

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

1. **Shri Bhanu Bhushan, Member**
2. **Shri R.Krishnamoorthy, Member**

Petition No. 40/2008

In the matter of

Approval of transmission tariff due to additional capitalization incurred during 2005-06 and 2006-07 in respect of 500 MW HVDC back-to-back station at Gazuwaka (Inter-Regional asset of Eastern Region and Southern Region) and 400 KV D/C Vijaywada-Gazuwaka transmission line along with bay extension and equipments at Vijaywada and Gazuwaka (Southern Region) under augmentation of capacity of Gazuwaka HVDC back to back project (500 MW) from 1.4.2005 to 31.3.2009.

And in the matter of

Power Grid Corporation of India Limited, Gurgaon

..Petitioner

Vs

1. Karnataka Power Transmission Corporation Ltd., Bangalore
2. Transmission Corporation of Andhra Pradesh, Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Government of Pondicherry, Pondicherry
6. Bihar State Electricity Board, Patna
7. West Bengal State Electricity Board, Kolkata
8. Grid Corporation of Orissa, Bhubaneswar
9. Damodar Valley Corporation, Kolkata
10. Department of Power, Government of Sikkim, Gangtok
11. Jharkhand State Electricity Board, Ranchi

...Respondents

The following were present:

1. Shri U.K. Tyagi, PGCIL
2. Shri V. V. Sharma, PGCIL
3. Shri C.Kannan, PGCIL
4. Shri Ramnesh, PGCIL
5. Shri A.K. Nagpal, PGCIL
6. Shri R.B. Sharma, Advocate, BSEB
7. Shri Krishnaswami, TNEB

ORDER
(DATE OF HEARING: 27.5.2008)

This petition has been filed for revision of transmission tariff for additional capital expenditure incurred during 2005-06 and 2006-07 in respect of 500 MW HVDC back-to-back station at Gazuwaka (inter-regional asset of Eastern Region and Southern Region) and 400 KV D/C Vijaywada-Gazuwaka transmission line along with bay extension and equipment at Vijaywada and Gazuwaka (Southern Region) under augmentation of capacity of Gazuwaka HVDC back-to-back project (500 MW) (hereinafter referred to as "the project") from 1.4.2005 to 31.3.2009 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the 2004 regulations"). The petitioner has also prayed for reimbursement of the petition filing fee and other expenditure in connection with the filing of the petition.

2. Administrative approval and expenditure sanction for the project was accorded by Ministry of Power vide letter dated 22.1.2002 at an estimated cost of Rs. 76925 lakh, including IDC of Rs. 9612 lakh, based on 4th quarter 2002 price level. The project comprises the following:

- (a) 500 MW HVDC back-to-back module at Gazuwaka,

- (b) Gazuwaka-Vijayawada 400 kV D/C transmission line with 63 MVAR reactors at both ends,

- (c) Extension of existing Vijayawada sub-station of Power Grid to accommodate two bays of Gazuwaka line,

(d) Extension of existing Gazuwaka sub-station of Power Grid to accommodate two bays of Vijayawada line,

(e) Provision of 50% series capacitors on existing Jeypore-Gazuwaka 400 kV D/C transmission line at Jeypore end,

(f) Provision of 40% series capacitors on existing Rengali-Indravati 400 kV S/C transmission line at Indravati/Rengali end, and

(g) Provision of 40% series capacitors on Meramundali-Jeypore 400 kV S/C transmission line at Jeypore end.

3. Details of the transmission assets covered in the present petition, declared under commercial operation on 1.3.2005 and their apportioned approved cost are as under:

S.No	Name of the asset	Apportioned cost	approved cost (Rs in lakh)
(a)	500 MW HVDC back-to-back station at Gazuwaka		35895
(b)	400 kV D/C Vijayawada-Gazuwaka transmission line along with 63 MVAR Reactors		29896

4. The Commission, vide its order dated 23.10.2006 in Petition No.138/2005 allowed transmission tariff in respect of (i) HVDC back-to-back station at Gazuwaka and (ii) 400 kV D/C Vijayawada-Gazuwaka transmission line for the period 1.3.2005 to 31.3.2009 based on capital cost of Rs. 33853.24 lakh and Rs. 22559.06 lakh respectively as per audited accounts up to 31.3.2005, after

accounting for additional capital expenditure incurred between 1.3.2005 and 31.3.2005. The transmission charges approved are summarised hereunder:

(Rs. In lakh)

	500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka					Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays				
Details	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	97.47	1204.48	1204.48	1204.48	1204.48	49.34	600.95	600.95	600.95	600.95
Interest on Loan	73.88	887.77	837.80	774.47	701.12	110.88	1322.14	1255.16	1163.13	1057.58
Return on Equity	105.00	1300.69	1300.69	1300.69	1300.69	69.03	842.13	842.13	842.13	842.13
Advance against Depreciation	0.00	392.92	563.74	742.89	857.18	0.00	0.00	366.06	607.99	761.08
Interest on Working Capital	8.55	111.45	116.05	120.69	124.19	6.44	77.94	84.80	89.14	91.83
O & M Expenses	37.49	468.00	486.72	506.08	526.40	21.28	265.58	276.55	287.06	299.06
Total	322.40	4365.32	4509.49	4649.31	4714.06	256.97	3108.75	3425.66	3590.40	3652.63

5. Through this petition, the petitioner has claimed revision of transmission tariff based on additional capital expenditure incurred between 1.4.2005 and 31.3.2007. As per the auditor's certificate dated 16.7.2007, the details of capital expenditure incurred are as under:

(Rs in lakh)

