

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 89/2010

**Coram: Dr. Pramod Deo, Chairperson
Shri S.Jayaraman, Member
Shri V.S.Verma, Member
Shri M.Deena Dayalan, Member**

Date of Hearing: 10.8.2010

Date of Order: 17.3.2011

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and CERC (terms and Conditions of Tariff) Regulations'2009 for Determination of Transmission tariff from date of commercial operation to 31.03.2014 for 400Kv S/C RAPP-Kota Line along with 80MVAR Bus Reactor (Asset-1) and 400kV/220kV 315 MVA ICT-I and ICT-II at Kota S/S and ICT-III at Kankroli S/S along with associated bays at Kota and Kankroli Substation (Asset-2) under Transmission System associated with RAPP 5 & 6, in Northern Region.

And

In the matter of:

Power Grid Corporation of India Ltd, Gurgaon

..Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Ltd, Jodhpur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Vidyut Prasaran Nigam Ltd, Panchkula
8. Power Development Department, Govt. of J&K, Jammu
9. Uttar Pradesh Power Corporation Ltd., Lucknow
10. Delhi Transco Ltd, New Delhi.
11. BSES Yamuna Power Ltd., New Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd., Dehradun
16. North Central Railway, Allahabad
17. NDMC, New Delhi

Respondents



The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri Rajee Gupta, PGCIL
3. Ms. Sangeeta Edwards, PGCIL
4. Shri Padmjit Singh, Consultant, HPCC
5. Shri T.P.S.Bawa, Consultant, HPCC
6. Shri G.M.Agarwal, UPPCL

ORDER

This petition has been filed seeking approval of transmission tariff in respect of 400Kv S/C RAPP-Kota Line along with 80MVAR Bus Reactor (Asset-1) and 400kV/220kV 315 MVA ICT-I and ICT-II at Kota S/S and ICT-III at Kankroli S/S along with associated bays at Kota and Kankroli Substation (Asset-2) under Transmission System associated with RAPP 5 & 6, in Northern Region (hereinafter collectively referred to as “the transmission assets”) 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 regulations”). The petitioner has also sought the following reliefs:

- (a) Invoke the provisions of Regulation 44(Power to Relax) of the 2009 regulations, for relaxation of clause (3) of regulation 15 thereof so that grossing up the base rate of Return on Equity (ROE) may be allowed considering the revised rate of MAT, surcharge, any other cess, charges, levies etc. as per the relevant Finance Acts and accordingly allow consequential impact of tariff on account of truing up, to be billed and settled directly with the beneficiaries every year in the tariff block.

(b) Approve the reimbursement, of expenditure, by the beneficiaries towards petition filing fee, and publishing of notices in newspapers in terms of Regulation 42 of the 2009 regulations, and other expenditure (if any) in relation to the filing of petition.

(c) Allow the petitioner to bill and recover Service Tax on Transmission charges separately from the respondents if petitioner is subjected to such service tax.

(d) Allow the petitioner to bill and recover licensee fee separately from the respondents

(e) Pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.

2. The administrative approval and expenditure sanction for the Transmission System Associated with Rajasthan Atomic Power Project (RAPP) – 5 & 6 was accorded by the Govt. of India vide Ministry of Power letter dated 3.6.2005 for ₹ 49945 lakh including IDC of ₹ 2238 lakh based on 4th quarter, 2004 price level. Subsequently, investment Approval for revised cost Estimate (RCE) for Transmission System Associated with Rajasthan Atomic Power Project (RAPP) – 5 & 6 has been approved by Board of Directors of POWERGRID vide letter dated 29.12.2008 for estimated cost of ₹ 62665 lakh including IDC of ₹ 4088 lakh (based on 1st quarter 2008 price level).

3. Details of the apportioned approved cost as on date of commercial operation and estimated additional capital expenditure projected to be incurred in respect of the transmission assets are summarized overleaf.

(₹ in lakh)

1 Name of Asset	2 Apportioned FR cost	3 Apportioned RCE cost	4 Actual cost incurred as on date of commercial operation	5 Projected Additional Capital expenditure		6 Total estimated completion cost
				2009-10	2010-11	
Asset-1	12999.23	13936.80	12027.81*	1302.24	125.90	13455.95
Asset-2	8110.45	13036.42	10593.59**	631.97	1615.22	12840.78

Capital Cost as on date of commercial operation are inclusive of initial spars of ₹ 74.89* lakh for Asset-1 and ₹ 133.19** lakh for Asset-2 which are within the ceiling limit as specified in Clause 8 of the 2009 regulation.

