset-II and Asset-III respectively. Therefore, we allow the additional capital expenditure as claimed by the petitioner in the original petition. The actual completed cost shall be reviewed at the time of truing up. The petitioner is directed to submit the list of deferred liabilities, if any, at the time of truing up. Thus, the details of additional capital expenditure allowed are as follows:-

(₹ in lakh)

| Particulars | Asset-I | | Asset-II | | Asset-III | |
|--|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| | Central Portion | State Portion | Central Portion | State Portion | Central Portion | State Portion |
| Additional capitalization during 2012-13/2013-14 | 105.94 | 260.30 | 89.68 | 358.24 | 81.17 | 277.42 |
| Total | 366.24 | | 447.92 | | 358.59 | |



25. Thus, the details of capital cost considered as on COD and 31.3.2014 after adjustment for disallowed IDC/IEDC and consideration of additional capital expenditure for the purpose of fee and charges in the instant petition are as given under:-

(₹ in lakh)

| Particulars | Asset-I | | Asset-II | | Asset-III | |
|-------------------------------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|
| | Central Portion | State Portion | Central Portion | State Portion | Central Portion | State Portion |
| Capital Cost as on COD (allowed) | 815.97 | 1859.18 | 481.66 | 2741.53 | 507.10 | 1268.50 |
| Additional capital expenditure | 105.94 | 260.30 | 89.68 | 358.24 | 81.17 | 277.42 |
| Capital cost as on 31.3.2014 | 921.91 | 2119.48 | 571.34 | 3099.77 | 588.27 | 1545.92 |

Debt-equity ratio

26. The capital cost on the date of commercial operation and additional capital expenditure allowed have been considered in the normative debt-equity ratio of 70:30. Details of debt-equity as on date of commercial operation and 31.3.2014 considered on normative basis are as under:-

(₹ in lakh)

| Asset-I Particulars | As on COD | | | | As on 31.3.2014 | | | |
|--------------------------|-----------------|---------------|----------------|---------------|-----------------|---------------|----------------|---------------|
| | Central portion | | State portion | | Central portion | | State portion | |
| | Amount | % | Amount | % | Amount | % | Amount | % |
| Loan/Debt | 571.18 | 70.00 | 1301.43 | 70.00 | 645.34 | 70.00 | 1483.64 | 70.00 |
| Equity | 244.79 | 30.00 | 557.75 | 30.00 | 276.57 | 30.00 | 635.84 | 30.00 |
| Total | 815.97 | 100.00 | 1859.18 | 100.00 | 921.91 | 100.00 | 2119.48 | 100.00 |
| Asset-II Particulars | As on COD | | | | As on 31.3.2014 | | | |
| | Central portion | | State portion | | Central portion | | State portion | |
| | Amount | % | Amount | % | Amount | % | Amount | % |
| Loan/Debt | 337.16 | 70.00 | 1919.07 | 70.00 | 399.94 | 70.00 | 2169.84 | 70.00 |
| Equity | 144.50 | 30.00 | 822.46 | 30.00 | 171.40 | 30.00 | 929.93 | 30.00 |
| Total | 481.66 | 100.00 | 2741.53 | 100.00 | 571.34 | 100.00 | 3099.77 | 100.00 |
| Asset-III Particulars | As on COD | | | | As on 31.3.2014 | | | |
| | Central portion | | State portion | | Central portion | | State portion | |
| | Amount | % | Amount | % | Amount | % | Amount | % |
| Loan/Debt | 354.97 | 70.00 | 887.95 | 70.00 | 411.79 | 70.00 | 1082.14 | 70.00 |
| Equity | 152.13 | 30.00 | 380.55 | 30.00 | 176.48 | 30.00 | 463.77 | 30.00 |
| Total | 507.10 | 100.00 | 1268.50 | 100.00 | 588.27 | 100.00 | 1545.92 | 100.00 |



Rates for Recovery of loan and equity

27. The Capital Recovery Factor for loan in respect of Asset-I, Asset-II and Asset-III has been calculated by applying weighted average rate of interest and it works out to be 9.3043%, 9.3016% and 9.1546% in the case of these assets respectively. The Capital Recovery Factor for equity has been considered on post-tax return on equity of 15.50%. The details are attached at Annexure-3 to Annexure-6 of the order. Thus, the rates considered on annual basis, have been converted to monthly rates and are as under:-

