CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 120/TT/2013

Coram:

Shri Gireesh B Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member

Date of Hearing: 26.08.2014
Date of Order : 18.06.2015

In the matter of:

Approval for determination of Transmission Tariff of 240 MVAR Switchable line Reactor along with associated bays at Bilaspur Pooling Station (DOCO: 1.11.2012), under Common Scheme for 765 kV Pooling Stations and Network for NR, Import by NR from ER and Common Scheme for network for WR and Import by WR from ER and from NER/SR/WR via ER in Western Region for tariff block 2009-14 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulation 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009.

And in the matter of:

Power Grid Corporation of India Limited
"Soudamini", Plot No. 2, Sector 29
Gurgaon -122001 **…….Petitioner**

Vs

1. Madhya Pradesh Power Trading Company Limited,
   Shakti Bhawan, Rampur
   Jabalpur-482 008

2. Maharashtra State Electricity Distribution Company Limited,
   Prakashgad, 4th floor
   Andehri (East), Mumbai-400 052

3. Gujarat Urja Vikas Nigam Limited,
   Sardar Patel Vidyut Bhawan,
   Race Course Road, Vadodara-390 007

4. Electricity Department, Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403 001

5. Electricity Department,
Administration of Daman and Diu,
Daman-396 210

6. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa-396 230

7. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh-492 013

8. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road
Indore -452 008 **……Respondents**

For petitioner : Shri M.M. Mondal, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Swapnil Verma, PGCIL
Shri Mohd. Mohsin, PGCIL
Ms Seema Gupta, PGCIL
Shri S.S. Raju, PGCIL

For respondents: None

ORDER

The present petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking approval of transmission charges for “240 MVAR Switchable line Reactor along with associated bays at Bilaspur Pooling Station” (hereinafter referred to as “transmission asset”) under the Common Scheme for 765 kV Pooling Stations and Network for Northern Region, Import by NR from ER and Common scheme for network for WR and import by WR from ER and from NER/SR/WR via ER in Western Region, 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. This order has been issued after considering PGCIL affidavits dated 31.7.2013, 31.3.2014, 9.4.2014, 22.8.2014, 12.9.2014 and Maharashtra State Electricity Distribution Company Limited (MSEDCL) affidavits dated 20.8.2013 and 10.10.2013.

3. The comprehensive transmission schemes for import of power from Eastern Region to Northern, Western and Southern Regions were evolved as a consequence of discussions at various Standing Committee and Regional Power Committee Meetings of the concerned regions. The need of the transmission system was agreed to in the 22nd meeting of Standing Committee on Power System Planning of Northern Region held on 12.3.2007. The implementation of the transmission system was entrusted to the petitioner. The Investment Approval (IA) and expenditure sanction for the transmission system was accorded by the Board of Directors of the petitioner vide Memorandum No C/CP/DVC and Maithon RB Project dated 29.8.2008 at an estimated cost of ₹707533 lakh including an IDC of ₹71360 lakh (based on 1st Qtr 2008 price level). The transmission system was scheduled to be commissioned within 48 months from the date of IA in a progressive manner. Therefore, the scheduled date of commissioning of the transmission system was 1.9.2012. The scope of work covered under the scheme is broadly as follows:-

Transmission Lines:

1) Maithon-Gaya 400 kV Quad D/C line : 235 km
2) Gaya-Sasaram 765 kV S/C line : 148 km
3) Gaya-Balia 765 kV S/C line : 235.10 km
4) Balia-Lucknow 765 kV S/C line : 316 km
5) Ranchi-WR Pooling Station 765 kV S/C line : 372 km
6) Lucknow 765/400 kV new Sub-station-Lucknow 400/220 kV existing Sub-station 400 kV Quad D/C line : 40 km
7) Ranchi 765/400 kV new Sub-station-Ranchi 400/220 kV existing Sub-station 400 kV Quad 2xD/C line : 110 km
8) LILO of both circuits of Allahabad-Mainpuri 400 kV D/C line at Fatehpur 765/400 kV Sub-station of PGCIL : 34 km
9) LILO of Barh-Balia 400 kV Quad D/C line at Patna : 25 km

