

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

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

Petition No. 140/2005

In the matter of

Approval of tariff in respect of Ramagundam Super Thermal Power Station
Stage – III (500 MW) for the period 25.3.2005 to 31.3.2009.

And in the matter of

NTPC Ltd.

....**Petitioner**

Vs

1. Transmission Corporation of Andhra Pradesh, Hyderabad
2. AP Eastern Power Distribution Co. Ltd., Visakhapatnam
3. AP Southern Power Distribution Co. Ltd., Tirupathi
4. AP Northern Power Distribution Co. Ltd., Warrangal
5. AP Central Power Distribution Co. Ltd., Hyderabad
6. Tamil Nadu Electricity Board, Chennai
7. Karnataka Power Transmission Corporation, Bangalore
8. Bangalore Electricity Supply Co. Ltd., Bangalore
9. Mangalore Electricity Supply Co. Ltd., Mangalore
10. Chamundeswari Electricity Supply Co. Ltd., Mysore
11. Gulbarga Electricity Supply Co. Ltd., Gulbarga
12. Hubli Electricity Supply Co. Ltd., Hubli
13. Kerala State Electricity Board, Thiruvananthapuram
14. Electricity Department, Govt. of Puducherry, Puducherry ... **Respondents**

The following were present

1. Shri S.N. Goel, NTPC
2. Shri S.K. Sharma, NTPC
3. Shri S.D. Jha, NTPC
4. Shri Manoj Saxena, NTPC
5. Shri S.K. Samvi, NTPC
6. Shri A.S. Pandey, NTPC
7. Shri S. Sowmyanarayanan, TNEB

ORDER
(DATE OF HEARING: 22.5.2007)

This petition has been filed by the petitioner, a generating company owned or controlled by the Central Government for approval of tariff in respect of Ramagundam Super Thermal Power Station, Stage – III (500 MW) (hereinafter referred to as “the generating station”) for the period 25.3.2005 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 sought reimbursement of expenditure towards publishing of notices in the newspapers and the petition filing fee. No other specific relief is prayed for.

2. The generating station has a capacity of 500 MW. The scheduled and actual dates of commercial operation of the generating station are 22.8 2006 and 25.3.2005 respectively.

3. The details of the fixed charges claimed by the petitioner are given hereunder:

(Rs. in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	5205	5205	5205	5205	5205
Interest on Loan	7780	7519	7045	6325	5110
Return on Equity	5985	5985	5985	5985	5985
Advance Against Depreciation	0	1688	409	4769	4769
Interest on Working Capital	1873	1862	1801	1882	1874
O & M Expenses	4680	4865	5060	5260	5475
TOTAL	25523	27124	25505	29426	28418

4. The details of working capital furnished by the petitioner and its claim for interest thereon are summarised hereunder:

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Coal Stock	521	369	232	232	232
Cost of Secondary Fuel Oil	390	405	422	438	456
O & M expenses	10358	10385	9899	10564	10384
Spares	5583	5495	5417	5431	5417
Receivables	18276	18164	17570	18363	18288
Total Working Capital	521	369	232	232	232
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest on Working Capital	1873	1862	1801	1882	1874

5. In addition, the petitioner has claimed energy charges @ 113.60 paise/kWh during the period 25.3.2006 to 31.3.2005 and @ 108.83 paise/kWh from 1.4.2005 to 31.3.2006 and @ 104.55 paise/kWh from 1.4.2006 onwards. The energy charges claimed are subject to adjustment in fuel price.

6. The reply to the petition was filed by Tamil Nadu Electricity Board (TNEB). The other respondents have not filed their reply. The petitioner has published notices in accordance with the procedure specified by the Commission. However, no objections or suggestions have been received in response to these notices.

CAPITAL COST

7. Regulation 17 of the 2007 regulations relating to the capital cost provide as under:

“17. **Capital Cost:** Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined based on the admitted capital expenditure actually incurred up to the date of commercial operation of the generating station and shall include capitalised initial spares subject to following ceiling norms as a percentage of the original project cost as on the cut off date:

(i) Coal-based/lignite-fired generating stations - 2.5%

(ii) Gas Turbine/Combined Cycle generating stations - 4.0%

Provided that where the power purchase agreement entered into between the generating company and the beneficiaries provides a ceiling of actual expenditure, the capital expenditure shall not exceed such ceiling for determination of tariff;

Provided further that any person intending to establish, operate and maintain a generating station may make an application before the Commission for 'in principle' acceptance of the project capital cost and financing plan before taking up a project through a petition in accordance with the procedure specified in the Central Electricity Regulatory Commission (Procedure for making application for determination of tariff, publication of the application and other related matters) Regulations, 2004, as applicable from time to time. The petition shall contain information regarding salient features of the project including capacity, location, site specific features, fuel, beneficiaries, break up of capital cost estimates, financial package, schedule of commissioning, reference price level, estimated completion cost including foreign exchange component, if any, consent of beneficiary licensees to whom the electricity is proposed to be sold etc.

Provided further that where the Commission has given 'in principle' acceptance to the estimates of project capital cost and financing plan, the same shall be the guiding factor for applying prudence check on the actual capital expenditure:

Provided further that in case of the existing generating stations, the capital cost admitted by the Commission prior to 1.4.2004 shall form the basis for determination of tariff.

Note

Scrutiny of the project cost estimates by the Commission shall be limited to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology, and such other matters for determination of tariff.

8. The petitioner has considered a capital cost of Rs.142491 lakh as on 25.3.2005. The petitioner vide affidavit dated 11.7.2007 has submitted the reconciliation of break-up of gross block based on the audited expenditure. However, gross block totaling to Rs.142491 lakh remains unchanged.

9. The project cost considered by the petitioner is inclusive of IDC and FC of Rs.13251 lakh. As such, the capital cost, excluding IDC and FC (hard cost) as on the

date of commercial operation of the generating station is Rs.129240 lakh. The petitioner has also furnished a list of deferred works amounting to Rs. 10817 lakh.

10. The capital cost as per TEC of the Central Electricity Authority accorded vide its letter dated 29.4.1999 was Rs.178099 lakh including IDC and FC of Rs 33935 lakh (at the exchange rate of 1US\$ = Rs 42.60) at the price level of 3rd quarter of 1998.

11. As noticed above, the capital expenditure of Rs.142491 lakh claimed by the petitioner included expenditure on account of the liabilities incurred, but not actually discharged. TNEB submitted that in a liability side approach, the promoter is eligible for return on equity capital employed and interest on loan capital employed. As such, according to TNEB, tariff should not be allowed on outstanding liabilities.

