

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 247/2010

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

Date of Hearing: 20.10.2011

Date of Order: 3.5.2012

IN THE MATTER OF

Approval of tariff of Korba Super Thermal Power Station Stage-III (500 MW) for the period from the date of commercial operation to 31.3.2014.

AND

IN THE MATTER OF

NTPC Ltd, New Delhi

...Petitioner

Vs

1. Madhya Pradesh Power Trading Company Ltd, Jabalpur
2. Maharashtra State Electricity Distribution Co. Ltd, Mumbai
3. Gujarat Urja Vikas Nigam Ltd, Vadodara
4. Chhattisgarh State Power Distribution Co. Ltd, Raipur
5. Electricity Department, Government of Goa, Goa
6. Electricity Department, Administration of Daman & Diu, Daman
7. Electricity Department, Administration of Dadra and Nagar Haveli, Silvassa

...Respondents

Parties Present:

1. Shri A.S. Pandey, NTPC Ltd.
2. Shri Sachin Jain, NTPC Ltd.
3. Shri Manoj Dubey, MPPTCL
4. Shri K.K. Agarwal, MPPTCL

ORDER

This petition has been filed by the petitioner, NTPC, for approval of tariff for Korba Super Thermal Power Station, Stage-III (500 MW) (hereinafter referred to as "the generating

station") for the period from the anticipated date of commercial operation to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. The petitioner had initially filed the petition on 31.8.2010, with a prayer for determination of tariff for 175 MW (35% of the installed capacity) allocated to the home State of Chhattisgarh in terms of the Power Purchase Agreement (PPA) signed with the respondent No.4, the Chhattisgarh State Power Distribution Co. Ltd, from the anticipated date of commercial operation of Unit-I i.e. from 1.10.2010 to 31.3.2014. The balance capacity of 325 MW was retained by the petitioner for sale to other customers for development of power markets in terms of the approval accorded by the petitioner's Board on 22.7.2009. Subsequently, the petitioner filed Interlocutory Application for modification of the petition on the ground that Government of India *vide* its letter dated 9.12.2010 had allocated 425 MW of power from the generating station to the beneficiary States and the Union territories located in the Western Region based on long term PPAs and the balance 75 MW power to be sold by the petitioner outside the long term PPAs for development of power markets, in terms of the National Electricity Policy. Accordingly, *vide* affidavit dated 4.1.2011, the petitioner filed amended petition for determination of tariff for 425 MW to be supplied to the respondent beneficiaries of the Western Region from the anticipated date of commercial operation to 31.3.2014. Thereafter, the petitioner by its affidavit dated 20.6.2011 submitted that the generating station has been declared under commercial operation with effect from 21.3.2011. Thus, the tariff of the generating station for the installed capacity of 500 MW is determined by this order for the period from 21.3.2011 to 31.3.2014. However, the tariff will be applicable for 425 MW sold through long term PPAs to the distribution licensees.

3. The capital cost claimed by the petitioner for the period 2010-14 as revised vide affidavit dated 4.1.2011 is as under:

	(₹ in lakh)			
	2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
Capital expenditure as on date of commercial operation (on cash basis)	216020.01	-	-	-
Add: Notional IDC	308.10	-	-	-
Add: FERV charged to revenue	(-) 141.61	-	-	-
Capital cost as on the date of commercial operation/ opening capital cost	216186	219131	234073	251537
Add: Projected Additional capital expenditure	2944.87	14942.39	17463.77	7272.68
Closing capital cost	219131	234073	251537	258810

4. The annual fixed charges for the period 2010-14 claimed by the petitioner as revised vide its affidavit dated 4.1.2011 is as under:

	(₹ in lakh)			
	2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
Depreciation	9881	10287	11023	11584
Interest on loan	11268	10829	10722	10347
Return on equity	13033	13568	14539	15279
Interest on working capital	1894	1924	1973	2011
O&M expenses	5840	6175	6528	6902
Secondary fuel Oil	1231	1235	1231	1231
Total	43147	44019	46016	47355

5. Reply to the petition has been filed by the respondents namely, MPPTCL (respondent No.1) and CSPDCL (respondent No.4). The petitioner has filed its rejoinder to the said replies.

Capital Cost

6. The petitioner has submitted that the investment proposal for the generating station was approved by the Board of NTPC vide resolution dated 24.3.2006 and in terms of the said resolution, the approved cost estimate was ₹2448.49 crore (₹4.896 crore/MW) including IDC and FC of ₹288.26 crore and Working Capital Margin (WCM) of ₹35.26 crore. The

petitioner has also submitted that the indicative completed cost as approved by the Board was ₹2677.26 crore including IDC & FC of ₹314.84 crore and WCM of ₹37.14 crore. (5.354 crore / MW). Since, the capital cost claimed by the petitioner was on the basis of anticipated date of commercial operation of January, 2011, the petitioner was directed to furnish the capital cost as on the actual date of commercial operation (21.3.2011) along with the projected additional capital expenditure for the period from 21.3.2011 to 31.3.2014 *vide* Commission's letter dated 29.4.2011. The petitioner was also asked to establish the reasonableness of capital cost as compared to its similar projects commissioned recently. In response, the petitioner *vide* its affidavit dated 20.6.2011 has submitted details of the actual capital expenditure as on the date of commercial operation of the Unit as on 21.3.2011, which are as under:

(₹ in lakh)	
2010-11 <i>(21.3.2011 to 31.3.2011)</i>	
Total capitalization as on the date of commercial operation (on accrual basis)	233709.97
Less: Un-discharged liabilities	17689.96
Actual capital expenditure as on the date of commercial operation (on cash basis)	216020.01
Add: Notional IDC	308.10
Add: FERV charged to revenue	(-) 141.61
Capital cost as on the date of commercial operation / Opening capital cost	216186.50

7. As regards reasonableness of the capital cost, the petitioner *vide* its affidavit dated 20.6.2011 has submitted that the main plant package was awarded to M/s BHEL after series of negotiations. The contemporary projects where NTPC had in the recent past gone for international competitive bidding (ICB) for award of main plant package including Sipat Super Thermal Power Station Stage-II (2x500 MW), Kahalgaon Super Thermal Power Station Stage -II (3 x 500 MW) and Ramagundam Super Thermal Power Station (500 MW). However, in spite of best efforts of the petitioner, none of the manufacturers, except M/s BHEL, participated in the bidding for the supply of 500 MW machines. After deliberation and prolonged negotiations based on the above awarded package for Kahalgaon STPS, Stage-

II, a total price of ₹998 crore (excluding taxes and duties) was agreed for the main plant package in respect of this generating station. Further, as per the then prevailing Mega Power Policy of Government of India, the mega power project benefits such as waiver of customs duty, excise duty etc. were not applicable to this generating station. Considering the above factors, the cost of the generating station is found to be reasonable and is comparable with the contemporary and similar projects.