4. As per the revised cost estimate, both the Assets were scheduled to be commissioned on 1.12.2008. The Assets have been declared under commercial operation on 1.4.2009 i.e. after 4 months of the scheduled date.
5. The petitioner has claimed the following transmission charges:

(₹ in lakh)

Asset -1					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	648.61	682.57	684.68	684.68	684.68
Interest on Loan	786.77	771.84	713.40	650.49	587.50
Return on equity	664.83	702.28	705.58	705.58	705.58
Interest on Working Capital	49.92	51.45	50.72	49.80	48.90
O & M Expenses	122.88	129.89	137.34	145.20	153.49
Total	2273.01	2338.03	2291.72	2235.75	2180.15
Asset - 2					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	510.69	553.36	582.29	582.29	582.29
Interest on Loan	685.23	709.19	709.37	655.36	601.31
Return on equity	572.22	631.15	673.50	673.50	673.50
Interest on Working Capital	57.56	61.36	64.10	64.30	64.57
O & M Expenses	413.96	437.66	462.71	489.14	517.12
Total	2239.66	2392.72	2491.97	2464.58	2438.79

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

(₹ in lakh)

Asset 1					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	18.43	19.48	20.60	21.78	23.02
O & M expenses	10.24	10.82	11.45	12.10	12.79
Receivables	378.84	389.67	381.95	372.63	363.36
Total	407.51	419.97	414.00	406.51	399.17
Interest	49.92	51.45	50.72	49.80	48.90
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Asset 2					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	62.09	65.65	69.41	73.37	77.57
O & M expenses	34.50	36.47	38.56	40.76	43.09
Receivables	373.28	398.79	415.33	410.76	406.47
Total	469.87	500.91	523.30	524.89	527.13
Interest	57.56	61.36	64.10	64.30	64.57
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

7. Reply to the petition has been filed by Haryana Power Purchase Centre (HPPC) and Uttar Pradesh Power Corporation Ltd (UPPCL).

8. HPPC in its reply has pointed out that there has been a delay in the commissioning of the transmission assets and the reasons adduced by the petitioner are not justified. Accordingly, HPPC has sought reduction in the capital cost. The respondent has further sought clarification regarding the details given in Form 5-B and has requested the Commission to direct the petitioner to furnish complete information in this regard. It has also been submitted that Form 7 prescribed under the 2009 regulations has not been furnished by the petitioner. HPPC has also objected to the claim by the petitioner for enhanced O&M charges based on wage hike.

9. UPPCL, in its reply has questioned the propriety of approval of the revised cost estimate by the Board of Directors of the petitioner against the original approval by the Department of Public Enterprises. Besides, the respondent has also objected to the request for grossing up of the base rate of ROE based on the financial acts of the respective years. UPPCL has also sought explanation from the petitioner regarding the figures of depreciation on capital cost and additional capital expenditure. Besides, the respondent has

objected to the claim for reimbursement of service tax, license fee and filing fee. UPPCL has pointed out there is a cost over-run triggered by time over-run and has requested that IDC for the period of delay should not be levied on the cost estimates of the project. Besides, UPPCL has also submitted that the additional cost due to diversion of ICT-II and ICT-III including freight and handling charges should be charged to the works where the material was diverted. UPPCL has also proposed that the penalty levied on the contractors as liquidated damages should be credited to the cost estimate of the project.

10. The petitioner, in its rejoinder to the reply by HPPC has reiterated the submissions made in the petition and has pointed out that relevant details are submitted in Form 5-B including the cost as per original estimates, cost as on date of commercial operation, liabilities/provision, variation and reasons for variation and reasons for variation in cost. It has further been clarified that there is not project specific loan and hence Form 7 is not applicable.

11. As regards the reply by UPPCL, the petitioner in its rejoinder has reiterated its claim on various aspects. It has further been clarified that powers for issue of revised cost estimates have been vested on the petitioner by virtue of conferring on it the 'Navratna' status. The petitioner has also clarified that no additional cost has been booked against the transmission assets due to diversion of ICAT-II and ICT-III. As regards the penalty levied on the contractors, the petitioner has submitted that final settlement of the contractor and contract closing is still to take place and has assured that penalty, if any levied on the contractors will be adjusted in the capital cost of the project.

12. Rival contentions by the respondents in their reply and by the petitioner in the rejoinders thereto are being addressed in the respective paragraphs hereunder.