Sub-stations:

1) Augmentation of Maithon 400/220 kV Sub-station
   a) 2 nos. of 400 kV line bays (for terminating Maithon-Gaya D/C line)
   b) 2 nos. of 400 kV line bays (for terminating Mejia-Maithon D/C line)

2) New 765/400 kV Sub-station at Gaya
   a) 3x1500 MVA, 765/400 kV Transformer along with associated bays
   b) 2 nos. of 765 kV line bays (for Gaya-Sasaram & Gaya-Balia 765 kV lines)
   c) 4 nos. of 400 kV line bays (for Maithon-Gaya line & kodarma-Gaya line)

3) New 765/400 kV Sub-station at Sasaram*
   a) 2x1500 MVA, 765/400 kV Transformer along with associated bays
   b) 2 nos. of 765 kV line bays (for Gaya-Sasaram 765 kV S/C and Sasaram-Fatehpur 765 kV S/C)

c) 2 nos. of 400 kV bays (for Biharshariff-Sasaram 400 kV quad D/C line)

*Note: New 765/400 kV Sub-station at Sasaram is to be accommodated in the premises of existing Sasaram Sub-station.

4) Augmentation of Biharshariff 400/220 kV Sub-station

a) 2 nos. of 400 kV bays (for Biharshariff-Sasaram 400 kV quad D/C line)

5) New 765/400 kV Sub-station at Fatehpur

a) 2x1500 MVA, 765/400 kV Transformer along with associated bays

b) 2 nos. of 765 kV line bays (for Sasaram-Fatehpur and Fatehpur-Agra 765 kV lines)

c) 4 nos. of 400 kV line bays (for LILO of Allahabad-Mainpuri 400 kV D/C line)

6) Augmentation of 400 kV Agra Sub-station to 765 kV

a) 2x1500 MVA, 765/400 kV Transformer along with associated bays

b) 1 no. of 765 kV line bay (for Fatehpur-Agra 765 kV line)

7) Augmentation of 400 kV Balia Sub-station to 765 kV

a) 2x1500 MVA, 765/400 kV Transformer along with associated bays

b) 2 nos. of 765 kV line bays (for Gaya-Balia and Balia-Lucknow 765 kV lines)

8) New 765/400 kV Sub-station at Lucknow

a) 2x1500 MVA, 765/400 kV Transformer along with associated bays

b) 1 no. of 765 kV line bay (for Balia-Lucknow 765 kV line)

c) 2 nos. of 400 kV bays (for Lucknow 765/400 kV new Sub-station-Lucknow 400/220 kV existing Sub-station 400 kV quad D/C line)

9) Augmentation of existing Lucknow 400/220 kV Sub-station

a) 2 nos. of 400 kV bays (for Lucknow 765/400 kV new Sub-station-Lucknow 400/220 kV existing Sub-station 400 kV quad D/C line)

10) New 2x1500 MVA, 765/400 kV Sub-station at Ranchi

a) 1 no. of 765 kV line bay (for Ranchi-WR Pooling 765 kV S/C line)

b) 4 nos. of 400 kV bays (for Ranchi 400 kV new Sub-station-Ranchi 400/220 kV existing Sub-station 400 kV quad 2xD/C line)

11) Augmentation of Ranchi 400/220 kV Sub-Station

a) 6 nos. of 400 kV bays (4 nos. for Ranchi 765/400 kV new Sub-station-Ranchi 400/220 kV existing Sub-station 400 kV quad 2xD/C line and 2 nos. for Raghunathpur TPS-Ranchi line)

12) 765/400 kV WR Pooling Sub-station

a) 1 no. of 765 kV line bay (for Ranchi-WR Pooling 765 kV S/C line)

13) Augmentation of Patna 400/220 kV Sub-station

a) 4 nos. of 400 kV line bays (for LILO of Barh-Balia 400 kV Quad line)

4. Provisional tariff in respect of instant assets was allowed vide order dated 11.6.2013, subject to adjustment as per Regulation 5 (4) of the 2009 Tariff Regulations.