12. By order dated 12.12.2006, the petitioner was, inter alia, directed to furnish the following information, namely:

- (a) details of expenditure incurred up to 25.3.2005 (date of commercial operation of the generating station) and capitalised; and
- (b) liabilities included in the capital cost on accrual basis, that is, liabilities for which provision was made in the capital cost.

13. The petitioner while submitting the details called for argued that as per the 2004 regulations, final tariff is to be determined based on the capital expenditure actually incurred up to date of commercial operation of the generating station. According to the petitioner, the term “capital expenditure actually incurred” in the

above context refers to specified expenditure in the form of liability or obligation undergone by developer relating to the project and is not confined to actual cash outflow. The petitioner further submitted that the term 'actual expenditure incurred' used in the 2004 regulations in the above context notwithstanding that some payments may not have been made by Developer as on date of the date of commercial operation and payment to the contractors may be withheld for number of reasons including due performance of equipment after the date of commercial operation for a specific period and on account of escalated claim of contractor or even on account of dispute to be settled through the Court etc.

14. The contention similar to that raised in the present petition is also raised by the petitioner in Petition No 106/2006 pertaining to determination of tariff in respect of Rihand STPS Stage-II. The Commission by its separate order of date (15th October 2007) which will also apply to the present case, has held that for determination of capital cost for tariff, the outstanding liabilities are not to form part of the capital cost, as per the relevant extracts of order placed below,

“29. From the various clauses of Regulation 20, it would be seen that emphasis is that when equity deployed is less than the normative equity of 30%, equity actually employed is to be the basis for determination of tariff. In case the liabilities which are unpaid and are to be settled at a later date or time are included in the capital cost, as claimed by the petitioner, these will inflate the amount of equity, *dehors* the Regulation 20, since it will not be equity actually employed. Therefore, inclusion of deferred liabilities in the capital cost would be in violation of Regulation 20 of the 2004 regulations. In fact, Regulation 18 which deals with the additional capitalization specifically provides that the deferred liabilities comprising the expenditure incurred after the date of commercial operation, are to be considered as part of additional capital expenditure.

.....

30. We are also conscious of the fact that the basis for the entire scheme for determination of annual fixed charges specified in the 2004 regulations is “cost

plus” approach. For this reason, the term “expenditure incurred” or “incurred” are qualified by “actual” or “actually” emphasizing “something real” or “real” expenditure as opposed to something constructive, or theoretical or speculative. In case the returns are allowed, without corresponding cash out flow, it will amount to unjust enrichment of the petitioner at the cost of the consumer who ultimately bears the burden of tariff. In the proceedings for determination of tariff for the period 2004-09, it has come to the notice of the Commission that in the past in several cases, the petitioner charged tariff after accounting for liabilities in the capital cost, for many years without incurring actual expenditure. We do not find recurrence of these cases. We may add that as and when the liabilities are settled by the petitioner, it becomes entitled to additional capitalization and consequently revision of tariff.”

15. The petitioner has furnished information regarding number of bidders in various contract packages. In case of main plant package, the bids were invited by the petitioner through ICB in Oct. 1999. There was only one bidder i.e BHEL who quoted the price, out of 16 bidders who purchased bid documents. The prices quoted by BHEL were found higher by 15.49% in comparison to updated cost estimates of the petitioner. After negotiations, the final prices offered by BHEL were brought down and closer to the updated cost estimates of the petitioner. Thus, work was awarded to BHEL, after approval of the competent authority. Regarding certain works which were executed by the single bidder, the petitioner submitted that works like off-site area civil works was awarded to M/s. Hindustan Steel Works construction Ltd. (HSCL) (A Govt. of India undertaking) but it failed to mobilize resources to the required extent. So as a matter of necessity the work was awarded on single tender basis at risk and cost of main agency and differential has been recovered from HSCL. Also, some works awarded to IIT Delhi, Research Centre of Council of Scientific & Industrial Research, Original Equipment Manufacturer (OEM), BHEL etc. involve very small sums.

16. The petitioner did not go for re-bidding for main plant package and in stead negotiated with the single bidder, BHEL for reduction in prices and did succeed in

reducing the cost of the package. On over all cost basis, this has culminated in actual completion cost of the generating station less than the TEC approved estimates.

17. The beneficiary, TNEB has alleged that the petitioner has not deducted the excess amount collected through supply made on account of infirm power. The Commission sought the information from the petitioner in this regard. The petitioner vide affidavit dated 2.6.2006 has indicated IEDC amounting to Rs. 5890 lakh capitalized in the capital cost. It has been noted that the generating station consumed fuel to the tune of Rs.5519 lakh during commissioning. The revenue generated from the sale of infirm power has been indicated as Rs.4308 lakh and adjusted in IEDC. Accordingly, the petitioner has capitalized an amount of Rs. 1211 lakh (Rs. 5519 lakh – Rs. 4308 lakh). Thus, we do not find force in TNEB's contention. The total IEDC of Rs. 5890 lakh is of the order 3.5% of total cost and appears to be reasonable on over all basis.

18. The Commission vide its order dated 18.7.2007 had directed the petitioner to furnish the reasons for increase in prices of certain packages over the awarded price. The petitioner vide its affidavit dated 17.8.2007 has submitted the clarification sought by the Commission. This has been examined and it is found that the increase over the awarded prices is on account of inclusion of taxes paid, IEDC & IDC, material supplied by the petitioner and due to escalation. The increases are found to be in order and without the fault of the petitioner.

19. In view of the foregoing, we proceed to determine the tariff based on the capital expenditure actually incurred by the petitioner and after excluding the outstanding

liabilities on the date of commercial operation of the generating station. Accordingly, the capital cost considered in our calculations is as under:

	(Rs. In lakh)
Capitalized gross block as on 25.3.2005 claimed by the petitioner as per accounts	142491
Liabilities included in above on annual basis	10817
Capital cost actually incurred	131674

20. The above capital cost includes IDC and FC. It is seen that the petitioner has adopted FIFO method for repayment of loan. The Commission, in its previous orders has uniformly followed the average method of repayment of loan since FIFO method results in higher IDC in on-going projects under construction and higher AAD in case of the existing generating stations. Accordingly, for this generating station also, IDC has been worked out with average method of loan repayment. Applying this correction, the capital cost considered for the purpose of tariff computation is as under:

	(Rs. In lakh)
Capital Cost actually incurred after deduction of liabilities on annual basis	131674
Reduction in IDC due to average method of repayment.	318
Capital Cost actually incurred up to the date of commercial operation for the purpose of tariff	131356

DEBT-EQUITY RATIO

21. Clause (2) of Regulation 20 of the 2004 regulations prior to its amendment in June 2006 as amended on 3.9.2004 *inter alia* provided that

“(2) In case of the generating stations for which investment approval was accorded prior to 1.4.2004 and which is likely to be declared under commercial operation during the period 1.4.2004 to 31.3.2009, debt-equity in the ratio of 70:30 shall be considered:

Provided that where deployment of equity is less than 30%, the actual equity deployed shall be considered for the purpose of determination of tariff.

