CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 314/2010

Coram:-
Shri V.S. Verma, Member
Shri M. Deena Dayalan, Member

Date of Hearing: 18.06.2013
Date of Order : 23.10.2013

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations1999 and of Central Electricity Regulatory Commission(Terms and Conditions of Tariff) Regulations 2009 for determination of transmission tariff from date of commercial operation to 31.3.2014 for Asset-1: Combined Elements of (a) 30% FSC on 400kV Bareilly-Mandola Ckt-1 & Ckt-2 at Bareilly (DOCO:1.4.2010), (b) 45% FSC on 400 kV D/C Unnao-Bareilly Ckt-1 & Ckt-2 at Unnao end (DOCO:1.4.2010) and (c) 30% FSC on 400 kV Gorakhpur-Lucknow Ckt-1 at Lucknow (DOCO: 1.4.2010) and Asset-2: 30% FSC on 400 kV Gorakhpur-Lucknow Ckt-2 at Lucknow (DOCO: 1.7.2010) under System associated with Enhancement of Transmission Capacity in East-West Corridor of Northern Region , for tariff block 2009-14 period in Northern Region.

And

In the matter of:

Power Grid Corporation of India Ltd.,
Saudamini, Plot No.2,
Sector 29,Gurgaon-122001 **…Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
   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-171004.

6. Punjab State Electricity Board,
   The Mall, Patiala-147001.

7. Haryana Power Purchase Centre,
   Shakti Bhawan, Sector-6,
   Panchkula (Haryana) 134109.

8. Power Development Department,
   Govt. of Jammu & Kashmir,
   Mini Secretariat, Jammu

9. Uttar Pradesh Power Corporation Limited,
   (Formally Uttar Pradesh State Electricity Board),
   Shakti Bhawan, 14, Ashok Marg,
   Lucknow-226001.

10. Delhi Transco Limited,
    Shakti Sadan, Kotla Road,
    New Delhi-110002.

11. BSES Yamuna Power Limited,
    BSES Bhawan, Nehru Place, New Delhi.

12. BSES Rajdhani Power Limited,
    BSES Bhawan, Nehru Place, New Delhi

13. North Delhi Power Limited, Power Trading & Load Dispatch Group,
    CENNET Building, Adjacent to 66/11 kV Pitampura-3,
    GRID Building, Near PP Jewelers,
    Pitampura, New Delhi-110034.

14. Chandigarh Administration,
    Sector-9, Chandigarh.

15. Uttarakhand Power Corporation Limited,
    Urja Bhawan, Kasnwali Road, Dehradun.

16. North Central Railway, Allahabad.

17. New Delhi Municipal Council, Palika Kendra, Sansad Marg, New Delhi-110001. …**Respondents**

Representatives of the petitioner : Shri S.S. Raju, PGCIL
Shri Prashant Sharma, PGCIL

Counsel and representatives of the petitioner : Shri R.B. Sharma, Advocate for BRPL
Shri Padamjit Singh, PSPCL
Shri T.P.S. Bawa, PSPCL

ORDER

This petition has been filed by Power Grid Corporation of India Limited (PGCIL) seeking transmission tariff from the date of commercial operation to 31.3.2014 for Asset-1: Combined Elements of (a) 30% FSC on 400kV Bareilly-Mandola CKT-1 & CKT-2 at Bareilly (date of commercial operation: 1.4.2010), (b) 45% FSC on 400 kV D/C Unnao-Bareilly CKT-1 & CKT-2 at Unnao end (date of commercial operation: 1.4.2010) and (c) 30% FSC on 400 kV Gorakhpur-Lucknow CKT-1 at Lucknow (date of commercial operation: 1.4.2010) and Asset-2: 30% FSC on 400 kV Gorakhpur-Lucknow CKT-2 at Lucknow (date of commercial operation: 1.7.2010) under System associated with Enhancement of Transmission Capacity in East-West Corridor of Northern Region, for tariff block 2009-14 period in Northern Region under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The Investment approval for this Scheme was accorded by Board of

Directors of the petitioner vide C/CP/East-West Corridor-NR dated 27.10.2006 for ₹10380 lakh including IDC of ₹427 lakh (based on 2nd Quarter, 2006 price level)

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

    (i) 30% Fixed Series Compensation (FSC) on 400 kV D/C Bareilly-Mandola at Bareilly end

    (ii) 45% FSC on 400 kV D/C Unnao- Bareilly Line at Unnao end

    (iii) 30% FSC on 400 kV D/C Gorakhpur- Lucknow Line at Lucknow end

4. The details of the assets covered under the petition are given below:-

Asset	Name of the asset	Date of commercial operation
1(a)	30% FSC on 400 kV Bareilly-Mandola CKT-1 & CKT-2 at Bareilly (hereinafter referred to as "Asset-1(a)")	1.4.2010
1(b)	45% FSC on 400 kV Unnao-Bareilly CKT-1 & CKT-2 at Unnao(hereinafter referred to as "Asset1-(b)")	1.4.2010
1(c)	30% FSC on 400 kV Gorakhpur-Lucknow CKT-1 at Lucknow (hereinafter referred to as "Asset-1(c)")	1.4.2010
2	30% FSC on 400 kV Gorakhpur-Lucknow CKT-2 at Lucknow (hereinafter referred to as "Asset-2")	1.7.2010