8. The respondent No.4, CSPDCL *vide* its reply dated 26.9.2011 has submitted that the capital cost claimed by the petitioner is not sustainable and should not be approved by the Commission since relevant data (audited figures) as to FERV charged to revenue and IDC have not been submitted.

9. It is noticed that no specific information has been provided by the petitioner with regard to the cost considered by it for its generating stations namely Sipat STPS, Stage-II, Ramagundam STPS, Stage-III and Kahalgaon STPS, Stage-II to enable the Commission to examine and take a considered view on the reasonableness of the capital cost of the project. Thus, in the absence of any material justification/data, the competitiveness of the cost of the project has been examined by comparing the cost of Extension and Green Field projects of the petitioner which have been commissioned during the period 2006-10, taking into consideration the information furnished by the petitioner in the various tariff petitions filed by it before the Commission for determination of tariff for the period 2009-14. A tabular statement comparing the project costs and the main plant cost for Extension and Green Field projects of the petitioner commissioned during 2006-10 is as under:

(₹ in crore)							
	Capacity MW	Petition No.	Cost of Main Plant Package	Date of award of Main Plant Package	Capital Cost	Capital Cost /MW	Remarks
Vindhyachal STPS Stage- III(2x500 MW)	1000	260/2009	2489.68	March/April 2003	4125.02	4.13	As approved by CEA & the Board of NTPC

Sipat STPS, Stage-II(2x500 MW)	1000	316/2009	1753.16	15/12/2003	3975.65	3.98	Based on the Certified actual expenditure as on 23.2.2009.
Kahalgaon STPS Stage-II (3x500MW)	1500	282/2009	3465.59	March, 2003, July, 2003 and August, 2003	5824.45	3.88	Upto the cut-off date of 31.3.2013.
NCTPS Dadri, Stage-II (2x490 MW)	980	14/2010	1996.00	July, 2006and November, 2006	4941.32	5.04	Upto the cut-off date of 31.3.2013.
KorbaSTPS, Stage-III (500 MW)	500	247/2009	998.62	24.3.2007	2588.28	5.18	Upto the cut-off date of 31.3.2014.

10. The petitioner *vide* its affidavit dated 23.8.2011 has submitted the audited statement in respect of capital cost as on the date of commercial operation as under:

(₹ in lakh)	
	2010-11 <i>(21.3.2011 to 31.3.2011)</i>
Total capitalization as on the date of commercial operation (on accrual basis)	233709.97
Less: Un-discharged liabilities**	17689.96
Capital expenditure as on the date of commercial operation (on cash basis)	216020.01

** The party/work wise liability position duly certified by the auditor.

11. It is observed from the above table that the main plant package cost of this generating station is comparable to NCTPS Dadri, Stage-II (2x490 MW) generating station of the petitioner considering the fact that the said generating station has two units. The cost for Vindhyachal STPS, Stage-III (2x500 MW), Sipat STPS, Stage-II (2x500 MW) and Kahalgaon STPS, Stage-II (3x500MW) generating stations which enjoy the status of Mega Power Project and have also availed the benefit of lesser taxes and duties is comparable with this generating station. Even though the capital cost of this generating station appear to be on the higher side when compared to other generating stations of the petitioner namely, Vindhyachal STPS, Stage-III, Sipat STPS, Stage-II and Kahalgaon STPS, Stage-II, the per MW cost of this generating station is reasonable, considering the fact that the cost is higher only on account of taxes and duties, for not being a Mega Power Project, and on account of

escalation in price due to the gap of four years between the placement of orders of other projects. Considering the above factors in totality, we are of the view that the project cost of this generating station is reasonable.

Time and Cost Overrun

12. In order to examine the delay in the commissioning of the project, the Commission during the proceedings held on 25.8.2011, directed the petitioner to submit information on the following:

(a) Reason for taking schedule of commissioning as 42 months from date of environmental clearance in the NTPC Board approval as against CERC timeline of 42 months for the COD of the generating station from the date of investment approval, substantiating the timeline with the details of actual time taken in other stations from the date of investment approval to the actual COD;

(b) Detailed reasoning for time over run from the schedule COD;

(c) Details of implications on the project cost due to time overrun, and also details of price escalation paid between schedule COD and actual COD; and

(d) Details of IDC and FC for the period from schedule COD to actual COD.

13. In response, the petitioner vide its affidavit dated 13.10.2011 has submitted clarification/information as detailed hereunder:

(a) The investment approval for the generating station was accorded by the Board of Directors of NTPC in the 285th meeting held on 24.3.2006 and this investment approval was conditional subject to clearance from the Ministry of Environment and Forests and the signing of Fuel Supply Agreement. The Ministry of Environment and Forests had accorded environment clearance for the project on 31.8.2006. As per the investment approval, commissioning (i.e synchronization of unit on coal) was to take place in 42 months from the date of main plant award and the main plant award was placed on 11.9.2006. Hence, the zero date may be taken as 11.9.2006. The unit was test synchronized on 25.11.2010. The date of commercial operation as per the investment approval could not have taken place within 42 months from the environment clearance as stated above. The unit could have been put under commercial operation only after the completion of all the commissioning activities including stabilization of the unit, establish reliable full load operational and after completion of the necessary activities and inputs. The commercial operation of the machine can only be declared after successful trial and stabilization of machine as per prevailing practice and guidelines. The timeline of 42 months for completion of the project is to allow additional equity of 0.5% over and above the base rate of 15.5% in line with Appendix-II of the 2009 Tariff Regulations. As the investment approval for the generating station was accorded much before the notification of the

said Regulations and implementation of the project commenced accordingly, the time lines given in the said regulations are not relevant to assess whether the project has been completed in time. Due to non-availability of 400 kV Korba-Raipur D/C transmission corridor and insistence of the System operator (WRLDC) and CTU to evacuate this power on short term basis only, the trial operation had got delayed leading to delay in declaration of commercial operation of this unit. NTPC had to persuade and make the beneficiaries agree to apply for STOA for availing their share. This has also been acknowledged by the Commission in its order dated 6.9.2011 in Petition No.122/2011 and had directed the CTU to grant long term access from the date of commercial operation of the generating station. From the comparative table indicating the completion schedule of identical generating units owned or controlled by IPPs and other State Electricity Boards published by CEA, it is clear that during these periods, almost all units got delayed, the primary reason being the massive order book of the main plant power equipment and balance of plant equipment manufacturers. Further the completion schedule varies and is dependent on site locations, co-operation of local administration, order book of equipment manufacturer etc. In case of this generating station the completion period is in line with other similar units.