5. The petitioner has filed for approval of the transmission charges from the actual dates of commercial operation (COD) of the transmission assets. The instant asset was declared under commercial operation on 1.11.2012.

6. The details of the transmission charges claimed by the petitioner are as under:-

(₹ in lakh)

Particulars	2012-13	2013-14
Depreciation	89.19	232.10
Interest on Loan	107.82	266.74
Return on Equity	89.83	234.17
Interest on Working Capital	10.59	27.00
O & M Expenses	72.23	183.28
Total	**369.66**	**943.29**

7. The details submitted by the petitioner in support of its claim for interest on working capital are as under:-

(₹ in lakh)

Particulars	2012-13	2013-14
Maintenance Spares	26.00	27.49
O & M expenses	14.45	15.27
Receivables	147.86	157.22
Total	**188.31**	**199.98**
Interest Rate	13.50%	13.50%
Interest	**10.59**	**27.00**

8. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. Respondent No 2, MSEDCL has filed reply vide affidavits dated 22.8.2013 and 10.10.2013. The respondent has mainly raised issues like correctness of claim, return on equity, filing/license fees, floating rate of interest on loan, service tax, cost variation and interest on loan etc. The submissions made by the respondent and their clarifications have been dealt in relevant paragraphs of this order.

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

Capital cost

10. Regulation 7 of the 2009 Tariff Regulations so far as relevant 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."

11. The details of the apportioned approved capital cost, capital cost as on the dates of commercial operation and estimated additional capital expenditure projected to be incurred for the transmission asset as submitted by the petitioner are given hereunder:-

(₹ in lakh)

Apportioned approved cost	Hard Cost claimed as on COD	IDC claimed	IEDC claimed	Cost incurred upto COD*	Additional capital expenditure		Total
					2012-13	2013-14	
6971.71	3209.56	557.82	78.15	3845.53	531.18	177.19	4553.90

*Capital cost as on actual COD is inclusive of initial spares

Cost over-run

12. The total estimated completion cost of the instant asset is ₹4553.90 lakh against apportioned FR cost of ₹6971.71 lakh and there is no cost over-run. However, there is over estimation of 34.7% in FR cost and cost variation under the following heads:-

(₹ in lakh)

S.No.	Items of Asset	Variation		Reason submitted by the Petitioner
		Amount	%age	
1.	Structure for switchyard	125.03	37	Variation due to increase in quantity and award cost.
2.	Auxiliary System	19.83	42	Variation due to increase in award cost.

13. MSEDCL has vide reply dated 20.8.2013 and 10.10.2013 also raised the issue of huge variation in capital cost and requested for a direction by the Commission to the petitioner to adopt a prudent procedure for cost estimation. The Commission directed the petitioner vide letter dated 23.10.2013, to submit the following information:-

(a) Reason for high apportioned FR cost for the asset

(b) The reactor is not included in investment approval, copy of DPR on the basis of which reactor is included in cost estimate.

14. The petitioner vide affidavit dated 31.3.2014 and 12.9.2014 has submitted that the major variation in actual vs. FR apportioned cost is mainly due to reduction in quantity and customs duty besides competitive price under various heads as under:-

a) Implementation of switching arrangement of the single phase units of 765 KV line reactors: Due to change in quantity the cost has decreased from the estimated ₹1500 lakh to ₹700 lakh.

Manufacturing of Reactor in India: The instant asset being a reactor of 765 kV rating, custom duty of ₹952 lakh was envisaged at the time of preparation of FR envisaging import of reactor. However, under open competitive bidding the favorable bidder proposed the manufacturing in India. Thus, the reactor was manufactured in India and no customs duty was levied resulting in decrease in estimated cost by ₹952 lakh. This was combined with price reduction of ₹200 lakh due to competitive bidding, thereby total reduction in cost by ₹1200 lakh. This reduction in cost also resulted in decrease in IDC/IEDC by ₹400 lakh.

b) The petitioner also submitted a copy of scope covered under DPR on the basis of which reactor is included in the cost estimate. As per scope one no. line reactor of 240 MVAR has been mentioned as extension of 765/400 kV Pooling Station in Western Region.