5. Details of the transmission charges claimed by the petitioner are given overleaf:-

(₹ in lakh)

Combined Asset-1 & Asset-2				
Particulars	**2010-11 (pro-rata)**	**2011-12**	**2012-13**	**2013-14**
Depreciation	314.29	459.47	470.44	470.44
Interest on Loan	68.52	93.95	88.46	80.37
Return on equity	312.27	456.63	467.53	467.53
Interest on Working Capital	25.83	37.02	38.31	39.17
O & M Expenses	249.30	351.42	371.52	392.76
Total	970.21	1398.49	1436.26	1450.27

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

(₹ in lakh)

Combined Asset-1 & Asset-2				
Particulars	**2010-11 (pro-rata)**	**2011-12**	**2012-13**	**2013-14**
Maintenance Spares	49.86	52.71	55.73	58.91
O & M expenses	27.70	29.29	30.96	32.73
Receivables	215.60	233.08	239.38	241.71
Total	**293.16**	**315.08**	**326.07**	**333.35**
Interest	25.83	37.02	38.31	39.17
Rate of Interest	11.75%	11.75%	11.75%	11.75%

7. 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, 2003. Reply has been filed by Respondent No. 6 - Punjab State Power Corporation Limited (PSPCL), Respondent No. 9 - Uttar Pradesh Power Corporation Limited (UPPCL) and Respondent No. 12 - BSES Rajdhani Power Limited (BRPL).

8. PSPCL, vide affidavits dated 15.3.2011 and 20.4.2012 has raised the issue of date of commercial operation, time over-run, additional capital expenditure and O&M expenses. UPPCL, vide affidavit dated 16.4.2012, has raised the issue of time over-run and cost over-run, application filing fee and publication expenses, licence fee, service tax and O&M expenses. BRPL, vide affidavit dated 20.4.2012, has raised the issue of time overrun, application filing fee and publication expenses, licence fee, service tax and O&M expenses. The petitioner has filed its rejoinder to the replies filed by the PSPCL and BRPL, vide affidavits dated 10.4.2013 and 16.7.2012, respectively. The objections raised by the respondent and their clarifications are dealt in relevant paragraphs of this order.

9. The matter was heard on 17.4.2013 and order was reserved. As one of the members of the Commission, who heard the matter on 17.4.2013 demitted office, the matter was again heard on 18.6.2013.

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

11. PSPCL in its affidavit, dated 20.4.2012 has submitted that the petitioner's letters declaring date of commercial operation do not specify or certify about trial operation and regular service and that the letters declaring the date of commercial operation are not in accordance with the 2009 Tariff Regulations. The FSC of 400 kV Unnao-Bareilly was charged on 31.3.2010 and was declared

operational on 1.4.2010 and it implies that the prescribed trial operation was not carried out.

12. The petitioner in its rejoinder, dated 10.4.2013, has clarified that the assets covered under this petition have been declared under commercial operation in line with the Regulations. We have considered the submissions of both PSPCL and the petitioner. As submitted by the petitioner, the 2009 Tariff Regulations do not define the trial operation in case of transmission elements and the successful test charging is considered as trial operation. The explanation of the petitioner is found to be satisfactory and accordingly, successful test charging by the petitioner is considered as completion of trial operation.

13. PSPCL has further submitted, vide affidavit dated 15.3.2011, that the date of commercial operation of 400 kV Gorakhpur-Lucknow line was 1.4.2010 while the date of commercial operation of the Ckt was 1.7.2010 and thus during the intervening period the Ckt-1 of Gorakhpur-Lucknow line was having 30% FSC while the second Ckt was not having 30% FSC. The operational benefit of 30% FSC would be available only when both circuits operate in parallel with both having FSC. The operational benefit of 30% FSC on Lucknow-Gorakhpur Ckt-1 would be available only when 30% FSC is commissioned on second parallel circuit. It is not justified to charge transmission tariff of FSC of Lucknow-Gorakhpur Ckt-1 for the period starting from 1.4.2010 to 30.6.2010. PSPCL submitted that tariff should be charged only from 1.7.2010, when the FSC of Ckt-2 was commissioned.

14. The petitioner in its rejoinder, dated 10.4.2013, has clarified that the load carrying capacity of the 30% FSC on Ckt-1 of 400kV D/C Gorakhpur-Lucknow line has increased to meet all kinds of contingency from the actual date of commercial operation. The operational benefit is available from the very first day of date of commercial operation of the Ckt-1 and it is incorrect for PSCPL to say that the operational benefit shall be available only from the date of commercial operation of FSC of the Ckt-2.

15. We have considered the submissions of both PSPCL and the petitioner. We are of the view that commissioning of one FSC and one Ckt would carry higher load and would also add to the power transfer capability of the line. Accordingly, tariff of Asset-1 and Asset-2 is allowed from 1.4.2010 and 1.7.2010 respectively.

Capital cost

16. Regulation 7(1) (a) of the 2009 Tariff Regulations provides as under:-

> "(1) Capital cost for a project shall include:
>
> (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan-(i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed,-up to the date of commercial operation of the project, as admitted by the Commission, after prudence check."