(b) The actual work for the main plant was started in the month of October, 2006 after placement of main plant order. Upon evacuation of soil for foundation for the boiler, it was found that the soil conditions were different from what was envisaged in the original design criterion. During commencement of foundation work, piling for structural/ equipment foundation work could not progress because of soil collapse during pile boring due to which piles could not be cast. The matter was re-examined by the engineering experts and after studies, piling methodology was changed. Considering, the above, a base contract amendment was issued in March, 2007 incorporating changes in piling methodology. Due to this, there was a delay in start of piling work for about 6-7 months during initial period of the project. It is evident from the details of the contract that most of the contracts were awarded in the year 2007 itself after resolution of foundation piling methodology and dispute with civil contractor. Due to this, the implementation schedule was shifted in the beginning of the project.

(c) There is no time overrun attributable to the petitioner for the reasons above and the overall completed project cost is within the approved capital cost of the project and no escalation has been paid due to any time overrun whatsoever.

(d) As per investment approval, only synchronization at full load on coal was indicated. The Interest During Construction (IDC) and Finance Charges (FC) were taken as 8.5% and 0.5% respectively as per prevailing market conditions during the years 2005-06. However, the changes in market conditions during subsequent years had resulted in higher weighted average rate of interest at the time of borrowing and the actual rate of interest during the construction period was in the range of 8.8% to 9.1%p.a. plus financing charges. This has resulted in higher IDC during construction period. There is no implication on IDC and FC due to time overrun, considering the fact that the original implementation schedule was shifted in the initial stage of the project. The total cash expenditure as on the date of commercial operation of the generating station is ₹226320 lakh.

14. The respondent No.1, MPPTCL *vide* its reply dated 18.10.2011 has submitted that the project which was required to be declared under commercial operation as on September, 2009 (within 42 months from the date of investment approval on 24.3.2006), was declared under commercial operation only on 21.3.2011 i.e. after a delay of one and half years. It has submitted that no reason has been given by the petitioner for the said delay and hence the petitioner is fully responsible for the increase in project cost on account of time overrun and the increased cost along with IDC and FERV gains should be excluded from the opening capital cost.

15. In support of its submissions made *vide* affidavits dated 13.10.2011, 7.12.2011 and 6.1.2012, the petitioner *vide* its affidavit dated 27.4.2012 has submitted reasons for the time overrun involved in the project, as under:

(a) Letter of award was placed on 8.9.2006 for main plant civil works and there was a delay in commencement of civil works due to problems faced by the contractor (caving/collapsing of soil during boring of piles).

(b) It was envisaged that permanent steel liners would have to be provided for piling work which was not envisaged in the main plant package and this involved extra work and new methodology for carrying out this work was evolved.

(c) The change in work required mobilisation of extra /new equipments by contractor, which took time.

(d) It is evident that there was a delay of more than 6 months in the beginning itself due to geological surprise and due to the said delay, various expenditure /cash outflows which otherwise would have incurred were deferred accordingly.

(e) After accounting the initial delay in start of civil works due to geological surprise, it had synchronised the unit as per investment approval. Thereafter, it had completed all testing and commissioning activities before declaring the unit under commercial operation. The unit could not be declared under commercial operation earlier due to problems faced in power evacuation.

16. The matter has been examined. It is not clear as to why the petitioner had not undertaken the testing of soil condition prior to the placement of award for main plant civil works, which in our view would have saved time and cost. The petitioner cannot absolve itself of its responsibility of undertaking these preliminary works before the commencement

of the main plant civil work. Moreover, the plant being an expansion project, the petitioner could have done the testing / trial operation using its existing arrangements in Stages-I & II of the generating station. Hence, the submissions of the petitioner that the initial delay in the start of civil works due to geological surprise had contributed to the delay in commissioning of the project are not sustainable. It is noticed that the petitioner had taken 4 months (approx) for declaration of commercial operation of the unit from the actual date of its synchronization. Considering the 4 months between the actual synchronization and actual date of commercial operation, the scheduled date of commercial operation works out as 11.7.2010 from the scheduled date of synchronization of 11.3.2010. Even if the zero date is considered as date of placement of order, there is time over run of 8 months from the scheduled date of commercial operation of 11.7.2010. In view of the above discussions, we are of the view that there is delay in commissioning of the project and the reasons for the same are attributable to the petitioner.

Implication of Cost Overrun due to Time Over run in the Project cost:

17. Since specific information as regards implication due to time overrun on the project cost and the details of IDC and FC for the period from the schedule date of commercial operation to actual commercial operation had not been furnished by the petitioner earlier, the petitioner was again called upon to furnish the same by Commission's letter dated 21.12.2011. In response, the petitioner *vide* its affidavit dated 6.1.2012, while referring to its submissions made *vide* affidavits dated 13.10.2011 and 7.12.2011 respectively, has submitted that there is no unreasonable time taken which can be attributable to the petitioner and as a result there is no cost overrun due to time overrun. Moreover, there is no additional/consequential cost escalation paid during the period from schedule commercial operation to actual commercial operation. The petitioner has further submitted that the actual completed cost of the generating station was lesser than the approved completed cost and accordingly, the benefit of the savings made by the petitioner in the project cost during the

time taken shall be availed by the beneficiaries for the entire life of the generating station by way of lower tariffs on account of the reduced actual completed cost. Admittedly, the time overrun has resulted in the increase of IDC. As stated in paragraph 15 above, the petitioner has failed to demonstrate that the time overrun involved in the project was not attributable to it. Therefore, IDC during the period of time overrun is not allowed to be capitalized.

