

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 58/2010**

**Coram:**

- 1. Dr. Pramod Deo, Chairperson**
- 2. Shri S.Jayaraman, Member**
- 3. Shri V.S.Verma, Member**
- 4. Shri M.Deena Dayalan, member**

**DATE OF HEARING: 19.8.2010**

**DATE OF ORDER: 29.6.2011**

**In the matter of**

Revision of transmission tariff due to de-capitalization and additional capital expenditure incurred during 2004-09 for (a) 500 kV HVDC line along with HVDC terminal stations (pole-I) at Talcher and Kolar; (b) 400 kV Hossur-Salem S/C line and 1x135 MVA Auto Transformer-I at Hossur along with the associated bay at Hossur and bay extension at Salem; (c) 1x315 MVA Auto transformer-II at Hossur along with associated 400 kV bay and complete 220 kV bays/yard at Hossur; (d) 400 kV AC Kolar-Arakkonam-Madras line along with bays at Kolar and Sriperumbudur (Madras) and LILO of 400 kV Cuddapah-Bangalore S/C line along with associated bays at Kolar; and (e) 400 kV Kolar-Hoody D/C line along with associated bays extensions (Kolar-I and Kolar-II) at Hoody sub-station, Hoody-I and Hoody-II bays at Kolar sub-station and 4x167 MVA auto transformer along with associated bays on 400 and 220 kV side and complete 220 kV sub-station at Kolar under the Transmission System associated with Talcher-II project in Southern Region for the period from 1.4.2004 to 31.3.2009.

**And  
In the matter of**

Power Grid Corporation of India Limited, Gurgaon

**..Petitioner**

**Vs**

1. Karnataka Power Transmission Corporation Limited, Bangalore
2. Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Govt. of Pondicherry, Pondicherry
6. Eastern Power Distribution Company of Andhra Pradesh Limited, Vishakhapatnam
7. Southern Power Distribution Company of Andhra Pradesh Limited, Tirupati
8. Central Power Distribution Company of Andhra Pradesh Limited, Hyderabad
9. Northern Power Distribution Company of Andhra Pradesh Limited, Warangal
10. Bangalore Electricity Supply Company Ltd., Bangalore
11. Gulbarga Electricity Supply Company Ltd. Gulbarga



12. Hubli Electricity Supply Company Ltd., Hubli
13. MESCOM, Mangalore
14. Chamundeswari Electricity Supply Corporation Ltd., Mysore.

**.Respondents**

**The following were present:**

1. Shri U.K.Tyagi, PGCIL
2. Shri M.M.Mondal, PGCIL
3. Shri R.Krishnaswami, TNEB

**ORDER**

This petition has been filed for revision of transmission tariff due to de-capitalisation and additional capital expenditure incurred during 2004-09 in respect of transmission assets under the Transmission System associated with Talcher-II (hereinafter referred to as "the transmission system") in Southern Region for the period from 1.4.2004 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).

2. The details of transmission assets and their dates of commercial operation as indicated by the petitioner are as under:

Asset No.	Name of Asset	Date of the commercial operation
Asset-I	500 kV HVDC line along with HVDC terminal stations (pole-I) at Talcher and Kolar	1.12.2002
Asset-II	400 kV Hossur-Salem S/C line and 1x135 MVA Auto Transformer-I at Hossur along with the associated bay at Hossur and bay extension at Salem	1.12.2002
Asset-III	1x315 MVA Auto transformer-II at Hossur along with associated 400 kV bay and Complete 220 kV bays/yard at Hossur	1.2.2003
Asset-IV	400 kV AC Kolar-Arakkonam-Madras line along with bays at Kolar and Sriperumbudur (Madras) and LILO of 400 kV Cuddapah-Bangalore S/C line along with associated bays at Kolar	1.12.2002
Asset-V	400 kV Kolar-Hoody D/C line along with associated bays extensions (Kolar-I and Kolar-II) at Hoody sub-station, Hoody-I and Hoody-II bays at Kolar sub-station and 4x167 MVA Auto transformer along with associated bays on 400 and 220 kV side and complete 220 kV sub-station at Kolar	1.2.2003



3. The petitioner has also prayed for reimbursement of the petition filing fee, licence fee and other expenditure in connection with the filing of the petition.

4. The investment approval for construction of the transmission system was accorded by the central Government in Ministry of Power under letter dated 9.2.2000 at an estimated cost of ₹386561.00 lakh (2nd quarter price level), including IDC of ₹ 39107.00 lakh.

5. The transmission charges for the transmission system for the period 1.4.2004 to 31.3.2009 were approved by the Commission in its order dated 9.5.2006 in Petition No. 84/2005 which were revised vide order dated 29.4.2008 in process of implementation of the judgment dated 4.10.2006 of the Appellate Tribunal for Electricity in Appeal No. 135 of 2005 and other related appeals. The summary of the revised transmission charges as approved by the said order dated 24.1.2008 is extracted hereunder:

(₹ in lakh)					
Transmission Tariff	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	5928.10	5928.10	5928.10	5928.10	5928.10
Interest on Loan	10869.50	9920.11	8880.00	7839.89	6799.79
Return on Equity	5156.65	5156.65	5156.65	5156.65	5156.65
Advance against Depreciation	4167.22	8563.27	8563.27	8563.27	8563.27
Interest on Working Capital	704.30	778.38	775.33	773.04	771.79
O & M Expenses	1620.58	1685.36	1754.34	1821.92	1897.21
<b>Total</b>	<b>28446.34</b>	<b>32031.86</b>	<b>31057.69</b>	<b>30082.87</b>	<b>29116.81</b>

6. The relevant details of the additional capital expenditure of the transmission system except Asset III, as claimed by the petitioner are given in the overleaf:

(₹ in lakh)

Year		Asset-I	Asset-II	Asset-III	Asset-IV	Asset-V
	Capital cost as on 1.4.2004 (As per order dated 10.5.2009 and 29.4.2008)	194106.12	7677.53	723.50	11874.06	8514.30
2004-05	Additional capital expenditure /(De- capitalization) in sub-station	26.84	-	-	(-)2.54	(-)1.92
	Additional capital expenditure /(De- capitalization) in transmission line	346.33	67.55	-	20.65	(-)33.13
	Additional capital expenditure in building	-	23.33	-	-	-
2005-06	Additional capital expenditure /(De- capitalization) in sub-station	-	(-)39.70	-	(-)35.54	(-)26.81
	Additional capital expenditure /(De- capitalization) in transmission line	54.64	-	-	-	-
2006-07	Additional capital expenditure /(De- capitalization) in sub-station	-	(-)4.26	-	(-)3.23	(-)2.43
	Additional capital expenditure /(De- capitalization) in transmission line	3.43	-	-	5.97	(-)35.76
2007-08	Additional capital expenditure /(De- capitalization) in sub-station	-	(-)3.54	-	(-)4.87	(-)3.67
	Additional capital expenditure /(De- capitalization) in transmission line	(-)107.59	-	-	100.93	(-)22.41
2008-09	Additional capital expenditure /(De- capitalization) in sub-station	-	(-)4.97	-	-	-
	Additional capital expenditure /(De- capitalization) in transmission line	(-)389.46	-	-	(-)92.12	(-)92.12
	Additional capital expenditure in land	-	273.48	-	-	-
	Balance estimated expenditure in sub- station	12.25	-	-	-	-
	Balance estimated expenditure in transmission line	--	-	-	20.22	15.25
	Capital cost as on 1.4.2009	1,94,052.56	7989.42	723.50	11883.53	8311.30

7. The petitioner has claimed the revised transmission charges for the years 2004-09 as under:

(₹ in lakh)