Description	500 MW HVDC back-to- back station (Pole-II) at Gazuwaka	400 kV D/C Vijayawada-Gazuwaka transmission line along with associated bays
Expenditure up to date of commercial operation ion (1.3.2005)	31918.19	21903.59
Expenditure from the date of commercial operation to 31.3.2005	1935.05	655.47
Expenditure incurred during 2005-06	2850.39	1686.57
Expenditure incurred during 2006-07	143.38	324.89
Balance estimated expenditure	338.42	91.52
Total	37185.43	24662.04

6. Based on the additional capital expenditure incurred during 2005-06 and 2006-07, the petitioner has claimed the following additional transmission tariff for the period 1.4.2005 to 31.3.2009:

(Rs.in lakh)

	500 MW HVDC-II back to back station (Pole-II) at Gazuwaka				Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Depreciation	51.31	105.19	107.78	107.78	22.21	49.29	54.15	54.15
Interest on Loan	36.03	71.60	68.34	62.04	47.13	100.19	102.39	93.91
Return on Equity	59.86	122.73	125.74	125.74	35.42	77.66	84.48	84.48
Advance against Depreciation	0.00	45.78	65.44	74.78	0.00	16.33	43.00	55.29
Interest on Working Capital	4.04	9.14	9.78	10.04	2.70	6.21	7.21	7.41
O & M Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	151.24	354.43	377.08	380.37	107.46	249.68	291.23	295.23

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

(Rs.in lakh)

	500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka				Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays			
	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	14.25	30.08	32.60	34.55	8.43	19.00	21.76	23.07
O & M expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Receivables	25.21	59.07	62.85	63.39	17.91	41.61	48.54	49.21
Total	39.46	89.15	95.44	97.95	26.34	60.61	70.30	72.27
Rate of Interest	10.25 %	10.25%	10.25%	10.25 %	10.25%	10.25%	10.25%	10.25%
Interest	4.04	9.14	9.78	10.04	2.70	6.21	7.21	7.41

8. In the course of computation of tariff claimed in this petition, a minor computational error which crept in the tariff awarded vide the Commission's order dated 23.10.2006 in Petition No. 138/2005 has come to the notice. The petitioner, while making its claim in Petition No. 138/2005 had indicated four loans from SEB

Sweden in respect of 500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka as if they were present throughout the year 2004-05. It has, however, been noted that these loans were taken on various dates in March 2005. Consequently the weighted average rate of interest was computed as 3.7193% whereas it now comes to 3.7598%. We propose to correct this error by revising tariff for the entire period, that is, 1.3.2005 to 31.3.2009 by the present order.

9. The reply to the petition has been filed by Bihar State Electricity Board and Tamil Nadu Electricity Board. In response to the public notices published by the petitioner in accordance with the procedure specified by the Commission, no comments have been received from the general public.

CAPITAL COST

10. The petitioner has furnished the following details of additional capital expenditure:

Name of asset	Works	Amount (Rs in lakh)	Year	Justification
HVDC back-to-back station at Gazuwaka	Sub-station	(i) 2845.71 (ii) 4.68	2005-06	(i) Retention payment. (ii) Additional taxes and duties
	Sub station	143.38	2006-07	Retention payments
Vijayawada-Gazuwaka 400 kV D/C transmission line	Sub station	104.72	2005-06	Retention payment
	Transmission line	962.43		Compensation payment
	Transmission line	610.95		Retention payment
	Transmission line	8.47		Additional taxes and duties
	Sub station	133.68	2006-07	Retention payment
	Transmission line	190.96		Retention payment
	Transmission line	0.25		Additional taxes and duties

11. It is found that the additional capital expenditure claimed is in respect of retention payments, compensation payments and additional taxes and duties. These are part of deferred liabilities relating to works/services within the original scope of work. Therefore, the additional capital expenditure sought to be capitalised is allowed under Regulation 53(1) and 53(2) of the 2004 regulations.

12. BSEB in its reply has pointed out that the details of compensation payments amounting to Rs 962.43 lakh made during 2005-06 in respect of Vijayawada-Gazuwaka 400 kV D/C transmission line have not been furnished. BSEB has further desired to have the details of works to be undertaken under balance estimated expenditure of Rs. 338.42 lakh for HVDC back-to-back station at Gazuwaka. It has also been pointed out that the petitioner's claim for maintenance spares is not in accordance with Regulation 56(v) (1) (b) and that there is no provision in the 2004 regulations for payment of any statutory taxes, levies, duties, cess etc. as such charges are generally included in O&M expenses. BSEB has further pointed out that In view of the Commission's order dated 28.3.2008 in the suo motu Petition No. 85/2007, the transmission charges of HVDC back-to-back station at Gazuwaka are payable by the beneficiaries in Southern Region only.

13. The petitioner during the hearing clarified that compensation payments claimed related to crops and trees. It was further clarified that the payment of additional taxes and duties were on account of levy of service tax not envisaged in cost estimates originally approved. BSEB's representative present in the hearing was satisfied with the justification given by the petitioner.

14. Based on the above, the following capital cost is considered for the purpose of revision of tariff for the years 2005-06 to 2008-09, in respect of the transmission assets:

Description	(Rs. in Lakh)	
	500 MW HVDC back-to- back station (Pole-II) at Gazuwaka	400 kV D/C Vijayawada-Gazuwaka transmission line along with associated bays
Admitted capital cost as on 1.4.2005	33853.24	22559.06
Capital cost as on 1. 4.2006	36703.63	24245.63
Capital cost as on 1. 4.2007	36847.01	24570.52

15. BSEB has pointed out that the petitioner should have furnished details of works to be undertaken under balance estimated expenditure of Rs 338.42 lakh for HVDC back-to-back station at Gazuwaka. In this regard, the last proviso to Regulation 53(1) of the 2004 regulations is relevant and the same is reproduced below:

“Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the transmission system”

16. The purpose of this proviso is that the beneficiaries should know upfront the pending liabilities/works for which the petitioner may seek revision of tariff in future. It has been observed that the petitioner has not furnished the necessary details in terms of the above proviso. The petitioner is directed to furnish to the beneficiaries the requisite details of pending works relating to balance estimated expenditure, amounting to Rs 338.42 lakh and Rs 91.52 lakh in HVDC back-to-back station at Gazuwaka and Vijayawada-Gazuwaka 400 kV D/C transmission line respectively within 15 days from the date of issue of this order. The petitioner is also directed to furnish such details in future invariably in all cases.