Computation of IDC

18. As stated in paragraph 15 above, the schedule date of commercial operation has been worked out as 11.7.2010 as against the actual date of commercial operation of the generating station of 21.3.2011. Keeping this scheduled date of commercial operation i.e. 11.7.2010 and based on the auditors certificate furnished by the petitioner, the cost of ₹216020.01 lakh (gross block of ₹233709.97 lakh *minus* ₹17689.96 lakh of Un-discharged liabilities) has been considered for the purpose of tariff. The petitioner in its affidavit dated 6.1.2012 has submitted details with regard to IDC and FC as under:

"As regards to the details of IDC and FC for the period from scheduled COD and actual COD, the petitioner respectfully submits that in the event of shifting of project construction and commissioning to a later date, the corresponding expenditure on the various activities also get shifted/deferred and accordingly fund deployment through loan also gets shifted/deferred. It is submitted that the loans are drawn on the company basis and allocated to various generating stations. Accordingly, the corresponding allocation of loans gets revised considering the likely projected expenditure on the actual, which results in lower actual IDC as compared to the IDC considering the original schedule. Therefore, IDC added between scheduled COD and Actual COD cannot be due to the shifting of scheduled COD and cannot be considered as increase in IDC. Since the allocation of loan also vary depending upon the actual status of work therefore, exact impact of the same cannot be evaluated. It is submitted that there could be savings in IDC under the actual schedule due to reduced drawl during the corresponding periods matching with actual schedule. It is possible that there is saving in IDC as compared to IDC based on approved schedule even though project has been commissioned after scheduled COD"

19. The petitioner has not furnished the details of IDC (inclusive of FC) included in the gross block as on 21.3.2011 and has not revised form 14 and 14A. However, in Form-5B to the petition, it has been indicated that the amount of IDC (inclusive of FC) included in the capital cost as on 1.10.2010 for the generating station is ₹26498 lakh. Further, in annexure-

G of its affidavit dated 20.12.2010, the petitioner has furnished the position of IDC (inclusive of FC) amounting to ₹21082.44 lakh up to 31.03.2010 for the generating station. Accordingly, the differential IDC (inclusive of FC) for the period from 1.4.2010 to 1.10.2010, for the generating station works out to ₹5415.56 lakh.

20. As per audited statements, the amount of IDC (inclusive of FC) capitalized from 1.4.2010 to 21.3.2011 for the combined stages Stages-I, II and III of the generating station is ₹12554.31 lakh. In the absence of detailed information of IDC (subsequent to 31.3.2010) this amount of ₹12554.31 lakh has been apportioned based on the number of days to arrive at IDC (inclusive of FC) up to 1.10.2010 and 11.7.2010 which works out to ₹6489.94 lakh and ₹3581.88 lakh, respectively. Further, considering the IDC (inclusive of FC) of ₹5415.56 lakh for the period 1.4.2010 to 1.10.2010, as worked out above, the IDC (inclusive of FC) for the period from 11.7.2010 to 21.3.2011 for Stage-III, works out to ₹7487.09 lakh. It is possible that some amount out of IDC (inclusive of FC) amounting to ₹7487.09 lakh for the period 11.7.2010 to 21.3.2011 may form part of CWIP as on 21.3.2011 (not capitalized in gross block). However, in the absence of any detailed information from the petitioner, this amount has been considered to form part of the gross block as on 21.3.2011. Accordingly, the amount of ₹7487.09 lakh as IDC (inclusive of FC) has been deducted from the capital cost, on cash basis. However, this is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations.

21. One more issue for consideration is the submission of the petitioner that due to delay, the expenditure incurred also gets delayed and as such it cannot quantify the impact of delay on IDC. The petitioner has also submitted that due to delay there is no adverse impact on beneficiaries in terms of capital cost as it has tried to safeguard the interest of beneficiaries by remaining within the estimated cost including the estimated amount of IDC.

22. We are of the view that though some capital expenditure could get deferred due to time overrun, it cannot be concluded that there would be no impact on IDC, as a consequence of this. Part of the expenditure which has been made prior to such deferment continue to accrue IDC as the same is still under CWIP and cannot be put to use till all other activities which had got deferred are completed. Thus, there is an impact on IDC due to time overrun (to the extent that part of expenditure that is incurred in time during the course of project execution but cannot be put to use due to other necessary expenditure which gets deferred due to time delay). In the instant case, based on Form-14 A which provides for cash expenditure incurred during various quarters of the execution of the project, it is noticed that out of the total permissible loan of ₹151214 lakh (70% of project cost of ₹216020 lakh) loan of ₹135398 lakh constituting 89.54% has been drawn up to the scheduled date of commercial operation i.e. 11.7.2010. Only a meager balance loan has been drawn during the period from the scheduled and actual date of commercial operation. Even in terms of expenditure, it is observed that about 96% of the expenditure (₹207823/₹ 216020 lakh=96%) has been incurred up to the scheduled date of commercial operation and the balance during the period from the scheduled and actual date of commercial operation.

23. The petitioner's claim for Notional IDC of ₹308.10 lakh is based on the premise of treatment of repayments of loan during the construction period as financed by equity and treating the same as notional loan. In this connection, Regulation 7 of the 2009 Tariff Regulations provides as under:

"7. **Capital Cost.** (1) *Capital cost for a project shall include:*

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

(b) xxxxx

24. For the computation of interest to be allowed over and above the actual IDC, the quarter-wise details of the actual capital expenditure and funds deployed upto the date of commercial operation of the generating station was required to be submitted by the petitioner in Form-14A. In addition to this, the actual rate of interest corresponding to each loan is required to be furnished by the petitioner. The petitioner has submitted the details only upto 1.10.2010 in Form-14A annexed to the petition. Neither the IDC calculations nor the applicable rate of interest subsequent to 31.3.2010 has been furnished by the petitioner. In view of this, the petitioner's claim for Notional IDC is not in line with the provisions of Regulation 7 as stated above. Accordingly, the petitioner's claim for Notional IDC has not been considered in this order. The same will be considered at the time of truing-up in terms of Regulation 6 of the 2009 Tariff Regulations, subject to the submission of the details of actual capital expenditure and funds deployed (as required in Form-14A) along with the applicable rate of interest, by the petitioner. Further, the petitioner has also included the short term FERV (charged to P&L A/c in books) amounting to (-) ₹141.61 lakh as on 21.3.2011, in its claim for capital cost. This has been allowed subject to truing-up of in terms of Regulation 6 of the 2009 Tariff Regulations.