	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	5933.03	5938.67	5939.42	5938.08	5931.69	221.78	222.14	221.35	221.21	221.06
Interest on Loan	10879.23	9940.31	8900.03	7855.34	6800.49	557.52	536.36	499.49	451.30	411.88
Return on Equity	5164.48	5173.47	5174.69	5172.50	5162.06	216.88	217.95	217.03	216.87	222.43
Advance against Depreciation	4162.28	8579.83	8577.05	8578.71	8573.74	0.00	0.00	77.73	291.97	291.85
Interest on Working Capital	704.61	779.49	776.43	774.03	772.14	30.19	30.51	31.90	35.52	35.72
O & M Expenses	1620.58	1685.36	1754.34	1821.92	1897.21	197.56	205.49	213.78	222.18	231.20
<b>Total</b>	<b>28464.21</b>	<b>32097.13</b>	<b>31121.96</b>	<b>30140.58</b>	<b>29137.33</b>	<b>1223.93</b>	<b>1212.45</b>	<b>1261.28</b>	<b>1439.05</b>	<b>1414.14</b>



(₹ in lakh)

	Asset-IV					Asset-V				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	340.42	340.00	339.37	340.60	340.63	249.30	248.35	247.37	246.51	244.97
Interest on Loan	901.55	840.17	762.88	685.76	604.98	671.33	627.60	567.31	507.27	445.64
Return on Equity	332.85	332.49	331.80	333.87	333.96	206.79	205.49	204.12	202.77	200.29
Advance against Depreciation	0.00	197.01	469.81	468.79	477.06	0.00	114.50	340.88	338.89	338.25
Interest on Working Capital	44.46	47.74	52.11	51.85	51.70	36.57	38.62	42.37	42.20	42.06
O & M Expenses	167.23	173.93	181.02	188.03	195.76	304.34	316.55	329.27	342.29	356.11
<b>Total</b>	<b>1786.51</b>	<b>1931.34</b>	<b>2136.99</b>	<b>2068.90</b>	<b>2004.09</b>	<b>1468.33</b>	<b>1551.11</b>	<b>1731.32</b>	<b>1679.93</b>	<b>1627.32</b>

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

(₹ in lakh)

	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	1995.12	2114.83	2241.72	2376.22	2518.79	74.05	78.49	83.20	88.19	93.49
O & M expenses	135.05	140.45	146.20	151.83	158.10	16.46	17.12	17.82	18.52	19.27
Receivables	4744.04	5349.52	5186.99	5023.43	4856.22	203.99	202.08	210.21	239.84	235.69
<b>Total</b>	<b>6874.21</b>	<b>7604.80</b>	<b>7574.91</b>	<b>7551.48</b>	<b>7533.11</b>	<b>294.50</b>	<b>297.69</b>	<b>311.23</b>	<b>346.55</b>	<b>348.45</b>
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>704.61</b>	<b>779.49</b>	<b>776.43</b>	<b>774.03</b>	<b>772.14</b>	<b>30.19</b>	<b>30.51</b>	<b>31.90</b>	<b>35.52</b>	<b>35.72</b>

(₹ in lakh)

	Asset-IV					Asset-V				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	122.02	129.34	137.10	145.33	154.05	86.68	91.88	97.39	103.24	109.43
O & M expenses	13.94	14.49	15.09	15.67	16.31	25.36	26.38	27.44	28.52	29.68
Receivables	297.75	321.89	356.17	344.82	334.02	244.72	258.52	288.55	279.99	271.22
<b>Total</b>	<b>433.71</b>	<b>465.72</b>	<b>508.36</b>	<b>505.82</b>	<b>504.38</b>	<b>356.76</b>	<b>376.78</b>	<b>413.38</b>	<b>411.75</b>	<b>410.33</b>
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>44.46</b>	<b>47.74</b>	<b>52.11</b>	<b>51.85</b>	<b>51.70</b>	<b>36.57</b>	<b>38.62</b>	<b>42.37</b>	<b>42.20</b>	<b>42.06</b>

9. The reply to the petition has been filed by Tamil Nadu Electricity Board (TNEB). TNEB in its reply has submitted as under:

(i) The petitioner has apportioned the FERV claim for the year 2001-04 based on the project cost as on the date of commercial operation in lieu of the project



cost as on 31.3.2004 as ordered by the Commission. The Auditors` certificate furnished in the petition does not clarify whether additional capital expenditure claimed is inclusive of FERV;

(ii) De-capitalization provision specified in the regulations does not cover the case of refund of Custom Duty. Moreover, in case of depreciation, the depreciation collected on the de-capitalised asset/amount is reduced from cumulative depreciation. In case depreciation collected on Custom/Excise Duty is deducted from cumulative depreciation, then the petitioner will be collecting depreciation in excess of 90% of the capital cost. Therefore, excess tariff received by the petitioner should be refunded with interest and the de-capitalization due to refund of duty should be fully deducted from the capital cost on the asset side and equity in the liability side;

(iii) The excess amount paid towards Custom Duty has been serviced by the respondents at the rate applicable for return on equity plus income tax which should be refunded;

(iv) The claim for reimbursement of filing fee may be negated in accordance with decision taken by the Commission vide order dated 11.9.2010 in Petition No. 129/2005;

(v) The request made by the petitioner with regard to revision of O & M expenses by considering the impact of wage revision with effect from 1.1.1997 along with escalation by way of DA be rejected as the petitioner has already filed a separate petition in this regard.



10. The petitioner in its rejoinder has made following submissions:

- (i) The tariff for the period 2004-09 has been determined in accordance with the 2004 regulations and accordingly, FERV has not been considered as part of additional capital expenditure;
- (ii) The petitioner has received the refund within 90 days of refund order and therefore, no interest has been claimed by the petitioner in accordance with Regulations 53 of the 2004 regulations. Refund of Custom/Excise Duty have been de-capitalized from the date of receipt of the amount;
- (iii) Since the refund of Custom Duty has been received subsequent to the date of commercial operation in trenches from different circles during the years 2004-05 to 2008-09, the respective refund amount have been considered in the respective years and the capital cost of the asset has been reduced for the purpose of calculation of tariff. Refund of custom duty effectively reduces the value of asset and accordingly debt-equity ratio for resultant negative additional capitalization has been adopted as per the 2004 regulations. It has been further stated that the cumulative depreciation of only 90% of the capital cost at the end of the useful life of the assets is being claimed;
- (iv) The petitioner has revised tariff for the period 2004-09 considering de-capitalization due to refund of Custom Duty from the capital cost and

has calculated the different components of the tariff in terms of the 2004 regulations;

- (v) As regards filing fee and other expenses, the same may be decided as per the 2004 regulations;
- (vi) As regards revision of O & M expenses, the petitioner has submitted that the employee cost is paid in tariff as a part of O & M expenses as per the 2004 regulations. O & M expenses claimed in the transmission charges are subject to the adjustment on account of the additional employee cost which becomes payable after wage revision due w.e.f 1.1.2007. The actual impact of wage revision will be filed in due course.

11. We have considered the objections of TNEB and rejoinder filed by the petitioner. We find that the petitioner has adequately met most of the objections of the respondent. It is therefore, clarified that the transmission charges in this order has been decided strictly in accordance with the provisions of the 2009 regulations.