Provided further that the Commission may in appropriate case consider equity higher than 30% for the purpose of determination of tariff, where the generating company is able to establish to the satisfaction of the Commission that deployment of equity more than 30% was in the interest of general public;"

22. The petitioner has considered normative debt-equity ratio of 70:30 in line with the 2004 regulations. As such, the debt equity ratio of 70:30 has been considered for computation of tariff.

23. Accordingly, out of the capital cost amounting to Rs.131356 lakh arrived at in para 20 above, an amount of Rs.39406.88 lakh as on 25.3.2005 has been treated as normative equity.

TARGET AVAILABILITY

24. Target availability of 80% has been considered for recovery of full fixed charges and computation of fuel element in the working capital.

RETURN ON EQUITY

25. As per clause (iii) of Regulation 21 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with regulation 20 @ 14% per annum. Equity invested in foreign currency is to be allowed a return in the same currency and the payment on this account is to be made in Indian Rupees based on the exchange rate prevailing on the due date of billing. In accordance with these provisions, return on equity has been worked out as under:

(Rs. in lakh)

Details of Return on equity	2004-05	2005 -06	2006-07	2007-08	2008-09
Equity	39407				
Addition due to Additional Capitalisation	0				
Addition due to FERV	0				
Equity	39407				
Return on equity @ 14%	5517	5517	5517	5517	5517

INTEREST ON LOAN

26. Clause (i) of regulation 21 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 20.

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan as per regulation 20 minus cumulative repayment as admitted by the Commission for the period up to 31.3.2004. The repayment for the period 2004-09 shall be worked out accordingly on normative basis.

(c) The generating company shall make every effort to swap the loan as long as it results in net benefit to the long-term transmission customers. The costs associated with such swapping shall be borne by the long-term transmission customers.

(d) The changes to the loan terms and conditions shall be reflected from the date of such swapping and benefits passed on to the beneficiaries.

(e) In case of any dispute, any of the parties may approach the Commission with proper application. However, the beneficiaries shall not withhold payment as ordered by the Commission to the generating company during pendency of any dispute relating to swapping 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 Generating Company shall not make any profit on account of swapping of loan and interest on loan.

27. The interest on loan has been worked out as mentioned below:

(a) Gross normative loan corresponding to 70% of admissible capital cost works out to Rs.91949.39 lakh as on 25.3.2005.

(b) Since the tariff of the generating station is being fixed for the first time, net loan opening as on 25.3.2005 is same as gross loan, cumulative repayment of loan being nil.

(c) The petitioner has considered FIFO method of repayment in case of loans. Since application of FIFO method may result into higher AAD in case of the existing generating stations and higher IDC in case of ongoing projects, calculations of actual repayment have been made on average basis, taking into consideration terms and conditions of the loan draws as furnished by the petitioner in Form 8 and the information and clarifications subsequently furnished.

(d) The petitioner has considered rate of interest on monthly/half- yearly rest. In our computation, rate of interest has been considered on annual rest basis.

(e) Actual repayment of actual loan based on above corrections has been used to calculate normative repayment of loan, worked out as per the formula given below:

$$\text{Normative Repayment} = \frac{\text{Actual Repayment}}{\text{Actual Loan}} \times \text{Normative Loan}$$

- (f) The repayment has been calculated based on normative loan in accordance with the decision of the Appellate Tribunal.
- (g) Weighted average rate of interest calculated on actual loan and actual repayment as considered above has been applied on normative loan for calculating interest on loan.
- (h) Financial charges of 0.03% for bonds (surveillance fee) and 20.91% withholding tax for Euro Bond incurred towards loans have been allowed and taken into consideration for calculation for interest on loan.
- (i) Some of the loans, namely SBI-I (9.6%), SBI-II (7%) and HDFC-III (8.4%) carry floating rate of interest. Interest rates prevailing on the date of commercial operation of the generating station have been considered for interest computation for the period from the date of commercial operation onwards. However interest on loan would be subject to adjustment on the basis of actual rate of interest applicable for the period.
- (j) Loan drawals up to the date of commercial operation of the generating station as furnished by the petitioner have been considered.
- (k) Repayment considered in case of foreign loans (Euro Bond) is bullet repayment.
- (l) The petitioner has calculated average net loan for interest using day product method so as to true up its claim. Since all other claims are

not tried up the method employed by the petitioner has not been considered. Average net loan has been calculated as average of opening and closing as was being done for other tariff orders pertaining to the period 2004-09.

(m) In case of J&K Bank loan, rate of interest shown in Form 8 is 7.35%. However, as per the later submission, the petitioner gave interest rate of 7.31% as applicable from 1.1.2005. Therefore, for this loan interest rate of 7.31% has been considered.

28. Weighted average rates of interest, as calculated, are appended in Annexure I to this order.

29. The computation of interest on loan by applying weighted average interest rate are appended herein below:

	(Rs. in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Loan	91949.39				
Addition due to Additional Capitalisation	0				
Addition due to FERV	0				
Gross Normative Loan	91949	91949	91949	91949	91949
Cumulative Repayment upto Previous Year	0	174	6981	15836	25235
Net Loan-Opening	91949	91775	84969	76113	66714
Repayment during the year	174	6806	8855	9399	9562
Net Loan-Closing	91775	84969	76113	66714	57152
Average Loan	91862	88372	80541	71414	61933
Weighted Average Rate of Interest on Loan	7.51%	7.49%	7.44%	7.38%	7.31%
Interest	6896	6615	5990	5271	4529

DEPRECIATION

30. Sub-clause (a) of clause (ii) of Regulation 21 of the 2004 regulations provides for computation of depreciation in the following manner:

(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.

31. Weighted average rate of depreciation calculated by the petitioner is 3.65% as on 25.3.2005. Since asset-wise liability provision is not furnished, calculation of depreciation rates has been based on gross value of the asset as furnished by the petitioner at applicable rates as per Appendix-II to the 2004 regulations and applied on pro rata basis on the admissible capital cost. For the assets not listed in Appendix II, the rates considered are as applicable to similar assets listed therein as considered in other tariff orders of 2004-09 period. In this manner, weighted average depreciation rate of 3.63% has been arrived at in our calculations and this has been considered.

32. The gross depreciable value of the generating station is 0.9 x Rs. 131356 lakh = Rs. 118220.64 lakh. This being the first year of operation of the generating station, cumulative depreciation and AAD recovered in tariff up to commencement of the tariff period is Nil.

33. Accordingly, depreciation works out to Rs.4767 lakh each year, which has been projected to Rs.91.41 lakh for the period 25.3.2005 to 31.3.2005.