CRF as on COD to be considered for Fee & Charges for 2012-13

| Particulars | Asset-I | | Asset-II | | Asset-III | |
|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Central Portion | State Portion | Central Portion | State Portion | Central Portion | State Portion |
| Loan | 0.010324 | 0.010324 | 0.010323 | 0.010323 | 0.010235 | 0.010235 |
| Equity | 0.014340 | 0.014340 | 0.014340 | 0.014340 | 0.014340 | 0.014340 |
| Total | 0.024664 | 0.024664 | 0.024663 | 0.024663 | 0.024575 | 0.024575 |

28. Thus, the amount of monthly capital recovery charges as on COD both for Central and State portions for Asset-I, Asset-II and Asset-III respectively have been considered by calculating the capital recovery charges for loan and equity using respective Capital Recovery Factors and are as below:-

(₹ in lakh)

| Particulars | Asset-I | | Asset-II | | Asset-III | |
|--------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| | Central Portion | State Portion | Central Portion | State Portion | Central Portion | State Portion |
| Loan | 5.90 | 13.44 | 3.48 | 19.81 | 3.63 | 9.09 |
| Equity | 3.51 | 8.00 | 2.07 | 11.79 | 2.18 | 5.46 |
| Total | 9.41 | 21.43 | 5.55 | 31.60 | 5.81 | 14.55 |

29. The petitioner has prayed to recover the shortfall or refund the excess Annual Fixed Charges, on account of return on equity due to change in applicable Minimum Alternate Tax/Corporate Income Tax rate as per the Income Tax Act,



1961 of the respective financial year directly without making any application before the Commission.

30. The Commission in its order dated 18.3.2011 in Petition No. 28/2010 approved the fees and charges for the period upto 31.3.2009 by considering CRF corresponding to equity on the basis of return on equity at the rate of 14% per annum (post-tax) in accordance with the terms and conditions for determination of tariff applicable during 2004-09. Whereas, during 2009-14, consequent to creation of POSOCO, fees and charges of the assets transferred to POSOCO were allowed as per RLDC Regulations 2009, the assets retained with the CTU are neither covered under the RLDC Regulations nor under the 2009 Tariff Regulations. The tariff regulations applicable for the period 2009-14 provide for recovery of RoE (pre-tax), calculated by grossing up the base rate (normally @ 15.5% per annum) with the Corporate Tax/MAT rate for the year 2008-09 and is to be trued up subsequently with reference to the actual tax rate applicable under the provisions of the relevant Finance Act each year during the tariff period. As already mentioned earlier in this order, PGCIL filed a miscellaneous Petition No. 68/2010 for fixation of tariff norms for recovery of cost of assets ("Communication System" and "Sub-Load Despatch Centre System") to be retained or to be installed by the petitioner after formation of POSOCO for the tariff period 2009-14. It was decided, vide order dated 8.12.2011 in Petition No. 68/2010, to continue with the levelised tariff for the existing assets in the absence of any provision in the 2009 Tariff Regulations regarding determination of tariff of communication system and ULDC system of the petitioner. In our opinion, the concept of grossing up linked with the tariff determination for ordinary assets cannot *per se* be applied for calculating fees and charges in accordance with the Capital Recovery Factor



(CRF) concept. By considering the grossed-up value of RoE, CRF gets distorted because of factoring of tax component. Therefore, in departure from the provisions for recovery of RoE specified under the tariff regulations presently applicable, post-tax RoE of 15.50% per annum, converted to monthly rates has been considered. As RoE has been considered post-tax, the petitioner shall be entitled to recover income-tax from the respondents in proportion of the fees and charges shared by them in accordance with this order.

Operation & Maintenance Expenses (O&M Expenses)

31. The petitioner in the original petition has submitted the claim of the O&M Expenses @ 7.5% of the capital cost for the year 2012-13 and has escalated the claim for 2013-14 @5.72% subject to actual expenditure at the time of truing-up. This seems to be as per the norms which had been arrived at on the basis of normalized actual O&M Expenses during the period 2003-04 to 2007-08 and by escalating it by 5.72% per annum for arriving at norms for the tariff period 2009-14. However, subsequently vide affidavit dated 18.3.2014, the petitioner has submitted that no O & M Expenses was incurred during 2012-13 and 2013-14 as the links were under warranty. Accordingly, no O&M Expenses are allowed for the instant assets.