### **CAPITAL COST**

12. The petitioner has not claimed the revised transmission charges for Asset-III. The details submitted by the petitioner in support of its claim for additional capital expenditure and de-capitalization for the period from 2004-09 are given hereunder:

(₹ in lakh)

Asset-I			Asset-II	
Year	Nature and details of expenditure	Amount	Nature and details of expenditure	Amount
2004-05	Sub-station- Final and retention payments	26.84	Building- Final and retention payment.	23.33
	Transmission line- Final and retention payments	346.33	Transmission line- Final and retention payments	67.55
2005-06	Transmission line- Final and retention payments	54.64	Sub-station- Customs and Excise Duty refund	(-)39.70
2006-07	Transmission line- Final and retention payments	3.43	Sub-station- Customs and Excise Duty refund	(-)4.26





2007-08	<b>Transmission line-</b> Customs and Excise Duty refund	(-)107.59	<b>Sub-station-</b> Customs and Excise Duty refund	(-)3.54
2008-09	<b>Transmission line-</b> Customs and Excise Duty refund	(-)389.46	<b>Sub-station -</b> Customs and Excise Duty refund	(-)4.97
			<b>Land-</b> Final and retention payments	273.48

(₹ in lakh)

Asset-IV			Asset-V	
Year	Nature and details of expenditure	Amount	Nature and details of expenditure	Amount
2004-05	<b>Sub-station-</b> Customs and Excise Duty refund	(-)2.54	<b>Sub-station-</b> Customs and Excise Duty refund	(-) 1.92
	<b>Transmission line-</b> Final and retention payments	20.65	<b>Transmission line-</b> Custom and excise duty refund	(-)33.13
2005-06	<b>Sub-station-</b> Customs and Excise Duty refund	(-)35.54	<b>Sub-station-</b> Customs and Excise Duty refund	(-)26.81
2006-07	<b>Sub-station-</b> Customs and Excise Duty refund	(-)3.23	<b>Sub-station-</b> Customs and Excise Duty refund	(-)2.43
	<b>Transmission line-</b> Final and retention payments	5.97	<b>Transmission line-</b> Custom and excise duty refund	(-)35.76
2007-08	<b>Sub-station-</b> Customs and Excise Duty refund	(-)4.87	<b>Sub-station-</b> Customs and Excise Duty refund	(-)3.67
	<b>Transmission line-</b> Final and retention payments	100.93	<b>Transmission line-</b> Customs and Excise Duty refund	(-)22.41
2008-09	<b>Transmission line-</b> Customs and Excise Duty refund	(-)92.12	<b>Transmission line-</b> Customs and Excise Duty refund	(-)92.12

13. The petitioner has submitted audited capital cost up to 31.3.2009 duly certified by Chartered Accountant. As regards the treatment of refund of Custom Duty for the purpose of de-capitalization, Commission has dealt with the issue in para 12 of the order dated 20.7.2010 in Petition No. 35/2010 as under:

*"12. The petitioner has submitted audited capital cost up to 31.3.2009 duly certified by Chartered Accountant. In the present case, there is no actual physical removal of any asset but de-capitalization is due to refund of Custom duty and as the Custom duty has been actually deployed and being serviced in the tariff until it was actually refunded in 2007-08, the same shall not be removed from cumulative depreciation as this will lead to excess claim of depreciation by the petitioner. As a consequence of this, depreciation claim will exceed the maximum limit of 90% which is permissible in the 2004 regulations. As the amount of refund of custom duty has been removed from the original cost during 2007-08 and the cumulative depreciation amount pertaining to custom duty refund has not been removed, therefore, the tariff has been worked out accordingly."*

14. In the light of the above decision, while working out the tariff, the amount of refund of Customs Duty has been removed from the original cost during 2004-09 without reducing its impact from cumulative depreciation.



## TOTAL CAPITAL COST

15. Based on the above, capital cost for the purpose of tariff for the transmission assets as on 31.3.2009 has been worked out as under:

(₹ in lakh)

Year		Asset-I	Asset-II	Asset-IV	Asset-V
	Capital cost as on 1.4.2004 (As per orders dated 10.5.2009 and 29.4.2008)	194106.12	7677.53	11874.06	8514.30
2004-05	Additional capital expenditure /(De-capitalization) in Sub-station	26.84	-	(-)2.54	(-)1.92
	Additional capital expenditure /(De-capitalization) in transmission line	346.33	67.55	20.65	(-)33.13
	Additional capital expenditure in Building	-	23.33	-	-
2005-06	Additional capital expenditure /(De-capitalization) in Sub-station	-	(-)39.70	(-)35.54	(-)26.81
	Additional capital expenditure in transmission line	54.64	-	-	-
2006-07	Additional capital expenditure /(De-capitalization) in Sub-station	-	(-)4.26	(-)3.23	(-)2.43
	Additional capital expenditure /(De-capitalization) in transmission line	3.43	-	5.97	(-)35.76
2007-08	Additional capital expenditure /(De-capitalization) in Sub-station	-	(-)3.54	(-)4.87	(-)3.67
	Additional capital expenditure /(De-capitalization) in transmission line	(-)107.59	-	100.93	(-)22.41
2008-09	Additional capital expenditure /(De-capitalization) in sub-station	-	-4.97	-	-
	Additional capital expenditure /(De-capitalization) in transmission line	(-)389.46	-	(-)92.12	(-) 92.12
	Additional capital expenditure in land	-	273.48	-	-
	<b>Capital cost as on 1.4.2009</b>	<b>1,94,040.31</b>	<b>7989.42</b>	<b>11863.31</b>	<b>8296.05</b>

## DEBT- EQUITY RATIO

16. The petitioner has considered the amount of additional capital expenditure and de-capitalization in the debt-equity ratio of 81.48:18.52, 86.76:13.24, 81.92:18.08 and 86.85:13.15 for Asset-I, Asset-II, Asset-IV and Asset-I, respectively. The additional capital expenditure has been restricted in the ratio of 70:30 in accordance with Regulation 54 of the 2004 regulations. Accordingly, for the purpose of tariff, equity considered for the transmission assets is as under:

(₹ in lakh)

	Equity as on 1.4.2004	Notional equity due to additional capital expenditure during 2004-05	Average equity for 2004-05	Notional equity due to additional capital expenditure during 2005-06	Average equity for 2005-06	Notional equity due to additional capital expenditure during 2006-07	Average equity for 2006-07	Notional equity due to de-capitalization during 2007-08	Average equity for 2007-08	Notional equity due to additional capital expenditure during 2008-09	Average equity for 2008-09	Total equity considered as on 31.3.2009
Asset-I	36833.18	111.95	36889.16	16.39	36953.33	1.03	36962.04	(-)32.28	36946.41	(-)116.84	36871.86	36813.44
Asset-II	1535.51	27.26	1549.14	(-)11.91	1556.82	(-)1.28	1550.23	(-)1.06	1549.06	80.55	1588.80	1629.08
Asset-IV	2374.81	5.43	2377.53	(-)10.66	2374.91	0.82	2369.99	28.82	2384.81	(-)27.64	2385.40	2371.59
Asset-V	1482.30	(-)10.52	1477.04	(-)8.04	1467.76	(-)11.46	1458.01	(-)7.82	1448.37	(-)27.64	1430.64	1416.83



## **RETURN ON EQUITY**

17. As per clause (iii) of Regulation 56 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with Regulation 54 @ 14% per annum. Proviso to the said clause provides that equity invested in foreign currency shall be allowed a return in the same currency and the payment on this account shall be made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

18. Equity as given in the table under para 16 above has been considered. However, tariff for the period 2004-09 has been allowed on the basis of the average equity. Accordingly, return on equity has been allowed for the period 2004-09 as under:

	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Asset-I	5164.48	5173.47	5174.69	5172.50	5162.06
Asset-II	216.88	217.95	217.03	216.87	222.43
Asset-IV	332.85	332.49	331.80	333.87	333.96
Asset-V	206.79	205.49	204.12	202.77	200.29

## **INTEREST ON LOAN**

19. 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."*

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

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

(b) Notional loan pertaining to de-capitalization during 2007-08 has been deducted from loan amount to arrive at the total notional loans. This adjusted gross loan has been considered as normative loans for tariff calculations;

(c) Tariff has been worked out considering normative loan and normative repayments. Once the normative loan has been arrived at, it is considered for all purposes in the tariff. Normative repayment has been worked out by the following formula:

$$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \text{Opening balance of normative loan during the year}$$

(d) Moratorium in repayment of loan has been considered with reference to normative loan and if the normative repayment of loan during the year is less than the depreciation including Advance Against Depreciation during the year, then depreciation including Advance Against Depreciation during the year is deemed as normative repayment of loan during the year; and

(e) Weighted average rate of interest on actual loan has been worked out as per sub-para (a) above and applied on the notional average loan during the year to arrive at the interest on loan.

