

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO.37/TT/2013

Coram:

**Shri A.S. Bakshi, Member
Dr. M. K. Iyer, Member**

Date of Hearing: 27.01.2016

Date of Order : 18.03.2016

In the matter of:

Determination of transmission tariff for 2009-14 block in respect of Transmission Assets (Group-4) associated with 765 kV system for Central Part of Northern Grid Part-II in Northern Region 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 Ltd,
'Saudamini', Plot No-2,
Sector-29, Gurgaon-122 001 (Haryana)

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur - 302005.
2. Ajmer Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
3. Jaipur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur



5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla - 171 004.
6. Punjab State Electricity Board,
The Mall, Patiala - 147 001.
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector - 6
Panchkula (Haryana) - 134 109
8. Power Development Department,
Government of Jammu and Kashmir
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226 001.
10. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi - 110 002
11. BSES Yamuna Power Ltd.,
Shakti Kiran Building, Karkardooma,
Delhi – 110 092.
12. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi.
13. North Delhi Power Ltd.,
Power Trading & Load Dispatch Group,
Cennet Building,
Adjacent to 66/11kV Pitampura -
Grid Building, Near PP Jewellers,
Pitampura, New Delhi - 110 034
14. Chandigarh Administration,
Sector - 9, Chandigarh
15. Uttarakhand Power Corporation Ltd.,
UrjaBhawan, Kanwali Road,
Dehradun
16. North Central Railway,
Allahabad



17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi - 110 002

.....Respondents

The following were present:

For Petitioner: Shri M.M. Mondal, PGCIL
Shri S.S. Raju, PGCIL
Smt. Sangeeta Edwards, PGCIL
Shri S.C. Taneja, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Anshul Garg, PGCIL
Shri Jasbir Singh, PGCIL
Shri S.K. Venkatesan, PGCIL
Smt. Trepti Sonkatar, PGCIL

Respondents: None

ORDER

The petition has been preferred by Power Grid Corporation of India Limited (“the petitioner”) for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) for the period from Commercial Operation Date (“COD”) to 31.3.2014 in respect of Transmission Assets (Group-4) associated with 765 kV system for Central Part of Northern Grid Part-II in NR (hereinafter referred to as “the transmission assets”).

2. The respondents are distribution licensees, who are procuring transmission service from the petitioner, mainly the beneficiaries of Northern Region.

3. The administrative approval and expenditure sanction to the project was accorded by the Board of Directors of POWERGRID vide Memorandum Ref. C/CP/765 kV System in Northern Grid dated 30.7.2009 for ₹173636 lakh including



an IDC of ₹11662 lakh based on 1st Quarter, 2009 price level. The scope of work covered under the project comprises following transmission lines and sub-stations:-

Sub-stations:

- New 4x1500 MVA, 765/400 kV Substation at Jhatikara
- Augmentation of 400/220 kV Meerut Substation to 2x1500 MVA, 765/400 kV Substation
- Augmentation of 400/220 kV Moga Substation to 2x1500 MVA, 765/400 kV Substation
- Extension of Agra 765/400 kV Substation

Reactive Compensation:

	Line Reactor from bus	Line Reactor to bus
Line Reactors		
Agra-Jhatikara 765 kV S/C line	-	240 (Switchable)
Meertut-Agra 765 kV S/C line	240 MVAR (Switchable)	-
Bhiwani- Moga 765 kV S/C line		240 MVAR (Switchable)

Bus Reactors:

1. **Jhatikara – 1x240 MVAR**
 2. **Meerut – 1x240 MVAR**
 3. Moga - 2x240 MVAR
4. As per the investment approval dated 30.7.2009, the instant assets were scheduled to be commissioned within 30 months from the date of Investment Approval. Accordingly, the schedule date of completion was 30.1.2012. The assets covered in the instant petition are as follows:-

Asset	Name of the Asset	Actual COD
Asset 1	240 MVAR Bus Reactor at Meerut	1.10.2012
Asset 2	240 MVAR Bus Reactor at Jhatikaran	1.10.2012
Asset 3	Associated bay for Bhiwani Jhatikaran at Jhatikaran	1.2.2013



5. The petitioner initially claimed the tariff for the instant transmission assets on the basis of anticipated COD of 1.4.2013 for Asset-1 and the actual COD of 1.10.2012 for Asset-2 and Asset-3. However, the petitioner, vide affidavits dated 16.7.2013 and 9.12.2015, has submitted the actual date of commercial operation of Asset-1 as 1.2.2013. The petitioner has submitted the Management Certificate indicating the expenditure incurred upto actual COD vide affidavit dated 16.7.2013 and other documents pertaining to deployment of IFC loan, interest rate and payment schedule. Further, the petitioner had submitted Auditor's Certificates dated 26.9.2015 indicating the expenditure incurred up to actual COD vide affidavit dated 9.12.2015 along with revised tariff forms pertaining to these assets. The petitioner has further submitted the declaration letter for commercial operation of the instant transmission assets and energisation certificates issued by Central Electricity Authority ("CEA") vide affidavit dated 23.1.2016.