25. Based on the above discussions, the capital cost as on 21.3.2011, for the purpose of tariff is worked out as under:

<i>(₹ in lakh)</i>	
	As on 21.3.2011
Gross Block	233709.97
Less: Un-discharged liabilities included in the above	17689.96
Capital cost on cash basis	216020.01
Less: Extra IDC incurred due to delay in project execution	7487.09
Add: Notional IDC	0.00
Add: Short term FERV (charged to P&L A/c)	(-) 141.61
Capital cost	208391.31

Actual / Projected Additional Capital Expenditure during 2010-14

26. Regulation 9 (1) of the 2009 Tariff Regulations, provides as under:

“9.(1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) *Un-discharged liabilities;*
- (ii) *Works deferred for execution;*
- (iii) *Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;*
- (iii) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- (v) *Change in law:*

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

27. The petitioner *vide* its affidavit dated 8.1.2010 has submitted that the projected additional capital expenditure upto the cut-off date is within the original scope of work and is in accordance with Regulation 9(1) of the 2009 Tariff Regulations. Subsequently, the petitioner *vide* its affidavit dated 4.1.2011 has submitted that all the works are under different stages of tendering and execution and are covered under the original project cost. The actual/projected additional capital expenditure claimed by the petitioner for 2010-14, *vide* affidavit dated 23.8.2011 is as under:

	Regulation	(₹ in lakh)			
		Actual/Projected Capitalization			
		2010-11 (actual)	2011-12	2012-13	2013-14
Land	9(1)(ii)	250.00	1000.00	1500.00	860.73
Roads & drains-Civil works		0.00	120.20	200.00	0.00
MGR & Marshalling yard		0.00	50.00	224.68	0.00
Other enabling work		0.00	25.00	0.00	0.00
Main Plant Civil works		254.00	500.00	509.82	0.00
Township & Colony		382.51	750.00	1200.00	1188.69
SG & TG		0.00	1837.35	224.00	0.00
Condensate polishing plant		61.19	276.94	105.00	0.00

EOT Crane		0.00	2.30	0.00	0.00
C&I Package		0.00	5.83	142.87	0.00
Locomotive		0.00	17.91	0.00	0.00
Rolling Stock wagons		0.00	14.43	0.00	0.00
Ash disposal area development		0.00	400.00	2000.00	2000.00
Ash handling system- Civil work		0.00	20.97	0.00	0.00
Ash handling system- Mechanical work		51.36	465.67	500.00	40.00
CW system & off site area- Civil work		0.00	132.14	200	306.79
CW system & Equipment package.		0.00	0.00	82.57	0.00
Cooling Tower –Civil Work		0.00	75.73	215	0.00
DM Plant-Civil Work		0.00	150.24	0.00	0.00
Hydrogen Generation plant		7.57	136.99	42.00	0.00
HP/LP Piping.		0.00	148.59	0.00	0.00
Fire Fighting systems.		0.00	0.00	122.30	0.00
Air Conditioning		0.00	0.00	78.67	0.00
Ventilation system		0.00	20.00	13.88	0.00
Transformer package		0.00	0.00	55.96	0.00
Switchgear package		0.00	44.46	0.00	0.00
Cables		0.00	5.54	0.00	0.00
Establishment		0.00	168.56	1211.83	151.48
Initial Spares	9(1)(iii)	0.00	500.00	1500.00	2400.00
Total Additional Capital expenditure		1006.63	6868.85	10128.58	6947.69
Discharge of Liabilities	9(1)(i)	1938.24	8091.54	7335.18	324.99
Total		2944.87	14942.39	17463.77	7272.68

28. The petitioner has submitted that all the works are part of original approved cost and are under different stages of execution and likely to be capitalized in the respective year. It has also submitted that the amount of spares capitalized as on date of commercial operation of the unit is ₹1800 lakh. The capitalisation of ₹4400.00 lakh towards initial spares along with the projected expenditure on initial spares up to the cut-off date is found to be within the specified limit of 2.5 % of the original project cost, in terms of Regulation 8 of the 2009 Tariff Regulations. Hence, allowed. The respondent No.1, MPPTCL by its reply dated 18.10.2011 has submitted that the additional capital expenditure as claimed by the petitioner should not be allowed as the petition does not contain detailed approved project report and as such the actual original scope of work cannot be ascertained. It has also submitted that the petitioner has failed to submit the details of works included in the original scope of work along with

estimates of expenditure, un-discharged liabilities along with works deferred for execution in terms of Regulation 9(1) of the 2009 Tariff Regulations. The respondent No.4, CSPDCL has submitted that the additional capital expenditure claimed does not appear to be practically feasible.

29. The cut-off date of the generating station is 31.3.2014. Taking into consideration the documents on record and after examining the submissions made by the parties in the light of the provisions of Regulation 9(1) of the 2009 Tariff Regulations, we allow the claim of the petitioner for additional capital expenditure for 2010-14, subject to actual expenditure at the time of truing-up, in terms of Regulation 6 of the 2009 Tariff Regulations.

30. Based on the above, the capital cost considered for the purpose of tariff for 2010-14 is as under:

	(₹ in lakh)			
	2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
Opening capital cost	208391.31	211336.18	226278.57	243742.34
Add: Projected Additional capital expenditure	2944.87	14942.39	17463.77	7272.68
Closing capital cost	211336.18	226278.57	243742.34	251015.02
Average capital cost	209863.75	218807.38	235010.46	247378.68

31. The capital cost allowed above is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations.

Debt- Equity Ratio

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

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

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

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

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and

investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the generating station or the transmission system.

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

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

33. The petitioner has considered debt-equity ratio of 70:30 as on the date of commercial operation of the generating station. As such, the debt equity ratio of 70:30 has been considered for computation of tariff, for the period 2009-14. The same is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations.

Return on Equity

34. Regulation 15 of the 2009 Tariff Regulations provides as under:

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

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation.

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in Appendix-II.

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the

respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

35. The petitioner has claimed Return on Equity of 23.481% per annum on the normative equity after accounting for the admitted additional capital expenditure (considering base rate of 15.50%, in terms of Clause (2) of the above regulation and tax rate of 33.99%. Return on Equity, which is subject to truing up, has been worked out as under:

	(₹ in lakh)			
	2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
Normative Equity -Opening	62517.39	63400.86	67883.57	73122.70
Add: Addition to equity on account of Projected Additional capital expenditure	883.46	4482.72	5239.13	2181.80
Normative Equity - Closing	63400.86	67883.57	73122.70	75304.51
Average Equity	62959.12	65642.21	70503.14	74213.61
Return on Equity	14783.43	15413.45	16554.84	17426.10

Additional Return on Equity

36. The Unit is not entitled to additional Return on Equity (ROE) of 0.5% on account of the delay in commercial operation of the Unit. In view of the above discussions, we are of the view that there is delay in the commissioning of the project and the reasons for the same are attributable to the petitioner.

