CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 165/TT/2013

Coram:

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

Date of Hearing : 13.05.2014
Date of Order : 29.01.2015

In the matter of:

Approval of transmission tariff for LILO of existing Bangalore-Salem 400 kV S/C at Hosur (anticipated DOCO: 1.11.2013) under System Strengthening-XVIII in Southern Regional Grid for tariff block 2009-14 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009.

And in the matter of:

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

Vs

1. Karnataka Power Transmission Corporation Limited,
(KPTCL), Kaveri Bhavan,
Bangalore-560 009

2. Transmission Corporation of Andhra Pradesh Limited,
(APTRANSCO), Vidyut Soudha,
Hyderabad-500 082

3. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695 004

4. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board-TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai-600 002

5. Electricity Department,
   Government of Goa,
   Vidyut Bhawan, Panaji,
   Goa-403 001

6. Electricity Department,
   Government of Pondicherry,
   Pondicherry-605 001

7. Eastern Power Distribution Company of Andhra Pradesh Limited,
   (APEPDCL)
   APEPDCL, P&T Colony, Seethmmadhara, Vishakhapatam,
   Andhra Pradesh

8. Southern Power Distribution Company of Andhra Pradesh Limited,
   (APSPDCL)
   Srinivasasa Kalyana Mandapam Backside,
   Tiruchanoor Road, Kesavayana Gunta,
   Tirupati-517 501
   Chittoor District, Andhra Pradesh

9. Central Power Distribution Company of Andhra Pradesh Limited,
   (APCPDCL)
   Corporate Office, Mint Compound,
   Hyderabad-500 063, Andhra Pradesh

10. Northern Power Distribution Company of Andhra Pradesh Limited,
    (APNPDCL)
    Opposite NIT Petrol Pump,
    Chaitanyapuri, Kazipet,
    Warangal-506 004, Andhra Pradesh

11. Bangalore Electricity Supply Company Limited (BESCOM),
    Corporate Office, K.R.Circle,
    Bangalore-506 001, Andhra Pradesh

12. Gulbarga Electricity Supply Company Limited (GESCOM),
    Station Main Road,
    Gulbarga, Karnataka

13. Hubli Electricity Supply Company Limited (HESCOM),
    Navanagar, PB Road,
    Hubli, Karnataka

14. Mescom Corporate Office,
    Paradigm Plaza, AB Shetty Circle,
    Mangalore-575 001, Karnataka

15. Chamundeswari Electricity Supply Corporation Limited (CESC),
    # 927, L J Avenue, Ground Floor,

New Kantharaj Urs Road,
Saraswatipuram, Mysore-570 009 Karnataka …… **Respondents**

For petitioner : Shri S. S. Raju, PGCIL
Shri S. K. Venkatesan, PGCIL
Ms. Seema Gupta, PGCIL
Shri M. M. Mondal, PGCIL

For respondents : None

ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval for determination of transmission tariff for LILO of existing Bangalore-Salem 400 kV S/C at Hosur (anticipated DOCO: 1.11.2013) under System Strengthening-XVIII in Southern Regional Grid (hereinafter referred to as "transmission assets") for the period from the date of commercial operation to 31.3.2014, 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 (IA) of the project was accorded by Board of Directors of the petitioner vide Memorandum No. C/CP/SRSS-XVIII dated 4.6.2012 at an estimated cost of ₹126326 lakh including IDC of ₹7855 lakh (based on 4th Quarter, 2012 price level). The estimated completion cost of the asset is ₹3029.13 lakh against apportioned approved cost estimate of ₹1974 lakh.

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

Transmission Lines:

i) Vijayawada-Nellore 400 kV D/C line;
ii) Nellore-Thiruvalam 400 kV D/C Quad line;

iii) **LILO of existing Bangalore-Salem 400 kV S/C line at Hosur**;
iv) Thiruvalam-Sholinganallur 400 kV D/C line;

Substations:

i) Extension of 400/220 kV sub-station at Vijayawada;
ii) Extension of 400/220 kV sub-station at Nellore (APTRANSCO);
iii) Extension of 400/220 kV sub-station at Nellore;
iv) Extension of 400/220 kV sub-station at Thiruvalam;
v) Extension of 400/220 kV sub-station at Hosur;
vi) Extension of 400/220 kV sub-station at Sholinganallur (TANTRANSCO).