6. The petitioner has served the petition on the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments/objections have been received from the public in response to the notice in newspapers. No comments/objections have been received from the respondents.

7. The hearing in this matter was held on 27.1.2016. Having heard the representatives of the parties and perused the records, we proceed to dispose of the petition.

8. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as below:-

(₹in lakh)

Particulars	Asset-1		Asset-2		Asset-3	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Depreciation	41.55	269.42	128.38	271.65	44.29	93.22
Interest on Loan	46.11	287.38	164.54	329.12	71.1	141.79
Return on Equity	45.86	300.9	157.12	334.71	64.12	135.05
Interest on Working Capital	3.87	24.81	12.76	26.6	6.53	13.58
O & M Expenses	14.45	91.64	43.34	91.64	43.34	91.64
Total	151.84	974.15	506.14	1053.72	229.38	475.28

Capital Cost

9. Regulation 7 of the 2009 Tariff Regulations provides that:-

“(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...”

10. The details of apportioned approved cost and capital cost as on the date of commercial operation and the additional capital expenditure claimed by the petitioner vide revised forms in affidavit dated 9.12.2015, are summarized below:-

(₹ in lakh)

Asset	Apportioned approved cost as per FR	Capital cost incurred as on COD*	Additional capital expenditure			Total completion cost
			2012-13	2013-14	Total	
Asset-1	6066.24	4492.38	482.64	279.38	762.02	5254.40
Asset-2	8041.96	5187.15	436.93	130.66	567.59	5754.74
Asset-3	2500.11	2144.78	122.62	56.28	178.90	2323.68

(*Capital cost has been considered as per Auditor Certificate dated 26.9.2015)

11. The petitioner has claimed a total Incidental Expenditure During Construction (IEDC) of ₹67.33 lakh, ₹67.33 lakh, and ₹22.77 lakh and total Interest During Construction (IDC) of ₹248.61 lakh, ₹248.61 lakh and ₹108.49 lakh for Asset-1, Asset-2 and Asset-3 respectively. The petitioner has submitted Auditor's Certificates dated 26.9.2015 vide affidavit dated 9.12.2015 in support of its claim.

Time over-run

12. As per the investment approval dated 30.7.2009, the instant assets were scheduled to be commissioned within 30 months from the date of investment approval. Accordingly the schedule date of commercial operation works out to be 1.2.2012. As against this, transmission assets were put under commercial operation as below:-

Asset	Scheduled COD	COD	Delay
Asset-1	1.2.2012	1.2.2013	12 months
Asset-2	1.2.2012	1.10.2012	8 months
Asset-3	1.2.2012	1.10.2012	8 months

13. The petitioner, vide affidavit dated 23.12.2013, has submitted that time over-run in the instant transmission assets is mainly on account of Right of Way (ROW) issues.



14. The petitioner has submitted that the delay in completion of Agra-Meerut 765 kV line has led to the delay in commissioning of the Bus Reactor at Meerut, i.e. Asset 1. The petitioner has further submitted that the delay in respect of Agra-Meerut 765 kV transmission line has been condoned by the Commission vide order dated 9.1.2015 in Petition No. 199/TT/2012. The petitioner has further submitted that owing to high voltages situation at the Meerut Sub-station, the petitioner approached CEA seeking permission for charging the bus reactor. The CEA, vide letter dated 31.1.2013, provided concurrence for charging the reactor through ICTs at Meerut Sub-station.

15. The petitioner has submitted that the time over-run in case of Assets 2 and 3, is due to delay in commissioning of 765 kV S/C Agra-Jatikara line and delay in commissioning of LILO of both circuits of Mundka/Bawana-Bamnouli 400 kV D/C line at Jatikara Sub-station, due to severe ROW issues and cases filed by land owners in the court. The petitioner has submitted that once the issues in the 765 kV S/C Agra-Jatikara line and LILO of both circuits of Mundka/Bawana-Bamnouli 400 kV D/C line at Jatikara Sub-station were resolved in August, 2012, Asset 2 and Asset 3 were commissioned in October, 2012. The petitioner has submitted detailed chronology of events leading to the delay in commissioning and documentary evidence to support the claims.