21. The detailed calculations in support of the weighted average rate of interest for the transmission asset are contained in ***Annexure-I, Annexure-II, Annexure-III and Annexure-IV*** attached to this order. Based on the above, interest on loan has been worked out as under:

(₹ in lakh)

Details of loan	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Normative Loan	157272.94	157534.16	157572.41	157574.81	157499.50	6142.02	6205.64	6177.85	6174.86	6172.39
Cumulative Repayment up to Previous Year	5131.34	17769.89	32288.39	46804.87	61321.66	42.59	264.37	486.52	999.99	1513.17
Net Loan-Opening	152141.60	139764.27	125284.01	110769.94	96177.83	6099.43	5941.26	5691.33	5174.87	4659.22
Addition due to Additional Capitalisation	261.22	38.25	2.40	(-)75.31	(-)272.62	63.62	(-)27.79	(-)2.98	(-)2.48	187.96
Repayment during the year	12638.55	14518.51	14516.48	14516.79	14505.43	221.78	222.14	513.47	513.18	512.91
Net Loan-Closing	139764.27	125284.01	110769.94	96177.83	81399.78	5941.26	5691.33	5174.87	4659.22	4334.27
Average Loan	145952.94	132524.14	118026.98	103473.89	88788.81	6020.35	5816.30	5433.10	4917.04	4496.74
Weighted Average Rate of interest on loan	7.45%	7.50%	7.54%	7.59%	7.66%	9.26%	9.22%	9.19%	9.18%	9.16%
Interest	10879.23	9940.30	8900.02	7855.33	6800.49	557.52	536.36	499.49	451.30	411.88

(₹ in lakh)

Details of loan	Asset-IV					Asset-V				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Normative Loan	9499.25	9511.93	9487.05	9488.97	9556.21	7032.00	7007.47	6988.70	6961.97	6943.71
Cumulative Repayment up to Previous Year	113.32	595.04	1303.80	2112.98	2922.37	46.80	296.10	886.17	1474.43	2059.84
Net Loan-Opening	9385.93	8916.88	8183.25	7375.99	6633.84	6985.20	6711.37	6102.53	5487.53	4883.87
Addition due to Additional Capitalisation	12.68	(-)24.88	1.92	67.24	-64.48	(-)24.54	(-)18.77	(-)26.73	(-)18.26	(-)64.48
Repayment during the year	481.72	708.76	809.18	809.39	817.68	249.30	590.07	588.26	585.41	583.23
Net Loan-Closing	8916.88	8183.25	7375.99	6633.84	5751.67	6711.37	6102.53	5487.53	4883.87	4236.15
Average Loan	9151.41	8550.07	7779.62	7004.91	6192.75	6848.28	6406.95	5795.03	5185.70	4560.01
Weighted Average Rate of Interest on Loan	9.85%	9.83%	9.81%	9.79%	9.77%	9.80%	9.80%	9.79%	9.78%	9.77%
Interest	901.55	840.17	762.88	685.77	604.98	671.33	627.60	567.31	507.27	445.64

## DEPRECIATION

22. Sub-clause (a) of clause (ii) of Regulation 56 of the 2004 regulations provides for computation of depreciation as under:

*"For the purpose of tariff, depreciation shall be computed in the following manner, namely:*

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

*(ii) 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.*

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

*(iv) 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."*



23. Depreciation of the transmission asset has been worked out and allowed as under:

(₹ in lakh)

	Asset-I					Asset-II				
Details of Depreciation	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Gross block as on 1 <sup>st</sup> April of the year	194106.12	194479.29	194533.93	194537.36	194429.77	7677.53	7768.41	7728.71	7724.45	7720.91
Addition due to Additional Capitalisation	373.17	54.64	3.43	-107.59	-389.46	90.88	-39.70	-4.26	-3.54	268.51
Gross Block	194479.29	194533.93	194537.36	194429.77	194040.31	7768.41	7728.71	7724.45	7720.91	7989.42
Rate of Depreciation	3.054%	3.053%	3.053%	3.053%	3.054%	2.872%	2.867%	2.865%	2.864%	2.814%
Depreciable Value	174407.83	174600.34	174626.47	174579.60	174355.93	6899.27	6922.30	6902.51	6899.00	6895.17
Remaining Depreciable Value	166733.26	156830.45	142338.08	127774.73	113034.27	6642.28	6443.52	6201.60	5899.01	5382.01
Depreciation	5933.03	5938.67	5939.42	5938.08	5931.69	221.78	222.14	221.35	221.21	221.06

(₹ in lakh)

	Asset-IV					Asset-V				
Details of Depreciation	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Gross block as on 1 <sup>st</sup> April of the year	11874.06	11892.17	11856.63	11859.37	11955.43	8514.30	8479.25	8452.44	8414.25	8388.17
Addition due to Additional Capitalisation	18.11	-35.54	2.74	96.06	-92.12	-35.05	-26.81	-38.19	-26.08	-92.12
Gross Block	11892.17	11856.63	11859.37	11955.43	11863.31	8479.25	8452.44	8414.25	8388.17	8296.05
Rate of Depreciation	2.865%	2.863%	2.862%	2.860%	2.860%	2.934%	2.934%	2.933%	2.934%	2.937%
Depreciable Value	10647.93	10640.09	10625.33	10669.79	10671.56	7600.22	7572.38	7543.13	7514.21	7461.02
Remaining Depreciable Value	10221.54	9873.28	9321.53	8556.81	7749.19	7326.20	7049.06	6656.96	6039.78	5401.18
Depreciation	340.42	340.00	339.37	340.60	340.63	249.30	248.35	247.37	246.51	244.97

### **ADVANCE AGAINST DEPRECIATION**

24. Sub-clause (b) of clause (ii) of Regulation 56 of the 2004 regulations provides as under:

*"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:*

*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:*

*Provided further 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."*



25. Advance Against Depreciation of the transmission assets has been worked as under:

- (a) 1/10th of gross loan has been computed from the Gross Notional Loan as per para 21 above;
- (b) Repayment of notional loan during the year has been considered as per para 21 above;
- (c) Depreciation has worked out as per para 23 above;
- (d) In the calculation of Advance Against Depreciation, cumulative depreciation/Advance Against Depreciation up to the preceding year along with the depreciation of the current year have been considered for working out the Advance Against Depreciation.

26. The Advance Against Depreciation has been worked as under:

(₹ in lakh)										
	Asset-I					Asset-II				
Advance against Depreciation	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	15727.29	15753.42	15757.24	15757.48	15749.95	614.20	620.56	617.78	617.49	617.24
Repayment of the Loan	12638.55	14518.51	14516.48	14516.79	14505.43	221.78	222.14	513.47	513.18	512.91
Minimum of the above	12638.55	14518.51	14516.48	14516.79	14505.43	221.78	222.14	513.47	513.18	512.91
Depreciation during the year	5933.03	5938.67	5939.42	5938.08	5931.69	221.78	222.14	221.35	221.21	221.06
(A) Difference	6705.51	8579.84	8577.06	8578.71	8573.74	0.00	0.00	292.12	291.97	291.85
Cumulative Repayment of the Loan	17769.89	32288.39	46804.87	61321.66	75827.09	264.37	486.52	999.99	1513.17	2026.08
Cumulative Depreciation/ Advance against Depreciation	13607.60	23708.56	38227.81	52742.95	67253.35	478.77	700.92	922.27	1221.20	1734.23
(B) Difference	4162.29	8579.84	8577.06	8578.71	8573.74	-214.40	-214.40	77.72	291.97	291.85
<b>Advance against Depreciation Minimum of (A) and (B)</b>	<b>4162.29</b>	<b>8579.84</b>	<b>8577.06</b>	<b>8578.71</b>	<b>8573.74</b>	<b>0.00</b>	<b>0.00</b>	<b>77.72</b>	<b>291.97</b>	<b>291.85</b>