(Rs. in lakh)

Details of Depreciation	2004-05	2005 -06	2006-07	2007-08	2008-09
Gross block	131356.27	131356.27	131356.27	131356.27	131356.27
Depreciable Value	118220.64	118220.64	118220.64	118220.64	118220.64
Balance Useful life of the asset					
Remaining Depreciable Value	118220.64	118046.36	111240.07	102384.65	93189.71
Depreciation	(pro rata) 91.41	4767	4767	4767	4767

ADVANCE AGAINST DEPRECIATION

34. 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

35. 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.

36. The petitioner has claimed Advance Against Depreciation based on repayment of the loan as considered for working out interest on loan. As mentioned above, the petitioner has considered FIFO method of repayment in case of loans. For the reasons already stated, all calculations of actual repayment have been made on average basis, taking into consideration terms and conditions of the loan drawal as per Form-8 as furnished by the petitioner and subsequent information and clarification called for and submitted by the petitioner. For working out Advance Against Depreciation, 1/10th of the loan has been worked out with reference to notional gross loan, while repayment of loan during the year has been worked out as mentioned above.

37. Based on the above, the petitioner's entitlement towards Advance Against Depreciation during the tariff period is as under:

(Rs. in lakh)

	2004-05	2005 -06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	9195	9195	9195	9195	9195
Repayment of the Loan	174	6806	8855	9399	9562
Minimum of the above	174	6806	8855	9195	9195
Depreciation during the year	91	4767	4767	4767	4767
(A) Difference	83	2040	4089	4428	4428
Cumulative Repayment of the Loan	174	6981	15836	25235	34797
Cumulative Depreciation	91	4941	11747	20603	29798
(B) Difference	83	2040	4089	4633	4999
Advance against Depreciation [Minimum of (A) and (B)]	(pro rata) 83	2040	4089	4428	4428

O&M EXPENSES

38. The 2004 regulations have prescribed the following O&M expense norms for 200/210 MW and 500 MW units-

(Rs. in lakh /MW)

Year	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses for 200/210 MW units	10.40	10.82	11.25	11.70	12.17
O&M expenses for 500 MW units	9.36	9.73	10.12	10.52	10.95

39. The petitioner has claimed O&M Expenses as detailed below:

Years	2004-05	2005-06	2006-07	2007-08	2008-09
O&M Expenses	4680	4865	5060	5260	5475

40. The petitioner has prayed for a specific deviation pertaining to water charges in O&M expenses. The petitioner has submitted that in the past years, the State Governments have been resorting to manifold increase in the rates of water charges/royalty payable, which is not normally based on common commercial principles. Therefore, according to the petitioner, this increase cannot be covered under the normal O&M expenses allowed in the tariff. The petitioner has, therefore, submitted that any increase in the rates of water charges / royalty etc. by more than 4% per annum over the rates prevailing on 31.3.2004 should be additionally payable by the respondent beneficiaries.

41. The normative O&M expenses were finalized by the Commission after going through the transparent process of hearing and consulting all concerned and were based on the data furnished by the concerned utilities for different components of O&M, including water charges. Further, an escalation of 4% per year is in-built in the normative O&M expenses specified by the Commission. There may be other heads in O&M expenses where actual expenses may be less than the normative expenses specified by the Commission. Therefore, we do not consider it to be justified to allow increase under one head, that is, water charges in isolation. As such, recovery of additional O&M expenses on account of any increase in the rates of water charges/royalty etc. during tariff period cannot be allowed. However, the petitioner is at liberty to approach the Commission in accordance with law for recovery of

additional water charges with proper justification and details of actual expenses incurred and recovered under other heads, if State Governments resort to abnormal increase in the rates of water charges/royalty during the tariff period.

42. Based on above discussion, year-wise O&M expenses for the generating station as claimed by the petitioner have been considered.

43. The petitioner has further submitted that the wage revision of its employees is due with effect from 1.1.2007 and the escalation of 4% provided in the O&M expenses would not cover the enhanced employee cost with effect from 1.1.2007. The petitioner has prayed for liberty to seek enhancement in O&M expenses with effect from 1.1.2007 based on actual payments whenever paid. We are not expressing any view, as this issue does not arise for consideration at this stage. The petitioner may approach for a relief in this regard at an appropriate stage in accordance with law.

INTEREST ON WORKING CAPITAL

44. In accordance with clause (v) of Regulation 21 of the 2004 regulations, working capital in case of Coal based/Lignite-fired generating stations shall cover:

- (i) Cost of coal or lignite for 1½ months for pit-head generating stations and two months for non-pit-head generating stations, corresponding to the target availability;
- (ii) Cost of secondary fuel oil for two months corresponding to the target availability;
- (iii) Operation and Maintenance expenses for one month;

- (iv) Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and
- (v) Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on the target availability.

45. Under the 2004 regulations, the rate of interest on working capital shall be on a 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 generating station or a unit thereof is declared under commercial operation, whichever is later. Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency.

46. Working capital has been calculated considering the following elements:

(a) **Coal stock:** The coal cost has been worked out for 2 months on the basis of operational parameters and weighted average price of coal.

(b) **Oil Stock:** The oil stock for 2 months as per the operational parameters and weighted average price of secondary fuel oil has been considered.

Details of the fuel component in working capital is as under:

	(Rs. In lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Cost of coal for 2 months	4623	4561	4485	4498	44855
Cost of secondary fuel Oil for 2 months	436	308	194	194	194

(c) **O&M Expenses:** O&M expenses for working capital have been worked out for 1 month of O&M expenses approved in para 39 above are considered in tariff of the respective year.

(d) Spares: The petitioner has calculated the value of maintenance spares for the purpose of working capital considering the capital cost of Rs. 142491 lakh. The amount claimed for maintenance spares for the purpose is given below :

(Rs.in lakh).

Year	2004-05	2005-06	2006-07	2007-08	2008-09
Amount	1425	1510	1601	1697	1799

The spares requirement has been worked out based on the historical cost of Rs.131356 lakh as on 25.3.2005 arrived at as per para 20 above after adjusting the initial spares amounting to Rs.1169 lakhs. Accordingly, 1% of this cost has been escalated at the rate of 6% per annum to arrive at permissible spares consumption for the relevant year. The value of spares considered in the computation of working capital is as under:

(Rs.in lakh)

Year	2004-05	2005-06	2006-07	2007-08	2008-09
Amount	1302	1303	1382	1464	1552

(e) Receivables: The receivables have been worked out on the basis of two months of fixed and variable charges. The supporting calculations in respect of receivables are tabulated hereunder:

Computation of receivables component of Working Capital

	2004-05	2005 -06	2006-07	2007-08	2008-09
Coal (Rs/kWh)	0.8605	0.8446	0.8303	0.8303	0.8303
Oil (Rs/kWh)	0.0811	0.0572	0.0358	0.0358	0.0358
Rs./kWh	0.9416	0.9018	0.8662	0.8662	0.8662
Variable Charges per year	30355	29155	28075	28125	28075
Variable Charges -2 months (Rs in lakh)	5059	4859	4679	4692	4679
Fixed Charges - 2 months (Rs in lakh)	4644	4235	4505	4476	4388
Receivables (Rs in lakh)	9704	9094	9184	9168	9068

47. The average SBI PLR of 10.25% as on 1.4.2004 has been considered as the rate of interest on working capital during the tariff period 2004-05 to 2008-09.