Interest on working capital

32. SBI Base Rate as on 1.4.2012 i.e. 10.00% Plus 350 bps (13.50%) has been considered as the rate of interest on working capital for Asset-I and Asset-II and SBI Base Rate as on 1.4.2013 i.e. 9.70% Plus 350 bps (13.20%) has been considered as the rate of interest on working capital for Asset-III. The interest on working capital for the assets covered in the petition has been worked out accordingly.



33. Necessary computations in support of interest on working capital are given under:-

(₹ in lakh)

| Asset-I | Central Portion | | State Portion | |
|--------------------|------------------------|----------------|----------------------|----------------|
| Particulars | 2012-13 | 2013-14 | 2012-13 | 2013-14 |
| Maintenance Spares | - | - | - | - |
| O & M Expenses | - | - | - | - |
| Receivables | 19.25 | 21.82 | 43.86 | 50.17 |
| Total | 19.25 | 21.82 | 43.86 | 50.17 |
| Rate of Interest | 13.50% | 13.50% | 13.50% | 13.50% |
| Interest | 2.60 | 2.95 | 5.92 | 6.77 |

(₹ in lakh)

| Asset-II | Central Portion | | State Portion | |
|--------------------|-------------------------------|----------------|-------------------------------|----------------|
| Particulars | 2012-13 (pro-rata) | 2013-14 | 2012-13 (pro-rata) | 2013-14 |
| Maintenance Spares | - | - | - | - |
| O & M Expenses | - | - | - | - |
| Receivables | 11.36 | 13.49 | 64.66 | 73.17 |
| Total | 11.36 | 13.49 | 64.66 | 73.17 |
| Rate of Interest | 13.50% | 13.50% | 13.50% | 13.50% |
| Interest | 1.53 | 1.82 | 8.73 | 9.88 |

(₹ in lakh)

| Asset-III | Central Portion | State Portion |
|--------------------|------------------------|----------------------|
| Particulars | 2013-14 | 2013-14 |
| Maintenance Spares | - | - |
| O & M Expenses | - | - |
| Receivables | 11.89 | 29.74 |
| Total | 11.89 | 29.74 |
| Rate of Interest | 13.20% | 13.20% |
| Interest | 1.57 | 3.93 |

Annual Fees and charges

34. The detailed calculations of fees and charges being allowed for the instant assets are attached at Annexure-1 to Annexure-3 of this order and are summarized hereinafter:-

(₹ in lakh)

| Asset-I | Central Portion | State Portion |
|----------------|------------------------|----------------------|
| Period | | |
| 2012-13 | 115.49 | 263.14 |
| 2013-14 | 130.90 | 301.00 |
| Total | 246.39 | 564.14 |



(₹ in lakh)

| Asset-II | Central Portion | State Portion |
|--------------------|-----------------|---------------|
| Period | | |
| 2012-13 (pro-rata) | 17.04 | 97.00 |
| 2013-14 | 80.94 | 439.01 |
| Total | 97.98 | 536.01 |

(₹ in lakh)

| Asset-III | Central Portion | State Portion |
|--------------|-----------------|---------------|
| Period | | |
| 2013-14 | 71.34 | 178.47 |
| Total | 71.34 | 178.47 |

Filing fee

35. The petitioner has sought reimbursement of filing fee paid by it. BRPL has submitted that the application filing fee can be allowed at the discretion of the Commission but this prayer of the petitioner be rejected. 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

36. 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. Both UPPCL and BRPL have submitted that the prayer of the petitioner is premature. We also consider petitioner's prayer pre-mature and accordingly this prayer is rejected.



Sharing of Annual Fees and Charges

37. 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:-

Distribution licensees and buyers : 45% of system operation charges;

Generating stations and sellers : 45% of system operation charges;

Inter-state Transmission licensees: 10% of system operation charges"

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 sharable by the transmission owner in accordance with these regulations shall be utilised towards reduction of transmission charges payable by the beneficiaries of the assets utilised for other business in proportion to the transmission charges payable by them to the transmission owner and shall be adjusted on monthly basis in the bills of the respective month.