(₹ in lakh)

	Asset-IV					Asset-V				
Advance against Depreciation	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	949.93	951.19	948.70	948.90	955.62	703.20	700.75	698.87	696.20	694.37
Repayment of the Loan	481.72	708.76	809.18	809.39	817.68	249.30	590.07	588.26	585.41	583.23
Minimum of the above	481.72	708.76	809.18	809.39	817.68	249.30	590.07	588.26	585.41	583.23
Depreciation during the year	340.42	340.00	339.37	340.60	340.63	249.30	248.35	247.37	246.51	244.97
(A) Difference	141.31	368.76	469.81	468.79	477.05	0.00	341.72	340.89	338.90	338.26
Cumulative Repayment of the Loan	595.04	1303.80	2112.98	2922.37	3740.05	296.10	886.17	1474.43	2059.84	2643.07
Cumulative Depreciation/ Advance against Depreciation	766.81	1106.80	1643.17	2453.58	3263.00	523.32	771.67	1133.54	1720.94	2304.82
(B) Difference	(-)171.76	197.00	469.81	468.79	477.05	(-)227.22	114.50	340.89	338.90	338.26
Advance against Depreciation Minimum of (A) and (B)	0.00	197.00	469.81	468.79	477.05	0.00	114.50	340.89	338.90	338.26

### OPERATION & MAINTENANCE EXPENSES

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

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

28. O&M expenses as taken for the tariff calculations as per order dated 9.6.2006 read with order dated 29.4.2008 in Petition No. 84/2005 have been considered, since line length and number of bays remain unchanged.

### INTEREST ON WORKING CAPITAL

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

- (a) **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. Accordingly, maintenance spares have been

worked as per order dated 9.6.2006 read with order dated 29.4.2008 in Petition No. 84/2005.

**(b) 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 considered in the order dated 9.6.2006 read with order dated 29.4.2008 in Petition No. 84/2005 have been considered.

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

**(d) 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.

30. The necessary computations in support of revised interest on working capital, as revised, are given as under:

(₹ in lakh)

	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	1995.12	2114.83	2241.72	2376.22	2518.79	74.05	78.49	83.20	88.19	93.48
O & M expenses	135.05	140.45	146.20	151.83	158.10	16.46	17.12	17.82	18.52	19.27
Receivables	4744.04	5349.52	5186.99	5023.43	4856.22	203.99	202.08	210.21	239.84	235.69
<b>Total</b>	<b>6874.20</b>	<b>7604.79</b>	<b>7574.90</b>	<b>7551.47</b>	<b>7533.12</b>	<b>294.50</b>	<b>297.69</b>	<b>311.23</b>	<b>346.55</b>	<b>348.44</b>
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>704.61</b>	<b>779.49</b>	<b>776.43</b>	<b>774.03</b>	<b>772.14</b>	<b>30.19</b>	<b>30.51</b>	<b>31.90</b>	<b>35.52</b>	<b>35.71</b>

(₹ in lakh)

	Asset-IV					Asset-V				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	122.02	129.35	137.11	145.33	154.05	86.68	91.89	97.40	103.24	109.44
O & M expenses	13.94	14.49	15.09	15.67	16.31	25.36	26.38	27.44	28.52	29.68
Receivables	297.75	321.89	356.16	344.82	334.01	244.72	258.52	288.56	279.99	271.22
<b>Total</b>	<b>433.71</b>	<b>465.73</b>	<b>508.36</b>	<b>505.82</b>	<b>504.38</b>	<b>356.77</b>	<b>376.78</b>	<b>413.39</b>	<b>411.76</b>	<b>410.33</b>
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>44.46</b>	<b>47.74</b>	<b>52.11</b>	<b>51.85</b>	<b>51.70</b>	<b>36.57</b>	<b>38.62</b>	<b>42.37</b>	<b>42.21</b>	<b>42.06</b>

### TRANSMISSION CHARGES

31. The revised transmission charges being allowed for the transmission assets for the year 2004-09 are summarised below:

(₹ in lakh)

	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	5933.03	5938.67	5939.42	5938.08	5931.69	221.78	222.14	221.35	221.21	221.06
Interest on Loan	10879.23	9940.30	8900.02	7855.33	6800.49	557.52	536.36	499.49	451.30	411.88
Return on Equity	5164.48	5173.47	5174.69	5172.50	5162.06	216.88	217.95	217.03	216.87	222.43
Advance against Depreciation	4162.29	8579.84	8577.06	8578.71	8573.74	0.00	0.00	77.72	291.97	291.85
Interest on Working Capital	704.61	779.49	776.43	774.03	772.14	30.19	30.51	31.90	35.52	35.71
O & M Expenses	1620.58	1685.36	1754.34	1821.92	1897.21	197.56	205.49	213.78	222.18	231.20
<b>Total</b>	<b>28464.22</b>	<b>32097.12</b>	<b>31121.95</b>	<b>30140.57</b>	<b>29137.33</b>	<b>1223.93</b>	<b>1212.47</b>	<b>1261.28</b>	<b>1439.05</b>	<b>1414.13</b>



(₹ in lakh)

	Asset-IV					Asset-V				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	340.42	340.00	339.37	340.60	340.63	249.30	248.35	247.37	246.51	244.97
Interest on Loan	901.55	840.17	762.88	685.77	604.98	671.33	627.60	567.31	507.27	445.64
Return on Equity	332.85	332.49	331.80	333.87	333.96	206.79	205.49	204.12	202.77	200.29
Advance against Depreciation	0.00	197.00	469.81	468.79	477.05	0.00	114.50	340.89	338.90	338.26
Interest on Working Capital	44.46	47.74	52.11	51.85	51.70	36.57	38.62	42.37	42.21	42.06
O & M Expenses	167.23	173.93	181.02	188.03	195.76	304.34	316.55	329.27	342.29	356.11
<b>Total</b>	<b>1786.50</b>	<b>1931.32</b>	<b>2136.98</b>	<b>2068.91</b>	<b>2004.07</b>	<b>1468.33</b>	<b>1551.11</b>	<b>1731.34</b>	<b>1679.95</b>	<b>1627.33</b>

32. The petitioner shall adjust/recover/refund from the respondents the revised transmission charges in one monthly instalment and these charges shall be shared in accordance with the 2004 regulations.

33. The petitioner has also sought reimbursement of filing fee paid. The Commission by its separate general order dated 11.9.2008 in Petition No. 129/2005 (*Suo-motu*) has decided that the petitioner shall not be allowed reimbursement of the petition filing fee. The petitioner shall not be entitled to reimbursement of publication expenses in connection with the tariff petition.

34. In addition to the transmission charges, the petitioner shall be entitled to other charges like income-tax, incentive, surcharge and other cess and taxes in accordance with the 2004 regulations.