48. The necessary details in support of calculation of interest on working capital are appended below:

Calculation of Interest on Working Capital

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Coal Stock	4623	4551	4485	4498	4485
Oil stock	436	308	194	194	194
O & M expenses	390	405	422	438	456
Spares	1302	1303	1382	1464	1552
Receivables	9704	9094	9184	9168	9068
Total Working Capital	16455	15662	15666	15763	15755
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest on Working Capital	1687	1605	1606	1616	1615

ANNUAL FIXED CHARGES

49. A statement showing summary of the capital cost and other related matters is annexed to this order. The annual fixed charges for the period 25.3.2005 to 31.3.2009 allowed in this order are summed up as below:

(Rs. in lakh)

Particulars	2004-05 (Pro rata)	2005-2006	2006-07	2007-08	2008-09
Interest on Loan	91	4767	4767	4767	4767
Interest on Working Capital	132	6615	5990	5271	4529
Depreciation	106	5517	5517	5517	5517
Advance Against Depreciation	83	2040	4089	4428	4428
Return on Equity	32	1605	1606	1616	1615
O & M Expenses	90	4865	5060	5260	5475
TOTAL	534	25409	27028	26858	26331

ENERGY/VARIABLE CHARGES

50. The petitioner has adopted following operational norms for 500 MW units as per the 2004 regulations for the calculation of rate of energy charge—

	During Stabilization period (25.3.2005 to 20.9.2005)	After stabilization period from 21.9.2005 onwards
Sec. Oil Consumption	4.5 ml/kWh	2 ml/kWh
Auxiliary Consumption	8.0%	7.5%
Heat Rate	2550 Kcal/kWh	2450 Kcal/kWh

52. The petitioner has claimed energy charges of 113.60 paise/kWh for the period 25.3.2005 to 31.3.2005, 108.83 paise/kWh for year 2005-06 (including stabilisation period) and 104.55 paise/kWh from 1.4.2006 onward (beyond stabilization) based on price and GCVs of fuels procured and burnt during the months of June 2005 to August 2005. However, as per the 2004 regulations, energy charges should have been computed based on price and GCVs of fuels procured during preceding three months, i.e December 2004 to February 2005 in the present case since the date of commercial operation of the generating station is 25.3.2005. The petitioner has submitted that coal linkage for the generating station is from South Eastern Coal Fields Ltd. (SECL). However, during the period of supply of infirm power, in view of the difficulty faced in movement of coal from SECL Korba, the coal from Singerni coal fields was being used. Further, the petitioner submitted that short-term coal linkages from SECL, Korba and WCL do not meet full requirements of the generating station. Therefore, balance requirement is being met from the source of Ramagundam stages I&II, that is, Singerni coal fields. Accordingly, in order to arrive at requirements of fuel stock etc. for working out IWC and variable charges, landed cost of coal has been taken for the months of June 2005 to August 2005 instead of December 2004 to

February 2005. The petitioner has also considered the landed cost of oil is also based on the same months to maintain parity.

53. TNEB vide affidavit dated 27.1.2006 has submitted that the method used by the petitioner to arrive at base energy charges is not in the line with the clause (iii) of Regulation 22 of the 2004 regulations, according to which Initially, gross calorific value of coal/lignite or gas or liquid fuel shall be taken as per actuals of preceding of three months from the date of synchronization. TNEB has further submitted that the generating station has been synchronized on 26.9.2004 and, therefore, the Commission should consider only the rate prevailed during June 2004 to August 2004 in the line with the 2004 regulations.

54. As per the clause (iii) of Regulation 22 of the 2004 regulations *“Initially, Gross Calorific Value of coal/lignite or gas or liquid fuel shall be taken as per actuals of preceding three months on the basis of Gross Calorific Value of coal/lignite or gas or liquid fuel received and burnt and landed cost incurred by the generating company for procurement of coal/lignite, oil, or gas or liquid, as the case may be.....”*

55. The interpretation of TNEB regarding preceding three months from date of synchronization is not correct. The term “preceding three months” means the three months preceding the actual date of commercial operation of the station/unit. Therefore, the Commission during the hearing on 20.4.2006 directed the petitioner to furnish the details of fuel prices and GCV prevailing during preceding 3 months from the date of commercial operation.

56. The petitioner has subsequently submitted the following details of prices and GCV of coal and secondary fuel oils (LDO+HFO) procured for the preceding three months from the date of commercial operation:

Particulars	December 2004	January 2005	February 2005
Price of Coal received during the month (Rs./MT)	1277.36	1296.91	1284.87
GCV of Coal	4053	4062	4093
Price of HFO received during the month (Rs./KL)	16240.99	16148.08	17914.95
GCV of HFO	10111	10111	10144

57. HSD/LDO is used only during cold boiler start up. Hot start ups and flame stability during low load conditions are taken care of by HFO which is the main secondary fuel oil. Since HFO is the main secondary fuel oil, it should only be considered for the computation of working capital requirement and base rate of energy charge. Therefore, HFO has been allowed as secondary fuel oil for the purpose of base rate of energy charge.

58. Further, FPA clause in the 2004 regulations takes care of the cost of HSD/LDO used at the generating station on as consumed basis on month-to-month basis. As such, the petitioner is not being denied reimbursement of HSD/LDO whenever used.