38. This order disposes of Petition No. 240/TT/2013.

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Annexure-1

(₹ in lakh)

| Particulars | Central Portion-Charges (2009-14) | | | State Portion-Charges (2009-14) | | |
|---|---|---------------|---------------|---|---------------|---------------|
| | On Capital expenditure upto COD i.e.1.4.2012 | 2012-13 | 2013-14 | On Capital expenditure upto COD i.e.1.4.2012 | 2012-13 | 2013-14 |
| Gross Capital Cost | 815.97 | 105.94 | - | 1859.18 | 260.30 | - |
| Gross Notional Loan | 571.18 | 74.16 | - | 1301.43 | 182.21 | - |
| Gross Equity | 244.79 | 31.78 | - | 557.75 | 78.09 | - |
| | 815.97 | 105.94 | - | 1859.18 | 260.30 | - |
| Years | 15.00000 | 14.00000 | - | 15.00000 | 14.00000 | - |
| Months | 180.00 | 168.00 | - | 180.00 | 168.00 | - |
| Weighted Average Rate of Interest p.a. | 9.3043% | 9.3043% | - | 9.3043% | 9.3043% | - |
| Weighted Average Rate of Interest p.m. | 0.7754% | 0.7754% | - | 0.7754% | 0.7754% | - |
| Monthly Recovery Factors-Loan | 0.010324 | 0.010668 | - | 0.010324 | 0.010668 | - |
| Monthly Capital Recovery Charge - Loan | 5.90 | 0.79 | - | 13.44 | 1.94 | - |
| Annual Capital Recovery Charge- Loan | 70.77 | 9.49 | - | 161.24 | 23.33 | - |
| Rate of Return on Equity p.a. | 15.50% | 15.50% | - | 15.50% | 15.50% | - |
| Rate of Return on Equity p.m. | 1.29% | 1.29% | - | 1.29% | 1.29% | - |
| Monthly Recovery Factors-Equity | 0.014340 | 0.014608 | - | 0.014340 | 0.014608 | - |
| Monthly Capital Recovery Charge- Equity | 3.51 | 0.46 | - | 8.00 | 1.14 | - |
| Annual Capital Recovery Charge- Equity | 42.12 | 5.57 | - | 95.98 | 13.69 | - |
| Monthly Capital Recovery Charge - Total | 9.41 | 1.26 | - | 21.43 | 3.08 | - |
| Annual Capital Recovery Charge- Total | 112.89 | 15.06 | - | 257.22 | 37.01 | - |
| Total Fee & Charges (Annualized) | | | | | | |
| Particulars | | 2012-13 | 2013-14 | | 2012-13 | 2013-14 |
| Annual Capital Recovery Charge - Loan | - | 70.77 | 80.26 | - | 161.24 | 184.56 |
| Annual Capital Recovery Charge - Equity | - | 42.12 | 47.69 | - | 95.98 | 109.67 |
| Annual Capital Recovery Charge- Total | - | 112.89 | 127.95 | - | 257.22 | 294.23 |
| O&M Expenses | - | - | - | - | - | - |
| Interest on Working | - | 2.60 | 2.95 | - | 5.92 | 6.77 |



| | | | | | | |
|--|---|----------------|----------------|---|----------------|----------------|
| Capital[†] | | | | | | |
| Total Fee & Charges (Annualized) | - | 115.49 | 130.90 | - | 263.14 | 301.00 |
| Interest on Working Capital (Annualized) | | | | | | |
| Particulars | | 2012-13 | 2013-14 | | 2012-13 | 2013-14 |
| Maintenance Spares | - | - | - | - | - | - |
| O&M Expenses (1 Month) | - | - | - | - | - | - |
| Receivables | - | 19.25 | 21.82 | - | 43.86 | 50.17 |
| Total | - | 19.25 | 21.82 | - | 43.86 | 50.17 |
| Rate of Interest on Working Capital (SBI Base rate as on 01.04.2012 plus 350 points) | - | 13.50% | 13.50% | - | 13.50% | 13.50% |
| Total Interest on Working Capital (Annualized) | - | 2.60 | 2.95 | - | 5.92 | 6.77 |
| Allowable Fee & Charges (2009-14) | | | | | | |
| Particulars | | 2012-13 | 2013-14 | | 2012-13 | 2013-14 |
| Annual Capital Recovery Charge - Loan | - | 70.77 | 80.26 | - | 161.24 | 184.56 |
| Annual Capital Recovery Charge - Equity | - | 42.12 | 47.69 | - | 95.98 | 109.67 |
| Annual Capital Recovery Charge- Total | - | 112.89 | 127.95 | - | 257.22 | 294.23 |
| O&M Expenses | - | - | - | - | - | - |
| Interest on Working Capital[†] | - | 2.60 | 2.95 | - | 5.92 | 6.77 |
| Total Allowable Fee & Charges (2009-14) | - | 115.49 | 130.90 | - | 263.14 | 301.00 |
| Note: Additional Capitalisation after date of commercial operation shall be considered in the next period (As per prevailing practice in respect of ULDC petitions). | | | | | | |