DEBT- EQUITY RATIO

17. The Commission in its order dated 23.10.2006 in Petition No. 138/2005 considered the following debt-equity ratio:

Asset	As on the date of commercial operation	As on 1.4.2005
500 MW HVDC back-to- back station (Pole-II) Gazuwaka	72.71:27.29	72.56:27.44
400 kV D/C Vijayawada-Gazuwaka transmission line along with associated bays	73.44:26.56	73.34:26.66

18. The petitioner has furnished the details of sources of financing the additional capital expenditure from 1.4.2005 to 31.3.2007 as indicated below:

500 MW HVDC back-to- back station (Pole-II) at Gazuwaka

	Actual (2005-06)		Normative (2005-06)		Actual (2006-07)		Normative (2006-07)	
	Rs in lakh	%	Rs in lakh	%	Rs in lakh	%	Rs in lakh	%
Debt	1995.45	70.01%	1995.27	70.00%	143.38	100.00%	100.37	70.00%
Equity	854.94	29.99%	855.12	30.00%	0	0.00%	43.01	30.00%
Total	2850.39	100.00%	2850.39	100.00%	143.38	100.00%	143.38	100.00%

400 kV D/C Vijayawada-Gazuwaka transmission line along with associated bays

	Actual (2005-06)		Normative (2005-06)		Actual (2006-07)		Normative (2006-07)	
	Rs in lakh	%	Rs in lakh	%	Rs in lakh	%	Rs in lakh	%
Debt	1181.00	70.02%	1180.60	70.00%	324.89	100.00%	227.42	70.00%
Equity	505.57	29.98%	505.97	30.00%	0	0.00%	97.47	30.00%
Total	1686.57	100.00%	1686.57	100.00%	324.89	100.00%	324.89	100.00%

19. Regulation 54 of the 2004 regulations lays down the norms of debt-equity ratio to be considered for determination of tariff. The Commission has already decided that all additional capitalisation made during 2004-09 is to be serviced in the debt-equity ratio of 70:30 irrespective of the source of financing, which is considered to be the "normative" debt-equity ratio. Accordingly, additional capital

expenditure for the years 2005-06 and 2006-07 now approved has been segregated in the debt-equity ratio of 70:30.

20. Following are the details of debt and equity being considered for tariff calculations:

500 MW HVDC back-to- back station (Pole-II) at Gazuwaka

(Rs. in lakh)

	Debt	Equity	Total	Debt%	Equity%
As on 1.3.2005 (Date of commercial operation)	23208.03	8710.16	31918.19	72.71%	27.29%
Additional capital expenditure during 2004-05	1354.54	580.52	1935.06	70.00%	30.00%
As on 31.3.2005	24562.57	9290.68	33853.25	72.56%	27.44%
Additional capital expenditure during 2005-06	1995.27	855.12	2850.39	70.00%	30.00%
As on 31.3.2006	26557.84	10145.80	36703.64	72.36%	27.64%
Additional capital expenditure during 2006-07	100.37	43.01	143.38	70.00%	30.00%
As on 31.3.2007	26658.21	10188.81	36847.02	72.35%	27.65%

400 kV D/C Vijayawada-Gazuwaka transmission line along with associated bays

(Rs. in lakh)

	Debt	Equity	Total	Debt%	Equity%
As on 1-3-2005 (Date of commercial operation)	16085.00	5818.59	21903.59	73.44%	26.56%
Additional capital expenditure during 2004-05	458.83	196.64	655.47	70.00%	30.00%
As on 31-3-2005	16543.83	6015.23	22559.06	73.34%	26.66%
Additional capital expenditure during 2005-06	1180.60	505.97	1686.57	70.00%	30.00%
As on 31-3-2006	17724.43	6521.20	24245.63	73.10%	26.90%
Additional capital expenditure during 2006-07	227.42	97.47	324.89	70.00%	30.00%
As on 31-3-2007	17951.85	6618.67	24570.52	73.06%	26.94%

RETURN ON EQUITY

21. As per clause (3) of regulation 56 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with regulation 54 and shall

be @ 14% per annum. In view of this provision and para 21 above, the following amount of equity has been considered for calculation of return of equity:

(Rs. in lakh)

Asset	Equity on 1.4.2004	Equity considered for tariff calculations for the year 2004-05*	Notional equity due to ACE for the year 2005-06	Equity considered for tariff calculations for the equity 2005-06*	Notional equity due to ACE for the year 2006-07	Equity considered for tariff calculations for the year 2006-07*	Equity considered for tariff calculations for the period 2007-09
500 MW HVDC back-to-back station (Pole-II) at Gazuwaka	8710.16	9000.42	855.12	9718.24	43.01	10167.31	10188.81
400 kV D/C Vijayawada-Gazuwaka transmission line along with associated bays	5818.59	5916.91	505.97	6268.22	97.47	6569.94	6618.67

*Average equity after accounting for additional capital expenditure during 2004-05 to 2006-07 considered for working out return on equity.