59. Based on the above data furnished by the petitioner, base rate of energy charge works out as under:

Computation of Energy Charges

Description	Unit	25.3.2005 to 20.9.2005 (stabilization period)	From 21.9.2005 & onwards (After stabilization period)
Capacity	MW	500	500
Gross Station Heat Rate	kCal/kWh	2550	2450
Specific Fuel Oil Consumption	ml/kWh	4.5	2
Aux. Energy Consumption	%	8	7.5
Weighted Average GCV of Oil	kCal/l	10122	10122
Weighted Average GCV of Coal	kCal/Kg	4068.96	4068.96
Weighted Average Price of Oil (HFO)	Rs./KL	16580.05	16580.05
Weighted Average Price of Coal	Rs./MT	1286.23	1286.23
Rate of Energy Charge from Sec. Fuel Oil	Paise/kWh	7.46	3.32
Heat Contributed from HFO	kCal/kWh	45.55	20.24
Heat Contributed from Coal	kCal/kWh	2504.45	2429.76
Specific Coal Consumption	Kg/kWh	0.62	0.60
Rate of Energy Charge from Coal	Paise/kWh	79.17	76.81
Rate of Energy Charge ex-bus per kWh Sent	Paise/kWh	94.16	86.62

60. The base rate of energy charges shall however, be subject to fuel price adjustment as per the formula given below: -

$$\mathbf{FPA = A + B}$$

Where,

FPA – Fuel price Adjustment for a month in Paise/kWh Sent out

A – Fuel price adjustment for Secondary Fuel oil in Paise/kWh sent out

B – Fuel price adjustment for Coal in Paise/kWh sent out

And,

$$\mathbf{A = \frac{10 \times (SFC_n)}{(100 - AC_n)} \left\{ (P_{om}) - (P_{os}) \right\}}$$

$$B = \frac{10}{(100 - AC_n)} \left\{ (SHR_n) \left(\frac{P_{cm}}{K_{cm}} - \frac{P_{cs}}{K_{cs}} \right) - (SFC_n) \left\{ (k_{om} \times \frac{P_{cm}}{K_{cm}}) - (k_{os} \times \frac{P_{cs}}{K_{cs}}) \right\} \right\}$$

Where,

- SFC_n – Normative Specific Fuel Oil consumption in l/kWh
- SHR_n – Normative Gross Station Heat Rate in kCal/kWh
- AC_n – Normative Auxiliary Consumption in percentage
- P_{om} – Weighted Average price of fuel oil on as consumed basis during the month in Rs./KL.
- K_{om} – Weighted average GCV of fuel oils fired at boiler front for the month in Kcal/Litre
- P_{os} – Base value of price of fuel oils as taken for determination of base energy charge in tariff order in Rs. / KL.
- K_{os} – Base value of gross calorific value of fuel oils as taken for determination of base energy charge in tariff order in Kcal/Litre
- P_{cm} – Weighted average price of coal procured and burnt during the month at the power station in Rs. / MT.
- K_{cm} – Weighted average gross calorific value of coal fired at boiler front for the month in Kcal/Kg
- P_{cs} – Base value of price of coal as taken for determination of base energy charge in tariff order in Rs. /MT
- K_{cs} – Base value of gross calorific value of coal as taken for determination of base energy charge in tariff order in kCal/Kg

61. The petitioner has also sought approval for the reimbursement of expenditure incurred on publication of notices in the newspapers. Although the petitioner has confirmed publication of public notices and submitted copies of the notices vide its affidavit dated 13.10.2006, the expenditure incurred in this regards is not available on record. We direct that the petitioner shall claim reimbursement of the said expenditure directly from the respondents in one installment in the ratio applicable for sharing of fixed charges on production of evidence of incurring expenditure. The petitioner has also sought reimbursement of filing fee of Rs.25 lakh paid. A final view on reimbursement of filing fee is yet to be taken by the Commission. The view taken on consideration of the comments received shall apply in the present case as regards reimbursement of filing fee.

62. In addition to the charges approved above, the petitioner is entitled to recover other charges like incentive, claim for reimbursement of Income-tax, other taxes, cess levied by a statutory authority, in accordance with the 2004 regulations, as applicable.

63. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's interim directions. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

64. This order disposes of Petition No.140/2005.

Sd/-
(R. KRISHNAMOORTHY)
MEMBER
New Delhi dated the 15th October, 2007

Sd/-
(BHANU BHUSHAN)
MEMBER

SUMMARY

(Rs.in lakh)

1	Capital Cost of the Project as on 25.3.2005(COD)			131356.27
2	Total Capital Cost as on 25.3.2005			131356.27
3	Means of Finance¹ :			
	Debt (Notional)	70.00%	91949.39	
	Equity (Notional)	30.00%	39406.88	
	Total	100.00%	131356.27	
4	Normative Loan O/S as on 25.3.2005			91949.39
	Normative Loan O/S as on 25.3.2005		91949.39	
	Total Normative Loan as on 25.3.2005		91949.39	
5	Cumulative Repayment upto 31.3.2009 :			34797.02
	Repaid upto 25.3.2005		0	
	From 25.3.2005 to 31.3.2009		34797.02	
	Total		34797.02	
6	Balance Normative Loan to be repaid beyond 31.3.2009 :			57152.37
7	Depreciation recovered upto 31.3.09 :			34225.87
		Dep	AAD	Total
	Recovered upto 25.3.2005	0	0	0
	From 25.3.2005 to 31.3.2009	19157.83	15068.04	34225.87
	Total			34225.87
8	Balance Depreciation to be recovered beyond 31.3.2009 :			83994.77
	Capital cost for the purpose of Depreciation		131356.27	
	Capital cost as 25.3.2005		131356.27	
	Less: Land Cost		0.00	
			131356.27	
	90% of Capital Cost as above		118220.64	
	Cum. Depreciation to be recovered upto 31.3.2009		34225.87	
	Balance Depreciation to be recovered beyond 31.3.2009		83994.77	