Reactive Compensation:

Line Reactors (400 kV)

i) 1x63 MVAR line reactor at both ends of each circuit of Vijayawada-Nellore 400 kV D/C line along with 600 ohms NGR;
ii) 1x50 MVAR line reactor at both ends of each circuit of Nellore-Thiruvalam 400 kV Quad D/C line along with 450 ohms NGR.

4. The petitioner has initially claimed transmission tariff for the instant assets from the anticipated date of commercial operation in the petition. Subsequently, the petitioner vide affidavit dated 14.8.2014 has submitted the actual date of commercial operation to be 1.2.2014. Accordingly, for the purpose of tariff, date of commercial operation has been considered as 1.2.2014.

5. Provisional tariff in respect of the above mentioned asset was approved by the Commission vide its order dated 9.9.2013. This was subject to adjustment as per Regulation 5 (4) of the 2009 Tariff Regulations.

6. Details of the transmission charges claimed by the petitioner are as overleaf:-

(₹ in lakh)

Particulars	2013-14 (Pro-rata)
Depreciation	19.76
Interest on Loan	22.76
Return on equity	20.41
Interest on Working Capital	2.68
O & M Expenses	23.43
Total	**89.04**

7. The details submitted by the petitioner in support of its claim for Interest on Working Capital are as below:-

(₹ in lakh)

Particulars	2013-14 (Pro-rata)
Maintenance Spares	21.09
O & M expenses	11.72
Receivables	89.04
Total	**121.85**
Interest	2.68
Rate of Interest	13.20%

8. 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. None of the respondents have filed any reply to the petition. The petitioner has filed additional information vide affidavits dated 30.12.2013 and 14.8.2014, which have been considered for the purpose of tariff calculation.

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

Capital Cost

10. As regards the capital cost, Regulation 7(1) of the 2009 Tariff Regulations provides as follows:-

> "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."

11. The petitioner initially in the petition submitted the capital expenditure as on the anticipated date of commercial operation and estimated additional capital expenditure. However, vide additional affidavit dated 14.8.2014 the petitioner has submitted that the asset was actually commissioned on 1.2.2014. Accordingly, the petitioner has submitted the revised capital expenditure as on 1.2.2014 as well as the anticipated additional capital expenditure, vide Management Certificate dated 12.4.2014.

12. The details of apportioned approved cost, actual expenditure incurred as on the date of commercial operation and details of additional capital expenditure (hereinafter "add cap") incurred/projected to be incurred for the asset covered in the petition are summarized below:-

(₹ in lakh)

Apportioned approved cost	**Cost incurred upto DOCO***	**Add-cap**		**Estimated completion cost**
		2013-14	**2014-15 2015-16#**	
1974.00	**1960.62**	**603.48**	**465.03**	**3029.13**

*****Inclusive of initial spares of ₹12.25 lakh and ₹56.48 lakh for transmission line and sub-station respectively, which fall within ceiling limit specified under Regulation 8 of the 2009 Tariff Regulations.

\# Additional capital expenditure for 2014-15 and 2015-16 period falls beyond the tariff period and hence is not considered.

13. As per the information submitted by the petitioner, expenditure has been verified on the basis of the information drawn from the audited statement of Accounts of the petitioner. The projected expenditure is on the basis of statement of accounts furnished by the Management.

Cost over-run

14. The Commission observed that there is cost over-run of approximately 43.23%, mainly on account of increase in line length and for provision of outdoor lighting, Station Auxiliaries and Grounding System in the existing sub-station. The petitioner was directed to give reasons for increase in the line length from 5 km to 12.3 km and also the reason for providing outdoor lighting, Station Auxiliaries and Grounding System in the existing sub-station. In response, the petitioner vide affidavit dated 30.12.2013 has submitted the following:-

(a) The length of the transmission line increased from 5 km to 12.3 km, due to deletion of multi circuit line length of around 10 km envisaged in SRSS-XVI. Further, portion of LILO of existing Bangalore-Salem 400 kV S/C Line (around 10 km) was originally envisaged in multi circuit line along with Electronic city-Hosur line. PGCIL informed in the 18th SRPC meeting dated 23.12.2011 that cost of multi circuit portion of the line would be covered under a single DPR. Accordingly, cost of multi circuit line covered under Electronic city-Hosur line project and cost of LILO portion of 10 km under multi circuit was not considered in SRSS-XVIII. Single line diagram is attached at Annexure-1. Subsequently, during 20th and 21st SRPC meetings held on 21.9.2012 and 2.2.2013, PGCIL informed that Electronic city-Hosur line would not be taken up due to anticipated severe ROW problems caused by high level of urbanization and techno-economic reasons. Hence, the line length of LILO of existing Bangalore-Salem 400 kV S/C at Hosur became 12.3 km and resulted in increase in actual cost of the line under System Strengthening-XVIII in Southern Regional Grid even though overall length of line has reduced from 15 km to 12.3 km; and