15. The Commission, during hearing on 26.08.2014 directed the petitioner to submit details of variation in quantity, etc. leading to high apportioned cost in comparison to estimated completion cost. The petitioner vide affidavit dated 12.09.2014 has reiterated the details of variation in quantity leading to high apportioned cost in comparison to estimated completion cost as already submitted vide affidavit dated 31.03.2014 and discussed at para 14. We are convinced with the justification submitted by the petitioner for cost over-run and accordingly it is allowed.

<u>Time over-run</u>

16. As per investment approval, the project was scheduled to be commissioned in the progressive manner by 1.9.2012 and the instant asset was commissioned on 1.11.2012. Thus, there is time over-run of two months. In response to a query, the petitioner submitted that as per contract 765 kV Reactor was required to be manufactured in India

and it was to be done under the supervision of ZTR personnel from Ukraine which required presence of experts from Ukraine over long stretch of time in India. However, as per visa conditions, visa was given for a shorter period at a stretch to Ukraine personnel. Thus, manufacturing took a little longer time added with the type test to be conducted in India under strict supervisions of ZTR personnel which took considerable time. This led to force majeure condition and the manufacturing/commissioning got delayed. The delay in commissioning is mainly due to delay in manufacturing and testing of Reactor in India under JV route (which was substantially economical) and it was beyond the control of the petitioner and it has prayed for condonation of marginal delay of two months in commissioning of the asset.

17. The Commission during hearing on 26.8.2014 directed the petitioner to submit documentary evidence in support of the reason submitted earlier for delay in the commissioning of the asset i.e. visa related issues for ZTR personnel.

18. The petitioner vide affidavit dated 12.09.2014 has submitted the following:-

(i) The supplier stated that the authorities responsible for issuance of visa do not tell the reasons either orally or in writing for allowing the period of the stay of a person. Therefore, documentary evidence from Government is not available. However, the supplier stated that first reactor was manufactured under strict supervision of ZTR personnel which also took some time as one person can stay in India for maximum of 15 weeks due to visa constraints of Ukraine laws.

(ii) Keeping in view the above, delay in commissioning which is mainly due to delay in manufacturing and testing of Reactor in India under JV route, although substantially economical, was beyond the control of the Petitioner and its supplier.

19. We have considered the submissions of petitioner and are inclined to deal the issue of delay in line with APTEL Judgment dated 27th April, 2011 in Appeal No. 72/2010. The relevant portion of judgment is reproduced:-

"The delay in execution of a generating project could occur due to following reasons:-

i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.

ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.

iii) situation not covered by i) and ii) above.

In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer".

20. In view of submissions of the petitioner, it emerges that both the petitioner and the supplier should have been aware of visa rules. They should have accordingly planned

for deployment of different personnel. Nothing has been submitted on record to determine the requirement of different personnel and the time period for which they were required and they had to go back due to visa reasons or there was gap in their deployment due to visa issue. We therefore are not inclined to condone the delay of two months. The issue is between the petitioner and the supplier and has to be settled by the petitioner with the supplier. In case, the petitioner recovers liquidated damages (LD) on account of delay in execution of project from the supplier and LD recovered from the supplier is more than disallowed IDC/IEDC, the difference has to be further reduced from the Capital Cost and in case of LD recovered is lower than disallowed IDC/IEDC, the petitioner has to bear the same. The petitioner is at liberty to submit detailed information at the time of truing up petition for consideration and prudence check by the Commission.

Treatment of IDC & IEDC

21. The petitioner has claimed ₹557.82 lakh towards Interest during Construction (IDC) but without submitting detailed working of IDC calculation i.e. details of IDC paid upto COD as well as after COD. As per the provisions of Regulation 7(1) read with Regulation 3(2) of the 2009 Tariff Regulations, IDC has to be worked out on cash basis. IDC on cash basis has been worked out based on the loans deployed for the asset as per Form-13, assuming that the petitioner has not made any default in the payment of interest and thereafter amount of IDC for delayed period of 2 months has been disallowed. Considering cash basis approach, IDC up to the scheduled date of commercial operation i.e. 31.8.2012 works out to ₹274.43 lakh. 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. The petitioner is directed to submit the detailed working of interest paid on and after COD corresponding to the loan deployed and actual cash expenditure in Form 14A to enable the Commission to consider the un-discharged liability once it is discharged subject to prudence check and submission of adequate information by the petitioner.