16. We have considered the submissions made by the petitioner regarding time over-run in commissioning of the instant transmission assets. In respect of Asset 1, the petitioner has submitted vide affidavit dated 23.12.2013, the copies of judicial directives which resolved the ROW issues related to Agra-Meerut 765 kV

line. The petitioner has further submitted that in principle approval granted by CEA vide letter dated 31.1.2013, for charging the reactor through ICTs at Meerut Sub-station. In response to query of the Commission during the hearing, the petitioner has submitted the voltage data at Meerut Sub-station, as below:-

Month	Maximum voltage during the month (kV)	% time when the voltage is more than 420 kV (prior and post DOCO of Reactor)
December, 2012	430	16
January, 2013	435	14
February, 2013	436	33
March, 2013	432	25

It is not ascertained from the above data that the bus reactors have been able to mitigate the high voltage issues.

17. In case of Asset 2, subsequent to the investment approval on 30.7.2009, the petitioner was handed over 103.54 acres of land on 22.9.2009 for construction of 765/400 kV Jhatikara Sub-station. The petitioner, vide letter dated 15.10.2009, has requested the concerned department, NCT, Delhi, to expedite the discharge of payment liability to the villagers, made by the petitioner in respect of 103.54 acres of land received by them and has further requested the concerned authority to raise demand note for the balance payment to be made by the petitioner in respect of the aforesaid land. It is observed that in response to petitioner's application dated 2.1.2010, the Department of Forest & Wildlife gave permission to cut trees towards clearance for a parcel of land vide its letter dated 24.6.2010. Further, in view of mass protests by the land owners of village Ghumanhera, Nazafgarh Tehsil, New Delhi for non-payments towards the cost of their poultry farms and

tubewells, the petitioner has requested, vide letter dated 9.6.2011 to Land and Building Department, NCT of Delhi, to expedite discharging their payments.

18. In case of Asset 3, the petitioner has submitted that the construction of Jhattikara-Bhiwani line was delayed due to severe hindrance caused by the land owners during erection of towers and line, leading to delay in commissioning of the instant asset. It is observed from the documents submitted by the petitioner that pursuant to the requests made by the petitioner, the District Magistrate, Jhajjar, vide letter dated 31.1.2012, issued order to grant police protection to the workers at site. The petitioner has submitted several letters to Superintendent of Police, District Collector, Sub Divisional Magistrate between February, 2012 and August, 2012 for assistance citing obstruction in works by the villagers. The petitioner has submitted the required documentary evidence to substantiate its claim.

19. It is observed that the acquisition of land, payment to competent authorities for the same, clearance from forest officials etc. have been completed in due time. The issues of ROW have arisen due to court cases filed by land owners and obstruction by villagers for enhanced land compensation and the petitioner has taken necessary steps and regularly intimated necessary authorities for assistance on the same. It is evident that the obstructions and court cases have resulted in delay in completion of works. Further, the Commission has condoned these delays for the related assets, vide order dated 9.1.2015 in Petition No. 199/TT/2012 and order dated 3.7.2014 in Petition No. 82/TT/2012. Therefore, the delay of 12 months in case of Asset 1 and 8 months in case of Asset 2 and Asset 3 are being condoned. The petitioner is directed to submit data over an extended period to



show that the bus reactors at Meerut Sub-station have been able to mitigate the high voltage issues at the time of true-up.

Interest During Construction (IDC)

20. The petitioner was directed to submit the details of IDC on cash basis paid up to COD. The petitioner has submitted the details of IDC discharged on cash basis up to COD and subsequently in 2012-13 and 2013-14. The details of IDC discharged up to COD and thereafter, as submitted by the petitioner, are as below:-

(₹in lakh)

Sr. No.	Asset	COD	IDC as per certificate	IDC discharged on COD	IDC discharged 2012-13	IDC discharged 2013-14
1	Asset 1	1.2.2013	322.53	226.86	23.46	72.21
2	Asset 2	1.10.2012	248.61	150.78	92.79	5.04
3	Asset 3	1.10.2012	108.49	71.20	37.29	-

The petitioner has further clarified that the accrued IDC discharged during 2012-13 and 2013-14 is not included in the additional capital expenditure certified by the Auditor's Certificate dated 26.9.2015.

21. Based on the above submissions of the petitioner, IDC as on COD has been capitalised and the remaining has been considered as part of the additional capital expenditure during 2012-13 and 2013-14.

Initial Spares

22. The petitioner has claimed total initial spares of ₹122.27 lakh, ₹134.42 lakh and ₹35.27 lakh towards sub-station equipment in Asset-I, Asset-II and Asset-III respectively.