22. Based on the above equity base, return on equity has been calculated at the rate of 14% as under:

(Rs. in lakh)

Details	500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka					Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Equity (as considered in Pet 138/2005)	8710.16	9290.68	10145.79	10188.81	10188.81	5818.59	6015.23	6521.20	6618.67	6618.67
Addition due to Additional Capitalisation	580.52	855.12	43.01			196.64	505.97	97.47		
Return on Equity	105.00	1360.55	1423.42	1426.43	1426.43	69.03	877.55	919.79	926.61	926.61

INTEREST ON LOAN

23. Clause (1) of regulation 56 of the 2004 regulations *inter alia* provides that-

(a) Interest on loan capital shall be computed loan-wise on the loans arrived at in the manner indicated in regulation 54.

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan in accordance with Regulation 54 minus cumulative repayment as admitted by the Commission or any other authority having power to do so, up to 31.3.2004. The repayment for the period 2004-09 shall be worked out on a normative basis.

(c) The transmission licensee shall make every effort to re-finance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such re-financing shall be borne by the beneficiaries.

(d) The changes to the loan terms and conditions shall be reflected from the date of such re-financing and benefit passed on to the beneficiaries.

(e) In case of dispute, any of the parties may approach the Commission with proper application. However, the beneficiaries shall not withhold any payment ordered by the Commission to the transmission licensee during pendency of any dispute relating to re-financing of loan;

(f) In case any moratorium period is availed of by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(g) The transmission licensee shall not make any profit on account of re-financing of loan and interest on loan;

(h) The transmission licensee may, at its discretion, swap loans having floating rate of interest with loans having fixed rate of interest, or vice versa, at its own cost and gains or losses as a result of such swapping shall accrue to the transmission licensee:

Provided that the beneficiaries shall be liable to pay interest for the loans initially contracted, whether on floating or fixed rate of interest.”

24. The petitioner has claimed interest on loan in the following manner:

(a) Gross loan opening is from the year 2004-05.

(b) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan is worked out for various years.

(c) For 500 MW HVDC-II back to back station (Pole-II) at Gazuwaka Project specific SEB Sweden loan has also been utilised which is indicated

as that as on date of commercial operation as well as for add cap in 2004-05 and this petition's 2005-06 add cap.

(d) Bond XVII (w.e.f. 22.09.2005) has been considered for the purpose of additional capital expenditure during 2005-06 and 2006-07 for both the assets.

(e) Notional loan corresponding to additional capital expenditure for 2005-06 and 2006-07 have been considered and the weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan.

25. On our calculation, the interest on loan has been worked out as detailed below:

(a) These being existing assets, gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual loan in accordance with the order dated 23.10.2006 in Petition No 138/2005 have been considered.

(b) Notional loan arising out of additional capital expenditure up to 31.3.2007 has been added in loan amount as on 1.4.2004 to arrive at total notional loan. This adjusted gross loan is considered as normative loan for tariff calculations.

(c) Tariff is worked out considering normative loan and normative repayments. Normative repayment is worked out by the following formula :

Actual repayment of actual loan during the year
----- X Opening balance of normative
Opening balance of actual loan during the year loan during the year

(d) Moratorium in repayment of loan is considered with reference to normative loan and if the normative repayment of loan during the year is less than the depreciation including AAD during the year, then depreciation including AAD during the year is deemed as normative repayment of loan during the year. This is as per decision in other similar petitions of the petitioner for the period 2004-09.

(e) 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.

26. Based on above, year-wise interest on loan has been worked out as under:

(Rs. in lakh)

	500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka					Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays				
Details	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Normative Loan	23208.03	24562.56	26557.84	26658.20	26658.20	16085.00	16543.83	17724.43	17951.85	17951.85
Cumulative Repayment upto Previous Year/date of commercial operation	0.00	97.47	1845.75	3764.91	5859.31	0.00	49.34	672.50	1638.44	2838.96
Net Loan-Opening	23208.03	24465.09	24712.09	22893.29	20798.89	16085.00	16494.49	17051.93	16313.41	15112.89
Addition due to Additional Capitalisation	1354.54	1995.27	100.37			458.83	1180.60	227.42		
Repayment during the year	97.47	1748.27	1919.17	2094.39	2207.32	49.34	623.16	965.94	1200.52	1352.28
Net Loan-Closing	24465.09	24712.09	22893.29	20798.89	18591.57	16494.49	17051.93	16313.41	15112.89	13760.61
Average Loan	23836.56	24588.59	23802.69	21846.09	19695.23	16289.75	16773.21	16682.67	15713.15	14436.75
Weighted Average Rate of Interest on Loan	3.7598%	3.7070%	3.7316%	3.7827%	3.8086%	8.1680%	8.1368%	8.0847%	8.0519%	8.0378%
Interest	74.68	911.51	888.23	826.37	750.11	110.88	1364.81	1348.75	1265.20	1160.40

27. The detailed calculations in support of the weighted average rate of interest are contained in Annexure-I, and Annexure-II attached.

DEPRECIATION

28. Sub-clause (a) of clause (ii) of Regulation 56 of the 2004 regulations provides for computation of depreciation in the following manner, namely:

(a) The value base for the purpose of depreciation shall be the historical cost of the asset.

(b) Depreciation shall be calculated annually based on straight line method over the useful life of the asset and at the rates prescribed in Appendix II to these regulations. The residual value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset. The historical capital cost of the asset shall include additional capitalisation on account of Foreign Exchange Rate Variation up to 31.3.2004 already allowed by the Central Government/Commission.