22. Similarly, the petitioner has claimed ₹78.15 lakh as Incidental Expenditure During Construction (IEDC). The detailed computations for admissible IEDC are not available. Therefore, IEDC has been worked out on presumptive basis as 5% on Hard Cost submitted in the Abstract Cost Estimates by the petitioner. Thus, in the absence of proper and sufficient details, IEDC claim is restricted to ₹75.02 lakh considering disallowance for the period of delay of two months, upto date of commercial operation for the purpose of the tariff in the instant petition.

23. Regulation 9 of the 2009 Tariff Regulations provides for the treatment of undischarged liabilities after the same are discharged. However, as the petitioner has not submitted the required information with regard to the IDC/IEDC actually discharged, 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 and specific to the transmission asset considered in this petition upto date of commercial operation and balance IDC discharged after date of commercial operation. IDC/IEDC allowed shall 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.

Initial Spares

24. Regulation 8 of the 2009 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:-

> **"8. Initial Spares.** Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:
>
> (iv) Transmission system
>
> (a) Transmission line - 0.75%
>
> (b) Transmission Sub-station - 2.5%
>
> (c) Series Compensation devices and HVDC Station - 3.5%
>
> Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to clause (2) of regulation 7, such norms shall apply to the exclusion of the norms specified herein.

25. The actual cost on the date of commercial operation claimed by the petitioner is inclusive of the cost of initial spares for sub-stations which are within the ceiling limit as specified vide clause 8 of the 2009 Tariff Regulations and are allowed as claimed.

Capital cost as on COD

26. Accordingly, the details of the capital cost allowed as on COD are as under:-

(₹ in lakh)

Hard cost claimed as on COD	IDC/IEDC allowed	Capital cost as on COD
3209.56	349.45	3559.01

Projected Additional Capital Expenditure

27. Clause (1) of Regulation 9 of the 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:"

28. Clause (11) of Regulation 3 of Tariff Regulations defines "cut-off" date as under:

> "cut-off date" means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case 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".

29. After taking into account the date of commercial operation of the transmission asset, cut-off date arrived at is 31.3.2016.

30. The additional capital expenditure during 2012-13 and 2013-14 claimed by the petitioner is ₹531.18 lakh and ₹177.19 lakh respectively. MSEDCL has submitted that due to huge variations between approved and actual cost the petitioner's claim towards additional capital expenditure requires a prudent check by the Commission. The additional capital cost claimed by the petitioner in respect of the instant asset is within

the cut-off date and is on account of balance/retention payments. The additional capital expenditure claimed in respect of the instant assets is therefore allowed.

Capital cost as on 31.3.2014

31. Based on the above, gross block has been considered as per details given as below:-

(₹ in lakh)

Capital cost as on COD	Additional capitalisation		Capital cost as 31.3.2014
	2012-13	2013-14	
3559.01	531.18	177.19	4267.38

Debt- Equity ratio

32. Regulation 12 of the 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."

33. The capital cost on the dates of commercial operation arrived at as above and additional capitalization allowed have been considered in the normative debt-equity ratio of 70:30. Details of debt-equity as on dates of commercial operation and 31.3.2014 considered on normative basis are as under:-

(₹ in lakh)

Particulars	**As on COD**		**As on 31.3.2014**	
	Amount	**%age**	**Amount**	**%age**
Debt	2491.31	70.00	2987.17	70.00
Equity	1067.70	30.00	1280.21	30.00
Total	**3559.01**	**100.00**	**4267.38**	**100.00**

Return on equity

34. 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".