13. Having heard the representatives of the parties and examined the material on record, we proceed to dispose of the petition.

CAPITAL COST

14. Clause (1) of Regulation 7 of the 2009 regulations, provides as under:

“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.”

15. The petitioner has submitted capital cost of ₹ 12027.81 lakh and ₹ 10593.59 lakh as on the date of commercial operation viz. 1.4.2009 for the purpose of tariff calculation for Asset-I and Asset-2 respectively as per Auditor's Certificate dated 15.10.2009.

16. However, as stated above, there has been a time over-run of four months in the commissioning of the assets and the respondents have pressed for appropriate reduction to be made in the capital cost on account of the delay in commissioning of the transmission assets. Besides, the respondents have also raised the issue of reduction in capital cost due to other reasons such as diversion of equipments and receipt of penalty from the contractors.

The same are examined hereunder:

(a) Delay in Commissioning of 400 kV S/C RAPP-Kota Line along with 100 MVAR Bus Reactor (delay -13 months from FR Schedule and 4 months from RCE): Regarding this asset the petitioner has mentioned that the delay was due to delay in Forest Clearance from March,2005 to Oct,2008. The other reasons for delay were hard strata and multi circuit towers. The petitioner was asked to submit the

detailed justification about the delay. The petitioner, vide its affidavit dated 20.7.2010 has submitted that there were some delays in obtaining forest clearance as well as delays due to the work under hold of Forest/Jawahar Sagar wild life sanctuary. The construction and erection work of RAPP-Kota line has been completed well ahead of implementation schedule, except for the work in the forest portion. Due to the problem in forest clearances / wild life sanctuary approval in different stretches of the line at different time the contractor has experienced problems and the work was delayed due mobilization, demobilization and remobilization of gangs. However, the work could be carried out by March 2009 immediately after obtaining clearances within a span of 5 months from the last date of clearance i.e. 27.10.2008, the line was charged and commissioned, much ahead of RAPP 5 & 6 generations. In view of the reasons behind the delay, we condone the delay in construction of the line.

(b) Delay in Commissioning of ICT – I at Kota S/S(delay -13 months from FR Schedule and 4 months from RCE): The delay in commissioning of this ICT was 13 months from FR Schedule and 4 months from RCE. The petitioner submitted that all the works of ICT -I were completed by September 2007 itself against the schedule of March 2008, but it could not be charged since power supply for charging for ICT was not available and 220 kV line of Rajasthan Vidyut Prasaran Nigam Ltd (RVPNL) had not been laid and terminated. The ICT-I could be charged on getting 400 kV supply from Merta Sub

Station of RVPNL through 400 kV Kota – Merta Line. In the affidavit dated 20.7.2010 it was submitted that the ICT-I works could be carried out as per schedule but the delay was due to system constraint of non-availability of power supply to the sub- station as RAPP-5 & 6 units have not been commissioned. Thus, the delay was beyond the control of Petitioner. We are convinced about the justification submitted by the petitioner. Accordingly we hold that the delay in commissioning of the ICT-I at Kota was beyond the control of the petitioner and therefore condone the same.

(c) Delay in Commissioning of ICT – II at Kota sub- station (delay - 13 months from FR Schedule and 4 months from RCE): IN this regard the petitioner has submitted that the ICT was diverted to other place having more priority in the larger interest of consumers, without affecting the power evacuation. The petitioner, vide its affidavit dated 20.07.2010 has submitted detailed reasons for delay in commissioning. It was submitted that the ICT-II at Kota sub-station was diverted to Kaithal S/S in order to attend to urgent system constraint. The ICT ordered for Kaithal S/S was delivered in time and the same was diverted to Kota S/S and charged on 25th March 2009 (ahead of RAPP generation, without affecting the evacuation of power from RAPP generation.

(d) The petitioner has further submitted that due to global shortage of CRGO steel, which forms the core of the Transformers, delivery

schedules of Transformers for various projects of the petitioner were affected adversely. Accordingly, diversions were effected to ensure commissioning of priority elements as per system requirement. It was also submitted that supply of power transformer was adversely affected due to the global crisis in availability of CRGO during 2006-07. The issue was addressed by the petitioner with diversions through an appropriate and prudent planning strategy with a national perspective and prioritizing the supplies of power transformers to more critical projects, first, so that the consumers are least affected. The petitioner vide affidavit dated 05.07.2010 submitted documents related to CRGO crisis.

