CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 67/TT/2012

Coram:

Shri Gireesh B. Pradhan, Chairperson
Shri M Deena Dayalan, member
Shri A. K. Singhal, Member
Shri A S Bakshi, Member

Date of Hearing : 09.10.2014
Date of Order : 15.01.2015

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and Central Electricity Regulatory Commission (Terms & Conditions of tariff) Regulations 2009 for determination of transmission tariff for 400 kV D/C (Quad) Koderma-Gaya Transmission Line and associated bays at Gaya Sub-station associated with Supplementary Transmission System under DVC and Maithon right bank project in Eastern Region from the date of commercial operation to 31.3.2014

And in the matter of:

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

Vs

1. Haryana Vidyut Prasaran Nigam, Ltd.,
   Shakti Bhawan, Sector-6,
   Panchkula-134 109.

2. Delhi Transco Ltd.,
   Shakti Sadan, Kotla Road,
   New Delhi-110 002.

3. Damodar Valley Corporation,
   DVC Tower
   Menekta, Civic Centre, VIP Road,
   Kolkata. …… **Respondents**

For petitioner	:	Shri S.S. Raju, PGCIL Shri M.M. Mondal, PGCIL Shri S.K. Venkatasan, PGCIL Ms. Seema Gupta, PGCIL
For respondent	:	None

ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission tariff in respect of 400 kV D/C (Quad) Koderma- Gaya Transmission Line and associated bays at Gaya Sub-station associated with supplementary Transmission System (hereinafter referred to as "Asset") under DVC and Maithon right bank project in Eastern Region from the date of commercial operation (hereinafter "DOCO") to 31.3.2014 for tariff block 2009-14 period based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as "the 2009 Tariff regulations").

2. Investment Approval (I.A.) for the transmission project was accorded by Board of Director of the petitioner in its 212th Board meeting held on 6.8.2008, (communicated vide the Memorandum dated 29.8.2008) at an estimated cost of ₹236095 lakh including IDC of ₹23593 lakh (based on 1st Quarter, 2008 price level). Subsequently, Revised Cost Estimates were approved by the Board of Directors of the petitioner company at ₹258090 lakh including IDC of ₹24441 lakh at December, 2012 price level in its meeting held on 1.5.2014 which was submitted under the petitioner's affidavit dated 8.10.2014.

3. Scope of the project covered under the IA is as follows:-

Transmission Lines

(a) Specific System for Maithon RB

i) Maithon RB TPS- Ranchi (PG) 400 kV D/C.

(b) Specific System for Bokaro Extn. and Koderma

ii) Bokaro TPS Extn-Koderma TPS 400 kV D/C

iii) Koderma-Gaya (PG) 400 kV D/C

(c) Specific System for Mejia Extn.

iv) Meija- Maithon (PG) 400 kV D/C

(d) Common Transmission System for import of power by NR

v) Sasaram-Fatehpur 765 kV S/C line

vi) Fatehpur-Agra 765 kV S/C line

vii) Biharsharif-Sasaram 400 kV D/C (Quad Conductor)line

viii) LILO of Singruali-Kanpur 400 kV S/C line at Fatehpur

ix) LILO of Allahabad-Kanpur 400 kV S/C line at Fatehpur

x) LILO of Fatehpur (UPPCL)- Kanpur (UPPCL) 220 kv D/C line at Fathepur (POWERGRID)

xi) LILO of Dehri- Bodhgaya 200 kV D/C line at Gaya

Sub-station

(e) Additional Scope at Fatehpur 765/400 kV sub-station

- 2x315 MVA, 400/220 kV transformer with associated bays.
- 4 nos. 400 kV line bays (for LILO of Singrauli- Kanpur 400 kV S/C & LILO of Allahabad- Kanpur 400 kV S/C line)
- 4 nos. 220 kV line bays [for LILO of Fatehpur (UPPCL)-Kanpur (UPPCL) 220 kV D/C line].

(f) Additional scope at Gaya 765/400 kV sub-station.