(c) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

(d) Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

29. Depreciation allowed has been worked out as below:

(Rs. in lakh)

	500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka					Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays				
Details	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Rate of Depreciation	3.56%	3.56%	3.56%	3.56%	3.56%	2.66%	2.66%	2.66%	2.66%	2.66%
Depreciable Value	29597.14	31750.59	33097.79	33162.31	33162.31	20008.19	21062.11	21967.27	22113.47	22113.47
Balance Useful life of the asset	-	-	-	-	-	-	-	-	-	-
Remaining Depreciable Value	29597.14	31653.12	31252.04	29397.39	27303.00	20008.19	21012.77	21294.77	20475.03	19274.51
Depreciation	97.47	1255.79	1309.68	1312.26	1312.26	49.34	623.16	650.24	655.10	655.10
Cumulative Depreciation/ Advance against Depreciation	97.47	1845.75	3764.91	5859.31	8066.63	49.34	672.50	1638.44	2838.96	4191.24

ADVANCE AGAINST DEPRECIATION

30. As per sub-clause (b) of clause (ii) of Regulation 56 of the 2004 regulations, in addition to allowable depreciation, the transmission licensee is entitled to Advance Against Depreciation, computed in the manner given hereunder:

AAD = Loan repayment amount as per regulation 56 (i) subject to a ceiling of 1/10th of loan amount as per regulation 54 minus depreciation as per schedule

31. It is provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. It is further provided that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

32. The petitioner has claimed Advance Against Depreciation in the following manner:

- (a) 1/10th of gross loan is worked out from the gross notional loan.
- (b) Cumulative loan as well as repayment of notional loan during the year have been considered.
- (c) Depreciation as claimed in the petition.

33. Accordingly, in our calculation the Advance Against Depreciation has been worked as detailed below:

- (a) 1/10th of gross loan is worked out from the gross notional loan as per para 26 above.
- (b) Repayment of notional loan during the year is considered as per para 26 above.
- (c) Depreciation is worked out as per para 29 above.
- (d) In the calculations of Advance Against Depreciation, cumulative depreciation/Advance Against Depreciation up to preceding year along with the depreciation of the current year has been considered for working out the Advance Against Depreciation. Therefore this figure of cumulative depreciation/ Advance Against Depreciation would be different from the figure appearing under the similar head elsewhere in tariff calculations

where Advance Against Depreciation for the current year is also included for 90% restriction of the depreciation.

34. Details of Advance Against Depreciation allowed are given hereunder:

(Rs. in lakh)								
	500 MW HVDC-II back-to-- back station (Pole-II) at Gazuwaka				Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays			
Details	2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	2456.26	2655.78	2665.82	2665.82	1654.38	1772.44	1795.19	1795.19
Repayment of the Loan	1748.27	1919.17	2094.39	2207.32	623.16	965.94	1200.52	1352.28
Minimum of the above	1748.27	1919.17	2094.39	2207.32	623.16	965.94	1200.52	1352.28
Depreciation during the year	1255.79	1309.68	1312.26	1312.26	623.16	650.24	655.10	655.10
(A) Difference	492.48	609.49	782.13	895.06	0.00	315.70	545.42	697.18
Cumulative Repayment of the Loan	1845.75	3764.91	5859.31	8066.63	672.50	1638.44	2838.96	4191.24
Cumulative Depreciation/ Advance against Depreciation	1353.26	3155.42	5077.17	7171.57	672.50	1322.74	2293.54	3494.06
(B) Difference	492.48	609.49	782.13	895.06	0.00	315.70	545.42	697.18
Advance against Depreciation Minimum of (A) and (B)	492.48	609.49	782.13	895.06	0.00	315.70	545.42	697.18

OPERATION & MAINTENANCE EXPENSES

35. In accordance with clause (iv) of Regulation 56 the 2004 regulations, the following norms are prescribed for O & M expenses

	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses (Rs in lakh per ckt-km)	0.227	0.236	0.246	0.255	0.266
O&M expenses (Rs in lakh per bay)	28.12	29.25	30.42	31.63	32.90

36. O&M expenses as approved in the order dated 23.10.2006 in Petition No. 138/2005 have been considered, since the line length and number of bays for the transmission assets remain unaltered.

INTEREST ON WORKING CAPITAL

37. The components of the working capital and the interest thereon are discussed hereunder:

(i) Maintenance spares

Regulation 56(v) (1) (b) of the 2004 regulations provides for maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation. The petitioner has claimed maintenance spares. As per regulation 56(v)(1)(b), maintenance spares @ 1% of the historical cost escalated @ 6% per annum are allowed. For this purpose, the historical cost is taken as the cost on the date of commercial operation. Maintenance spares on additional capital expenditure are not being considered for the present. Therefore, the petitioner's claim in this regard is not being allowed. Accordingly, maintenance spares have been worked out on the historical cost as on the date of commercial operation and by providing escalation from that date.

(ii) O & M expenses

Regulation 56(v)(1)(a) of the 2004 regulations provides for operation and maintenance expenses for one month as a component of working capital. O&M expenses as approved in the order dated 23.10.2006 in Petition No. 138/2005 have been considered.

(iii) Receivables

As per Regulation 56(v)(1)(c) of the 2004 regulations, receivables will be equivalent to two months average billing calculated on target availability level. Accordingly, in the tariff being allowed, receivables have been worked out on the basis 2 months' transmission charges.

(iv) Rate of interest on working capital

As per Regulation 56(v) (2) of the 2004 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 1.4.2004 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 @ 10.25% based on SBI PLR as on 1.4.2004, which is in accordance with the 2004 regulations and has been allowed.