Annexure-2

(₹ in lakh)

| Particulars | Central Portion-Charges (2009-14) | | | State Portion-Charges (2009-14) | | |
|---|--|--------------|--------------|--|---------------|---------------|
| | On Capital expenditure upto DOCO i.e.1.1.2013 | 2012-13 | 2013-14 | On Capital expenditure upto DOCO i.e.1.1.2013 | 2012-13 | 2013-14 |
| Gross Capital Cost | 481.66 | 89.68 | - | 2741.53 | 358.24 | - |
| Gross Notional Loan | 337.16 | 62.78 | - | 1919.07 | 250.77 | - |
| Gross Equity | 144.50 | 26.90 | - | 822.46 | 107.47 | - |
| | 481.66 | 89.68 | - | 2741.53 | 358.24 | - |
| Years | 15.00000 | 14.75000 | - | 15.00000 | 14.75000 | - |
| Months | 180.00 | 177.00 | - | 180.00 | 177.00 | - |
| Weighted Average Rate of Interest p.a. | 9.3016% | 9.3016% | - | 9.3016% | 9.3016% | - |
| Weighted Average Rate of Interest p.m. | 0.7751% | 0.7751% | - | 0.7751% | 0.7751% | - |
| Monthly Recovery Factors-Loan | 0.010323 | 0.010404 | - | 0.010323 | 0.010404 | - |
| Monthly Capital Recovery Charge - Loan | 3.48 | 0.65 | - | 19.81 | 2.61 | - |
| Annual Capital Recovery Charge - Loan | 41.77 | 7.84 | - | 237.72 | 31.31 | - |
| Rate of Return on Equity p.a. | 15.50% | 15.50% | - | 15.50% | 15.50% | - |
| Rate of Return on Equity p.m. | 1.29% | 1.29% | - | 1.29% | 1.29% | - |
| Monthly Recovery Factors-Equity | 0.014340 | 0.014402 | - | 0.014340 | 0.014402 | - |
| Monthly Capital Recovery Charge- Equity | 2.07 | 0.39 | - | 11.79 | 1.55 | - |
| Annual Capital Recovery Charge- Equity | 24.87 | 4.65 | - | 141.53 | 18.57 | - |
| Monthly Capital Recovery Charge- Total | 5.55 | 1.04 | - | 31.60 | 4.16 | - |
| Annual Capital Recovery Charge- Total | 66.63 | 12.49 | - | 379.25 | 49.88 | - |
| Total Fee & Charges (Annualized): | | | | | | |
| Particulars | | 2012-13 | 2013-14 | | 2012-13 | 2013-14 |
| Annual Capital Recovery Charge - Loan | - | 41.77 | 49.60 | - | 237.72 | 269.03 |
| Annual Capital Recovery Charge - Equity | - | 24.87 | 29.51 | - | 141.53 | 160.10 |
| Annual Capital Recovery Charge - Total | - | 66.63 | 79.12 | - | 379.25 | 429.13 |
| O&M Expenses | - | - | - | - | - | - |
| Interest on Working | - | 1.53 | 1.82 | - | 8.73 | 9.88 |