- 2x315 MVA, 400/220 kv transformer with associated bays
- 4 nos. 220 kV line bays (for LILO of Dehri- Bodhgaya 220 kV D/C line)

(g) Additional sope at Ranchi 400/220 kV sub-station

- 2 nos. 400 kV line bays (for termination of Maithon RB- Ranchi 400 kV D/C line)

(h) PLCC Equipments for the following:-

- Koderma TPS – Bokaro TPS 400 kV D/C line
- At Dehri and Bodhgaya 220 kV sub-station (for LILO of Dehri-Bodhgaya 220 kV D/C line at Gaya)

Note: 1) Bays at Maithon RB, Koderma TPS, Bokaro TPS are to be covered under the scope of Generation Switchyards.

2) Bay extension at POWERGRID Sub-station at Sasaram, Agra & Biharsharif for termination of associated lines has been covered under the main DPR for DVC and Maithon RB projects.

4. The transmission line at Para 3(b)(ii) Koderma-Gaya (PG) 400 kV D/C line (alongwith associated bays at Gaya Sub-station associated with Supplementary Transmission System under DVC and Maithon Right Bank Project) was covered in the present petition. The petitioner in its affidavit dated 5.3.2013 has submitted that it has filed Petition No. 87/TT/2012 for determination of tariff of 400 kV D/C (Quad) Maithon-Gaya Transmission Line under DVC Common Project in Eastern Region. The petitioner has submitted that 400 kV D/C Koderma-Gaya Transmission Line and 400 kV D/C (Quad) Maithon Gaya Transmission Lines are passing through a forest stretch of 37 km. In order to judiciously utilize the ROW, the construction of these

two D/C lines in the forest stretch was decided to be made by using Multi-Circuit Tower configuration. Since the construction of these lines were likely to be delayed due to issue of forest clearances, as a remedial measure to facilitate interconnection with ER, the interim arrangement was approved by Central Electricity Authority on 9.4.2012. As per the interim arrangement, the petitioner has revised the scope of the transmission assets covered in the instant petition as follows:-

	As per Original Scope *	**Revised Scope**
Name of Transmission Element	400 KV D/C (Quad) Koderma-Gaya Transmission Line and associated bays at Gaya Sub-station	400KV D/C (Quad) Maithon-Koderma (**Part of Koderma-Gaya**) under contingency arrangement of supplementary transmission system associated with DVC and Maithon RB.
Apportioned approved Cost (₹ in lakh)	18362.82	9893.70

5. The petitioner has submitted that, on the completion of construction of assets as per the original scope, the interim arrangement will be withdrawn and it would be informed to the Commission. Tariff is being calculated in this order, as per the revised scope of the project.

6. The details of apportioned approved cost, actual expenditure incurred as on date of commercial operation as per auditor certificate dated 19.3.2013 and details of estimated additional capitalization projected to be incurred for the period from 1.2.2013 i.e. commissioning to 31.3.2014 for the transmission Asset covered in the petition are summarized overleaf:-

(₹ in lakh)

Apportioned approved cost	Expenditure Incurred upto DOCO	Additional Capital Expenditure		Total estimated completion Cost
		2012-13	2013-14	
9894.00	9122.93	111.84	260.96	9495.73

7. Details of the transmission charges claimed by the petitioner are as under:-

(₹ in lakh)

Particulars	2012-13 (Pro Rata)	2013-14
Depreciation	80.77	494.49
Interest on Loan	95.12	556.55
Return on equity	80.23	491.14
Interest on Working Capital	6.42	38.81
O & M Expenses	9.44	59.87
Total	**271.98**	**1640.86**

8. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-

(₹ in lakh)

Particulars	2012-13 (Pro Rata)	2013-14
Maintenance Spares	8.50	8.98
O & M expenses	4.72	4.99
Receivables	271.98	273.48
Total	**285.20**	**287.45**
Interest	6.42	38.81
Rate of Interest	13.50%	13.50%

9. No comments have been received from the general public in response to the notices published in news papers by the petitioner under Section 64 of the Electricity Act, 2003. Besides, none of the respondents have filed reply to the petition.