Interest on loan

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

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

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

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

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

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

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

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

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

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

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

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

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

38. Interest on loan has been worked out as mentioned below:

- (a) The gross normative loan corresponding to 70% of the admitted capital cost works out to ₹145873.92 lakh as on 21.3.2011.
- (b) The net loan opening as on 21.3.2011 is same as the gross loan and the cumulative repayment of loan up to previous year/period is nil.
- (c) Depreciation allowed for the period has been considered as repayment.
- (d) Average net loan is calculated as average of opening and closing of loan.
- (e) Weighted average rate of interest has been calculated as shown below:

- (i) The rate of interest considered in calculation for all loans is on annual rest basis.
- (ii) Actual draws up to the date of commercial operation has been considered.
- (iii) Actual rate of interest corresponding to each loans as existing as on 31.3.2010 has been considered for draws up to 31.3.2010. And for draws subsequent to 31.3.2010 rate of interest on the date of drawl as per Form-8 has been considered as actual rate of interest.
- (iv) In case of Eurobond-II, opening loan as on 21.3.2011 has been worked out applying the exchange rate of ₹45.67/\$.
- (v) Interest rates for Bonds considered in actual loan portfolio have been arrived at after considering surveillance fee of 0.03% as had been accepted by the Commission earlier.
- (vi) The petitioner has considered FIFO method of repayment for few of the loans drawn till the date of commercial operation while working out the weighted average rate of interest in Form-13. However, in line with the Commission's earlier decision, Average method of repayment (instead of FIFO method of repayment) has been considered. The calculations for weighted average rate of interest are enclosed as **Annexure-I** to this order.

39. The calculations for Interest on loan, subject to truing up, are as under:

	(₹ in lakh)			
	2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
Gross Opening Loan	145873.92	147935.33	158395.00	170619.64
Cumulative Repayment of Loan	0.00	337.80	12024.12	24575.84
Net Loan Opening	145873.92	147597.53	146370.88	146043.80
Addition of loan due to projected Additional Capital Expenditure	2061.41	10459.67	12224.64	5090.88
Repayment of loan (Normative)	337.80	11686.33	12551.72	13212.30
Net Loan Closing	147597.53	146370.88	146043.80	137922.38
Average Loan	146735.73	146984.21	146207.34	141983.09
Weighted Average Rate of Interest on Loan	9.1275%	9.1315%	9.1192%	9.0978%
Interest on Loan	13393.36	13421.80	13332.90	12917.37

Depreciation

40. Regulation 17 of the 2009 Tariff Regulations provides as under:

“(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under longterm power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system.

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation including Advance against Depreciation as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets.

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

41. The petitioner in Form-11 of the petition has calculated the weighted average rate of depreciation of 5.341% from 1.10.2010, but has not revised the said form for calculation of the weighted average rate of depreciation as on 21.3.2011. As such, the same has been considered, subject to truing-up. However, after considering the rates of depreciation as enclosed in Appendix-III to the 2009 Tariff Regulations, the weighted average rate of depreciation works out to 5.3409%. The necessary calculations in support of depreciation are as under:

(₹ in lakh)

	2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
Opening capital cost	208391.31	211336.18	226278.57	243742.34
Add: Additional capital expenditure	2944.87	14942.39	17463.77	7272.68
Closing capital cost	211336.18	226278.57	243742.34	251015.02
Average capital cost	209863.75	218807.38	235010.46	247378.68
Rate of depreciation	5.3409%	5.3409%	5.3409%	5.3409%
Depreciation for the period	337.80	11686.33	12551.72	13212.30
Depreciation (<i>annualized</i>)	11208.65	11686.33	12551.72	13212.30

O & M Expenses

42. Clause (a) of Regulation 19 of Regulation of the 2009 Tariff Regulations provide the following O&M expense norms for Coal based and lignite fired generating stations as under:

(₹ in lakh/MW)

	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses for 500 MW units	13.00	13.74	14.53	15.36	16.24

43. Based on above norms, the year wise O&M expenses works out as under:

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
O&M expenses	6870 (<i>annualized</i>)	7265	7680	8120

44. The petitioner has claimed the following O&M expenses for 425 MW capacity as under:

(₹ in lakh)

	2010-11	2011-12	2012-13	2013-14
O&M expenses	5840 (<i>annualized</i>)	6175	6528	6902

45. Based on above norms, the operation & maintenance expense claimed by the petitioner for 425 MW is in order. However, the O&M expenses for the installed capacity of 500 MW as worked out in para 42 above has been considered for the purpose of tariff.

Normative Annual Plant Availability Factor (NAPAF)

46. The NAPAF of the generating station is considered as 85% for the period from the date of commercial operation till s31.3.2014.

Interest on Working Capital

47. Regulation 18(1) (a) of the 2009 Tariff Regulations provides that the working capital for coal based generating stations shall cover:

(i) Cost of coal for 1.5 months for pit-head generating stations and two months for non-pithead generating stations, for generation corresponding to the normative annual plant availability factor;

(ii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel oil, cost of fuel oil stock for the main secondary fuel oil;

(iii) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 19.

(iv) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor; and

(v) O&M expenses for one month.

48. Clause (3) of Regulation 18 of the 2009 Tariff Regulations as amended on 21.6.2011 provides as under:

"Rate of interest on working capital shall be on normative basis and shall be considered as follows:

(i) SBI short-term Prime Lending Rate as on 01.04.2009 or on 1st April of the year in which the generating station or unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.06.2010.

(ii) SBI Base Rate plus 350 basis points as on 01.07.2010 or as on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the units or station whose date of commercial operation lies between the period 01.07.2010 to 31.03.2014.

Provided that in cases where tariff has already been determined on the date of issue of this notification, the above provisions shall be given effect to at the time of truing up.

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

Fuel Components in working capital

50. The cost for fuel component in working capital, based on price and GCV of coal & secondary fuel oil (HFO) procured and burnt for the preceding three months from January, 2011 to March, 2011 for the installed capacity of 500 MW is as under:

	2010-11	2011-12 (leap year)	2012-13	2013-14
Cost of coal for 1.5 months	3562.26	3572.02	3562.26	3562.26
Cost of secondary fuel oil 2 months	241.46	242.12	241.46	241.46

51. The claim of the petitioner for the cost of coal and secondary fuel oil is based on 425 MW capacity and the price and GCV of coal & oil for the preceding three months of January 2010 to March, 2010 is not accepted as the same is not in order. Hence, the fuel component calculated as above for the installed capacity of 500 MW has been considered for the purpose of tariff.