(b) Extension of switch-yard was required to accommodate the assets covered in the instant petition in the existing sub-Station. Accordingly, as per the provisions in the DPR, outdoor lighting has been provided for the extended switchyard, grounding system is considered for the risers, earth pits etc. for the new equipment installed in the extension switchyard and under station auxiliaries, new battery and battery charger are considered as capacity in the existing battery and battery charger was not adequate to cater the bays under LILO of existing Bangalore-Salem 400 kV S/C at Hosur.

15. There is change of scope of work as initially executed and as planned in Investment Approval dated 4.6.2012, 10 km multi-circuit line was to be constructed under SRSS-XVI scheme. However, Electronic city-Hosur line could not be taken up due to severe RoW problem caused by high level urbanization and techno-economic reasons. Under SRSS-XVIII, the petitioner decided to change the configuration and implemented LILO of Salem-Somanhalli S/C line at Hosur.

16. The Commission, during the hearing on 13.5.2014, directed the petitioner to submit the intimation to Board about the change in the scope of work. In response, vide affidavit dated 14.8.2014, the petitioner has submitted that there is no change in the scope of work. 5 km of LILO portion was included in SRSS XVIII and 10 km of multi circuit portion was envisaged in SRSS XVI. Due to termination of SRSS XVI, entire portion of 12.5 km was executed under SRSS XVIII which led to increase in completion cost as compared to FR cost. However, some assets of the project are yet to be commissioned. The petitioner has further submitted that in case the completion cost of the project cost exceeds the FR cost, RCE of the project will be prepared and intimation of the same will be given to the Board.

17. We have considered the submissions made by the petitioner regarding the increase in cost. It has been observed that the cost over-run for assets in the instant petition has substantial variation as compared to the approved apportioned cost estimates. Therefore, the petitioner is required to submit the revised cost estimate (RCE) duly approved by its Board. The petitioner has not furnished the RCE for assets covered in the instant case. Accordingly, the capital cost of these assets is restricted to the apportioned approved cost. However, the capital cost in case of these assets shall be reviewed at the time of truing up, subject to the petitioner filing the RCE and justification for cost over-run. This approach has been upheld by the Appellate Tribunal for Electricity in its order dated 28.11.2013 in Appeal No. 165 of 2012, and subsequently the Commission, vide its order dated 18.2.2014 in Petition No. 216/TT/2012, has considered the apportioned approved cost of individual asset for restricting the capital expenditure due to cost over-run for the purpose of tariff determination. The same approach has been adopted in the present case and capital expenditure has been restricted to apportioned approved cost.

18. The project was scheduled to be commissioned within 29 months from the date of IA i.e. 4.6.2012. Accordingly, the scheduled commissioning works out to 4.11.2014 i.e. 1.12.2014. The instant asset was commissioned within the specified timeline on 1.2.2014.

<u>Initial Spares</u>

19. Regulation 8 of 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%

20. The petitioner has claimed initial spares of ₹12.25 lakh and ₹56.48 lakh for transmission line and sub-station respectively, which are higher than the ceiling limits specified. As discussed in para 17, the capital cost has been restricted to ₹1974 lakh. Thus, in view of the restriction of the capital cost, the claim of the petitioner in respect of cost of the initial spares has been further rationalized as under:-

(₹ in lakh)

Particulars	Capital Cost up to cut off date/ 31.3.2014	Initial Spares claimed	Capital Cost restricted upto 31.3.2014	Proportionate Initial Spares claimed
Sub-station	971.46	56.48	635.84	36.97
Transmission Line	1592.64	12.25	1360.03	10.46

(₹ in lakh)

Particulars	Capital cost up to March, 2014	Initial spares claimed	Ceiling limit as per 2009 Tariff Regulations	Initial spares allowed	Excess initial spares*
Sub-station	635.84	36.97	2.50%	15.36	21.61
Transmission Line	1360.03	10.46	0.75%	10.20	0.26

*The excess initial spares worked out as above, have been disallowed from the capital cost as on COD.