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

Capital Cost

11. As regards the capital cost, Regulation 7 of the 2009 tariff regulations provides as under:-

> **"(1) Capital cost for a project shall include:-**
>
> (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii)being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
>
> (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
>
> (c) additional capital expenditure determined under regulation 9:
>
> Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.
>
> (2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:
>
> Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:
>
> Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff."

12. While filing the petition, the capital expenditure as on the anticipated date of commercial operation and additional capital expenditure projected to be incurred for the asset covered in the petition were submitted by the

petitioner along with Auditor Certificate as per the original scope. As stated above, the scope of the project was revised on account of the delay in obtaining forest clearance. Accordingly, the assets have been revised and the petitioner has, vide its additional affidavit dated 5.3.2013, furnished the cost actually incurred up to the date of commissioning i.e. 1.2.2013, duly supported by Auditor's certificate dated 4.1.2013.

Cost over-run

13. As per the initial Investment approval, the cost of the project was ₹236095 lakh. This has since been revised to ₹258090 lakh vide the Revised Cost estimates dated 24.5.2013. Apportioned approved cost vis-à-vis the actual completion cost as also the projected additional capital expenditure in respect of the revised scope of the project as submitted by the petitioner is as under:-

(₹ in lakh)

Apportioned approved cost	**Expenditure Incurred upto DOCO**	**Additional Capital Expenditure**		**Total estimated completion Cost**
		2012-13	2013-14	
9894.00	9122.93	111.84	260.96	9495.73

14. It may be seen from the above, the estimated completion cost is within the apportioned approved cost. Hence, there is no cost over-run.

15. Further, it is observed from the petitioner's affidavit dated 25.11.2014 that the expenditure incurred up to the date of commercial operation viz. ₹9122.93 lakh includes ₹7.36 lakh which has been incurred for the interim arrangement on account of extra conductor and other tower accessories used. The petitioner has further clarified that this cost has been included in

the capital cost of interim arrangement.

16. While we are convinced and hold that the above expenditure needs to be reimbursed to the petitioner, we do not approve of its capitalization. Accordingly, we direct that the above expenditure of ₹7.36 lakh may be recovered by the petitioner as onetime reimbursement.

Time Over-run

17. As per the I.A dated 29.8.2008, the project was scheduled to be commissioned within 48 months from the date of I.A. Hence, the assets were to be commissioned progressively upto 1.9.2012. The asset has been commissioned on 1.2.2013. Hence, there is a delay of 5 months in commissioning the instant asset.

18. In this connection, the petitioner vide its affidavit dated 7.10.2014 submitted the following clarifications:-

(a) The total forest land involvement for contingency arrangement portion was to the tune of 147 Hectare in the Maithon-Gaya line. Preliminary and detailed survey was included in the scope of main transmission line contract which is a pre-requisite for preparation of forest proposal.

(b) Carrying out survey in the forest areas was quite challenging due to Maoist threat prevailing in the area. However with utmost caution and care the work of survey of line could be completed.

(c) In the mean time vide order dated 3.8.2009, Ministry of Environment and Forest, directed all State Governments to ensure compliance of Forest Rights Act 2006 which inter-alia required NOC and written consent from each Gramsabha (in which at least 50% of the members were present) and certification of the same by the respective State Governments. This had been made mandatory prerequisite for submission of forest proposal.

(d) Instant forest proposal involved 3 DFOs in the state of Jharkhand and 1 DFO in the state of Bihar. Holding gram-sabha in each village was quite a cumbersome and time consuming exercise. Compliance of this condition, which came into force only from 3.8.2009, considerably delayed the submission of proposal for forest clearance. However with extensive mobilization of manpower, this exercise could be completed in May–August, 2010 and forest proposal was submitted by the petitioner to various DFOs between May to September, 2010. There had been delay in obtaining forest clearance of this line. Final clearance in respect of Bihar was received on 16.1.2012 and that of Jharkhand on 8.11.2012. i.e 16 months after submission of proposal in the state of Bihar and 26 months in the state of Jharkhand. Since, most of the works associated with Maithon–Gaya line falls in the forest area that too mostly in Jharkhand, the work could be extensively taken up only after final approval of forest clearance.