(e) As stated above, Uttar Pradesh Power Corporation Ltd. (UPPCL) had suggested reduction of the capital cost based on the following submissions:

(i) IDC for the period of delay should not be levied on the cost estimate on the project.

(ii) The additional cost due to diversion of ICT-II at Kota and ICT-III at including the cost of freight and handling both ways should not be charged to the cost estimate of the project. It should be charged to the works where the material was diverted.

(iii) The penalty levied on the contractors as liquidated damages should be credit to the cost estimate of the project.

(f) The petitioner in its rejoinder vide affidavit dated 18.11.2010 has submitted that the delay in commissioning of transmission line was due to forest clearance and Right of Way problems, which were beyond the control of the petitioner. Regarding ICT-I & II at Kota it was submitted that as the RAPP generation was not ready, these ICTs could only be commissioned, when power flow to Kota sub-station was available. The schedule of commissioning of these ICTs were planned matching with RAPP-Kota line, broadly to cater to the requirements of overall power system in whole. The diversion of ICT-II at Kota was carried out in the mean time and commissioned along with RAPP-Kota Line simultaneously, which was much ahead of RAPP 5&6 generation, without affecting RAPP-5&6 evacuation. It was further submitted that no additional cost has been booked to this project due to the diversion of ICT.

(g) In view of above it is observed that ICT-II was to be commissioned with RAPP-Kota Line and this line could not be commissioned due to non-availability of power to Kota sub-station as the RAPP 5&6 generation was delayed and supply to this sub-station was made from RRVPL's Kota-Merta transmission line. The delay may not be attributable to the petitioner and may be condoned.

(h) Delay in commissioning of ICT – III at Kankroli S/S ICTs (delay -13 months from FR Schedule and 4 months from RCE): The petitioner submitted that due to above mentioned conditions of shortage in

CRGO and delay in supply of transformers , the ICT – III at Kankroli S/S was diverted to Ranchi S/S for the urgent commissioning of Ranchi S/S. The ICT ordered for Ranchi S/S was sent to Kankroli for commissioning. The diversion has not resulted in any bottleneck in power evacuation as generating units of RAPP 5 & 6 were not ready.

(i) The petitioner vide affidavit dated 16.12.2010 submitted additional information regarding delay in commissioning of ICT-III at Kankroli sub-station. It was stated that initially the LOA for supply of ICT-III at Kankroli sub-station was awarded to M/s CGL on 14.7.2005 with scheduled supply by 13.12.2006. This ICT was diverted to Ranchi Sub-station due to urgent requirement of ICT at this place. The ICT for Ranchi was awarded to BHEL on 20.10.2004 with supply schedule of Dec.,05/April,06. However due to shortage of CRGO supply by BHEL were severely affected and the ICT for Ranchi was received at Kankroli in Feb/March,08. The Ranchi Sub-station was associated with Kahalgaon-II Phase –I. Ist unit of this generating station was scheduled in March,07 and the petitioner was hard pressed to commission the Ranchi sub-station for evacuation of power from Kahalgaon-II Phase – I. The decision of diversion of ICT to Ranchi sub-station was taken in December,2006. Kahalgaon Stage-II generation came in Mar,07/May,07. Thus, the diverted ICT was put to use. It is significant that the diversion has not resulted any power evacuation problem in RAPP 5&6 since RAPP units came in Feb/Mar,10.

(j) It was also submitted that the ICT for Ranchi was diverted to Kankroli and it was received at Kankroli in Feb / March,08. Due to change in supplier the necessary changes in foundation, piping etc. took about 10 months and finally the ICT was commissioned in w.e.f. 1.4.2009. Regarding the global shortage of CRGO the petitioner submitted documents to show that the shortage was prevailing during 2004-2009.

(k) Regarding the delay in commissioning of ICT-III at Kankroli, it is observed that the delay was due to diversion of the ICTs to other places to meet urgent system requirements and it did not cause evacuation problem for the power from RAPP 5&6 as RAPP 5 and 6 generating units were commissioned in Feb and March, 2010, respectively. From the documents submitted it is observed that the supply of transformers by Bharat Heavy Electricals Ltd. BHEL was adversely affected due to shortage of CRGO steel. BHEL in its letter dated 28.11.2006 addressed to the petitioner admitted that there was slippage in contractual delivery commitments for transformers and shunt reactors due to severe scarcity of CRGO steel globally.