17. The petitioner, vide affidavit dated 19.6.2013, has submitted Management Certificates dated 17.6.2013, in respect of Asset-1(a), Asset-1(b) and Asset-1(c), which give the details of the actual expenditure incurred up to the date of

commercial operation and additional capital expenditure incurred / projected to be incurred during 2009-14. Further, the petitioner has submitted, vide CA certificate dated 5.8.2010, the actual expenditure incurred up to date of commercial operation and additional capital expenditure incurred/projected to be incurred with respect to Asset-2 during 2009-14. The details of the same are given below:-

(₹ in lakh)

Asset	Apportioned approved cost	Capital cost claimed as on date of commercial operation/ Notional date of commercial operation	Additional capital expenditure					Total estimated completion cost considered*
			1.4.2010 to 3.6.2010	1.7.2010 to 31.3.2011	2011-12	2012-13	2013-14	
Asset-1(a)	8691.61	2456.80	1.63	34.01	227.86	32.60	43.66	2796.56
Asset-1(b)		2816.85	2.62	15.62	290.02	34.11	75.63	3234.85
Asset-1(c)		929.05	2.86	20.23	212.70	82.39	37.46	1284.69
Asset-2	1688.88	1176.46	-	109.08	0.00	0.00	0.00	1285.54

*The capital cost as on the date of commercial operation is inclusive of initial spares amounting to ₹150.56 lakh, ₹171.42 lakh, ₹73.62 lakh and ₹66.74 lakh for Asset-1(a), Asset-1(b), Asset-1(c) and Asset-2 respectively, corresponding to sub-station.

18. The petitioner has prayed to combine the assets in the following way:-

Asset	Combination of the assets	Date of commercial operation / Notional date of commercial operation	Applicable tariff period
Asset-1	1(a), 1(b) & 1(c)	1.4.2010	1.4.2010 to 30.6.2010
Combined Assets of Asset-1 & Asset-2	1(a), 1(b), 1(c) & 2	1.7.2010	1.7.2010 to 31.3.2014

19. The petitioner has claimed the following capital cost, as on the date of commercial operation, for the instant assets:-

(₹ in lakh)

Asset	DOCO / Notional DOCO	Capital cost claimed	Applicable tariff period
Asset-1	1.4.2010	6202.70	1.4.2010 to 30.6.2010
Combined Assets of Asset-1 & Asset-2	1.7.2010	7386.27	1.7.2010 to 31.3.2014

20. The capital cost considered for the purpose of tariff calculation is as follows:-

(₹ in lakh)

Asset	DOCO/ Notional DOCO	Capital cost considered for the purpose of tariff before adjustment of IEDC/IDC and Initial Spares as on DOCO/ Notional DOCO*
Asset-1	1.4.2010	**6202.70**
Combined Assets of Asset-1 & Asset-2	1.7.2010	**7386.27**

*Capital cost as on date of commercial operation is inclusive of initial spares amounting to ₹150.56 lakh, ₹171.42 lakh, ₹73.62 lakh and ₹66.74 lakh for Asset-1(a), Asset-1(b), Asset-1(c) and Asset-2 respectively, corresponding to Sub-station.

Cost over-run

21. BRPL, in its reply, has submitted that the total estimated completion cost is ₹8914 lakh as against the total apportioned approved cost of ₹10380 lakh resulting in a large savings inspite of time over-run. In response, the petitioner in its rejoinder has submitted that the estimates are prepared by the petitioner as per well-defined procedures for cost estimate. The cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts. For procurement, open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest possible market price for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders are lower as compared to the cost estimate depending upon prevailing market conditions. Further, it has been submitted that the cost estimate is on the basis of 2nd Quarter 2006 price level, whereas the contract date is 3rd Quarter 2007 price level.

22. The capital cost claimed by the petitioner is ₹7386 lakh against apportioned approved cost of ₹10380 lakh and there is a huge over-estimation of the cost of the transmission assets. It appears that the petitioner has not adopted prudent procedure while estimating the cost and the procedure adopted by the petitioner in estimating the cost is not realistic. The petitioner is directed to adopt a prudent procedure while estimating the cost of different elements of the transmission projects.

Time over-run

23. As per investment approval the transmission assets are to be commissioned within 24 months from the date of issue of first letter of award

(LOA). The first letter of award was issued on 30.7.2007. Accordingly, the transmission assets were scheduled to be commissioned before 30.7.2009 or say by 1.8.2009. Asset-1 and Asset-2 were commissioned on 1.4.2010 and 1.7.2010, respectively. Hence, there is a delay of 8 months and 11 months in commissioning Asset-1 and Asset-2 respectively.

24. The petitioner has submitted the following reasons for the time over-run and requested to condone the delay:-

(a) The project involves installation of FSC on the existing old transmission lines of Unnao-Bareilly-Mandola and Gorakhpur-Lucknow lines.

(b) The project includes installation of FSC on Unnao-Bareilly D/C lines at Unnao station of UPPTCL and clearance of UPPTCL was required to work in their premises, which involves re-location of existing equipments including dead end tower. UPPTCL granted permission to work in its premises in January 2008 after lot of persuasion and co-ordination. The relocation requires details regarding existing ACDB & DCDB, Sub-station drawings & documents etc. The sub-station being an old station, these were not readily available with Unnao (UPPTCL) Sub-station. Further, civil works got delayed due to non-availability of old equipments and foundation drawings with M/s UPPTCL.