Maintenance Spares in working capital

52. The petitioner has claimed the following maintenance spares based on 425 MW capacity in the working capital, as under:

	2010-11	2011-12	2012-13	2013-14
Cost of maintenance spares	1168	1235	1306	1380

53. The 2009 Tariff Regulations provide for maintenance spares @ 20% of the operation and maintenance expenses as specified in Regulation 19. Accordingly, the maintenance spares for the installed capacity of 500 MW allowed for the purpose of tariff is as under:

	2010-11	2011-12	2012-13	2013-14
Cost of maintenance spares	1374	1453	1536	1624

Receivables

54. Receivables have been worked out on the basis of two months of fixed and energy charges (based on primary fuel only) on normative plant availability factors as under:

	<i>₹ in lakh</i>			
	2010-11	2011-12	2012-13	2013-14
Variable Charges -2 months	4749.68	4762.70	4749.68	4749.68
Fixed Charges - 2 months	8925.28	8558.43	8955.59	9222.15
Total	13044.96	13321.13	13705.28	13971.83

O&M Expenses

55. O & M expenses for 1 month claimed by the petitioner for 425 MW capacity for the purpose of working capital is as under:

	<i>₹ in lakh</i>			
	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	487	515	544	575

56. For the purpose of computation of interest on Working loan, the O&M expenses for one month in respect of the installed capacity of 500 MW has been considered as under:

	<i>₹ in lakh</i>			
	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	572.50	605.42	640.00	676.67

57. Accordingly, the interest on working capital has been calculated based on the rate of interest of 11% (SBI Base Rate of 7.50% plus 350 basis points as on 1.7.2010). Necessary computations in support of calculation of interest on working capital are as under as under:

	<i>₹ in lakh</i>			
	2010-11	2011-12	2012-13	2013-14
Cost of coal for 1.1/2 months	3562.26	3572.02	3562.26	3562.26
Cost of secondary fuel oil for 2 months	241.46	242.12	241.46	241.46
Maintenance spares	1374.00	1453.00	1536.00	1624.00
Receivables	13044.96	13321.13	13705.28	13971.83
O&M Expenses	572.50	605.42	640.00	676.67
Total working capital	18795.18	19193.69	19685.00	20076.22
Rate of interest	11.000%	11.000%	11.000%	11.000%
Interest on working capital	2067.47	2111.31	2165.35	2208.38

Cost of secondary fuel oil

58. Clause (1) of Regulation 20 of the 2009 Tariff Regulations provides as under:

“20. Expenses on secondary fuel oil consumption for coal-based and lignite-fired generating station. (1) Expenses on secondary fuel oil in Rupees shall be computed corresponding to normative secondary fuel oil consumption (SFC) specified in clause (iii) of regulation 26, in accordance with the following formula:

$$\begin{aligned} & \text{SFC} - \text{Normative Specific Fuel Oil consumption in ml/kWh} \\ & = \text{SFC} \times \text{LPSFi} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10 \end{aligned}$$

Where,

LPSFi – Weighted Average Landed Price of Secondary Fuel in ₹/ml considered initially.

NAPAF – Normative Annual Plant Availability Factor in percentage

NDY – Number of days in a year

IC - Installed Capacity in MW.

59. The petitioner has claimed secondary fuel oil cost based on 425 MW capacity as under:

	<i>₹ in lakh</i>			
	2010-11	2011-12	2012-13	2013-14
Secondary Fuel Oil	1231	1235	1231	1231

60. The cost of secondary fuel oil has been calculated on the normative specific fuel oil consumption, the weighted average landed price of secondary fuel price adopted and NAPF of 85%. Accordingly, the cost of secondary fuel based on the installed capacity of 500 MW is considered for the purpose of tariff as under:

	<i>₹ in lakh</i>			
	2010-11	2011-12	2012-13	2013-14
Cost of secondary fuel oil	1448.75	1452.72	1448.75	1448.75

61. The cost of secondary fuel oil arrived at as above shall be subject to fuel price adjustment at the end of each year of tariff period in terms of the proviso to Regulation 20(2) as per the following formula:

$$\text{SFC} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10 \times (\text{LPSFy} - \text{LPSFi})$$

Where,

$LPSF_y =$ The weighted average landed price of secondary fuel oil for the year in ₹/ml

Annual Fixed charges for 2009-14

62. The annual fixed charges for the period 2009-14 in respect of the installed capacity of the generating station is summarized as under:

	(₹ in lakh)			
	2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
Return on Equity	14783.43	15413.45	16554.84	17426.10
Interest on Loan	13393.36	13421.80	13332.90	12917.37
Depreciation	11208.65	11686.33	12551.72	13212.30
Interest on Working Capital	2067.47	2111.31	2165.35	2208.38
O&M Expenses	6870.00	7265.00	7680.00	8120.00
Cost of secondary fuel oil	1448.75	1452.72	1448.75	1448.75
Total	49771.66	51350.60	53733.56	55332.89

Note: (i) All figures are on annualized basis for the installed capacity of 500 MW
(ii) All the figures under each head have been rounded. (ii) The figure in total column in each year is also rounded. Because of rounding of each figure the total may not be arithmetic sum of individual items in columns.

63. The annual fixed charges for the saleable quantity of 425 MW capacity shall be calculated and *prorated* to the number of days for the year. The recovery of the annual fixed charges shall be subject to truing up, in terms of Regulation 6 of the 2009 regulations.

Energy Charge Rate (ECR)

64. Sub-clause (b) of clause (6) of Regulation 21 of the 2009 Tariff Regulations provides as under:

“Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

65. The petitioner has claimed Energy Charge Rate (ECR) of 81.87 paise/kwh, based on the weighted average price, GCV of fuel procured and burnt for the preceding three months of January, 2010 to March, 2010 considering the capacity of 425 MW. The calculation for ECR of 81.87 paise/kWh is based on the installed capacity of 500 MW and the price & GCV of coal and oil for the preceding three months i.e. January, 2011 to March, 2011. Hence, the ECR of 81.867 paise/kwh is considered for the purpose of tariff.

The relevant calculations are as under:

	Unit	2009-14
Capacity	MW	1 x 500
Gross Station Heat Rate	Kcal/kWh	2438.80
Aux. Energy Consumption	%	6.50
Weighted average GCV of oil	Kcal/l	10193.00
Weighted average GCV of coal	Kcal/kg	3344.33
Weighted average price of oil	₹/kl	38913.48
Weighted average price of coal	₹/MT	1054.08
Rate of energy charge ex-bus	Paise/kWh	81.867

66. The petitioner shall be entitled to compute and recover the annual fixed charges and energy charges in accordance with Regulation 21 of the 2009 Tariff Regulations.