(l) Regarding the delay of generation project and delay of transmission system to match the generation, it is observed that in the Ministry of Power letter dated 03.06.2005 for investment approval of the transmission project the approval was given subject to implementation of various segments in a progressive manner matching

with the commissioning of two generating units of RAPP in June, 2007 and December,2007. Thus during the investment approval stage itself the transmission project was envisaged to be matched with the generating station.

(m) In order dated 25.1.2010 in petition No. 169/2009, while determining the tariff for ICT-I at Kankroli sub-station the Commission had condoned the delay on account of similar reasons as in the present case of ICT-III at Kankroli sub-station. However, in order dated 18.6.2010 in Petition No. 242/2009, while determining the tariff for ICT-II at Bhattapara sub-station the Commission had not allowed IDC and IEDC for the period of delay. In this case also the delay was on account of similar reasons as in the present case of ICT-III at Kankroli sub-station. It was observed in this order that there was no reference of Transformers/ICTs to be supplied at Bhattapara sub-station in the document submitted by the petitioner. The petitioner had filed review Petition No. 213/2010 in this matter, which is pending in Commission.

(n) In view of the above, it is noticed that the delay was due to diversion of ICT to a more important place to match the Transmission system with the new unit of Kahalgaon TPS whereas the RAPP generation came in Feb/March,2010 much after the commissioning of the ICT.

(o) Besides, there was scarcity of CRGO steel and delay in supply of transformer by BHEL during 2005 to 2007. The date of award of ICT for Ranchi sub-station to BHEL was 24.10.2004 and schedule of delivery was Dec.,2005/ Apr.,06.

(p) Keeping in view the situations the diversion was justified and the delay in commissioning of ICT-III at Kankroli may be condoned.

17. In the light of the foregoing, we hold that the time over-run is attributable to reasons beyond the control of the petitioner. Needless to add that's the petitioner shall abide by its assurance and ensure that the LD recovered from the contractor shall be adjusted against the capital cost.

18. As regards the cost over-run, the petitioner has submitted that the price variation observed during execution of the project is attributable to the inflationary trend prevailing during execution of project and also market forces prevailing at the time of bidding process of various packages awarded for execution of project.

19. It was also submitted that administrative approval for expenditure sanction to the transmission project was accorded by the Government of India in June, 2005 based on 4th quarter, 2004 price level. Subsequently, investment approval for Revised Cost Estimate (RCE) has been approved by the board of Directors of the petitioner in December, 2008 based of 1st quarter 2008 price level. The RCE for the project has been made due to increase in

the cost of the project during execution period. It was further submitted that during the period 4th quarter 2004 to 1st quarter 2008 there has been inflationary trend in the prices of various input items for the project as indicated by the indices given below:

Name of Indices	December 2004	March 2008	% increase during December 2004 to March 08)
Tower Steel	31038	41323	33.1
HG Zinc	66000	118300	79.2
EC grade Aluminium	96467	135267	40.2
WPI	189.2	219.9	16.2
WPI for Iron & Steel	237.2	287.4	21.2
WPI for Fuel & Power	228.8	341	18.1
CRGO (above 10 MVA)	119072	228139	91.6
CPI	521	634	21.7

20. The petitioner vide affidavits dated 5.7.2010 and 16.12.2010, submitted documents relating to delay in delivery by the equipment suppliers due to global shortage of CRGO steel and unprecedented increase in prices of CRGO steel and other raw materials particularly of metals. The letters from Ministry of Power, Govt. of India, Bharat Heavy Electricals Limited and Indian Electrical and Electronics Manufacturers Association (IEEMA) were placed on record. From these documents it is observed that during 2005 and 2007 there was shortage of CRGO steel and increase in prices of CRGO as well as other raw materials.

21. Vide affidavit dated 27.1.2011, the petitioner submitted that the awards for supply of ICT-II at Kota and ICT-III at Kankroli were placed on M/s CGL. However, ICT-II at Kota was diverted to Kaithal and ICT-III at Kankroli was diverted to Ranchi for the reasons detailed in the petition. It was further,

submitted that the actual cost pertaining to original LOAs of M/s CGL have only been booked to the ICT-II at Kota and ICT-II at Kankroli sub-stations.

22. In view of above it is observed that the cost over-run was mainly due to increase in price in different items and is attributable to the market trend during the execution period of the project and the costs as per original LOAs only were booked to these ICTs.