23. The petitioner, in response to a query, has submitted vide affidavit dated 9.12.2015, the details of liability discharged corresponding to the initial spares up to COD and during the subsequent period as given below:

(₹ in lakh)

Liabilities discharged in respect of initial spares	Asset-1 Sub Station	Asset-2 Sub Station	Asset-3 Sub Station
Up to COD and included in Auditor Certificate up to COD	85.59	94.09	24.69
Estimated for 2014-15 (Add Cap)	36.68	40.33	10.58
Total	122.27	134.42	35.27

24. We have considered the claim of the petitioner for initial spares up to 31.3.2014. The initial spares worked out in respect of the capital cost on COD of the instant transmission assets, are as follows:-

Particulars	Formula	Amount in (₹ in lakh)		
		Asset-1 Sub-station	Asset-2 Sub-station	Asset-3 Sub-station
Capital Cost as on cut off date or up to 31.3.2014 (whichever is earlier)	(a)	5254.40	5754.74	2323.68
Capital Cost after reducing IDC on cash basis up to 31.3.2014	(b)	5254.40	5754.74	2286.39
Initial Spares claimed (up to 31.3.2014)	(c)	85.59	94.09	24.69
Ceiling limit as per Regulation 8 of 2009 regulations	(e)	2.50%	2.50%	2.50%
Initial spares worked out	(f)= (b-c)/(1-e)-1)	130.08	142.64	57.99
Excess initial spares claimed up to 31.3.2014	(h)=(g)-(f)	0	0	0

25. The initial spares claimed by the petitioner in respect of Assets 1, 2 and 3 are within the ceiling limit specified in Regulation 8 of 2009 Tariff Regulations and hence same are allowed.

26. The cut-off date as per the 2009 Tariff Regulations falls beyond the 31.3.2014. Therefore, the admissible initial spares have been worked out by considering the capital cost up to 31.3.2014. The petitioner may claim the balance initial spares during next tariff period.

27. The undischarged liabilities due to initial spares included in additional capitalization during 2014-15 will be subject to admissibility of additional capitalization during next tariff period as per the 2014 Tariff Regulations. The petitioner has liberty to claim the balance initial spares based on additional capital expenditure during next tariff period. Accordingly, the capital cost on COD is worked out by considering IDC and excess initial spares as on COD is as follows:-

Asset 1:

(₹ in lakh)

Capital Cost	As per petitioner's claim	IDC discharged after COD	As on COD 1.2.2013*
Land – Freehold	0.00	0.00	0.00
Land – Leasehold	0.00	0.00	0.00
Building Civil Works & Colony	32.48	0.69	31.79
Transmission Line	0.00	0.00	0.00
Sub Station	4459.90	94.98	4364.92
PLCC	0.00	0.00	0.00
Total	4492.38	95.67	4396.71

*incl. IDC= ₹226.86 lakh (₹322.53 lakh - ₹95.67 lakh), IEDC= ₹66.63 lakh, initial spares = ₹85.59 lakh

Asset 2:

(₹ in lakh)

Capital Cost	As per petitioner's claim	IDC discharged after COD	As on COD 1.10.2012*
Land – Freehold	511.86	0.00	511.86
Land – Leasehold	0.00	0.00	0.00
Building Civil Works & Colony	78.39	1.64	76.75
Transmission Line	0.00	0.00	0.00
Sub Station	4596.90	96.19	4500.71
PLCC	0.00	0.00	0.00
Total	5187.15	97.83	5089.32

*incl. IDC= ₹150.78 lakh (₹248.61 lakh - ₹97.83 lakh), IEDC= ₹67.33 lakh, initial spares = ₹94.09 lakh

Asset 3:

(₹ in lakh)

Capital Cost	As per petitioner's claim	IDC discharged after COD	As on COD 1.10.2012*
Land – Freehold	511.86	0.00	511.86
Land – Leasehold	0.00	0.00	0.00
Building Civil Works & Colony	79.48	1.82	77.66
Transmission Line	0.00	0.00	0.00
Sub Station	1483.80	33.88	1449.92
PLCC	69.64	1.59	68.05
Total	2144.78	37.29	2107.49

*incl. IDC= ₹71.20 lakh (₹108.49 lakh - ₹37.29 lakh), IEDC= ₹22.77 lakh, initial spares = ₹24.69 lakh

Additional Capital Expenditure

28. Clause (1) of Regulation 9 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.”

29. Further, clause (11) of Regulation 3 of the 2009 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".

As per the above definition, the cut-off date in respect of the Asset 1 is 31.3.2016 and in respect of Assets 2 and 3 is 31.3.2015.

30. The petitioner has claimed additional capital expenditure of ₹762.02 lakh, ₹567.59 lakh and ₹178.90 lakh in respect of Assets 1, 2 and 3 respectively, towards balance and retention payments for the works completed within the cut-off date.

31. In response to query vide letter dated 22.1.2016, the petitioner has confirmed that all the works included in the scope of work have been completed. The petitioner has also submitted the details of such undischarged liabilities vide its affidavit dated 4.3.2016.