(c) Installation of FSCs at existing charged stations of Lucknow, Bareilly and Unnao require long shutdowns which were not provided even after co-ordination with various agencies such as UPPTCL, CLDS, ALDS, NRLDC, CPCC and others, and this led to delay in commissioning of the project. Shutdowns were available only during off-peak load seasons and has contributed slower pace of work and delay in commissioning of the project. The delay is mainly on account of permits that are required for availing shutdowns, which are beyond the control of petitioner.

(d) Heavy rains during the monsoon season in 2008 and flooding of Lucknow Sub-station during un-seasonal heavy rain during August and September, 2008, which raised the water table, made the civil works (like TG and TH tower foundations, Platform Structure foundation & Cable trench etc.) impossible from July 2008 to January-February 2009.

25. As the petitioner did not file any document to substantiate the delay in getting the shutdown, the petitioner was directed, vide letter dated 3.5.211, to submit the justification for the delay in shutdowns alongwith the correspondence made with UPPCL seeking shutdowns. In response the petitioner, vide affidavit dated 16.8.2011, has submitted that requests for shutdown were made verbally through telephone and hence there is no documentary evidence. The petitioner has further submitted the work of FSC at Lucknow sub-station was delayed as the sub-station was flooded twice during August and September, 2008 due to heavy rains and release of water from barrages situated in the northern part of Uttar Pradesh. The petitioner has also submitted that there was delay in transportation of machines and material as the approach road was washed away. The area under construction was marshy and it took 50 to 60 days to settle down. The petitioner has also submitted that as per the flood bulletin issued by Uttar Pradesh Flood Works and Minor Irrigation department, the actual

rainfall upto October, 2008 in the area was about 138-158% more than the average normal rainfall in Barabanki and Lucknow.

26. During the hearing on 17.4.2012, the petitioner was directed to submit the details, alongwith the documentary evidence, of delay due to non-availability of shutdown, the period and dates for which shutdown was requested, the period and dates of actual shutdown and the consequent delay in shutdown and the construction work. In response, the petitioner has submitted, vide affidavit dated 16.7.2012, that installation of FSC at existing charged stations of Lucknow, Bareilly and Unnao require long shutdowns and obtaining shutdowns required coordination with various agencies like UPPTCL, CLDS, ALDS, NRLDC, CPCC and others. Shutdowns were made available only during off-peak load seasons and all these reasons contributed to slow pace of work and time over-run. The Unnao-Bareilly D/C line belongs to UPPTCL, hence shutdown was requested from CLDS through Executive Engineer, UPPTCL through letters. FSC installation at existing charged stations of Bareilly was delayed due to rainfall during May-October, 2008 and non-availability of shutdown in the required lines. Besides this, the petitioner has submitted many internal memos regarding shutdowns and approvals and fog related constraints. However, the petitioner has failed to submit the information as directed by the Commission during the hearing on 17.4.2012. We are unable to quantify the delay due to non-availability of shutdowns in the absence of the information called from the petitioner.

27. UPPCL, vide affidavit dated 16.4.2012, has submitted that, the time over-run in case of Asset-I has resulted in increase in IDC and FERV. PSPCL, vide affidavit dated 20.4.2012 has submitted that the delay in commissioning of the transmission assets should not be condoned and the justification given by the petitioner for the delay are not in order. PSPCL has further submitted that the petitioner is obliged under Section 38 of the Electricity Act, 2003, to co-ordinate with the STU to avail the shutdowns. Delay in availing shut downs is not a valid ground since shut downs are invariably discussed and decided in advance in the NRPC and OCC meetings held every month wherein the petitioner, UPPCL as well as NRLDC are participants. BRPL has also made similar submissions and requested to disallow IDC and IEDC for the period of time over-run. In response, the petitioner in its rejoinder to the replies filed by respondent has submitted that the delay is not attributable to it and requested to condone the time over-run.

28. We have gone through the submissions made by the petitioner and the documents filed in support of time over-run and the submissions of the respondents. The petitioner has submitted that non-availability of shutdown and rains from May to October, 2008 delayed the commissioning of Asset-1(a). But, the petitioner has not submitted any documentary evidence to show non-availability of shut-down and the rains delayed the commissioning of the Asset-1(a). Accordingly, the delay of eight months in commissioning of Asset 1(a) is not condoned. The petitioner has submitted that commissioning of Asset-1(b) was delayed due to non-availability of shutdown, delay in permission to work in UPPCL premises and non-availability of drawings with UPPTCL. On perusal of the documents filed by the petitioner, it is observed that though request for

shutdown was first made on 9.11.2009, it was only granted from 17.2.2010 to 27.2.2010 and was extended upto 4.3.2010. Thus, there was a delay of three months in granting shutdown and hence we condone the delay of three months due to non-availability of shutdown due to foggy conditions in Northern Region in winter months. As regards the remaining period of delay, the petitioner has not made any clear submissions regarding delay and hence the delay of remaining five months is not condoned. The petitioner has submitted that the Asset-1(c) and Asset-2 were delayed due to non-availability of shut-down and heavy rains and floods in Lucknow during August and September, 2008. The petitioner has not submitted any documents to show that the shutdown was refused. The petitioner has shown that the rains in 2008 were more than the normal rains leading to flooding of the construction area. Abnormal rains for two months made it difficult for the petitioner to carry out any activity for the next two months and it appears that the petitioner was not able to carry out any construction activity for four months in case of Asset-1(c) and Asset-2. Therefore, we condone the delay of only four months due to rains and flooding and the remaining period of delay of four months and seven months in case of Asset-1(c) and Asset-2 respectively is not condoned as the petitioner has failed to provide any proper justification.