23. Based on the above, capital cost amounting to ₹ 12027.81 lakh and ₹ 10593.59 lakh as on date of commercial operation i.e. 1.4.2009 have been considered for the purpose of tariff calculation for Asset-I and Asset-2 respectively as per Auditor's Certificate dated 15.10.2009.

ADDITIONAL CAPITAL EXPENDITURE

24. Clause 9(1) of the 2009 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) XXX*
- (iii) XXX*
- (iv) XXX*
- (v) XXX”*

25. The 2009 regulations further provides that *“cut-off date means 31st march of the year closing after 2 years of the year of commercial operation of the project, and incase of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation”*. In view of the above, cut-off date for the transmission assets is 31.3.2012.

26. Details of the projected additional capital expenditure claimed by the petitioner are as under:

(₹ in lakh)

Asset 1			
Year	Capital Expenditure	Nature of Payment	Amount
2009-10	Land	Balance/Retention Payment)	23.32
	Building & Civil works		196.35
	TR Line		975.00
	Substation		107.57
2010-11	Building & Civil works	Balance/Retention Payment)	125.90
Asset 2			
Year	Capital Expenditure	Nature of Payment	Amount
2009-10	Building & Civil works	Balance/Retention Payment)	303.17
	Substation		328.80
2010-11	Land	Balance/Retention Payment)	73.73
	Building & Civil works		1212.69
	Substation		328.80

27. The above expenditure is allowed for the purpose of computation of tariff in this order.

DEBT- EQUITY RATIO

28. Regulation 12 of the 2009 regulations *inter alia* provides that,-

“(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.

(2) XXX.”

29. Details of debt-equity of the two assets as on the date of commercial operation are as under:

(₹ in lakh)

Asset-1	Approved		As on date of commercial operation	
	Amount	%	Amount	%
Debt	9755.76	70.00%	8420.00	70.00%
Equity	4181.04	30.00%	3607.81	30.00%
Total	13936.80	100.00%	12027.81	100.00%

(₹ in lakh)

Asset-2	Approved		As on date of commercial operation	
	Amount	%	Amount	%
Debt	9125.49	70.00%	7415.51	70.00%
Equity	3910.93	30.00%	3178.08	30.00%
Total	13036.42	100.00%	10593.59	100.00%

30. As regards the additional capital expenditure during 2009-10 and 2010-11 for the transmission assets, the same has been segregated in the debt-equity ratio of 70:30 in our tariff calculations.

31. Based on the above, the equity base for the computation of tariff, consequent to allowing additional capital expenditure (referred to as “ACE” in the table below) is as under:

(₹ in lakh)

Description	Equity on 1.4.2009	Notional equity due to ACE for the period 2009-10	Total equity considered for tariff calculations for the period 2009-10*	Notional equity due to ACE for the period 2010-11	Total equity considered for tariff calculations for the period 2010-11*	Notional equity due to ACE for the period 2011-12	Total equity considered for tariff calculations for the period 2011-14*
Asset-1	3607.81	390.67	3803.15	37.77	4017.37	0.00	4036.25
Asset-2	3178.08	189.59	3272.87	484.57	3609.95	0.00	3852.23

RETURN ON EQUITY

32. Regulation 15 of the 2009 regulations provides that,-

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

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to 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 normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be:

Provided that return on equity with respect to the actual 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 separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

(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.”

33. Return on Equity has been calculated as follows- Base rate/(1-t), where Base Rate is 15.5% and 't' is normal tax rate for the period 2008-09 applicable to PowerGrid which is under MAT i.e. 10%+ surcharge@10%+3%Education Cess. Revision of MAT Rate is being reviewed by the commission separately. As the decision of the Commission is pending on this subject, the same needs to be applied as and when the decision is taken in this regard.

34. Petitioner's prayer to invoke the provisions of Regulation 44 of the 2009 regulations for relaxation of Regulation 15(3) thereof so that grossing up the base rate of ROE may be allowed considering the tax rates viz., MAT, surcharge, any other cess, charges, levies etc., as per the relevant Finance Acts, has already been taken cognizance of in the Commission's order dated 3.8.2010 in Petition No. 17/2010 wherein a decision has been taken to address the issue raised by the petitioner. Relevant portion of the said order is extracted as under:

“We are of the view that this issue of ‘grossing up the base rate with the normal tax rate for the year 2008-09’ is generic in nature and therefore, it will be appropriate to make suitable provisions in the 2009 regulations to cater to any future changes in the tax rate. Accordingly, we direct the staff of the Commission to prepare and submit draft amendment to the 2009 regulations for allowing grossing up of base rate of return with the applicable tax rate as per the Finance Act for the relevant year and direct settlement of tax liability between the generating company/transmission licensee and the beneficiaries/long term transmission customers on year to year basis. Any under/over recovery on account of direct settlement of tax liability shall be subject to the final adjustment at the time of true up exercise.”