21. The petitioner has claimed capital cost of ₹1960.62 lakh upto the date of commercial operation for the assets under consideration. The details of the capital cost considered as on the date of commercial operation after allowing capitalization of IDC, IEDC (as claimed) and admissible initial spares for the purpose of the determination of transmission tariff is as follows:-

(₹ in lakh)

Particulars	Asset
Building and other civil works	45.52
Transmission Line	1345.34
Sub-Station Equipments	522.74
PLCC	25.15
Capital Cost considered as on COD*	**1938.75**

***Inclusive of admissible Initials Spares of ₹10.20 lakh and ₹15.36 lakh for Transmission line and Sub-Station respectively. Excess initial spares have been excluded.

Additional Capital Expenditure

22. As regards 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:"

23. Further, the 2009 Tariff Regulations defines cut-off date as follows:-

> "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".

Therefore, the cut-off date for the instant assets is 31.3.2017.

24. It is seen that the additional capital expenditure claimed by the petitioner falls within the cut-off date and is mainly on account of balance and retention payments. Additional capital expenditure for financial year 2014-15 and 2015-16 claimed by the petitioner falls beyond the tariff period i.e. 2009-14 and is not being allowed for calculation of tariff for the period up to 31.3.2014. However, as discussed in para 17, the capital cost is restricted to the approved apportioned cost. Thus, additional

capital expenditure of ₹603.48 lakh claimed from the date of commercial operation to 31.3.2014 has been restricted to ₹35.25 lakh for tariff computation.

Debt- Equity Ratio

25. Regulation 12 of the 2009 Tariff Regulations provides as under:--

> "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."

26. The petitioner has claimed debt: equity ratio of 70:30 as on the date of commercial operation of the assets. The details of debt-equity in respect of the assets covered in this petition as on date of commercial operation and as on 1.4.2014 respectively are as under:-

(₹ in lakh)

Particulars	**Cost as on Date of commercial operation (after excluding excess initial spares**	
	Amount	**%**
Debt	1357.12	70.00
Equity	581.62	30.00
Total	**1938.74**	**100.00**

(₹ in lakh)

Particulars	Cost as on 1.4.2014	
	Amount	**%**
Debt	1381.80	70.00
Equity	592.20	30.00
Total	**1974.00**	**100.00**

27. The above stated debt-equity ratio has been applied for the purpose of tariff calculation in this order.

Return on Equity

28. Regulation 15 of the 2009 Tariff Regulations provides that:-

"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".

29. The petitioner has submitted that it may be allowed 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. 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(3) of the 2009 Tariff Regulations.

30. Details of return on equity calculated are as given under:-

(₹ in lakh)

Particulars	**2013-14 (Pro-rata)**
Opening Equity	581.62
Addition due to Additional Capitalisation	10.58
Closing Equity	592.20
Average Equity	586.91
Return on Equity (Base Rate)	**15.50%**
Tax rate for the year 2008-09 (MAT)	11.33%
Rate of Return on Equity (Pre Tax)	17.481%
Return on Equity (Pre Tax)	**17.10**

Interest on Loan

31. 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."

32. In these calculations, interest on loan has been worked out as overleaf:-

(a) Gross amount of loan, repayment of instalments & rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period;

(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;

(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.

33. Detailed calculation of the weighted average rate of interest has been given at Annexure-2 to this order.

34. Details of Interest on Loan calculated are as under:-

(₹ in lakh)

Particulars	**2013-14 (Pro-rata)**
Gross Normative Loan	1357.12
Cumulative Repayment upto Previous Year	0.00
Net Loan-Opening	1357.12
Addition due to Additional Capitalisation	24.68
Repayment during the year	17.11
Net Loan-Closing	1364.69
Average Loan	1360.91
Weighted Average Rate of Interest on Loan	8.6777%
Interest	**19.68**

Depreciation

35. 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."

36. Date of commercial operation of assets covered in the petition fall in the year 2013-14. Accordingly, the assets 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.