35. MSEDCL has raised the issue that the petitioner may not be allowed to bill, in case of a variation in the rates of Income Tax without filing a separate petition. The petitioner's prayer 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 shall be dealt under Regulation 15(5). Return on Equity has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

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

(₹ in lakh)

Particulars	**2012-13 (pro-rata)**	**2013-14**
Opening Equity	1067.70	1227.06
Addition due to Additional Capitalization	159.35	53.16
Closing Equity	1227.06	1280.21
Average Equity	1147.38	1253.64
Return on Equity (Base Rate)	**15.50%**	**15.50%**
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%
Rate of Return on Equity (Pre Tax)	17.481%	17.481%
Return on Equity (Pre Tax)	**83.57**	**219.15**

Interest on loan

37. Regulation 16 of the 2009 Tariff Regulations provides as follows:-

"16. **Interest on loan capital** (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."

38. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner's entitlement to interest on loan has been calculated on the following basis:-

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

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

(c) 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.

39. MSEDCL has raised the issue that petitioner's prayer to bill and adjust the impact on loan due to change in interest rate on account of floating rate of interest on loan and the impact of a proposed loan which has been replaced with Bond-XLI on the project cost, needs a prudent check by the Commission. The interest on loan has been calculated on the basis of prevailing rate available as on the date of commercial operation. Any change in rate of interest subsequent to date of commercial operation will be considered at the time of truing up.

40. Detailed calculations in support of interest on loan have been calculated as given at Annexure to this order.

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

(₹ in lakh)

Particulars	2012-13 (pro-rata)	2013-14
Gross Normative Loan	2491.31	2780.17
Cumulative Repayment upto Previous Year	-	82.97
Net Loan-Opening	2491.31	2780.17
Addition due to Additional Capitalisation	371.83	124.03
Repayment during the year	82.97	217.16
Net Loan-Closing	2780.17	2687.03
Average Loan	2635.74	2733.60
Weighted Average Rate of Interest on Loan	9.1334%	9.1334%
Interest on Loan	**100.31**	**249.67**

Depreciation

42. Regulation 17 of the 2009 Tariff Regulations provides as under:-

"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."

43. The petitioner has claimed actual depreciation as a component of Annual Fixed Charges. In our calculations, depreciation has been calculated in accordance with clause (4) of Regulation 17 extracted above.

44. The transmission asset was put under commercial operation during the last half of 2012. Accordingly, they will complete 12 years after 2013-14. As such, depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-III to the 2009 Tariff Regulations.

45. Details of the depreciation worked out are as under:-

(₹ in lakh)

Particulars	**2012-13 (pro-rata)**	**2013-14**
Opening Gross Block	3559.01	4090.19
Addition during 2009-14 due to Projected Additional Capitalisation	531.18	177.19
Gross Block as on 31st March	4090.19	4267.38
Average Gross Block	3824.60	4178.78
Rate of Depreciation	5.2063%	5.1968%
Depreciable Value	3442.14	3760.91
Remaining Depreciable Value	3442.14	3677.94
Depreciation	**82.97**	**217.16**

Operation & Maintenance Expenses (O&M Expenses)

46. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as under:-

Elements	2009-10	2010-11	2011-12	2012-13	2013-14
765 kV bays (₹ lakh per bay)	73.36	77.56	81.99	86.68	91.64

47. The allowable O&M expenses for the assets are as follows:-

(₹ in lakh)

Particulars	No. of Bays	2012-13 (pro-rata)	2013-14
765 kV bays	2	72.23	183.28
Total	**2**	**72.23**	**183.28**

48. 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 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 may approach the Commission for suitable revision in norms for O&M Expenses in case the impact of wage hike with effect from 1.1.2007 is more than 50%.

49. While specifying the norms for the O & M Expenses, the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on

account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M Expenses as per the existing norms. In view of above, the prayer of the petitioner is rejected.

Interest on working capital

50. The petitioner is entitled to claim interest on working capital as per the Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

(i) Receivables

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital 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 as part of the working capital 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 to be included in the working capital. The petitioner has claimed O&M expenses for 1 month of the respective year. This has been considered in the working capital.

(iv) Rate of interest on working capital

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation after 1.4.2009 shall be equal to State Bank of India Base Rate as applicable on 1st April of the year of commercial operation plus 350 bps. State Bank of India base interest rate on 1.4.2012 was 10.00%. Therefore, interest rate of 13.50% has been considered in respect of the transmission assets. The interest on working capital for the assets covered in the petition has been worked out accordingly.