19. Break-up of the delay as submitted by the petitioner is as under:-

Activities	**Jharkhand**	**Bihar**
	Date	**Date**
Submission of Forest proposal	May/September, 2010	September, 2010
Forwarded to MoEF	1.6.2011	5.4.2011
Stage I clearance by MoEF,	22.3.2012	30.8.2011
Stage II clearance by MoEF,	8.8.2012	16.1.2012
Final clearance issued	**8.11.2012**	**16.1.2012**
Total time taken	**26 months**	**16 months**

20. We are prima facie satisfied with the reasons for delay adduced by the petitioner and are inclined to condone the delay. The petitioner is directed to support its averments with the help of supporting documentary evidence i.e. copies of communication with Forest Department at the time of filing truing up petition whereupon a final view will be taken on the condonation of delay, as required.

21. For the present we hold that there is no need to make any deduction from the capital cost on account of time over-run.

22. The petitioner has filed the petition for determination of tariff on 1.2.2012 with anticipated date of commercial operation as 1.3.2012 (only few days ahead with no time over-run). It is expected that in such cases, while filing the petition, the petitioner has completed almost all the work of the transmission line and is anticipating commissioning of the line to be declared within a short span of time. However, it is observed that the petitioner did not have the forest clearance for 37 km of the line at the time of filing the petition and had to devise an interim arrangement avoiding such forest area during April, 2012 because of which the asset could be commissioned only by

1.2.2013. The petitioner has also obtained provisional tariff for the asset on 21.3.2012. Such a practice on the part of the petitioner is not appreciated. The petitioner is advised not to hasten filing of tariff petitions in such cases.

Treatment of Initial spares

23. Regulation 8 of the 2009 tariff regulations provides that Initial spares shall be capitalised as a percentage of the original project cost , subject to following ceiling norms:-

Transmission line	0.75%
Transmission Sub-station	2.5%
Series compensation devices & HVDC Station	3.5%

24. The petitioner has claimed initial spares amounting to ₹91.50 lakh. As discussed above, the cost of contingency arrangement amounting to ₹7.36 lakh has been reduced from the capital cost, as the same has not been allowed to be capitalized. Accordingly, the cost of initial spares has been correspondingly reduced to ₹91.43 lakh. This is found to be more than the prescribed percentage viz. 0.75%. Accordingly, the cost of initial spares is being restricted as under:-

(₹ in lakh)

Particulars	**Capital Cost up to cut off date**	**Initial Spares Claimed**	**Ceiling Limit, Regulation' 2009**	**Initial Spares worked out**	**Excess Initial Spares**
Transmission Line	9488.37	91.43	0.75%	71.01	20.42

25. Based on the above, capital cost considered as on DOCO after adjusting the additional cost of interim arrangement, capitalization of IDC, IEDC and admissible initial spares for the purpose of the determination of transmission

tariff is as follows:-

(₹ in lakh)

Particular	
Building and other civil works	0.00
Transmission Line	9095.15
Sub-Station Equipments	0.00
PLCC	0.00
Capital Cost considered as on DOCO*	**9095.15***

***** Inclusive of admissible initial spares of ₹71.01 lakh for Transmission lines. Excess initial spare has been excluded.

<u>Additional Capital Expenditure</u>

26. With regard to additional capital expenditure, clause 9(1) of the 2009 Tariff Regulations provides as under:-

> "Additional Capitalisation: (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:
>
> (i) Undischarged liabilities;
> (ii) Works deferred for execution;
> (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
> (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
> (v) Change in Law:"

27. The 2009 Tariff Regulations further defines cut-off date as

> "cut-off date means 31st march of the year closing after 2 years of the year of commercial operation of the project, and incase of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation".