35. This order disposes of Petition No. 58/2010.

Sd/-  
(M.DEENA DAYALAN)  
MEMBER

sd/-  
(V.S.VERMA)  
MEMBER

sd/-  
(S.JAYARAMAN)  
MEMBER

sd/-  
(Dr. PRAMOD DEO)  
CHAIRPERSON



**Annexure-I****CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN****Asset-I**

						(₹ in lakh)
	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
<b>1</b>	<b>Bond-IX</b>					
	Net Loan-Opening	13065.30	11613.60	10161.90	8710.20	7258.50
	Repayment during the year	1451.70	1451.70	1451.70	1451.70	1451.70
	Net Loan-Closing	11613.60	10161.90	8710.20	7258.50	5806.80
	Average Loan	12339.45	10887.75	9436.05	7984.35	6532.65
	Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
	Interest	1511.58	1333.75	1155.92	978.08	800.25
	Repayment Schedule	10 Annual instalments from 22.8.2003				
<b>2</b>	<b>Bond-X</b>					
	Net Loan-Opening	29621.00	27152.58	24684.17	22215.75	19747.33
	Repayment during the year	2468.42	2468.42	2468.42	2468.42	2468.42
	Net Loan-Closing	27152.58	24684.17	22215.75	19747.33	17278.92
	Average Loan	28386.79	25918.38	23449.96	20981.54	18513.13
	Rate of Interest	10.90%	10.90%	10.90%	10.90%	10.90%
	Interest	3094.16	2825.10	2556.05	2286.99	2017.93
	Repayment Schedule	12 Annual instalments from 21.6.2004				
<b>3</b>	<b>Bond- XI Option 1</b>					
	Net Loan-Opening	20165.00	20165.00	18484.58	16804.17	15123.75
	Repayment during the year	0.00	1680.42	1680.42	1680.42	1680.42
	Net Loan-Closing	20165.00	18484.58	16804.17	15123.75	13443.33
	Average Loan	20165.00	19324.79	17644.38	15963.96	14283.54
	Rate of Interest	9.80%	9.80%	9.80%	9.80%	9.80%
	Interest	1976.17	1893.83	1729.15	1564.47	1399.79
	Repayment Schedule	12 Annual instalments from 7.12.2005				
<b>4</b>	<b>Bond- XII</b>					
	Net Loan-Opening	1665.00	1665.00	1526.25	1387.50	1248.75
	Repayment during the year	0.00	138.75	138.75	138.75	138.75
	Net Loan-Closing	1665.00	1526.25	1387.50	1248.75	1110.00
	Average Loan	1665.00	1595.63	1456.88	1318.13	1179.38
	Rate of Interest	9.70%	9.70%	9.70%	9.70%	9.70%
	Interest	161.51	154.78	141.32	127.86	114.40
	Repayment Schedule	12 Annual Instalments from 28.3.2006				
<b>5</b>	<b>Bond- XIII Option II</b>					
	Net Loan-Opening	41.67	33.33	25.00	16.67	8.33
	Repayment during the year	8.33	8.33	8.33	8.33	8.33



	Net Loan-Closing	33.33	25.00	16.67	8.33	0.00
	Average Loan	37.50	29.17	20.83	12.50	4.17
	Rate of Interest	7.85%	7.85%	7.85%	7.85%	7.85%
	Interest	2.94	2.29	1.64	0.98	0.33
	Repayment Schedule	6 Annual Instalments from 31.7.2003				
<b>6</b>	<b>PNB-II</b>					
	Net Loan-Opening	11141.00	10212.58	9284.17	8355.75	7427.33
	Repayment during the year	928.42	928.42	928.42	928.42	928.42
	Net Loan-Closing	10212.58	9284.17	8355.75	7427.33	6498.92
	Average Loan	10676.79	9748.38	8819.96	7891.54	6963.13
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	918.20	838.36	758.52	678.67	598.83
	Repayment Schedule	12 Annual Instalments from 8.3.2005				
<b>7</b>	<b>OBC</b>					
	Net Loan-Opening	9283.00	8509.42	7735.83	6962.25	6188.67
	Repayment during the year	773.58	773.58	773.58	773.58	773.58
	Net Loan-Closing	8509.42	7735.83	6962.25	6188.67	5415.08
	Average Loan	8896.21	8122.63	7349.04	6575.46	5801.88
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	765.07	698.55	632.02	565.49	498.96
	Repayment Schedule	12 Annual Instalments from 22.3.2005				
<b>8</b>	<b>KFW ECA- Hermes (Fixed)</b>					
	Net Loan-Opening	45874.24	41045.37	36216.49	31387.62	26558.74
	Repayment during the year	4828.87	4828.87	4828.87	4828.87	4828.87
	Net Loan-Closing	41045.37	36216.49	31387.62	26558.74	21729.87
	Average Loan	43459.80	38630.93	33802.05	28973.18	24144.31
	Rate of Interest	3.91450%	3.9145%	3.9145%	3.9145%	3.9145%
	Interest	1701.23	1512.21	1323.18	1134.16	945.13
	Repayment Schedule	Half yearly Instalments from 31.3.2004				
<b>9</b>	<b>KFW Hermes (Floating)</b>					
	Net Loan-Opening	7424.90	6643.34	5861.78	5080.23	4298.67
	Repayment during the year	781.56	781.56	781.56	781.56	781.56
	Net Loan-Closing	6643.34	5861.78	5080.23	4298.67	3517.12
	Average Loan	7034.12	6252.56	5471.01	4689.45	3907.89
	Rate of Interest	0.6725%	0.67%	0.67%	0.67%	0.67%
	Interest	47.30	42.05	36.79	31.54	26.28
	Repayment Schedule	Half yearly Instalments from 31.3.2004				
<b>10</b>	<b>KFW Commercial (Fixed)</b>					
	Net Loan-Opening	8775.88	7852.11	6928.34	6004.57	5080.81
	Repayment during the year	923.77	923.77	923.77	923.77	923.77
	Net Loan-Closing	7852.11	6928.34	6004.57	5080.81	4157.04
	Average Loan	8314.00	7390.23	6466.46	5542.69	4618.92
	Rate of Interest	5.54029%	5.54029%	5.54029%	5.54029%	5.54029%
	Interest	460.62	409.44	358.26	307.08	255.90
	Repayment Schedule	Half yearly Instalments from 31.3.2004				

11	KFW Commercial (Floating)					
	Net Loan-Opening	2321.00	2076.68	1832.36	1588.03	1343.71
	Repayment during the year	244.32	244.32	244.32	244.32	244.32
	Net Loan-Closing	2076.68	1832.36	1588.03	1343.71	1099.39
	Average Loan	2198.84	1954.52	1710.19	1465.87	1221.55
	Rate of Interest	1.5125%	1.5125%	1.5125%	1.5125%	1.5125%
	Interest	33.26	29.56	25.87	22.17	18.48
	Repayment Schedule	Half yearly Instalments from 31.3.2004				
12	Bond-XVIII (ADD CAP FOR 2005-06 DRAWL ON 09.03.2006)					
	Net Loan-Opening	0.00	0.00	54.64	54.64	54.64
	Drawls during the year	0.00	54.64	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	54.64	54.64	54.64	54.64
	Average Loan	0.00	27.32	54.64	54.64	54.64
	Rate of Interest	8.15%	8.15%	8.15%	8.15%	8.15%
	Interest	0.00	2.23	4.45	4.45	4.45
	Repayment Schedule	12 Annual Instalments from 9.3.2010				
	Total Loan					
	Net Loan-Opening	149377.98	136969.01	122795.51	108567.38	94339.24
	Drawls during the year	0.00	54.64	0.00	0.00	0.00
	Repayment during the year	12408.97	14228.14	14228.14	14228.14	14228.14
	Net Loan-Closing	136969.01	122795.51	108567.38	94339.24	80111.10
	Average Loan	143173.50	129882.26	115681.45	101453.31	87225.17
	Rate of Interest	7.4539%	7.5007%	7.5407%	7.5916%	7.6592%
	Interest	10672.06	9742.14	8723.15	7701.94	6680.72