51. Necessary computations of interest on working capital are given under:-

(₹ in lakh)

Particulars	**2012-13 (pro-rata)**	**2013-14**
Maintenance Spares	26.00	27.49
O & M expenses	14.45	15.27
Receivables	139.68	149.20
Total	**180.13**	**191.96**
Interest Rate	13.50%	13.50%
Interest	**10.13**	**25.91**

Transmission charges

52. MSEDCL has raised the issue that the Commission may carry out a prudence check for allowing the transmission charges and the petitioner may be allowed to adjust the tariff with retrospective effect with interest rate equal to the prime lending rate of SBI of the respective year to avoid unnecessary burden on the ultimate consumers.

53. We have considered the various parameters as submitted by the petitioner and the transmission charges allowed for the transmission assets are summarized as under:-

(₹ in lakh)

Particulars	**2012-13 (pro-rata)**	**2013-14**
Depreciation	82.97	217.16
Interest on Loan	100.31	249.67
Return on Equity	83.57	219.15
Interest on Working Capital	10.13	25.91
O & M Expenses	72.23	183.28
Total	**349.21**	**895.18**

Filing Fee and the Publication Expenses

54. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the 2009 Tariff Regulations. MSEDCL has raised the issue that the issue of filing fee has been taken up against the Commission's order dated 20.8.2010 in Petition No. 70/2010 and it should not be allowed. 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

55. 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 bill and recover license fee separately from the respondents as provided in the 2009 Tariff Regulations. The petitioner has submitted that the licence fee has been a new component of cost to the transmission licence under O&M stage of the project and has become incidental to the petitioner only from 2008-09. MSEDCL has submitted that licence fee is being asked to be reimbursed by the petitioner in view of amendments to the 2009 Tariff Regulations but the Commission may pass just and proper order to avoid consequent burden on the consumers. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (1) (b) of the 2009 Tariff Regulations.

Service Tax

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

Sharing of Transmission Charges

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

58. This order disposes of Petition No. 120/TT/2013.

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

Annexure

(₹ in lakh)

	CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
	Details of Loan	**2012-13**	**2013-14**
1	**Bond XLI**		
	Gross loan opening	**403.87**	**403.87**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**
	Net Loan-Opening	403.87	403.87
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	403.87	403.87
	Average Loan	403.87	403.87
	Rate of Interest	8.85%	8.85%
	Interest	35.74	35.74
	Rep Schedule	12 annual instalments from 19.10.2016	
2	**Bond XXXVI**		
	Gross loan opening	**1188.00**	**1188.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**
	Net Loan-Opening	1188.00	1188.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1188.00	1188.00
	Average Loan	1188.00	1188.00
	Rate of Interest	9.35%	9.35%
	Interest	111.08	111.08
	Rep Schedule	12 annual instalments from 29.08.2016	
3	**Bond XXXIII**		
	Gross loan opening	**300.00**	**300.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	300.00	300.00
	Average Loan	300.00	300.00
	Rate of Interest	8.64%	8.64%
	Interest	25.92	25.92
	Rep Schedule	12 annual instalments from 08.07.2014	
4	**Bond XXXIV**		
	Gross loan opening	**500.00**	**500.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**
	Net Loan-Opening	500.00	500.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	500.00	500.00

	Average Loan	500.00	500.00
	Rate of Interest	8.84%	8.84%
	Interest	44.20	44.20
	Rep Schedule	12 annual instalments from 21.10.2014	
5	**Bond XXXV**		
	Gross loan opening	**300.00**	**300.00**
	Cumulative Repayment upto DOCO/previous year	**0.00**	**0.00**
	Net Loan-Opening	300.00	300.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	300.00	300.00
	Average Loan	300.00	300.00
	Rate of Interest	9.64%	9.64%
	Interest	28.92	28.92
	Rep Schedule	12 annual instalments from 31.05.2015	
	Total Loan		
	Gross loan opening	2691.87	2691.87
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2691.87	2691.87
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2691.87	2691.87
	Average Loan	2691.87	2691.87
	Rate of Interest	**9.1334%**	**9.1334%**
	Interest	**245.86**	**245.86**