Accordingly, the cut-off in the instant case is 2017.

28. It is noticed that the additional capital expenditure claimed is towards balance and retention payments and within the cut-off period. Hence, the same is allowed in terms of Regulation 9(1) of the 2009 Tariff Regulations.

Debt- Equity Ratio

29. Regulation 12 of the 2009 Tariff Regulations provides that,-

> "12. **Debt-Equity Ratio**. (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:
>
> Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:
>
> Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.
>
> **Explanation.-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.
>
> (2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.
>
> (3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

30. The petitioner has claimed Debt-Equity ratio of 70:30 in respect of the capital cost on the date of commercial operation as well as the additional capital expenditure. The same, being in accordance with the 2009 Tariff Regulations, has been allowed in the calculation of tariff in this order.

Return on Equity

31. Regulation 15 of the 2009 Tariff Regulations provides as under:-

> "15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)
Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee as the case may be, shall recover the shortfall or refund the excess Annual Fixed charge on account of Return on Equity due to change in applicable Minimum Alternate/ Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission;

Provided further that Annual Fixed charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective financial year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations".

32. The petitioner has submitted that it may be allowed to recover the shortfall or refund the excess Annual Fixed Charges, on account on 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 under Regulation 15(5) of the 2009 Tariff Regulations. We would like to clarify that

the petitioner is allowed to recover the shortfall or refund the excess Annual Fixed Charges under Regulation 15(5) of the 2009 Tariff Regulations. Accordingly, Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15(5) of the 2009 Tariff Regulations.

33. Details of the return on equity allowed are as under:-

(₹ in lakh)

Particulars	**2012-13 (Pro rata)**	**2013-14**
Opening Equity	2728.55	2762.10
Addition due to Additional Capitalisation	33.55	78.29
Closing Equity	2762.10	2840.39
Average Equity	2745.32	2801.24
Return on Equity (Base Rate)	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.330%	11.330%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%
Return on Equity (Pre Tax)	79.98	489.68

<u>Interest on loan</u>

34. Regulation 16 of the 2009 Tariff Regulations provides that:-

"16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

35. In these calculations, interest on loan has been computed on the following basis:

(a) Gross amount of loan, repayment of instalments and rate of interest on actual loans have been considered as per affidavit of the petitioner.

(b) The yearly repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that year.

(c) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed; and

(d) Weighted average rate of interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at the interest on loan.

36. Detailed calculations in support of the weighted average rate of interest have been given in the Annexure to this order.

37. Based on the above, interests on loan has been calculated as under:-

(₹ in lakh)

Particulars	**2012-13 (pro-rata)**	**2013-14**
Gross Normative Loan	6366.61	6444.89
Cumulative Repayment upto Previous Year	0.00	80.53
Net Loan-Opening	6366.61	6364.36
Addition due to Additional Capitalisation	78.29	182.67
Repayment during the year	80.53	493.02
Net Loan-Closing	6364.36	6054.02
Average Loan	6365.48	6209.19
Weighted Average Rate of Interest on Loan	8.9559%	8.9538%
Interest	95.01	555.96

Depreciation

38. Regulation 17 of the 2009 Tariff Regulations provides for computation of depreciation in the following manner, namely:-

"17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.
Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;
Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its

cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:
Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.
(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."

39. Asset in the instant petition was put under commercial operation on 1.2.2013 and accordingly will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations.

40. Accordingly, depreciation has been worked out on the basis of capital expenditure as on date of commercial operation wherein depreciation for the first year has been calculated on pro rata basis for the part of year.