| | | | | | | |
|--|---|---------------------------|----------------|---|---------------------------|----------------|
| Capital¹ | | | | | | |
| Total Fee & Charges (Annualized) | - | 68.16 | 80.94 | - | 387.98 | 439.01 |
| Interest on Working Capital (Annualized) | | | | | | |
| Particulars | | 2012-13 | 2013-14 | | 2012-13 | 2013-14 |
| Maintenance Spares | - | - | - | - | - | - |
| O&M Expenses (1 Month) | - | - | - | - | - | - |
| Receivables | - | 11.36 | 13.49 | - | 64.66 | 73.17 |
| Total | - | 11.36 | 13.49 | - | 64.66 | 73.17 |
| Rate of Interest on Working Capital (SBI Base rate as on 01.04.2012 plus 350 points) | - | 13.50% | 13.50% | - | 13.50% | 13.50% |
| Total Interest on Working Capital (Annualized) | - | 1.53 | 1.82 | - | 8.73 | 9.88 |
| Allowable Fee & Charges (2009-14) | | | | | | |
| Particulars | | 2012-13 (pro-rata) | 2013-14 | | 2012-13 (pro-rata) | 2013-14 |
| Annual Capital Recovery Charge-Loan | - | 10.44 | 49.60 | - | 59.43 | 269.03 |
| Annual Capital Recovery Charge-Equity | - | 6.22 | 29.51 | - | 35.38 | 160.10 |
| Annual Capital Recovery Charge-Total | - | 16.66 | 79.12 | - | 94.81 | 429.13 |
| O&M Expenses | - | - | - | - | - | - |
| Interest on Working Capital¹ | - | 0.38 | 1.82 | - | 2.18 | 9.88 |
| Total Allowable Fee & Charges (2009-14) | - | 17.04 | 80.94 | - | 97.00 | 439.01 |
| Note: Additional Capitalisation after date of commercial operation shall be considered in the next period (As per prevailing practice in respect of ULDC petitions). | | | | | | |

Annexure-3

(₹ in lakh)

| Particulars | Central Portion-Charges (2009-14) | | State Portion-Charges (2009-14) | |
|--|---|----------------|---|----------------|
| | On Capital expenditure upto COD i.e.1.4.2013 | 2013-14 | On Capital expenditure upto COD i.e.1.4.2013 | 2013-14 |
| Gross Capital Cost | 507.10 | 81.17 | 1268.50 | 277.42 |
| Gross Notional Loan | 354.97 | 56.82 | 887.95 | 194.19 |
| Gross Equity | 152.13 | 24.35 | 380.55 | 83.23 |
| | 507.10 | 81.17 | 1268.50 | 277.42 |
| Years | 15.00000 | 14.00000 | 15.00000 | 14.00000 |
| Months | 180.00 | 168.00 | 180.00 | 168.00 |
| Weighted Average Rate of Interest p.a. | 9.1546% | 9.1546% | 9.1546% | 9.1546% |
| Weighted Average Rate of Interest p.m. | 0.7629% | 0.7629% | 0.7629% | 0.7629% |
| Monthly Recovery Factors-Loan | 0.010235 | 0.010580 | 0.010235 | 0.010580 |
| Monthly Capital Recovery Charge -Loan | 3.63 | 0.60 | 9.09 | 2.05 |
| Annual Capital Recovery Charge - Loan | 43.60 | 7.21 | 109.06 | 24.65 |
| Rate of Return on Equity p.a. | 15.50% | 15.50% | 15.50% | 15.50% |
| Rate of Return on Equity p.m. | 1.29% | 1.29% | 1.29% | 1.29% |
| Monthly Recovery Factors-Equity | 0.014340 | 0.014608 | 0.014340 | 0.014608 |
| Monthly Capital Recovery Charge - Equity | 2.18 | 0.36 | 5.46 | 1.22 |
| Annual Capital Recovery Charge - Equity | 26.18 | 4.27 | 65.48 | 14.59 |
| Monthly Capital Recovery Charge - Total | 5.81 | 0.96 | 14.55 | 3.27 |
| Annual Capital Recovery Charge - Total | 69.77 | 11.48 | 174.54 | 39.24 |
| Total Fee & Charges (Annualized) | | | | |
| Particulars | | 2013-14 | | 2013-14 |
| Annual Capital Recovery Charge - Loan | - | 43.60 | - | 109.06 |
| Annual Capital Recovery Charge - Equity | - | 26.18 | - | 65.48 |
| Annual Capital Recovery Charge - Total | - | 69.77 | - | 174.54 |
| O&M Expenses | - | - | - | - |
| Interest on Working Capital¹ | - | 1.57 | - | 3.93 |