Annexure-1**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	Bank of Maharashtra					
	Net Loan-Opening	800.00	800.00	600.00	400.00	200.00
	Repayment during the year	0.00	200.00	200.00	200.00	200.00
	Net Loan-Closing	800.00	600.00	400.00	200.00	0.00
	Average Loan	800.00	700.00	500.00	300.00	100.00
	Rate of Interest	7.31%	7.31%	7.31%	7.31%	7.31%
	Interest	58.48	51.17	36.55	21.93	7.31
	Rep Schedule	5 Yearly instalments wef 27.02.05				
2	Bank of Punjab					
	Net Loan-Opening	2321.43	2142.86	1785.71	1428.57	1071.43
	Repayment during the year	178.57	357.14	357.14	357.14	357.14
	Net Loan-Closing	2142.86	1785.71	1428.57	1071.43	714.29
	Average Loan	2232.14	1964.29	1607.14	1250.00	892.86
	Rate of Interest	7.31%	7.31%	7.31%	7.31%	7.31%
	Interest	163.17	143.59	117.48	91.38	65.27
	Rep Schedule	14 Half-Yearly instalments wef 30.09.04				
3a	Canara Bank-Drawal-1					
	Net Loan-Opening	1500.00	1500.00	1500.00	1285.71	1071.43
	Repayment during the year	0.00	0.00	214.29	214.29	214.29
	Net Loan-Closing	1500.00	1500.00	1285.71	1071.43	857.14
	Average Loan	1500.00	1500.00	1392.86	1178.57	964.29
	Rate of Interest	9.40%	9.40%	9.40%	9.40%	9.40%
	Interest	141.00	141.00	130.93	110.79	90.64
	Rep Schedule	14 Half-Yearly instalments wef 24.07.06				
3b	Canara Bank-Drawal-5					
	Net Loan-Opening	1877.00	1877.00	1877.00	1608.86	1340.71
	Repayment during the year	0.00	0.00	268.14	268.14	268.14
	Net Loan-Closing	1877.00	1877.00	1608.86	1340.71	1072.57
	Average Loan	1877.00	1877.00	1742.93	1474.79	1206.64
	Rate of Interest	7.25%	7.25%	7.25%	7.25%	7.25%
	Interest	136.08	136.08	126.36	106.92	87.48
	Rep Schedule	14 Half-Yearly instalments wef 24.07.06				
3	Total Canara Bank Loan					
	Net Loan-Opening	3377.00	3377.00	3377.00	2894.57	2412.14
	Repayment during the year	0.00	0.00	482.43	482.43	482.43
	Net Loan-Closing	3377.00	3377.00	2894.57	2412.14	1929.71
	Average Loan	3377.00	3377.00	3135.79	2653.36	2170.93
	Rate of Interest	8.2050%	8.2050%	8.2050%	8.2050%	8.2050%
	Interest	277.08	277.08	257.29	217.71	178.12
4	Central Bank of India					
	Net Loan-Opening	1000.00	1000.00	1000.00	1000.00	800.00
	Repayment during the year	0.00	0.00	0.00	200.00	200.00
	Net Loan-Closing	1000.00	1000.00	1000.00	800.00	600.00

	Average Loan	1000.00	1000.00	1000.00	900.00	700.00
	Rate of Interest	8.00%	8.00%	8.00%	8.00%	8.00%
	Interest	80.00	80.00	80.00	72.00	56.00
	Rep Schedule	10 Half-Yearly instalments wef 27.09.2007				
5	Citi Bank N A					
	Net Loan-Opening	5000.00	5000.00	5000.00	4642.86	3928.57
	Repayment during the year	0.00	0.00	357.14	714.29	714.29
	Net Loan-Closing	5000.00	5000.00	4642.86	3928.57	3214.29
	Average Loan	5000.00	5000.00	4821.43	4285.71	3571.43
	Rate of Interest	5.707%	5.707%	5.707%	5.707%	5.707%
	Interest	285.35	285.35	275.16	244.59	203.82
	Rep Schedule	14 Half-Yearly instalments wef 02.03.2007				
6a	Corporation Bank-Drawal-1					
	Net Loan-Opening	500.00	500.00	428.57	357.14	285.71
	Repayment during the year	0.00	71.43	71.43	71.43	71.43
	Net Loan-Closing	500.00	428.57	357.14	285.71	214.29
	Average Loan	500.00	464.29	392.86	321.43	250.00
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	44.65	41.46	35.08	28.70	22.33
	Rep Schedule	14 Half-Yearly instalments wef 04.09.2005				
6b	Corporation Bank-Drawal-3					
	Net Loan-Opening	7000.00	7000.00	6000.00	5000.00	4000.00
	Repayment during the year	0.00	1000.00	1000.00	1000.00	1000.00
	Net Loan-Closing	7000.00	6000.00	5000.00	4000.00	3000.00
	Average Loan	7000.00	6500.00	5500.00	4500.00	3500.00
	Rate of Interest	8.19%	8.19%	8.19%	8.19%	8.19%
	Interest	573.30	532.35	450.45	368.55	286.65
	Rep Schedule	14 Half-Yearly instalments wef 04.09.2005				
6	Corporation Bank-Total					
	Net Loan-Opening	7500.00	7500.00	6428.57	5357.14	4285.71
	Repayment during the year	0.00	1071.43	1071.43	1071.43	1071.43
	Net Loan-Closing	7500.00	6428.57	5357.14	4285.71	3214.29
	Average Loan	7500.00	6964.29	5892.86	4821.43	3750.00
	Rate of Interest	8.24%	8.24%	8.24%	8.24%	8.24%
	Interest	617.95	573.81	485.53	397.25	308.98
	Rep Schedule	14 Half Yearly instalments wef 04.09.2005				
7	Jammu & Kashmir Bank					
	Net Loan-Opening	3857.14	3857.14	3214.29	2571.43	1928.57
	Repayment during the year	0.00	642.86	642.86	642.86	642.86
	Net Loan-Closing	3857.14	3214.29	2571.43	1928.57	1285.71
	Average Loan	3857.14	3535.71	2892.86	2250.00	1607.14
	Rate of Interest	7.31%	7.31%	7.31%	7.31%	7.31%
	Interest	281.96	258.46	211.47	164.48	117.48
	Rep Schedule	14 Half Yearly instalments wef 27.08.2004				

8	LIC-III					
	Net Loan-Opening	5000.00	5000.00	5000.00	5000.00	5000.00
	Repayment during the year	0.00	0.00	0.00	0.00	166.67
	Net Loan-Closing	5000.00	5000.00	5000.00	5000.00	4833.33
	Average Loan	5000.00	5000.00	5000.00	5000.00	4916.67
	Rate of Interest	6.571%	6.571%	6.571%	6.571%	6.571%
	Interest	328.55	328.55	328.55	328.55	323.07
	Rep Schedule	30 Half Yearly instalments wef 31.12.2008				
9	Punjab National Bank					
	Net Loan-Opening	2500.00	2500.00	2083.33	1666.67	1250.00
	Repayment during the year	0.00	416.67	416.67	416.67	416.67
	Net Loan-Closing	2500.00	2083.33	1666.67	1250.00	833.33
	Average Loan	2500.00	2291.67	1875.00	1458.33	1041.67
	Rate of Interest	7.31%	7.31%	7.31%	7.31%	7.31%
	Interest	182.75	167.52	137.06	106.60	76.15
	Rep Schedule	14 Half Yearly instalments wef 30.09.2004-MODIFIED-12 INST WEF 30.9.05- AS DRAWAL IS ON 15.02.05				
10	State Bank of India-I					
	Net Loan-Opening	6428.57	6428.57	5142.86	3857.14	2571.43
	Repayment during the year	0.00	1285.71	1285.71	1285.71	1285.71
	Net Loan-Closing	6428.57	5142.86	3857.14	2571.43	1285.71
	Average Loan	6428.57	5785.71	4500.00	3214.29	1928.57
	Rate of Interest	9.60%	9.60%	9.60%	9.60%	9.60%
	Interest	617.14	555.43	432.00	308.57	185.14
	Rep Schedule	14 Half Yearly instalments wef 03.07.2003				
11	State Bank of India-II					
	Net Loan-Opening	5000.00	5000.00	4285.71	3571.43	2857.14
	Repayment during the year	0.00	714.29	714.29	714.29	714.29
	Net Loan-Closing	5000.00	4285.71	3571.43	2857.14	2142.86
	Average Loan	5000.00	4642.86	3928.57	3214.29	2500.00
	Rate of Interest	7.00%	7.00%	7.00%	7.00%	7.00%
	Interest	350.00	325.00	275.00	225.00	175.00
	Rep Schedule	14 Half Yearly instalments wef 01.08.2005				
12	State Bank of Indore					
	Net Loan-Opening	1285.71	1285.71	1071.43	857.14	642.86
	Repayment during the year	0.00	214.29	214.29	214.29	214.29
	Net Loan-Closing	1285.71	1071.43	857.14	642.86	428.57
	Average Loan	1285.71	1178.57	964.29	750.00	535.71
	Rate of Interest	7.35%	7.35%	7.35%	7.35%	7.35%
	Interest	94.50	86.63	70.88	55.13	39.38
	Rep Schedule	14 Half Yearly instalments wef 05.09.2004				
13a	Karur Vysya Bank-Drawal-2					
	Net Loan-Opening	4000.00	4000.00	4000.00	3440.00	2880.00
	Repayment during the year	0.00	0.00	560.00	560.00	560.00
	Net Loan-Closing	4000.00	4000.00	3440.00	2880.00	2320.00
	Average Loan	4000.00	4000.00	3720.00	3160.00	2600.00
	Rate of Interest	8.00%	8.00%	8.00%	8.00%	8.00%