## Asset-II

		(₹ in lakh)				
	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
<b>1</b>	<b>Bond-IX</b>					
	Gross Loan opening	412.00	412.00	412.00	412.00	412.00
	Cumulative Repayment upto DOCO/previous year	41.20	82.40	123.60	164.80	206.00
	Net Loan-Opening	370.80	329.60	288.40	247.20	206.00
	Repayment during the year	41.20	41.20	41.20	41.20	41.20
	Net Loan-Closing	329.60	288.40	247.20	206.00	164.80
	Average Loan	350.20	309.00	267.80	226.60	185.40
	Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
	Interest	42.90	37.85	32.81	27.76	22.71
	Repayment Schedule	10 Annual instalments from 22.8.2003				
<b>2</b>	<b>Bond-X</b>					
	Gross Loan opening	785.00	785.00	785.00	785.00	785.00
	Cumulative Repayment upto DOCO/previous year	0.00	65.42	130.84	196.26	261.68
	Net Loan-Opening	785.00	719.58	654.16	588.74	523.32
	Repayment during the year	65.42	65.42	65.42	65.42	65.42
	Net Loan-Closing	719.58	654.16	588.74	523.32	457.90
	Average Loan	752.29	686.87	621.45	556.03	490.61
	Rate of Interest	10.90%	10.90%	10.90%	10.90%	10.90%
	Interest	82.00	74.87	67.74	60.61	53.48
	Repayment Schedule	12 Annual instalments from 21.6.2004				
<b>3</b>	<b>Bond- XI Option 1</b>					
	Gross Loan opening	573.00	573.00	573.00	573.00	573.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	47.75	95.50	143.25
	Net Loan-Opening	573.00	573.00	525.25	477.50	429.75
	Repayment during the year	0.00	47.75	47.75	47.75	47.75
	Net Loan-Closing	573.00	525.25	477.50	429.75	382.00
	Average Loan	573.00	549.13	501.38	453.63	405.88
	Rate of Interest	9.80%	9.80%	9.80%	9.80%	9.80%
	Interest	56.15	53.81	49.13	44.46	39.78
	Repayment Schedule	12 Annual instalments from 7.12.2005				
<b>4</b>	<b>Bond- XII</b>					
	Gross Loan opening	40.00	40.00	40.00	40.00	40.00
	Cumulative Repayment up to DOCO/previous year	0.00	0.00	3.33	6.66	9.99
	Net Loan-Opening	40.00	40.00	36.67	33.34	30.01
	Repayment during the year	0.00	3.33	3.33	3.33	3.33
	Net Loan-Closing	40.00	36.67	33.34	30.01	26.68
	Average Loan	40.00	38.34	35.01	31.68	28.35
	Rate of Interest	9.70%	9.70%	9.70%	9.70%	9.70%
	Interest	3.88	3.72	3.40	3.07	2.75
	Repayment Schedule	12 Annual Instalments from 28.3.2006				



<b>5</b>	<b>Bond- XIII Option I</b>					
	Gross Loan opening	3700.00	3700.00	3700.00	3700.00	3700.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	308.33	616.66
	Net Loan-Opening	3700.00	3700.00	3700.00	3391.67	3083.34
	Repayment during the year	0.00	0.00	308.33	308.33	308.33
	Net Loan-Closing	3700.00	3700.00	3391.67	3083.34	2775.01
	Average Loan	3700.00	3700.00	3545.84	3237.51	2929.18
	Rate of Interest	8.63%	8.63%	8.63%	8.63%	8.63%
	Interest	319.31	319.31	306.01	279.40	252.79
	Repayment Schedule	6 Annual Instalments from 31.7.2006				
<b>6</b>	<b>OBC</b>					
	Gross Loan opening	264.00	264.00	264.00	264.00	264.00
	Cumulative Repayment upto DOCO/previous year	0.00	22.00	44.00	66.00	88.00
	Net Loan-Opening	264.00	242.00	220.00	198.00	176.00
	Repayment during the year	22.00	22.00	22.00	22.00	22.00
	Net Loan-Closing	242.00	220.00	198.00	176.00	154.00
	Average Loan	253.00	231.00	209.00	187.00	165.00
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	21.76	19.87	17.97	16.08	14.19
	Repayment Schedule	12 Annual Instalments from 22.3.2005				
<b>7</b>	<b>PNB-II</b>					
	Gross Loan opening	168.00	168.00	168.00	168.00	168.00
	Cumulative Repayment upto DOCO/previous year	0.00	14.00	28.00	42.00	56.00
	Net Loan-Opening	168.00	154.00	140.00	126.00	112.00
	Repayment during the year	14.00	14.00	14.00	14.00	14.00
	Net Loan-Closing	154.00	140.00	126.00	112.00	98.00
	Average Loan	161.00	147.00	133.00	119.00	105.00
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	13.85	12.64	11.44	10.23	9.03
	Repayment Schedule	12 Annual Instalments from 8.3.2005				
	<b>Total Loan</b>					
	Gross Loan opening	5942.00	5942.00	5942.00	5942.00	5942.00
	Cumulative Repayment upto DOCO/previous year	41.20	183.82	377.52	879.55	1381.58
	Net Loan-Opening	5900.80	5758.18	5564.48	5062.45	4560.42
	Repayment during the year	142.62	193.70	502.03	502.03	502.03
	Net Loan-Closing	5758.18	5564.48	5062.45	4560.42	4058.39
	Average Loan	5829.49	5661.33	5313.47	4811.44	4309.41
	Rate of Interest	9.2606%	9.2217%	9.1935%	9.1783%	9.1595%
	<b>Interest</b>	539.85	522.07	488.49	441.61	394.72

## Asset-IV

		(₹ in lakh)				
	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
1	<b>Bond-IX</b>					
	Gross Loan opening	1103.00	1103.00	1103.00	1103.00	1103.00
	Cumulative Repayment up to DOCO/previous year	110.30	220.60	330.90	441.20	551.50
	Net Loan-Opening	992.70	882.40	772.10	661.80	551.50
	Repayment during the year	110.30	110.30	110.30	110.30	110.30
	Net Loan-Closing	882.40	772.10	661.80	551.50	441.20
	Average Loan	937.55	827.25	716.95	606.65	496.35
	Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
	Interest	114.85	101.34	87.83	74.31	60.80
	Repayment Schedule	10 Annual instalments from 22.8.2003				
2	<b>Bond-X</b>					
	Gross Loan opening	2098.00	2098.00	2098.00	2098.00	2098.00
	Cumulative Repayment upto DOCO/previous year	0.00	174.83	349.66	524.49	699.32
	Net Loan-Opening	2098.00	1923.17	1748.34	1573.51	1398.68
	Repayment during the year	174.83	174.83	174.83	174.83	174.83
	Net Loan-Closing	1923.17	1748.34	1573.51	1398.68	1223.85
	Average Loan	2010.59	1835.76	1660.93	1486.10	1311.27
	Rate of Interest	10.90%	10.90%	10.90%	10.90%	10.90%
	Interest	219.15	200.10	181.04	161.98	142.93
	Repayment Schedule	12 Annual instalments from 21.6.2004				
3	<b>Bond- XI Option 1</b>					
	Gross Loan opening	1532.00	1532.00	1532.00	1532.00	1532.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	127.67	255.34	383.01
	Net Loan-Opening	1532.00	1532.00	1404.33	1276.66	1148.99
	Repayment during the year	0.00	127.67	127.67	127.67	127.67
	Net Loan-Closing	1532.00	1404.33	1276.66	1148.99	1021.32
	Average Loan	1532.00	1468.17	1340.50	1212.83	1085.16
	Rate of Interest	9.80%	9.80%	9.80%	9.80%	9.80%
	Interest	150.14	143.88	131.37	118.86	106.35
	Repayment Schedule	12 Annual instalments from 7.12.2005				
4	<b>Bond- XII</b>					
	Gross Loan opening	1108.00	1108.00	1108.00	1108.00	1108.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	92.33	184.66	276.99
	Net Loan-Opening	1108.00	1108.00	1015.67	923.34	831.01
	Repayment during the year	0.00	92.33	92.33	92.33	92.33
	Net Loan-Closing	1108.00	1015.67	923.34	831.01	738.68
	Average Loan	1108.00	1061.84	969.51	877.18	784.85
	Rate of Interest	9.70%	9.70%	9.70%	9.70%	9.70%
	Interest	107.48	103.00	94.04	85.09	76.13
	Repayment Schedule	12 Annual Instalments from 28.3.2006				