32. The additional capital expenditure claimed in respect of Assets 1, 2 and 3 are within the cut-off date and is on account of Balance/Retention payments and hence the same are allowed. The IDC as on COD has been capitalised and the remaining has been considered as part of the additional capital expenditure during 2012-13 and 2013-14 as given below:-

(₹ in lakh)

Asset	Appor- tioned approved cost as per FR	Actual cost incurred as on COD	Additional capital expenditure			Total completion cost
			2012-13	2013-14	Total	
Asset-1	6066.24	4396.71	506.10 (482.64+23.46)	351.59 (279.38+72.21)	857.69	5254.40
Asset-2	8041.96	5089.32	529.72 (436.93+92.79)	135.70 (130.66+5.04)	665.42	5754.74
Asset-3	2500.11	2107.49	159.91 (122.62+37.29)	56.28	216.19	2323.68

33. The debt-equity ratio of 70:30 is claimed by the petitioner for the additional capital expenditure in accordance with the Regulation 12 (3) of 2009 Tariff Regulations and hence, same has been considered towards financing of the additional capital expenditure.

Debt: Equity

34. 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:

.....

(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.”

35. The debt:equity ratio of 70:30 has been considered as on the date of commercial operation for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations. The debt-equity ratio 70:30 as claimed by the petitioner is in accordance with the Regulation 12 (3) of 2009 Tariff Regulations and hence, same has been considered towards financing of the additional capital expenditure



36. The details of the debt: equity considered for the purpose of tariff for 2009-14 tariff period is as follows:-

(₹ in lakh)

Funding	Claimed		Admissible	
	As on COD	%	As on COD	%
Asset-1				
Debt	3144.67	70.00	3077.70	70.00
Equity	1347.71	30.00	1319.01	30.00
Total	4492.38	100.00	4396.71	100.00
Asset-2				
Debt	3631.01	70.00	3562.52	70.00
Equity	1556.14	30.00	1526.80	30.00
Total	5187.15	100.00	5089.32	100.00
Asset-3				
Debt	1501.35	70.00	1475.24	70.00
Equity	643.43	30.00	632.25	30.00
Total	2144.78	100.00	2107.49	100.00

37. The normative debt:equity ratio of 70:30 has been considered for the estimated additional capitalization in accordance with the 2009 Tariff Regulations as under:-

(₹ in lakh)

Funding	As on COD	%	Additional capital expenditure during 2009-14	%	As on 31.3.2014	(%)
Asset-1						
Debt	3077.70	70.00	600.38	70.00	3678.08	70.00
Equity	1319.01	30.00	257.31	30.00	1576.32	30.00
Total	4396.71	100.00	857.69	100.00	5254.40	100.00
Asset-2						
Debt	3562.52	70.00	465.79	70.00	4028.31	70.00
Equity	1526.80	30.00	199.63	30.00	1726.43	30.00
Total	5089.32	100.00	665.42	100.00	5754.74	100.00
Asset-3						
Debt	1475.24	70.00	151.33	70.00	1626.57	70.00
Equity	632.25	30.00	64.86	30.00	697.11	30.00
Total	2107.49	100.00	216.19	100.00	2323.68	100.00

Return on Equity (“ROE”)

38. Clause (3), (4) and (5) of the Regulation 15 of the 2009 Tariff Regulations provide as follows:-

“(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 maybe, 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 year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

39. Regulation 15 of the 2009 Tariff Regulations provides for grossing up of ROE with the actual tax rate for the purpose of ROE. The petitioner has prayed that it may be allowed to recover the shortfall or refund the excess due to change in MAT rate. The petitioner has submitted the MAT rate applicable during the various years of 2009-14 tariff period.

(₹ in lakh)

Return on Equity	Asset-1		Asset-2		Asset-3	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Opening Equity	1319.01	1470.84	1526.80	1685.71	632.25	680.22
Additions	151.83	105.48	158.92	40.71	47.97	16.88
Closing Equity	1470.84	1576.32	1685.71	1726.42	680.22	697.10
Average Equity	1394.93	1523.58	1606.25	1706.07	656.23	688.66
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500	15.500



Return on Equity MAT Rate for respective year (%)	Asset-1		Asset-2		Asset-3	
	20.008	20.961	20.008	20.961	20.008	20.961
Rate of Return on Equity (%)	19.377	19.610	19.377	19.610	19.377	19.610
Return on Equity	45.05	298.78	155.62	334.57	63.58	135.05

Interest on Loan (“IoL”)

40. Clause (5) and (6) of Regulation 16 of the 2009 Tariff Regulations provide the methodology for working out weighted average rate of IoL as under:-

“(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.”