35. Pending decision on revision of MAT rate, ROE has been computed as per Regulation 15 of the 2009 regulations, and pre-tax ROE of 17.481% has been considered.

36. Detailed calculation of the ROE in respect the transmission assets is as under:

(₹ in lakh)

Asset – 1						
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	3607.81					
Addition due to Additional Capitalisation	0.00					
Opening Equity	3607.81	3607.81	3998.48	4036.25	4036.25	4036.25
Addition due to Additional Capitalisation		390.67	37.77	0.00	0.00	0.00
Closing Equity		3998.48	4036.25	4036.25	4036.25	4036.25
Average Equity		3803.15	4017.37	4036.25	4036.25	4036.25
Return on Equity (Base Rate)		15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09		11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)		17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)		664.83	702.28	705.58	705.58	705.58
Asset – 2						
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	3178.08					
Addition due to Additional Capitalisation	0.00					
Opening Equity	3178.08	3178.08	3367.67	3852.23	3852.23	3852.23
Addition due to Additional Capitalisation		189.59	484.57	0.00	0.00	0.00
Closing Equity		3367.67	3852.23	3852.23	3852.23	3852.23
Average Equity		3272.87	3609.95	3852.23	3852.23	3852.23
Return on Equity (Base Rate)		15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)		11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax)		17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)		572.13	631.06	673.41	673.41	673.41

INTEREST ON LOAN

37. Regulation 16 of the 2009 regulations provides that,-

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

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

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

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

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

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

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

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

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

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

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

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

38. In these calculations, interest on loan has been worked out as detailed below:

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

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

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

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

(e) The methodology followed for the calculation of weighted average Rate of Interest in case of floating interest loans in Petition 132/2010, the same has been adopted in the instant petition. Accordingly, the interest on Loan has been calculated on the basis of rate prevailing as on 1.4.2009. Any change in rate of Interest subsequent to 1.4.2009 will be considered at the time of truing up.

39. Details of the calculation of Interest on Loan are as under:

(₹ in lakh)

Asset – 1						
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Loan	8420.00					
Addition due to Additional Capitalisation	0.00					
Gross Normative Loan	8420.00	8420.00	9331.57	9419.70	9419.70	9419.70
Cumulative Repayment upto Previous Year		0.00	648.61	1331.19	2015.86	2700.54
Net Loan-Opening		8420.00	8682.96	8088.51	7403.84	6719.16
Addition due to Additional Capitalisation		911.57	88.13	0.00	0.00	0.00
Repayment during the year		648.61	682.57	684.68	684.68	684.68
Net Loan-Closing		8682.96	8088.51	7403.84	6719.16	6034.48
Average Loan		8551.48	8385.73	7746.17	7061.50	6376.82
Weighted Average Rate of Interest on Loan		9.2004%	9.2042%	9.2097%	9.2118%	9.2131%
Interest		786.77	771.84	713.40	650.49	587.50

(₹ in lakh)

Asset – 2						
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Loan	7415.51					
Addition due to Additional Capitalisation	0.00					
Gross Normative Loan	7415.51	7415.51	7857.89	8988.55	8988.55	8988.55
Cumulative Repayment upto Previous Year		0.00	510.69	1064.05	1646.34	2228.63
Net Loan-Opening		7415.51	7347.21	7924.50	7342.21	6759.91
Addition due to Additional Capitalisation		442.38	1130.65	0.00	0.00	0.00
Repayment during the year		510.69	553.36	582.29	582.29	582.29
Net Loan-Closing		7347.21	7924.50	7342.21	6759.91	6177.62
Average Loan		7381.36	7635.85	7633.35	7051.06	6468.77
Weighted Average Rate of Interest on Loan		9.2839%	9.2882%	9.2937%	9.2951%	9.2963%
Interest		685.28	709.24	709.42	655.40	601.36

DEPRECIATION

40. The petitioner has claimed actual depreciation as a component of Annual Fixed Charges. However, as per clause 17 (4) of the 2009 regulations,

provides as under:

“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 31th 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 asset”.

41. Assets in the instant petition were put on commercial operation as on 1.4.2009 and accordingly will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III.