<b>5</b>	<b>Bond- XIII Option I</b>					
	Gross Loan opening	1200.00	1200.00	1200.00	1200.00	1200.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	100.00	200.00
	Net Loan-Opening	1200.00	1200.00	1200.00	1100.00	1000.00
	Repayment during the year	0.00	0.00	100.00	100.00	100.00
	Net Loan-Closing	1200.00	1200.00	1100.00	1000.00	900.00
	Average Loan	1200.00	1200.00	1150.00	1050.00	950.00
	Rate of Interest	8.63%	8.63%	8.63%	8.63%	8.63%
	Interest	103.56	103.56	99.25	90.62	81.99
	Repayment Schedule	6 Annual Instalments from 31.7.2006				
<b>6</b>	<b>OBC</b>					
	Gross Loan opening	705.00	705.00	705.00	705.00	705.00
	Cumulative Repayment upto DOCO/previous year	0.00	58.75	117.50	176.25	235.00
	Net Loan-Opening	705.00	646.25	587.50	528.75	470.00
	Repayment during the year	58.75	58.75	58.75	58.75	58.75
	Net Loan-Closing	646.25	587.50	528.75	470.00	411.25
	Average Loan	675.63	616.88	558.13	499.38	440.63
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	58.10	53.05	48.00	42.95	37.89
	Repayment Schedule	12 Annual Instalments from 22.3.2005				
<b>7</b>	<b>PNB-II</b>					
	Gross Loan opening	1500.00	1500.00	1500.00	1500.00	1500.00
	Cumulative Repayment upto DOCO/previous year	0.00	125.00	250.00	375.00	500.00
	Net Loan-Opening	1500.00	1375.00	1250.00	1125.00	1000.00
	Repayment during the year	125.00	125.00	125.00	125.00	125.00
	Net Loan-Closing	1375.00	1250.00	1125.00	1000.00	875.00
	Average Loan	1437.50	1312.50	1187.50	1062.50	937.50
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	123.63	112.88	102.13	91.38	80.63
	Repayment Schedule	12 Annual Instalments from 8.3.2005				
	<b>Total Loan</b>					
	Gross Loan opening	9246.00	9246.00	9246.00	9246.00	9246.00
	Cumulative Repayment upto DOCO/previous year	110.30	579.18	1268.06	2056.94	2845.82
	Net Loan-Opening	9135.70	8666.82	7977.94	7189.06	6400.18
	Repayment during the year	468.88	688.88	788.88	788.88	788.88
	Net Loan-Closing	8666.82	7977.94	7189.06	6400.18	5611.30
	Average Loan	8901.26	8322.38	7583.50	6794.62	6005.74
	Rate of Interest	9.8515%	9.8265%	9.8061%	9.7898%	9.7691%
	<b>Interest</b>	<b>876.90</b>	<b>817.80</b>	<b>743.65</b>	<b>665.18</b>	<b>586.71</b>

## Asset-V

		(₹ in lakh)				
	Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
<b>1</b>	<b>Bond-IX</b>					
	Gross Loan opening	468.00	468.00	468.00	468.00	468.00
	Cumulative Repayment up to DOCO/previous year	46.80	93.60	140.40	187.20	234.00
	Net Loan-Opening	421.20	374.40	327.60	280.80	234.00
	Repayment during the year	46.80	46.80	46.80	46.80	46.80
	Net Loan-Closing	374.40	327.60	280.80	234.00	187.20
	Average Loan	397.80	351.00	304.20	257.40	210.60
	Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
	Interest	48.73	43.00	37.26	31.53	25.80
	Repayment Schedule	10 Annual instalments from 22.8.2003				
<b>2</b>	<b>Bond-X</b>					
	Gross Loan opening	890.00	890.00	890.00	890.00	890.00
	Cumulative Repayment upto DOCO/previous year	0.00	74.17	148.34	222.51	296.68
	Net Loan-Opening	890.00	815.83	741.66	667.49	593.32
	Repayment during the year	74.17	74.17	74.17	74.17	74.17
	Net Loan-Closing	815.83	741.66	667.49	593.32	519.15
	Average Loan	852.92	778.75	704.58	630.41	556.24
	Rate of Interest	10.90%	10.90%	10.90%	10.90%	10.90%
	Interest	92.97	84.88	76.80	68.71	60.63
	Repayment Schedule	12 Annual instalments from 21.6.2004				
<b>3</b>	<b>Bond- XI Option 1</b>					
	Gross Loan opening	650.00	650.00	650.00	650.00	650.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	54.17	108.34	162.51
	Net Loan-Opening	650.00	650.00	595.83	541.66	487.49
	Repayment during the year	0.00	54.17	54.17	54.17	54.17
	Net Loan-Closing	650.00	595.83	541.66	487.49	433.32
	Average Loan	650.00	622.92	568.75	514.58	460.41
	Rate of Interest	9.80%	9.80%	9.80%	9.80%	9.80%
	Interest	63.70	61.05	55.74	50.43	45.12
	Repayment Schedule	12 Annual instalments from 7.12.2005				
<b>4</b>	<b>Bond- XII</b>					
	Gross Loan opening	3700.00	3700.00	3700.00	3700.00	3700.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	308.33	616.66	924.99
	Net Loan-Opening	3700.00	3700.00	3391.67	3083.34	2775.01
	Repayment during the year	0.00	308.33	308.33	308.33	308.33
	Net Loan-Closing	3700.00	3391.67	3083.34	2775.01	2466.68
	Average Loan	3700.00	3545.84	3237.51	2929.18	2620.85
	Rate of Interest	9.70%	9.70%	9.70%	9.70%	9.70%
	Interest	358.90	343.95	314.04	284.13	254.22
	Repayment Schedule	12 Annual instalments from 28.3.2006				

<b>5</b>	<b>OBC</b>					
	Gross Loan opening	299.00	299.00	299.00	299.00	299.00
	Cumulative Repayment upto DOCO/previous year	0.00	24.92	49.84	74.76	99.68
	Net Loan-Opening	299.00	274.08	249.16	224.24	199.32
	Repayment during the year	24.92	24.92	24.92	24.92	24.92
	Net Loan-Closing	274.08	249.16	224.24	199.32	174.40
	Average Loan	286.54	261.62	236.70	211.78	186.86
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	24.64	22.50	20.36	18.21	16.07
	Repayment Schedule	12 Annual Instalments from 22.3.2005				
<b>6</b>	<b>PNB-II</b>					
	Gross Loan opening	1025.00	1025.00	1025.00	1025.00	1025.00
	Cumulative Repayment upto DOCO/previous year	0.00	85.42	170.84	256.26	341.68
	Net Loan-Opening	1025.00	939.58	854.16	768.74	683.32
	Repayment during the year	85.42	85.42	85.42	85.42	85.42
	Net Loan-Closing	939.58	854.16	768.74	683.32	597.90
	Average Loan	982.29	896.87	811.45	726.03	640.61
	Rate of Interest	8.60%	8.60%	8.60%	8.60%	8.60%
	Interest	84.48	77.13	69.78	62.44	55.09
	Repayment Schedule	12 Annual Instalments from 8.3.2005				
	<b>Total Loan</b>					
	Gross Loan opening	7032.00	7032.00	7032.00	7032.00	7032.00
	Cumulative Repayment upto DOCO/previous year	46.80	278.11	871.92	1465.73	2059.54
	Net Loan-Opening	6985.20	6753.89	6160.08	5566.27	4972.46
	Repayment during the year	231.31	593.81	593.81	593.81	593.81
	Net Loan-Closing	6753.89	6160.08	5566.27	4972.46	4378.65
	Average Loan	6869.55	6456.99	5863.18	5269.37	4675.56
	Rate of Interest	9.8029%	9.7956%	9.7896%	9.7821%	9.7728%
	<b>Interest</b>	673.42	632.50	573.98	515.46	456.93