IDC&IEDC

29. The IEDC & IDC amounting to ₹44.45 lakh, ₹35.40 lakh, ₹11.01 and₹3.05 lakh has been deducted in respect of Asset-1(a), Asset-1(b), Asset-1(c) and Asset-2 respectively on pro-rata basis as the time over-run has not been condoned. The details of IEDC & IDC disallowed are as follows:-

(₹ in lakh)

Asset	Claimed			Disallowed		
	IEDC	IDC	Total	IEDC	IDC	Total
Asset-1(a)	58.97	118.83	**177.80**	14.74	29.71	**44.45**
Asset-1(b)	75.13	151.40	**226.53**	11.74	23.66	**35.40**
Asset-1(c)	29.20	58.84	**88.04**	3.65	7.36	**11.01**
Asset-2	4.58	10.68	**15.26**	0.92	2.14	**3.05**

30. Accordingly, following capital cost up to date of commercial operation/notional date of commercial operation of the Assets have been considered for the purpose of tariff after deducting IEDC & IDC but before adjustment of initial spares:

(₹ in lakh)

Assets	Capital Cost considered for the purpose of tariff before adjustment of IEDC/IDC & initial spares as on date of commercial operation/ Notional date of commercial operation	Disallowed IEDC/IDC	Capital cost considered for the purpose of tariff after deduction of IEDC/IDC but before adjustment of initial spares as on date of commercial operation/ Notional date of commercial operation
Asset-1	6202.70	90.86	6111.84
Combined Assets of Asset-1 & Asset-2	7386.27	93.91	7292.36

Treatment of initial spares

31. The petitioner has claimed the initial spares of 5.185% of the estimated completion cost in case of Asset-1 and 5.192% in case of Asset-2 against the 3.5% norms specified in the 2009 Tariff Regulations.

32. The petitioner, vide affidavit dated 15.4.2011, has submitted that the fixed series compensation is a specialized electronic equipment which is not replaceable with other old equipment in the power system and hence the

petitioner is required to mandatorily hold specified number of initial spares in the interest of power system and reliability. The petitioner has requested to allow higher initial spares claimed by relaxing the norms specified under Regulation 8 by invoking the power to relax under Regulation 44 of the 2009 Tariff Regulations. The petitioner has further submitted, vide affidavit dated 16.8.2011, that the spares were procured as per the recommendation of the manufacturer.

33. Initial spares for the series compensation devices and HVDC stations have been clearly specified as 3.5% of the project cost in the 2009 Tariff Regulations. The norms specified in Regulation 8 of the 2009 Tariff Regulations were arrived at on the basis of information provided by the petitioner and taking into consideration the views of the stakeholders. We are of the view that the instant case does not necessitate allowance of higher initial spares and hence we feel there is no need to invoke Regulation 44 of the 2009 Tariff Regulations. Accordingly, initial spares are allowed as per the norms specified in Regulation 8 of the 2009 Tariff Regulations.

34. The initial Spares in respect of Asset-1(a), Asset-1(b), Asset-1(c) are adjusted while determining tariff of Combined Assets of Asset-1 and Asset-2 and not individually. Accordingly, the excess initial spares claimed are deducted to arrive at the capital cost considered for the purpose of tariff are given overleaf:-

(₹ in lakh)

Particulars **(a)**	Capital cost claimed up to cut off date **(b)**	Initial spares claimed **(c)**	Capital cost considered up to cut off date after deducting IDC and IEDC **(d)**	Proportionate initial spares claimed **(e)= {(d)*(c) / (b)}**	Ceiling limits as per Regulation 8 2009 Tariff Regulations **(f)**	Initial spares worked out **(g) ={(d)-(e)}*{(f) / {100%-(f)}**	Excess claim of initial spares disallowed **(h)={(e)-(g)}**
Combined Assets of Asset-1 and Asset-2	8444.89	462.34	8350.99	457.20	3.50%	286.30	**176.04**

35. Capital cost as on the date of commercial operation/notional date of commercial operation has been considered for the purpose of tariff calculation after deducting initial spares as given hereunder:-

(₹ in lakh)

Particulars	**Capital Cost considered for the purpose of tariff before adjustment of Initial Spares as on date of commercial operation / notional date of commercial operation**	**Excess initial spares**	**Capital cost considered for the purpose of tariff after deduction of Excess initial spares as on date of commercial operation / notional date of commercial operation**
Asset-1	6111.84	-	6111.84
Combined Assets of Asset-1 & Asset-2	7292.36	176.04	7116.32

<u>Projected additional capital expenditure</u>

36. Regulation 9(1) of the 2009 Tariff Regulations provides as under:-

"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.

Provided that the details of works included in the original scope of work along with estimates of expenditure, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff."

37. As per 2009 Tariff Regulations,

"'cut-off date' means 31st March of the year closing after two years of the year of commercial operation of the project, and in case the project is put under commercial operation in the last quarter of a year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation."

Therefore, the cut-off date for the above mentioned assets is 31.3.2013.