41. Details of the depreciation worked out are as follows:-

(₹ in lakh)

Particulars	**2012-13 (Pro-rata)**	**2013-14**
Opening Gross Block	9095.15	9206.99
Addition during 2009-14 due to Projected Additional Capitalisation	111.84	260.96
Closing Gross Block	9206.99	9467.95
Average Gross Block	9151.07	9337.47
Rate of Depreciation	5.2800%	5.2800%
Depreciable Value	8235.96	8403.72
Remaining Depreciable Value	8235.96	8323.19
Depreciation	80.53	493.02

Operation & Maintenance Expenses (O&M Expenses)

42. As per the 2009 Tariff Regulations, applicable for 2009-14, norms for O&M Expenses for Transmission System have been specified under section 19 (g) of the 2009 Tariff Regulations. The norms for the transmission asset covered in this petition are as follows:-

(₹ lakh per bay)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
Double circuit bundled conductor T/L	0.940	0.994	1.051	1.111	1.174

43. Based on the above norms, the O&M Expenses in respect of the transmission Asset is computed as under:-

(₹ in lakh)

Element	2012-13 (Pro-rata)	2013-14
51 km, 400 kV Quad conductor, D/C T/L	9.44	59.87

44. The petitioner has submitted that O & M Expenses for the year 2009-14 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 the norms for the years of tariff period. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O & M Expenses for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for suitable revision in the norms for O & M Expenses in case the impact of wage hike with effect from 1.1.2007 is more than 50%.

45. While specifying the norms for the O & M Expenses, the Commission has, in the 2009 Tariff Regulations, already factored 50% on account of pay

revision of the employees of the PSUs after extensive consultation with the stakeholders. At this stage there does not seem to be any justification for deviating from the norms.

46. The petitioner has submitted that the withdrawl of this contingency arrangement shall be intimated to the commission upo the completion of 400 kV D/C (Quad) Koderma-Gaya line. The petitioner vide affidavit dated 26.11.2014 in Petition No.87/TT/2014 has submitted that one circuit of balance portion of Koderm-Gaya and Maithon-Gaya has been restored as planned originally on 8.9.2014. The petitioner is directed to submit the RLDC charging certificate and CEA certificate issued under Regulation 43 of the Central Electricity Authority (Measures related to Safety & Electricity Supply) Regulations, 2010, for the assets put under commercial operation at the time of truing stage.

Interest on working capital

47. As per the 2009 tariff regulations the components of the working capital and the interest thereon are discussed hereunder:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months’ of fixed cost. The petitioner has claimed the receivables on the basis of 2 months' of annual transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares

Regulation 18(1)(c)(ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital

As per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011 dated 21.06.2010, SBI Base Rate (10.00%) as on 1.4.2012 Plus 350 Bps i.e. 13.50% has been considered as the rate of interest on working capital for the Assets involved in the petition..

48. Necessary computations in support of interest on working capital are given herein below:-

(₹ in lakh)

Particulars	**2012-13 (Pro-rata)**	**2013-14**
Maintenance Spares	8.50	8.98
O & M expenses	4.72	4.99
Receivables	271.37	272.88
Total	284.59	286.85
Rate of Interest	13.50%	13.50%
Interest	**6.40**	**38.72**

Transmission charges

49. The transmission charges being allowed for the transmission assets are as follows:-

(₹ in lakh)

Particulars	2012-13 (Pro Rata)	2013-14
Depreciation	80.53	493.02
Interest on Loan	95.01	555.96
Return on equity	79.98	489.68
Interest on Working Capital	6.40	38.72
O & M Expenses	9.44	59.87
Total	**271.37**	**1637.26**

50. Transmission charges allowed are subject to truing up in accordance with the 2009 Tariff Regulations.

Filing Fee and the Publication Expenses

51. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis in accordance with Regulation 42 A (1) (a) of the 2009 Tariff Regulations.

Licence Fee

52. The petitioner has submitted that the petitioner may be allowed to bill and recover license fee separately from the respondents as provided in the 2009 Tariff Regulations. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (1) (b) of the 2009 Tariff Regulations.

Service Tax

53. The petitioner has made a specific prayer to be allowed to bill and recover the Service tax on Transmission charges separately from the respondents if the exemption granted to it is withdrawn and transmission of power is made a taxable service. We consider the prayer pre-mature. The petitioner is at liberty to approach the Commission for any relief at the appropriate as per law.