41. The weighted average rate of IoL has been considered on the basis of actual loan portfolio and the rate of interest submitted by the petitioner. The IoL has been worked out in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest for 2009-14 tariff period are given in Annexure-1. The IoL allowed is as follows:-

(₹in lakh)

Interest on Loan	Asset-1		Asset-2		Asset-3	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Gross Normative Loan	3077.70	3431.97	3562.52	3933.33	1475.24	1587.18
Cumulative Repayment upto Previous Year	0.00	40.81	0.00	127.03	0.00	43.80
Net Loan-Opening	3077.70	3391.15	3562.52	3806.29	1475.24	1543.38
Additions	354.27	246.11	370.80	94.99	111.94	39.40
Repayment during the	40.81	267.53	127.03	271.51	43.80	93.22



Interest on Loan	Asset-1		Asset-2		Asset-3	
year						
Net Loan-Closing	3391.15	3369.74	3806.29	3629.77	1543.38	1489.56
Average Loan	3234.42	3380.45	3684.41	3718.03	1509.31	1516.47
Weighted Average Rate of Interest on Loan (%)	8.4014	8.4423	8.8466	8.8510	9.3423	9.3529
Interest on Loan	45.29	285.39	162.97	329.08	70.50	141.83

Depreciation

42. The depreciation has been worked out as per the methodology provided in the Regulation 17 of the 2009 Tariff Regulations provided 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 depreciation allowed is as follows:-

(₹ in lakh)

Depreciation	Asset-1		Asset-2		Asset-3	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
Opening Gross Block	4396.71	4902.81	5089.32	5619.04	2107.49	2267.40
Additional Capitalization	506.10	351.59	529.72	135.70	159.91	56.28
Closing Gross Block	4902.81	5254.40	5619.04	5754.74	2267.40	2323.68
Average Gross Block	4649.76	5078.61	5354.18	5686.89	2187.45	2295.54
Freehold Land (Av. Cost)	-	-	511.86	511.86	511.86	511.86
Rate of Depreciation (%)	5.27	5.27%	4.75	4.77	4.00	4.06
Balance Useful life of the asset	25	24	25.	24	25	24
Elapsed life	-	1	-	1	-	1
Remaining Depreciable Value	4184.78	4529.93	4358.09	4530.49	1508.03	1561.51
Depreciation during the year	40.81	267.53	127.03	271.51	43.80	93.22

Operation & Maintenance Expenses (“O&M Expenses”)

44. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. Normative O&M Expenses in respect of the transmission assets covered in the instant petition are as under:-

(₹ in lakh)

Particulars	Asset-1		Asset-2		Asset-3	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
765 kV Bays:						
No. of Bays	1	1	1	1	1	1
Norms (₹ lakh/Bay)	86.68	91.64	86.68	91.64	86.68	91.64
Total O&M Expenses (₹ lakh)	14.45	91.64	43.34	91.64	43.34	91.64

45. The petitioner has submitted that O&M expenses for the period 2009-14 was 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.

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

Interest on Working Capital (“IWC”)

47. The IWC has been worked out as per the methodology provided in the Regulation 18 of the 2009 Tariff Regulations. The IWC allowed is as under:-

(₹ in lakh)

Interest on Working Capital	Asset-1		Asset-2		Asset-3	
	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14	2012-13 (pro-rata)	2013-14
O & M expenses	7.22	7.63	7.22	7.63	7.22	7.63
Maintenance Spares	13.00	13.75	13.00	13.75	13.00	13.75
Receivables	149.42	161.33	167.21	175.57	75.90	79.22
Total	169.64	182.71	187.43	196.94	96.13	100.60
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	3.82	24.67	12.65	26.59	6.49	13.58

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

48. Based on the foregoing discussions, the annual fixed charges for the transmission assets for the 2009-14 tariff period are summarised below:-

Asset 1:

(₹ in lakh)

Particulars	2012-13 (pro-rata)	2013-14
Depreciation		
Opening Gross Block	4396.71	4902.81
Additional Capitalisation	506.10	351.59
Closing Gross Block	4902.81	5254.40
Average Gross Block	4649.76	5078.61
Rate of Depreciation	5.27%	5.27%
Depreciable Value	4184.78	4798.49
Balance Useful life of the asset	25.00	24.00
Elapsed Life	0.00	1.00
Remaining Depreciable Value	4184.78	4529.93
Depreciation during the year	40.81	267.53
Interest on Loan		
Gross Normative Loan	3077.70	3431.97
Cumulative Repayment upto Previous Year	0.00	40.81
Net Loan-Opening	3077.70	3391.15
Additions	354.27	246.11
Repayment during the year	40.81	267.53
Net Loan-Closing	3391.15	3369.74
Average Loan	3234.42	3380.45
Weighted Average Rate of Interest on Loan (%)	8.4014%	8.4423%
Interest on Loan	45.29	285.39
Return on Equity		
Opening Equity	1319.01	1470.84
Additions	151.83	105.48
Closing Equity	1470.84	1576.32
Average Equity	1394.93	1523.58
Return on Equity (Base Rate)	15.500%	15.500%
MAT rate for the respective year	20.008%	20.961%
Rate of Return on Equity	19.377%	19.610%
Return on Equity	45.05	298.78
Interest on Working Capital		
O & M expenses	7.22	7.63
Maintenance Spares	13.00	13.75
Receivables	149.42	161.33
Total	169.64	182.71