38. The petitioner has claimed the following additional capital expenditure:-

(₹ in lakh)

Particulars	**Notional date of commercial operation**	**2010-11 (pro-rata)**	**2011-12**	**2012-13**	**2013-14**	**Total**
Combined Assets	1.7.2011	178.94	730.58	149.10	156.75	**1215.37**

The additional capital expenditure claimed by the petitioner falls within the cut-off period and accordingly it is allowed.

<u>Debt- equity ratio</u>

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

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

Explanation- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

40. The details of debt-equity ratio as on notional the date of commercial operation of combined asset of Asset-1 and Asset-2 are as follows:-

(₹ in lakh)

Particulars	**Capital cost as on date of commercial operation/ Notional date of commercial operation**	
	Amount	**%**
Debt	4981.43	70.00
Equity	2134.90	30.00
Total	7116.33	100.00

41. The details of debt-equity ratio for the transmission system as on 31.3.2014 are as follows:-

(₹ in lakh)

Particulars	**Capital cost as on date of commercial operation/ Notional date of commercial operation**	
	Amount	**%**
Debt	5832.19	70.00
Equity	2499.51	30.00
Total	8331.70	100.00

Return on equity

42. 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 tis 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".

43. The amount of equity allowed for calculation of return on equity is given hereunder:-

(₹ in lakh)

Asset-1	
Particulars	**2011-12 (Pro-rata)**
Opening equity	1833.55
Addition due to additional capital expenditure	2.13
Closing equity	1835.69
Average equity	1834.62
Return on equity (Base Rate)	*15.50%*
Tax rate for the year 2008-09 (MAT)	11.33%
Rate of return on equity (Pre Tax)	17.481%
Return on equity (Pre Tax)	80.18

(₹ in lakh)

Combined asset of Asset 1 & Asset 2				
Particulars	**2010-11 (pro-rata)**	**2011-12**	**2012-13**	**2013-14**
Opening equity	2134.90	2188.58	2407.76	2452.49
Addition due to additional capital expenditure	53.68	219.17	44.73	47.03
Closing equity	2188.58	2407.76	2452.49	2499.51
Average equity	2161.74	2298.17	2430.12	2476.00
Return on equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%	11.33%	11.33%
Rate of return on equity (Pre Tax)	17.481%	17.481%	17.481%	17.481%
Return on equity (Pre Tax)	283.42	401.74	424.81	432.83

44. The petitioner's request to allow grossing up the base rate of return with the applicable tax rate as per the relevant Finance Act for the relevant year and direct settlement of tax liability between the transmission licensee and the beneficiaries on year to year basis, shall be settled in accordance with the provisions of Regulation 15 of the 2009 Tariff Regulations.

Interest on loan

45. Regulation 16 of the 2009 Tariff Regulations provides as under:-

"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."

46. In these calculations, the interest on loan has been worked out as per details given hereunder:-

(i) 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 details submitted by the petitioner;

(ii) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period; and

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

47. Detailed calculations of the weighted revised average rate of interest are given in Annexure-I and II to this order.

48. Details of the interest on loan worked on the above basis are given hereunder:-

(₹ in lakh)

Asset 1	
Particular	**2011-12 (pro-rata)**
Gross Normative Loan	47278.29
Cumulative Repayment upto Previous Year	0.00
Net Loan-Opening	4278.29
Addition due to Additional capital expenditure	4.98
Repayment during the year	80.72
Net Loan-Closing	4202.55
Average Loan	4240.42
Weighted Average Rate of Interest on Loan	1.7200%
Interest	18.23

(₹ in lakh)

Combined Asset 1 & Asset 2				
Particular	**2010-11 (pro-rata)**	**2011-12**	**2012-13**	**2013-14**
Gross Normative Loan	4981.43	5106.69	5618.10	5722.47
Cumulative Repayment upto Previous Year	80.72	366.07	770.55	1198.25
Net Loan-Opening	4900.71	4740.62	4847.55	4524.22
Addition due to Additional capital expenditure	125.26	511.41	104.37	109.73
Repayment during the year	285.35	404.48	427.70	435.78
Net Loan-Closing	4740.62	4847.55	4524.22	4198.17
Average Loan	4820.67	4794.08	4685.88	4361.19
Weighted Average Rate of Interest on Loan	1.72%	1.72%	1.72%	1.72%
Interest	62.19	82.46	80.60	75.01

Depreciation

49. Regulation 17 (4) of the 2009 Tariff 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".

50. The notional date of commercial operation of Combined Assets of Asset-1 (Asset-1(a), Asset-1(b) and Asst-1(c)) & Asset-2 was 1.7.2010 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 to the 2009 Tariff Regulations.

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

52. Depreciation of Asset-1(Asset-1(a), Asset-1(b) and Asst-1(c)) for the period 1.4.2010 to 30.6.2010 has been arrived at on pro-rata basis and considered as cumulative depreciation up to 30.6.2010 for the Combined Assets of Asset-1 (Asset-1(a), Asset-1(b) and Asst-1(c)) & Asset-2.