38. The necessary computations in support of interest on working capital are appended herein below:

(Rs. in lakh)

Details	500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka					Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	319.18	320.78	340.02	360.43	382.05	219.04	220.13	233.34	247.34	262.18
O & M expenses	37.49	39.00	40.56	42.17	43.87	21.28	22.13	23.05	23.92	24.92
Receivables	646.44	767.31	806.54	829.94	840.00	513.94	535.13	599.80	628.61	638.88
Total	1,003.12	1,127.09	1,187.12	1,232.53	1,265.92	754.26	777.39	856.18	899.87	925.98
Interest	8.57	115.53	121.68	126.33	129.76	6.44	79.68	87.76	92.24	94.91

TRANSMISSION CHARGES

39. The revised transmission charges being allowed for the two transmission assets in supersession of the charges approved vide order dated 23.10.2006 *ibid* are summarised below:

						Rs. In lakh)				
500 MW HVDC-II back-to-back station (Pole-II) at Gazuwaka						Gazuwaka-Vijayawada 400 kV D/C transmission line along with associated bays				
Details	2004-'05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	97.47	1255.79	1309.68	1312.26	1312.26	49.34	623.16	650.24	655.10	655.10
Interest on Loan	74.68	911.51	888.23	826.37	750.11	110.88	1364.81	1348.75	1265.20	1160.40
Return on Equity	105.00	1360.55	1423.42	1426.43	1426.43	69.03	877.55	919.79	926.61	926.61
Advance against Depreciation	0.00	492.48	609.49	782.13	895.06	0.00	0.00	315.70	545.42	697.18
Interest on Working Capital	8.57	115.53	121.68	126.33	129.76	6.44	79.68	87.76	92.24	94.91
O & M Expenses	37.49	468.00	486.72	506.08	526.40	21.28	265.58	276.55	287.06	299.06
Total	323.22	4603.87	4839.22	4979.61	5040.02	256.97	3210.78	3598.79	3771.63	3833.27

SHARING OF TRANSMISSION CHARGES:

40. The Commission vide its order dated 28.3.2008 in Petition No. 85/2007 (suo motu) has revised the approach for sharing of transmission charges for inter-regional transmission assets with effect from 1.4.2008. It has been decided that the transmission charges of inter-regional assets should be allocated to the constituents of the importing region. Accordingly, the revised transmission charges of HVDC back-to-back station at Gazuwaka will be borne by the beneficiaries of Southern Region exclusively with effect from 1.4.2008 and by beneficiaries of Eastern and Southern Region in 50:50 ratio for the period up to 31.3.2008. The revised transmission charges for Gazuwaka-Vijayawada 400 kV D/C transmission line shall be borne only by the beneficiaries of Southern Region.

41. The additional transmission charges for the period up to 31.8.2008 now approved shall be recovered by the petitioner in two instalments.

42. This order disposes of Petition No. 40/2008

Sd/=
(R.KRISHNAMOORTHY)
MEMBER

Sd/=
(BHANU BHUSHAN)
MEMBER

New Delhi dated the 28th August 2008

Annexure-I

Name of the Company:		PGCIL				
Name of the Element:		500 MW HVDC back-to-back station (Pole-II) at Gazuwaka				
Actual Date of commercial operation:		1.3.2005				
Petition No.:		40/2008 (Earlier Petition 138/2005)				
Tariff setting Period:		2004-09				
CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
(Rs. in lakh)						
	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
1	Bond-XII					
	Gross Loan opening	427.00	427.00	427.00	427.00	427.00
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	35.58	71.17	106.75
	Net Loan-Opening	427.00	427.00	391.42	355.83	320.25
	Add: drawal during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	35.58	35.58	35.58	35.58
	Net Loan-Closing	427.00	391.42	355.83	320.25	284.67
	Average Loan	427.00	409.21	373.63	338.04	302.46
	Rate of Interest	9.70%	9.70%	9.70%	9.70%	9.70%
	Interest	41.42	39.69	36.24	32.79	29.34
	Repayment Schedule	12 Annual Installments from 28.3.2006				
2	Bond XIII Option I					
	Gross Loan opening	2051.00	2051.00	2051.00	2051.00	2051.00
	Cumulative Repayment upto date of commercial operation//previous year	0.00	0.00	0.00	170.92	341.83
	Net Loan-Opening	2051.00	2051.00	2051.00	1880.08	1709.17
	Add: drawal during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	170.92	170.92	170.92
	Net Loan-Closing	2051.00	2051.00	1880.08	1709.17	1538.25
	Average Loan	2051.00	2051.00	1965.54	1794.63	1623.71
	Rate of Interest	8.63%	8.63%	8.63%	8.63%	8.63%
	Interest	177.00	177.00	169.63	154.88	140.13
	Repayment Schedule	12 Annual Installments from 31.7.2006				
3	Bond XV					
	Gross Loan opening	2151.00	2151.00	2151.00	2151.00	2151.00
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00	0.00	179.25
	Net Loan-Opening	2151.00	2151.00	2151.00	2151.00	1971.75
	Add: drawal during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	179.25	179.25
	Net Loan-Closing	2151.00	2151.00	2151.00	1971.75	1792.50
	Average Loan	2151.00	2151.00	2151.00	2061.38	1882.13
	Rate of Interest	6.68%	6.68%	6.68%	6.68%	6.68%
	Interest	143.69	143.69	143.69	137.70	125.73
	Repayment Schedule	12 Annual Installments from 23.2.2008				
4	Bond XVI					
	Gross Loan opening	1132.00	1132.00	1132.00	1132.00	1132.00

Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	1132.00	1132.00	1132.00	1132.00	1132.00
Add: drawal during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	113.20
Net Loan-Closing	1132.00	1132.00	1132.00	1132.00	1018.80
Average Loan	1132.00	1132.00	1132.00	1132.00	1075.40
Rate of Interest as on date of commercial operation	7.10%	7.10%	7.10%	7.10%	7.10%
Interest	80.37	80.37	80.37	80.37	76.35
Repayment Schedule	10 Annual Installments from 18.2.2009				
5 OBC					
Gross Loan opening	417.00	417.00	417.00	417.00	417.00
Cumulative Repayment upto date of commercial operation/previous year	0.00	34.75	69.50	104.25	139.00
Net Loan-Opening	417.00	382.25	347.50	312.75	278.00
Add: drawal during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	34.75	34.75	34.75	34.75	34.75
Net Loan-Closing	382.25	347.50	312.75	278.00	243.25
Average Loan	399.63	364.88	330.13	295.38	260.63
Rate of Interest as on date of commercial operation	8.60%	8.60%	8.60%	8.60%	8.60%
Interest	34.37	31.38	28.39	25.40	22.41
Repayment Schedule	12 Annual Installments from 22.3.2005				
6 SEB (Foreign Currency Loan)-Tranche 13 to 29					
Gross Loan opening	17030.03	17030.03	17030.03	17030.03	17030.03
Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	1419.17	2838.34	4257.51
Net Loan-Opening	17030.03	17030.03	15610.86	14191.69	12772.52
Add: drawal during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	1419.17	1419.17	1419.17	1419.17
Net Loan-Closing	17030.03	15610.86	14191.69	12772.52	11353.35
Average Loan	17030.03	16320.45	14901.28	13482.11	12062.94
Rate of Interest	2.38%	2.38%	2.38%	2.38%	2.38%
Interest	404.99	388.12	354.37	320.62	286.87
Repayment Schedule	24 Equal Half yearly installments from 1.9.2005				
7 SEB (Foreign Currency Loan)-Tranche 30					
Gross Loan opening	0.00	179.55	179.55	179.55	179.55
Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	14.96	29.93	44.89
Net Loan-Opening	0.00	179.55	164.59	149.63	134.66
Add: drawal during the year	179.55	0.00	0.00	0.00	0.00
Repayment during the year	0.00	14.96	14.96	14.96	14.96
Net Loan-Closing	179.55	164.59	149.63	134.66	119.70
Average Loan	89.78	172.07	157.11	142.15	127.18
Rate of Interest	2.20%	2.20%	2.20%	2.20%	2.20%
Interest	1.98	3.79	3.46	3.13	2.80
Repayment Schedule	24 Equal Half yearly installments from 1.9.2005				
8 SEB (Foreign Currency Loan)-Tranche 31					

	Gross Loan opening	0.00	155.24	155.24	155.24	155.24
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	12.94	25.87	38.81
	Net Loan-Opening	0.00	155.24	142.30	129.37	116.43
	Add: drawal during the year	155.24	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	12.94	12.94	12.94	12.94
	Net Loan-Closing	155.24	142.30	129.37	116.43	103.49
	Average Loan	77.62	148.77	135.84	122.90	109.96
	Rate of Interest	2.23%	2.23%	2.23%	2.23%	2.23%
	Interest	1.73	3.31	3.03	2.74	2.45
	Repayment Schedule	24 Equal Half yearly installments from 1.9.2005				
9	SEB (Foreign Currency Loan)-Tranche 32					
	Gross Loan opening	0.00	350.20	350.20	350.20	350.20
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	29.18	58.37	87.55
	Net Loan-Opening	0.00	350.20	321.02	291.83	262.65
	Add: drawal during the year	350.20	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	29.18	29.18	29.18	29.18
	Net Loan-Closing	350.20	321.02	291.83	262.65	233.47
	Average Loan	175.10	335.61	306.43	277.24	248.06
	Rate of Interest	2.25%	2.25%	2.25%	2.25%	2.25%
	Interest	3.94	7.54	6.89	6.23	5.58
	Repayment Schedule	24 Equal Half yearly installments from 1.9.2005				
10	SEB (Foreign Currency Loan)-Tranche 33					
	Gross Loan opening	0.00	620.89	620.89	620.89	620.89
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	51.74	103.48	155.22
	Net Loan-Opening	0.00	620.89	569.15	517.41	465.67
	Add: drawal during the year	620.89	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	51.74	51.74	51.74	51.74
	Net Loan-Closing	620.89	569.15	517.41	465.67	413.92
	Average Loan	310.44	595.02	543.28	491.54	439.80
	Rate of Interest	2.25%	2.25%	2.25%	2.25%	2.25%
	Interest	6.98	13.39	12.22	11.06	9.90
	Repayment Schedule	24 Equal Half yearly installments from 1.9.2005				
11	Bond XVII (Loan for ACE during 2005-06 and 2006-07) drawn on 22.9.05					
	Gross Loan opening	0.00	0.00	184.00	327.38	327.38
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	184.00	327.38	327.38
	Add: drawal during the year	0.00	184.00	143.38	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	184.00	327.38	327.38	327.38
	Average Loan	0.00	92.00	255.69	327.38	327.38
	Rate of Interest	7.39%	7.39%	7.39%	7.39%	7.39%
	Interest	0.00	6.80	18.90	24.19	24.19
	Repayment Schedule	10 equal annual installments from 22-9-2009				

1	SEB (Foreign Currency Loan)-Date of Drawl 26.04.05 to 23.09.05					
2						
	Gross Loan opening	0.00	0.00	1811.45	1811.45	1811.45
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	150.95	301.91	452.86
	Net Loan-Opening	0.00	0.00	1660.50	1509.54	1358.59
	Add: drawal during the year	0.00	1811.45	0.00	0.00	0.00
	Repayment during the year	0.00	150.95	150.95	150.95	150.95
	Net Loan-Closing	0.00	1660.50	1509.54	1358.59	1207.63
	Average Loan	0.00	830.25	1585.02	1434.06	1283.11
	Rate of Interest (wt. average as per petition)	2.04%	2.04%	2.04%	2.04%	2.04%
	Interest	0.00	16.94	32.33	29.25	26.18
	Repayment Schedule	24 equal Half Yearly installments from 15-9-2005				
	Total Loan					
	Gross Loan opening	23208.03	24513.91	26509.36	26652.74	26652.74
	Cumulative Repayment upto date of commercial operation/previous year	0.00	34.75	1784.03	3704.23	5803.67
	Net Loan-Opening	23208.03	24479.16	24725.33	22948.52	20849.07
	Add: drawal during the year	1305.88	1995.45	143.38	0.00	0.00
	Repayment during the year	34.75	1749.28	1920.20	2099.45	2212.65
	Net Loan-Closing	24479.16	24725.33	22948.52	20849.07	18636.42
	Average Loan	23843.60	24602.25	23836.92	21898.79	19742.74
	Rate of Interest	3.76%	3.71%	3.73%	3.78%	3.81%
	Interest	896.46	912.02	889.51	828.36	751.91