Particulars	2012-13 (pro-rata)	2013-14
Rate of Interest	13.50%	13.50%
Interest on Working Capital	3.82	24.67
Annual Transmission Charges		
Depreciation	40.81	267.53
Interest on Loan	45.29	285.39
Return on Equity	45.05	298.78
Interest on Working Capital	3.82	24.67
O & M Expenses	14.45	91.64
Total	149.42	968.00

Asset 2:

(₹ in lakh)

Particulars	2012-13 (pro-rata)	2013-14
Depreciation		
Opening Gross Block	5089.32	5619.04
Additional Capitalisation	529.72	135.70
Closing Gross Block	5619.04	5754.74
Average Gross Block	5354.18	5686.89
Rate of Depreciation	4.75%	4.77%
Depreciable Value	4358.09	4895.90
Balance Useful life of the asset	25.00	24.00
Elapsed Life	0.00	1.00
Remaining Depreciable Value	4358.09	4530.49
Depreciation during the year	127.03	271.51
Interest on Loan		
Gross Normative Loan	3562.52	3933.33
Cumulative Repayment upto Previous Year	0.00	127.03
Net Loan-Opening	3562.52	3806.29
Additions	370.80	94.99
Repayment during the year	127.03	271.51
Net Loan-Closing	3806.29	3629.77
Average Loan	3684.41	3718.03
Weighted Average Rate of Interest on Loan (%)	8.8466%	8.8510%
Interest on Loan	162.97	329.08
Return on Equity		
Opening Equity	1526.80	1685.71
Additions	158.92	40.71
Closing Equity	1685.71	1726.42
Average Equity	1606.25	1706.07
Return on Equity (Base Rate)	15.500%	15.500%
MAT rate for the respective year	20.008%	20.961%
Rate of Return on Equity	19.377%	19.610%
Return on Equity	155.62	334.57



Particulars	2012-13 (pro-rata)	2013-14
Interest on Working Capital		
O & M expenses	7.22	7.63
Maintenance Spares	13.00	13.75
Receivables	167.21	175.57
Total	187.43	196.94
Rate of Interest	13.50%	13.50%
Interest on Working Capital	12.65	26.59
Annual Transmission Charges		
Depreciation	127.03	271.51
Interest on Loan	162.97	329.08
Return on Equity	155.62	334.57
Interest on Working Capital	12.65	26.59
O & M Expenses	43.34	91.64
Total	501.62	1053.39

Asset 3:

(₹ in lakh)

Particulars	2012-13 (pro-rata)	2013-14
Depreciation		
Opening Gross Block	2107.49	2267.40
Additional Capitalisation	159.91	56.28
Closing Gross Block	2267.40	2323.68
Average Gross Block	2187.45	2295.54
Rate of Depreciation	0.04	0.04
Depreciable Value	1508.03	1677.27
Balance Useful life of the asset	25.00	24.00
Elapsed Life	0.00	1.00
Remaining Depreciable Value	1508.03	1561.51
Depreciation during the year	43.80	93.22
Interest on Loan		
Gross Normative Loan	1475.24	1587.18
Cumulative Repayment upto Previous Year	0.00	43.80
Net Loan-Opening	1475.24	1543.38
Additions	111.94	39.40
Repayment during the year	43.80	93.22
Net Loan-Closing	1543.38	1489.56
Average Loan	1509.31	1516.47
Weighted Average Rate of Interest on Loan (%)	9.3423%	9.3529%
Interest on Loan	70.50	141.83
Return on Equity		
Opening Equity	632.25	680.22
Additions	47.97	16.88
Closing Equity	680.22	697.10



Particulars	2012-13 (pro-rata)	2013-14
Average Equity	656.23	688.66
Return on Equity (Base Rate)	15.500%	15.500%
MAT rate for the respective year	20.008%	20.961%
Rate of Return on Equity	19.377%	19.610%
Return on Equity	63.58	135.05
Interest on Working Capital		
O & M expenses	7.22	7.63
Maintenance Spares	13.00	13.75
Receivables	75.90	79.22
Total	96.13	100.60
Rate of Interest	13.50%	13.50%
Interest on Working Capital	6.49	13.58
Annual Transmission Charges		
Depreciation	43.80	93.22
Interest on Loan	70.50	141.83
Return on Equity	63.58	135.05
Interest on Working Capital	6.49	13.58
O & M Expenses	43.34	91.64
Total	227.71	475.33

Filing Fee and the Publication Expenses

49. 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 of the 2009 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

50. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (1) (b) of the 2009 Tariff Regulations for 2009-14 tariff period. The petitioner shall also be entitled for recovery of RLDC fee &

charges in accordance with Regulations 42A (1) (a) of the 2009 Tariff Regulations for 2009-14 tariff period.