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

(₹ in lakh)

Asset 1	
Particular	**2011-12 (pro-rata)**
Opening Gross Block	6111.85
Addition during 2009-14 due to projected additional Capital expenditure	7.11
Closing Gross Block	6118.96
Average Gross Block	6115.40
Rate of Depreciation	5.2800%
Depreciable value of combined assets	5503.86
Remaining Depreciable Value	5503.86
Depreciation	80.72
Cumulative Depreciation	80.72

(₹ in lakh)

Combined Asset 1& Asset 2				
Particular	**2010-11 (pro-rata)**	**2011-12**	**2012-13**	**2013-14**
Opening Gross Block	7116.33	7295.27	8025.85	8174.95
Addition during 2009-14 due to projected additional Capital expenditure	178.94	730.58	149.10	156.75
Closing Gross Block	7295.27	8025.85	8174.95	8331.70
Average Gross Block	7205.80	7660.56	8100.40	8253.33
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value of combined assets	6485.22	6894.50	7290.36	7427.99
Remaining Depreciable Value	6404.50	6528.44	6519.81	6229.74
Depreciation	285.35	404.48	427.70	435.78
Cumulative Depreciation	366.07	770.55	1198.25	1634.02

Operation & maintenance expenses

54. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the following norms for operation and maintenance expenses for the instant assets:-

(₹ in lakh)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bay (₹lakh/ bay)	52.40	55.40	58.57	61.92	65.46

55. As per the 2009 Tariff Regulations, allowable O&M expenses for the assets covered in this petition are as follows:-

(₹ in lakh)

Element **Combined Elements of Capacity Enhancement of East- West Corridor of Northern Region (Notional date of commercial operation: 1.7.2010)**	**2009-10**	**2010- 11 (pro-rata for three months April,10 to June, 2010)**	**2010-11 (pro-rata for nine months July,10 to March, 2011)**	**2011-12**	**2012-13**	**2013-14**
5 nos 400 kV bays (Date of commercial operation: 1.4.2010)	---	69.25	207.75	---	---	---
1 no 400 kV bay (Date of commercial operation: 1.7.2010)	--	--	41.55	---	---	--
Combined Asset (6 nos. bays)	-		249.30	351.42	371.52	392.76
Total O&M Allowable	**---**	**69.25**	**249.30**	**351.42**	**371.52**	**392.76**

56. Accordingly, the following O&M expenses are allowed:-

(₹ in lakh)

Year	2010- 11 (pro-rata for three months April,10 to June, 2010)	2010-11 (pro-rata for nine months July,10 to March, 2011)	2011-12	2012-13	2013-14
Total O&M expenses allowable	69.25	249.30	351.42	371.52	392.76

57. PSPCL has submitted O&M expenses may be allowed as per the 2009 Tariff Regulations. BRPL has submitted that the Commission has already allowed the increase in employee cost on account of pay revision by rationalising the O&M expenses by 50% increase for increase in employee cost. Any further increase in the employee cost due to wage revision should be taken care by the petitioner by increasing the productivity. UPPCL has also made similar submission. In response, the petitioner has clarified that per Ckt Km and per bay O&M rates considered in the instant petition are based on the 2009 Tariff Regulations. While framing the 2009 Tariff Regulations, the petitioner had furnished the actual O&M cost, line and bay details of its transmission system for the 5 years period i.e, 2003-04, 2004-05, 2005-06, 2006-07 and 2007-08, without taking into account expected manpower cost implications on account of wage revision due with effect from 1.1.2007. The Commission has considered 50% in the wage hike so as to stipulate the norms for 2009-10.The petitioner has also submitted that it would approach Commission for suitable revision in the norms for O&M expenses in case the impact of wage hike with effect from 1.1.2007 is more than 50%.

58. The Commission has given effect to the impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. However, in case the petitioner approaches with any such application, the same shall be dealt with in accordance with law.

Interest on working capital

59. As per the 2009 Tariff Regulations, the components of the working capital and the interest thereon are discussed as per details given below:-

(i) Receivables:-

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

(ii) Maintenance spares:

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

(iii) O & M expenses:

O & M expenses have been considered for one month as a component of working capital in terms of Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations.

60. Necessary computations in support of interest on working capital are given hereunder:-

(₹ in lakh)

Asset 1	
Particular	**2011-12 (pro-rata)**
Maintenance Spares	41.55
O & M expenses	23.08
Receivables	170.19
Total	234.82
Interest	6.90

(₹ in lakh)

Combined Asset 1& Asset 2				
Particular	**2010-11(pro-rata)**	**2011-12**	**2012-13**	**2013-14**
Maintenance Spares	49.86	52.71	55.73	58.91
O & M expenses	27.70	29.29	30.96	32.73
Receivables	200.71	212.07	223.12	228.60
Total	278.27	294.07	309.81	320.24
Interest	22.96	32.35	34.08	35.23

<u>Transmission charges</u>

61. The transmission charges allowed are given hereunder:-

(₹ in lakh)

Asset-1	
Particular	**2011-12 (pro-rata)**
Depreciation	80.72
Interest on Loan	18.23
Return on Equity	80.18
Interest on Working Capital	6.90
O & M Expenses	69.25
Total	**255.28**

(₹ in lakh)

Combined Asset-1& Asset-2				
Particular	**2010-11(pro-rata)**	**2011-12**	**2012-13**	**2013-14**
Depreciation	285.35	404.48	427.70	435.78
Interest on Loan	62.19	82.46	80.60	75.01
Return on Equity	283.42	401.74	424.81	432.83
Interest on Working Capital	22.96	32.35	34.08	35.23
O & M Expenses	249.30	351.42	371.52	392.76
Total	903.21	1272.45	1338.71	1371.60

<u>Filing fee and the publication expenses</u>

62. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. BRPL and UPPCL submitted that the filing fee shall be governed as per the Commission's order. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of 2009 Tariff Regulations. In accordance with the Commission's order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee directly from the beneficiaries on *pro-rata* basis. The petitioner shall also be entitled for reimbursement of the publication expenses in connection with the present petition, directly from the beneficiaries on *pro-rata* basis.