	Interest	320.00	320.00	297.60	252.80	208.00
	Rep Schedule	7 Yearly instalments wef 03.01.2007-1st 6 inst. Of 1260 and last inst. Of 1440				
13b	Karur Vysya Bank-Drawal-3					
	Net Loan-Opening	5000.00	5000.00	5000.00	4300.00	3600.00
	Repayment during the year	0.00	0.00	700.00	700.00	700.00
	Net Loan-Closing	5000.00	5000.00	4300.00	3600.00	2900.00
	Average Loan	5000.00	5000.00	4650.00	3950.00	3250.00
	Rate of Interest	7.30%	7.30%	7.30%	7.30%	7.30%
	Interest	365.00	365.00	339.45	288.35	237.25
	Rep Schedule	7 Yearly instalments wef 03.01.2007-1st 6 inst. Of 1260 and last inst. Of 1440				
13	Total Loan-Karur Vysya Bank					
	Net Loan-Opening	9000.00	9000.00	9000.00	7740.00	6480.00
	Repayment during the year	0.00	0.00	1260.00	1260.00	1260.00
	Net Loan-Closing	9000.00	9000.00	7740.00	6480.00	5220.00
	Average Loan	9000.00	9000.00	8370.00	7110.00	5850.00
	Rate of Interest	7.61%	7.61%	7.61%	7.61%	7.61%
	Interest	685.00	685.00	637.05	541.15	445.25
	Rep Schedule	7 Yearly instalments wef 03.01.2007-1st 6 inst. Of 1260 and last inst. Of 1440				
14	United Bank of India					
	Net Loan-Opening	2571.43	2571.43	2142.86	1714.29	1285.71
	Repayment during the year	0.00	428.57	428.57	428.57	428.57
	Net Loan-Closing	2571.43	2142.86	1714.29	1285.71	857.14
	Average Loan	2571.43	2357.14	1928.57	1500.00	1071.43
	Rate of Interest	7.306%	7.306%	7.306%	7.306%	7.306%
	Interest	187.87	172.21	140.90	109.59	78.28
	Rep Schedule	14 Half Yearly instalments wef 26.08.2004				
15	Vijaya Bank					
	Net Loan-Opening	1285.71	1285.71	1071.43	857.14	642.86
	Repayment during the year	0.00	214.29	214.29	214.29	214.29
	Net Loan-Closing	1285.71	1071.43	857.14	642.86	428.57
	Average Loan	1285.71	1178.57	964.29	750.00	535.71
	Rate of Interest	7.30%	7.30%	7.30%	7.30%	7.30%
	Interest	93.86	86.04	70.39	54.75	39.11
	Rep Schedule	28 Quarterly instalments wef 23.05.2004				
16	HDFC-III					
	Net Loan-Opening	8571.43	8571.43	7142.86	5714.29	4285.71
	Repayment during the year	0.00	1428.57	1428.57	1428.57	1428.57
	Net Loan-Closing	8571.43	7142.86	5714.29	4285.71	2857.14
	Average Loan	8571.43	7857.14	6428.57	5000.00	3571.43
	Rate of Interest	8.40%	8.40%	8.40%	8.40%	8.40%
	Interest	720.00	660.00	540.00	420.00	300.00
	Rep Schedule	14 Half Yearly instalments wef 28.08.2004				

17	Bonds XVI Series					
	Net Loan-Opening	6000.00	6000.00	6000.00	6000.00	6000.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	6000.00	6000.00	6000.00	6000.00	6000.00
	Average Loan	6000.00	6000.00	6000.00	6000.00	6000.00
	Rate of Interest	8.03%	8.03%	8.03%	8.03%	8.03%
	Interest	481.80	481.80	481.80	481.80	481.80
	Rep Schedule	Bullet Payment on 10.04.2018				
18	Bonds XVIII Series					
	Net Loan-Opening	2000.00	2000.00	2000.00	2000.00	2000.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	2000.00	2000.00	2000.00	2000.00	2000.00
	Average Loan	2000.00	2000.00	2000.00	2000.00	2000.00
	Rate of Interest	5.98%	5.98%	5.98%	5.98%	5.98%
	Interest	119.60	119.60	119.60	119.60	119.60
	Rep Schedule	5 Yearly instalments wef 15.09.2009				
19	Euro Bonds					
	Net Loan-Opening	20714.11	20714.11	20714.11	20714.11	20714.11
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	20714.11	20714.11	20714.11	20714.11	20714.11
	Average Loan	20714.11	20714.11	20714.11	20714.11	20714.11
	Rate of Interest	6.95%	6.95%	6.95%	6.95%	6.95%
	Interest	1440.48	1440.48	1440.48	1440.48	1440.48
	Rep Schedule	Bullet Payment on 10.03.2011				
	Total Loan					
	Net Loan-Opening	94213	94034	87060	77987	68356
	Repayment during the year	179	6974	9073	9631	9797
	Net Loan-Closing	94034	87060	77987	68356	58559
	Average Loan	94123	90547	82523	73172	63458
	Rate of Interest	7.5067%	7.4853%	7.4369%	7.3807%	7.3123%
	Interest	7065.54	6777.72	6137.19	5400.55	4640.23