Service Tax

51. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. We are of the view that the petitioner's prayer is premature.

Sharing of Transmission Charges

52. 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.

53. This order disposes of Petition No.37/TT/2013.

Sd/-
(Dr. M.K. Iyer)
Member

Sd/-
(A.S. Bakshi)
Member

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST**Asset-1:**

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2013	Additions during the tariff period	Total
BOND XXXVI-DOCO DRAWL	9.35%	1914.60	0.00	1914.60
BOND XXXVII-DOCO DRAWL	9.25%	500.00	0.00	500.00
BOND XXXVIII- ADDCAP FOR 2012-2013- Add Cap. DRAWL	9.25%	0.00	164.60	164.60
BOND XXXVIII- DOCO DRAWL	9.24%	35.40	0.00	35.40
BOND XXXIX- DOCO DRAWL	9.40%	167.36	0.00	167.36
SBI (21.03.2012)-ADD CAP for 2013-14 Addcap DRAWL	10.29%	0.00	195.57	195.57
BOND XLII-ADDCAP FOR 2012-13 add cap DRAWL	8.80%	0.00	173.25	173.25
IFC (IFC- A Loan) (31419-00) DOCO DRAWL-53.79	3.58%	527.31	0.00	527.31
Total		3144.67	533.42	3678.09

WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2009-14 TARIFF PERIOD

(₹ in lakh)

Particulars	2012-13	2013-14
Gross Opening Loan	3144.67	3482.52
Cumulative Repayments of Loans upto Previous Year	0.00	0.00
Net Loans Opening	3144.67	3482.52
Add: Draw(s) during the Year	337.85	195.57
Less: Repayments of Loan during the year	0.00	0.00
Net Closing Loan	3482.52	3678.09
Average Net Loan	3313.60	3580.31
Rate of Interest on Loan (%)	8.4011%	8.4426%
Interest on Loan	278.38	302.27

Asset-2:

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2012	Additions during the tariff period	Total
BOND XXXVI-DOCO	9.35%	1601.94	0.00	1601.94
BOND XXXVII-ADDCAP FOR 2012-2013-Add cap	9.25%	0.00	263.94	263.94
BOND XXXVII-DOCO	9.25%	336.06	0.00	336.06
BOND XXXVIII-DOCO	9.25%	600.00	0.00	600.00
BOND XXXIX-DOCO	9.40%	774.86	0.00	774.86
SBI(21.03.2012)-ADDCAP FOR 2013-2014 Add Cap	10.29%	0.00	12.65	12.65
BOND XL-ADDCAP FOR 2012-2013 Add Cap	9.30%	0.00	41.91	41.91
IFC (IFC- A Loan) (31419-00) DOCO DRAWL-53.79	3.58%	318.15	0.00	318.15
BOND XLV-ADDCAP FOR 2013-2014 Add Cap	9.65%	0.00	78.81	78.81
Total		3631.01	397.31	4028.32

WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2009-14 TARIFF PERIOD

(₹ in lakh)

Particulars	2012-13	2013-14
Gross Opening Loan	3631.01	3936.86
Cumulative Repayments of Loans upto Previous Year	0.00	0.00
Net Loans Opening	3631.01	3936.86
Add: Draw(s) during the Year	305.85	91.46
Less: Repayments of Loan during the year	0.00	0.00
Net Closing Loan	3936.86	4028.32
Average Net Loan	3783.94	3982.59
Rate of Interest on Loan (%)	8.8466%	8.8510%
Interest on Loan	334.75	352.50



Asset-3:

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2012	Additions during the tariff period	Total
BOND XXXVI-doco-	9.35	759.40	0.00	759.40
BOND XXXVII-ADDCAP For 2012-2013-addcap	9.25	0.00	59.40	59.40
BOND XXXVII-doco	9.25	120.60	0.00	120.60
BOND XXXVIII-doco	9.25	190.00	0.00	190.00
BOND XXXIX-AddCAP for 2012-13	9.40	0.00	26.43	26.43
BOND - XXXIX-doco	9.40	431.35	0.00	431.35
SBI (21.03.2012)-ADDCAP FOR 2013-2014 Addcap	10.29	0.00	39.40	39.40
Total		1501.35	125.23	1626.58

WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2009-14 TARIFF PERIOD

(₹ in lakh)

Particulars	2012-13	2013-14
Gross Opening Loan	1501.35	1587.18
Cumulative Repayments of Loans upto Previous Year	0.00	0.00
Net Loans Opening	1501.35	1587.18
Add: Draw(s) during the Year	85.83	39.40
Less: Repayments of Loan during the year	0.00	0.00
Net Closing Loan	1587.18	1626.58
Average Net Loan	1544.27	1606.88
Rate of Interest on Loan (%)	9.3424%	9.3527%
Interest on Loan	144.27	150.29