Annexure –II

	Name of the Company:	PGCIL				
	Name of the Element:	400 KV D/C Vijaywada-Gajuwaka transmission line along with bay extension and equipment at Vijaywada & Gajuwaka associated with augmentation of capacity of Gajuwaka HVDC back to back project in Southern Region				
	Actual date of commercial operation:	1.3.2005				
	Petition No.:	40/2008				
	Tariff setting Period:	2004-09				
CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
(Rs. in lakh)						
	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
1	Bond-XII					
	Gross Loan opening	579.00	579.00	579.00	579.00	579.00
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	48.25	96.50	144.75
	Net Loan-Opening	579.00	579.00	530.75	482.50	434.25
	Repayment during the year	0.00	48.25	48.25	48.25	48.25
	Net Loan-Closing	579.00	530.75	482.50	434.25	386.00
	Average Loan	579.00	554.88	506.63	458.38	410.13
	Rate of Interest	9.70%	9.70%	9.70%	9.70%	9.70%
	Interest	56.16	53.82	49.14	44.46	39.78
	Repayment Schedule	12 Annual Installments from 28.3.2006				
2	Bond XIII Option I					
	Gross Loan opening	10496.00	10496.00	10496.00	10496.00	10496.00
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00	874.67	1749.33
	Net Loan-Opening	10496.00	10496.00	10496.00	9621.33	8746.67
	Repayment during the year	0.00	0.00	874.67	874.67	874.67
	Net Loan-Closing	10496.00	10496.00	9621.33	8746.67	7872.00
	Average Loan	10496.00	10496.00	10058.67	9184.00	8309.33
	Rate of Interest	8.63%	8.63%	8.63%	8.63%	8.63%
	Interest	905.80	905.80	868.06	792.58	717.10
	Repayment Schedule	12 Annual Installments from 31.7.2006				
3	Bond XV					
	Gross Loan opening	2912.00	2912.00	2912.00	2912.00	2912.00
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00	0.00	242.67
	Net Loan-Opening	2912.00	2912.00	2912.00	2912.00	2669.33
	Repayment during the year	0.00	0.00	0.00	242.67	242.67
	Net Loan-Closing	2912.00	2912.00	2912.00	2669.33	2426.67
	Average Loan	2912.00	2912.00	2912.00	2790.67	2548.00
	Rate of Interest	6.68%	6.68%	6.68%	6.68%	6.68%
	Interest	194.52	194.52	194.52	186.42	170.21
	Repayment Schedule	12 Annual Installments from 23.2.2008				
4	Bond XVI					
	Gross Loan opening	1533.00	1533.00	1533.00	1533.00	1533.00

	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	1533.00	1533.00	1533.00	1533.00	1533.00
	Repayment during the year	0.00	0.00	0.00	0.00	153.30
	Net Loan-Closing	1533.00	1533.00	1533.00	1533.00	1379.70
	Average Loan	1533.00	1533.00	1533.00	1533.00	1456.35
	Rate of Interest as on date of commercial operation	7.10%	7.10%	7.10%	7.10%	7.10%
	Interest	108.84	108.84	108.84	108.84	103.40
	Repayment Schedule	10 Annual Installments from 18.2.2009				
5	OBC					
	Gross Loan opening	565.00	565.00	565.00	565.00	565.00
	Cumulative Repayment upto date of commercial operation/previous year	0.00	47.08	94.17	141.25	188.33
	Net Loan-Opening	565.00	517.92	470.83	423.75	376.67
	Repayment during the year	47.08	47.08	47.08	47.08	47.08
	Net Loan-Closing	517.92	470.83	423.75	376.67	329.58
	Average Loan	541.46	494.38	447.29	400.21	353.13
	Rate of Interest as on date of commercial operation	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	46.57	42.52	38.47	34.42	30.37
	Repayment Schedule	12 Annual Installments from 22.3.2005				
6	Bond XVII (Loan for ACE during 2005-06 and 2006-07)					
	Gross Loan opening	0.00	0.00	1181.00	1505.89	1505.89
	Cumulative Repayment upto date of commercial operation/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	1181.00	1505.89	1505.89
	Add: drawal during the year	0.00	1181.00	324.89	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	1181.00	1505.89	1505.89	1505.89
	Average Loan	0.00	590.50	1343.45	1505.89	1505.89
	Rate of Interest	7.39%	7.39%	7.39%	7.39%	7.39%
	Interest	0.00	43.64	99.28	111.29	111.29
	Repayment Schedule	10 annual installments from 22-9-2009				
	Total Loan					
	Gross Loan opening	16085.00	16085.00	17266.00	17590.89	17590.89
	Cumulative Repayment upto date of commercial operation/previous year	0.00	47.08	142.42	1112.42	2325.08
	Net Loan-Opening	16085.00	16037.92	17123.58	16478.47	15265.81
	Repayment during the year	47.08	95.33	970.00	1212.67	1365.97
	Net Loan-Closing	16037.92	17123.58	16478.47	15265.81	13899.84
	Average Loan	16061.46	16580.75	16801.03	15872.14	14582.82
	Rate of Interest	8.1680%	8.1368%	8.0847%	8.0519%	8.0378%
	Interest	1311.90	1349.15	1358.32	1278.00	1172.14