37. Details of the depreciation allowed are as under:-

(₹ in lakh)

Particulars	2013-14 (Pro-rata)
Opening Gross Block	1938.75
Additional Capital expenditure	35.25
Closing Gross Block	1974.00
Average Gross Block	1956.37
Rate of Depreciation	5.2475%
Depreciable Value	1760.74
Remaining Depreciable Value	1760.74
Depreciation	**17.11**

Operation & Maintenance Expenses (O&M Expenses)

38. Clause (g) of regulation 19 of the 2009 Tariff Regulations specifies the norms for O & M expenses based on the type of sub-station and line. Norms specified in respect of the elements covered in the instant petition are as under:-

Elements	2011-12	2012-13	2013-14
D/C twin conductor T/L (₹ lakh per km)	0.701	0.741	0.783
400 kV bays (₹ lakh per bay)	58.57	61.92	65.46

39. Accordingly, O&M Expenses allowed in respect of the assets covered in this petition are as below:-

(₹ in lakh)

Element	2013-14 (Pro-rata)
12.3 km D/C Twin conductor Transmission Line	1.61
2 Nos. 400 kV bays	21.82
Total	**23.43**

40. The petitioner has submitted that O & M Expenses for the period 2009-14 were arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08. 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 additional manpower cost on account of wage revision (if any) during the tariff block 2009-14 for claiming in the tariff.

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

Interest on Working Capital

42. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are discussed under:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months 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 O&M 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 provided under 18(3) of the 2009 Tariff Regulations, SBI Base rate of 9.70% as on 1.4.2013 plus 350 BPS i.e. 13.20% has been considered for the purpose of working out the interest on working capital.

43. Necessary computations in support of interest on working capital are as below:-

(₹ in lakh)

Particulars	2013-14 (Pro-rata)
Maintenance Spares	21.09
O & M expenses	11.72
Receivables	79.80
Total	**112.60**
Interest	**2.48**

Transmission Charges

44. The transmission charges being allowed for the transmission assets are as under:-

(₹ in lakh)

Particulars	2013-14 (Pro-rata)
Depreciation	17.11
Interest on Loan	19.68
Return on equity	17.10
Interest on Working Capital	2.48
O & M Expenses	23.43
Total	**79.80**

Filing Fee and the Publication Expenses

45. 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 42A (1) (a) of the 2009 Tariff Regulations.

Licence Fee

46. The petitioner has submitted that in O&M norms for tariff block 2009-14 the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations

Service Tax

47. 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 submitted that service tax on transmission has been put on negative list w.e.f. 1.4.2012 and therefore the transmission charges, is exclusive of service tax and shall be born and additionally paid by the respondents. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