Sharing of Transmission Charges

54. The billing collection and disbursement of transmission charges shall be governed by provision of the Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010.

55. This order disposes of Petition No. 67/TT/2012.

sd/-	sd/-	sd/-	sd/-
(A. S. Bakshi) **Member**	**(A. K. Singhal)** **Member**	**(M. Deena Dayalan)** **Member**	**(Gireesh B. Pradhan)** **Chairperson**

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(₹ in lakh)
	Details of Loan	**2012-13**	**2013-14**
1	**Bond XXXIII**		
	Gross loan opening	750.00	750.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	750.00	750.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	750.00	750.00
	Average Loan	750.00	750.00
	Rate of Interest	8.64%	8.64%
	Interest	64.80	64.80
	Rep Schedule	12 Annual installments from 8.7.2014	
2	**Bond XXIX**		
	Gross loan opening	478.00	478.00
	Cumulative Repayment upto DOCO/previous year	0.00	39.83
	Net Loan-Opening	478.00	438.17
	Additions during the year	0.00	0.00
	Repayment during the year	39.83	39.83
	Net Loan-Closing	438.17	398.33
	Average Loan	458.08	418.25
	Rate of Interest	9.20%	9.20%
	Interest	42.14	38.48
	Rep Schedule	12 Annual installments from 12.3.2013	
3	**BOND XXVIII**		
	Gross loan opening	1000.00	**1000.00**
	Cumulative Repayment upto DOCO/previous year	83.33	**83.33**
	Net Loan-Opening	916.67	916.67
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	83.33
	Net Loan-Closing	916.67	833.33
	Average Loan	916.67	875.00
	Rate of Interest	9.33%	9.33%
	Interest	85.53	81.64
	Rep Schedule	12 Annual installments from 15.12.2012	
4	**Bond XXXII**		
	Gross loan opening	25.00	**25.00**
	Cumulative Repayment upto DOCO/previous year	0.00	**0.00**
	Net Loan-Opening	25.00	25.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	2.08
	Net Loan-Closing	25.00	22.92
	Average Loan	25.00	23.96
	Rate of Interest	8.84%	8.84%
	Interest	2.21	2.12

	Rep Schedule	12 Annual installments from 29.3.2014	
5	**Bond XXXI**		
	Gross loan opening	700.00	700.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	700.00	700.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	58.33
	Net Loan-Closing	700.00	641.67
	Average Loan	700.00	670.83
	Rate of Interest	8.90%	8.90%
	Interest	62.30	59.70
	Rep Schedule	12 Annual installments from 25.2.2014	
6	**Bond XXXVII**		
	Gross loan opening	453.00	**453.00**
	Cumulative Repayment upto DOCO/previous year	0.00	**0.00**
	Net Loan-Opening	453.00	453.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	453.00	453.00
	Average Loan	453.00	453.00
	Rate of Interest	9.25%	9.25%
	Interest	41.90	41.90
	Rep Schedule	15 Annual installments from 26.12.2015	
7	**Bond XXX**		
	Gross loan opening	1982.00	**1982.00**
	Cumulative Repayment upto DOCO/previous year	0.00	**0.00**
	Net Loan-Opening	1982.00	1982.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	165.17
	Net Loan-Closing	1982.00	1816.83
	Average Loan	1982.00	1899.42
	Rate of Interest	8.80%	8.80%
	Interest	174.42	167.15
	Rep Schedule	15 Annual installments from 29.9.2013	
	Total Loan		
	Gross loan opening	5388.00	5388.00
	Cumulative Repayment upto DOCO/previous year	83.33	123.17
	Net Loan-Opening	5304.67	5264.83
	Additions during the year	0.00	0.00
	Repayment during the year	39.83	348.75
	Net Loan-Closing	5264.83	4916.08
	Average Loan	5284.75	5090.46
	Weighted Average Rate of Interest	**8.9559%**	**8.9538%**
	Interest	473.30	455.79