42. For the period from date of commercial operation to 31.3.2014 the depreciation worked out are as under:

(₹ in lakh)						
Asset – 1						
		2009-10	2010-11	2011-12	2012-13	2013-14
Rate of Depreciation		5.1157%	5.0965%	5.0883%	5.0883%	5.0883%
Depreciable Value	90%	11102.48	11734.65	11791.31	11791.31	11791.31
Remaining Depreciable Value		11102.48	11086.04	10460.12	9775.44	9090.77
Depreciation		648.61	682.57	684.68	684.68	684.68
Asset – 2						
		2009-10	2010-11	2011-12	2012-13	2013-14
Rate of Depreciation		4.6811%	4.5986%	4.5347%	4.5347%	4.5347%
Depreciable Value		8891.82	9869.88	10563.55	10563.55	10563.55
Remaining Depreciable Value		8891.82	9359.20	9499.51	8917.21	8334.92
Depreciation		510.69	553.36	582.29	582.29	582.29

OPERATION & MAINTENANCE EXPENSES

43. Clause (g) of Regulation 19 the 2009 regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. The petitioner has calculated the operation and maintenance expenses in accordance with the above norms and the same are allowed as such.

INTEREST ON WORKING CAPITAL

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

(i) Receivables: As per Regulation 18(1)(c)(i) of the 2009 regulations, receivables will be equivalent to two months' average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

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

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

(iv) Rate of interest on working capital: As per Regulation 18(3) of the 2009 regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding that the transmission licensee has not taken working capital loan from any outside agency. The petitioner has claimed interest on working capital @ 12.25% based on SBI PLR as on 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

45. Necessary computations in support of interest on working capital are appended hereinbelow:

(₹ in lakh)

Asset – 1					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	18.43	19.48	20.60	21.78	23.02
O & M expenses	10.24	10.82	11.45	12.10	12.79
Receivables	378.83	389.67	381.95	372.62	363.36
Total	407.51	419.98	414.00	406.50	399.17
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	49.92	51.45	50.71	49.80	48.90
Asset – 2					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	62.09	65.65	69.41	73.37	77.57
O & M expenses	34.50	36.47	38.56	40.76	43.09
Receivables	373.27	398.78	415.32	410.76	406.46
Total	469.86	500.90	523.29	524.89	527.12
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	57.56	61.36	64.10	64.30	64.57

TRANSMISSION CHARGES

46. The transmission charges being allowed for the transmission lines are summarized below:

(₹ in lakh)

Asset – 1					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	648.61	682.57	684.68	684.68	684.68
Interest on Loan	786.77	771.84	713.40	650.49	587.50
Return on equity	664.83	702.28	705.58	705.58	705.58
Interest on Working Capital	49.92	51.45	50.71	49.80	48.90
O & M Expenses	122.88	129.89	137.34	145.20	153.49
Total	2273.01	2338.03	2291.71	2235.74	2180.14
Asset - 2					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	510.69	553.36	582.29	582.29	582.29
Interest on Loan	685.28	709.24	709.42	655.40	601.36
Return on equity	572.13	631.06	673.41	673.41	673.41
Interest on Working Capital	57.56	61.36	64.10	64.30	64.57
O & M Expenses	413.96	437.66	462.71	489.14	517.12
Total	2239.61	2392.67	2491.93	2464.54	2438.75

APPLICATION FEE AND THE PUBLICATION EXPENSES

47. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition. In accordance with our decision in order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee from the beneficiaries.

48. Accordingly, expenses incurred by the petitioner on application filing fees and publication of notices in connection with the present petition shall be directly recovered from the beneficiaries on pro rata basis.

SERVICE TAX

49. The petitioner has prayed to be allowed to bill and recover the Service tax on Transmission charges separately from the respondents, if at any time, the exemption from Service tax is withdrawn and transmission of power is notified as a taxable service.

50. This prayer is premature. The petitioner is at liberty to approach the Commission as per the provisions of law as and when such a contingency arises.

51. The transmission charges allowed in this order shall be recovered on monthly basis in accordance with Regulation 23 and shall be shared by the respondents in accordance with Regulation 33 of the 2009 regulations.

52. This order disposes of Petition No. 89/2010.

Sd/-

M.Deena Dayalan
Member

Sd/-

V.S.Verma
Member

Sd/-

S.Jayaraman
Member

Sd/-

Dr. Pramod Deo
Chairperson