| | | | | |
|--|---|----------------|---|----------------|
| Total Fee & Charges (Annualized) | - | 71.34 | - | 178.47 |
| Interest on Working Capital (Annualized) | | | | |
| Particulars | | 2013-14 | | 2013-14 |
| Maintenance Spares | - | - | - | - |
| O&M Expenses (1 Month) | - | - | - | - |
| Receivables | - | 11.89 | - | 29.74 |
| Total | - | 11.89 | - | 29.74 |
| Rate of Interest on Working Capital (SBI Base rate as on 01.04.2013 plus 350 points) | - | 13.20% | - | 13.20% |
| Total Interest on Working Capital (Annualized) | - | 1.57 | - | 3.93 |
| Allowable Fee & Charges (2009-14) | | | | |
| Particulars | | 2013-14 | | 2013-14 |
| Annual Capital Recovery Charge - Loan | - | 43.60 | - | 109.06 |
| Annual Capital Recovery Charge - Equity | - | 26.18 | - | 65.48 |
| Annual Capital Recovery Charge - Total | - | 69.77 | - | 174.54 |
| O&M Expenses | - | - | - | - |
| Interest on Working Capital¹ | - | 1.57 | - | 3.93 |
| Total Allowable Fee & Charges (2009-14) | - | 71.34 | - | 178.47 |
| Note: Additional Capitalisation after date of commercial operation shall be considered in the next period (As per prevailing practice in respect of ULDC petitions). | | | | |

Annexure-4

(₹ in lakh)

| Wt. Average Rate of Interest on DOCO (for 2009-14) as submitted by the petitioner | | | | |
|--|-------------------------------------|---|-----------------|--|
| Loan | Amount of Loan as on COD | Rate of interest as on COD | Interest | Weighted Average Rate of Interest |
| Bond XXXII | 160.00 | 8.84% | 14.14 | |
| Bond XXXIV | 100.00 | 8.84% | 8.84 | |
| Bond XXXV | 450.00 | 9.64% | 43.38 | |
| Bond XXXVI | 350.00 | 9.35% | 32.73 | |
| Bond XXXVII | 350.00 | 9.25% | 32.38 | |
| Bond XXXVIII | 502.54 | 9.25% | 46.48 | |
| Total Loan | 1912.54 | | 177.95 | 9.3043% |



Annexure-5

(₹ in lakh)

| Wt. Average Rate of Interest on DOCO (for 2009-14) as submitted by the petitioner | | | | |
|--|---------------------------------|-----------------------------------|-----------------|--|
| Loan | Amount of Loan as on COD | Rate of interest as on COD | Interest | Weighted Average Rate of Interest |
| Bond XXXII | 110.00 | 8.84% | 9.72 | |
| Bond XXXIV | 60.00 | 8.84% | 5.30 | |
| Bond XXXV | 300.00 | 9.64% | 28.92 | |
| Bond XXXVI | 200.00 | 9.35% | 18.70 | |
| Bond XXXVII | 200.00 | 9.25% | 18.50 | |
| Bond XXXVIII | 400.00 | 9.25% | 37.00 | |
| XL (Proposed Loan 2012-13) | 1057.81 | 9.30% | 98.38 | |
| Total Loan | 2327.81 | | 216.52 | 9.3016% |



Annexure-6

(₹ in lakh)

| Wt. Average Rate of Interest on DOCO (for 2009-14) as submitted by the petitioner | | | | |
|--|-------------------------------------|---------------------------------------|-----------------|--|
| Loan | Amount of Loan as on COD | Rate of interest as on COD | Interest | Weighted Average Rate of Interest |
| Bond XXXII | 120.00 | 8.84% | 10.61 | |
| Bond XXXIV | 95.00 | 8.84% | 8.40 | |
| Bond XXXV | 195.00 | 9.64% | 18.80 | |
| Bond XXXVI | 150.00 | 9.35% | 14.03 | |
| Bond XXXVII | 70.00 | 9.25% | 6.48 | |
| Bond XXXVIII | 200.00 | 9.25% | 18.50 | |
| Bond XL | 200.00 | 9.30% | 18.60 | |
| Bond XLI | 110.00 | 8.85% | 9.74 | |
| Bond XLII | 219.08 | 8.80% | 19.28 | |
| Total Loan | 1359.08 | | 124.42 | 9.1546% |