<u>Licence fee</u>

63. The petitioner has submitted that in O&M norms for tariff block 2009-14, the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. BRPL and UPPCL has submitted that the petitioner's request for reimbursement for licence fee should be rejected as license fee is the eligibility fee of a licence holder and it

is the onus of the petitioner. The petitioner has clarified 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. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations.

Service tax

64. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents if it is subjected to such service tax in future. BRPL and UPPCL have objected to recovery of service tax from the beneficiaries in future as CBEC has exempted service tax on transmission vide notification No. 11/2010-service tax dated 20.7.2010.The petitioner has clarified that if notifications regarding granting of exemption to transmission service are withdrawn at a later date, the beneficiaries shall have to share the service tax paid by the petitioner. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of transmission charges

65. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shared by the beneficiaries in accordance with Regulation 33 of the 2009 Tariff Regulation up to 30.6.2011. With effect from 1.7.2011, the billing, collection & 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 to time.

66. This order disposes of Petition No. 314/2010.

Sd/-	**Sd/-**
(M. Deena Dayalan)	**(V.S. Verma)**
Member	**Member**

Annexure-I

CACULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	**2010-11**	**2011-12**	**2012-13**	**2013-14**
1	**ADB III (Exchange Rate@Rs.45.67)**				
	Gross loan opening	4341.85	**4341.85**	**4341.85**	**4341.85**
	Cumulative Repayment upto date of commercial operation/previous year	65.56	**206.24**	**361.24**	**532.31**
	Net Loan-Opening	4276.29	4135.61	3980.61	3809.54
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	140.68	155.00	171.07	188.44
	Net Loan-Closing	4135.61	3980.61	3809.54	3621.10
	Average Loan	4205.95	4058.11	3895.07	3715.32
	Rate of Interest	1.72%	1.72%	1.72%	1.72%
	Interest	**72.34**	**69.80**	**67.00**	**63.90**
	Rep Schedule	30 HY instalments from 15.01.2010			
	Total Loan				
	Gross loan opening	4341.85	4341.85	4341.85	4341.85
	Cumulative Repayment upto DATE OF COMMERCIAL OPERATION/previous year	65.56	206.24	361.24	532.31
	Net Loan-Opening	4276.29	4135.61	3980.61	3809.54
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	140.68	155.00	171.07	188.44
	Net Loan-Closing	4135.61	3980.61	3809.54	3621.10
	Average Loan	4205.95	4058.11	3895.07	3715.32
	Rate of Interest	**1.7200%**	**1.7200%**	**1.7200%**	**1.7200%**
	Interest	72.34	69.80	67.00	63.90

Annexure-II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	**2010-11**	**2011-12**	**2012-13**	**2013-14**
1	**ADB III (Exchange Rate@Rs.45.67)**				
	Gross loan opening	4341.85	**4341.85**	**4341.85**	**4341.85**
	Cumulative Repayment upto DATE OF COMMERCIAL OPERATION/previous year	65.56	**206.24**	**361.24**	**532.31**
	Net Loan-Opening	4276.29	4135.61	3980.61	3809.54
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	140.68	155.00	171.07	188.44
	Net Loan-Closing	4135.61	3980.61	3809.54	3621.10
	Average Loan	4205.95	4058.11	3895.07	3715.32
	Rate of Interest	1.72%	1.72%	1.72%	1.72%
	Interest	**72.34**	**69.80**	**67.00**	**63.90**
	Rep Schedule	30 HY instalments from 15.01.2010			
2	**ADB III (Exchange Rate@Rs.47.26)**				
	Gross loan opening	823.74	**823.74**	**823.74**	**823.74**
	Cumulative Repayment uptodate of commercial operation/previous year	12.44	**39.13**	**68.54**	**100.99**
	Net Loan-Opening	811.30	784.61	755.21	722.75
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	26.69	29.41	32.46	35.75
	Net Loan-Closing	784.61	755.21	722.75	687.00
	Average Loan	797.96	769.91	738.98	704.88
	Rate of Interest	1.72%	1.72%	1.72%	1.72%
	Interest	**13.72**	**13.24**	**12.71**	**12.12**
	Rep Schedule	30 HY instalments from 15.01.2010			
	Total Loan				
	Gross loan opening	5165.59	5165.59	5165.59	5165.59
	Cumulative Repayment upto date of commercial operation/previous year	78.00	245.37	429.78	633.30
	Net Loan-Opening	5087.59	4920.22	4735.81	4532.29
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	167.37	184.41	203.52	224.19
	Net Loan-Closing	4920.22	4735.81	4532.29	4308.10
	Average Loan	5003.91	4828.02	4634.05	4420.19
	Rate of Interest	**1.7200%**	**1.7200%**	**1.7200%**	**1.7200%**
	Interest	86.07	83.04	79.71	76.03