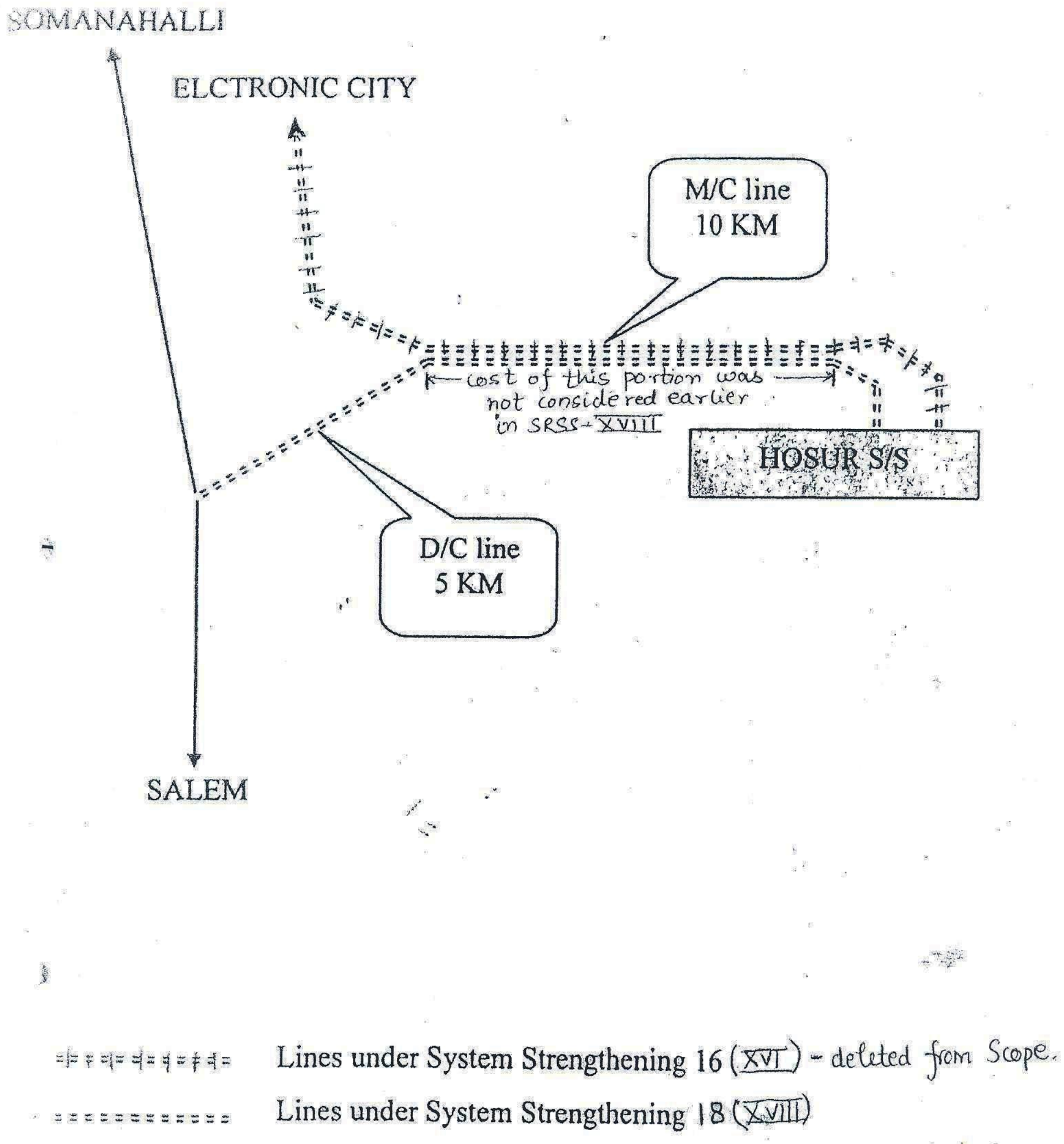
Sharing of Transmission Charges

48. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.

49. This order disposes of Petition No. 165/TT/2013.

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

Annexure-I


SOMANAHALLI
ELCTRONIC CITY
M/C line
10 KM
cost of this portion was
not considered earlier
in SRSS-XVIII
HOSUR S/S
D/C line
5 KM
SALEM
Lines under System Strengthening 16 (XVI) - deleted from Scope.
Lines under System Strengthening 18 (XVIII)

Annexure-2

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
	Details of Loan	**2013-14**
1	**Bond XXVIII**	
	Gross loan opening	1.00
	Cumulative Repayment upto DOCO/previous year	0.17
	Net Loan-Opening	0.83
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	0.83
	Average Loan	0.83
	Rate of Interest	9.33%
	Interest	0.08
	Rep Schedule	12 Annual instalments from 15.12.2012
2	**Bond XLIII**	
	Gross loan opening	100.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	100.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	100.00
	Average Loan	100.00
	Rate of Interest	7.93%
	Interest	7.93
	Rep Schedule	12 Annual instalments from 20.5.2017
3	**Bond XLI**	
	Gross loan opening	53.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	53.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	53.00
	Average Loan	53.00
	Rate of Interest	8.85%
	Interest	4.69
	Rep Schedule	12 equal instalments from 19.10.2016
4	**SBI (21.3.2012)**	
	Gross loan opening	10.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	10.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	10.00
	Average Loan	10.00
	Rate of Interest	10.25%
	Interest	1.03
5	**BOND XLIV**	

	Gross loan opening	1172.43
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1172.43
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1172.43
	Average Loan	1172.43
	Rate of Interest	8.70%
	Interest	102.00
	Rep Schedule	3 equal instalments from 15.7.2018
6	**BOND XL**	
	Gross loan opening	36.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	36.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	36.00
	Average Loan	36.00
	Rate of Interest	9.30%
	Interest	3.35
	Rep Schedule	12 Annual Instalment from 28.6.2016
	Gross loan opening	1372.43
	Cumulative Repayment upto DOCO/previous year	0.17
	Net Loan-Opening	1372.26
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1372.26
	Average Loan	1372.26
	Rate of Interest	**8.6771%**
	Interest	119.07