67. The petitioner has also prayed for the following reliefs, which are disposed of as under:

(a) **Recovery of RLDC Fees and Charges:** The claim of the petitioner towards recovery of RLDC fees & charges incurred by the petitioner pursuant to the notification of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2009 would be considered in accordance with our order dated 6.2.2012 in Petition No. 129/MP/2011 and other related petitions.

(b) **Expenditure incurred for implementation of scheme for provision of supply of electricity in 5 km area around Central Power plants:** The petitioner has submitted that in terms of the notification dated 27.4.2010 of the Government of India of a scheme

for provision of supply of electricity in 5 km area around Central Power plants, the petitioner is required to create infrastructure for supply of reliable power to the rural households of the villages within a radius of 5 km of existing and new power stations and as per the scheme, the Appropriate Commission shall consider the expenditure incurred for implementation of such scheme for the purpose of determining tariff of the generating station. The petitioner has submitted that DPR for implementation of the scheme is under preparation and it was not possible to estimate the projected expenditure at this stage. The petitioner has further submitted that it would approach the Commission for consideration of the cost incurred in implementation of this scheme for tariff purpose thereafter. The petitioner is at liberty to approach the Commission through an appropriate application, which would be considered in accordance with law.

Application fee and the publication expenses

68. The petitioner has sought approval for the reimbursement of fees deposited for the years 2010-11 and 2011-12 towards filing the petition and for towards expenses incurred for publication of notices in connection with the petition. The petitioner by its affidavit dated 23.11.2011 has submitted that an expenditure of ₹393436/- has been incurred by it for publication of notice in the newspapers.

69. In terms of Regulation 42 of the 2009 Tariff Regulations and based on our decision contained in order dated 11.1.2010 in Petition No.109/2009, the expenses towards filing of tariff application and the expenses incurred on publication of notices are to be reimbursed. Accordingly, the expenses incurred by the petitioner for petition filing fees for the years 2010-11 and 2011-12 and for publication of notices in connection with the present petition shall be directly recovered from the beneficiaries, on *pro rata* basis. The filing fees in respect of the balance years would be recoverable as and when paid by the petitioner in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012.

70. In addition to the above, the petitioner is entitled to recover other taxes etc., levied by statutory authorities in accordance with the 2009 Tariff Regulations, as applicable.

71. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's order dated 9.11.2011. The provisional billing of tariff shall be adjusted in terms of the proviso to Regulation 5(3) of the 2009 Tariff Regulations.

72. This order disposes of Petition No.247/2010.

Sd/-
[M.DEENA DAYALAN]
MEMBER

Sd/-
[S.JAYARAMAN]
MEMBER

Sd/-
[DR.PRAMOD DEO]
CHAIRPERSON

Annexure-I

Calculation of Weighted Average Rate of Interest on Loan

(₹ in lakh)

S. No.	Loan Drawn		2010-11 (21.3.2011 to 31.3.2011)	2011-12	2012-13	2013-14
1	Bond XXII					
		Gross Loan - Opening	1,000.00	1,000.00	1,000.00	1,000.00
		Cumulative repayment	-	-	100.00	200.00
		Net Loan - Opening	1,000.00	1,000.00	900.00	800.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	100.00	100.00	100.00
		Net Loan - Closing	1,000.00	900.00	800.00	700.00
		Rate of Int on Loan	8.2071%	8.2071%	8.2071%	8.2071%
		Average Loan	1,000.00	950.00	850.00	750.00
		Interest	82.07	77.97	69.76	61.55
2	Bond XXIII					
		Gross Loan - Opening	1,200.00	1,200.00	1,200.00	1,200.00
		Cumulative repayment	-	-	120.00	240.00
		Net Loan - Opening	1,200.00	1,200.00	1,080.00	960.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	120.00	120.00	120.00
		Net Loan - Closing	1,200.00	1,080.00	960.00	840.00
		Rate of Int on Loan	8.4096%	8.4096%	8.4096%	8.4096%
		Average Loan	1,200.00	1,140.00	1,020.00	900.00
		Interest	100.92	95.87	85.78	75.69
3	Bond XXV					
		Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Cumulative repayment	-	-	-	715.00
		Net Loan - Opening	5,000.00	5,000.00	5,000.00	4,285.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	715.00	715.00
		Net Loan - Closing	5,000.00	5,000.00	4,285.00	3,570.00
		Rate of Int on Loan	9.4000%	9.4000%	9.4000%	9.4000%
		Average Loan	5,000.00	5,000.00	4,642.50	3,927.50
		Interest	470.00	470.00	436.40	369.19
4	Bond XXVI					
		Gross Loan - Opening	7,500.00	7,500.00	7,500.00	7,500.00
		Cumulative repayment	-	-	-	1,072.50
		Net Loan - Opening	7,500.00	7,500.00	7,500.00	6,427.50
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	1,072.50	1,072.50
		Net Loan - Closing	7,500.00	7,500.00	6,427.50	5,355.00
		Rate of Int on Loan	9.0900%	9.0900%	9.0900%	9.0900%
		Average Loan	7,500.00	7,500.00	6,963.75	5,891.25
		Interest	681.75	681.75	633.00	535.51
5	Bond XXVIII					
		Gross Loan - Opening	12,500.00	12,500.00	12,500.00	12,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	12,500.00	12,500.00	12,500.00	12,500.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	12,500.00	12,500.00	12,500.00	12,500.00
		Rate of Int on Loan	11.0300%	11.0300%	11.0300%	11.0300%
		Average Loan	12,500.00	12,500.00	12,500.00	12,500.00

		Interest	1,378.75	1,378.75	1,378.75	1,378.75
6	Bond XXX					
		Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	5,000.00	5,000.00	5,000.00	5,000.00
		Rate of Int on Loan	7.9200%	7.9200%	7.9200%	7.9200%
		Average Loan	5,000.00	5,000.00	5,000.00	5,000.00
		Interest	396.00	396.00	396.00	396.00
7	Bond XXXI					
		Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	2,500.00	2,500.00	2,500.00	2,500.00
		Rate of Int on Loan	8.8100%	8.8100%	8.8100%	8.8100%
		Average Loan	2,500.00	2,500.00	2,500.00	2,500.00
		Interest	220.25	220.25	220.25	220.25
8	Bond XXXIII					
		Gross Loan - Opening	7,500.00	7,500.00	7,500.00	7,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	7,500.00	7,500.00	7,500.00	7,500.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	7,500.00	7,500.00	7,500.00	7,500.00
		Rate of Int on Loan	8.7600%	8.7600%	8.7600%	8.7600%
		Average Loan	7,500.00	7,500.00	7,500.00	7,500.00
		Interest	657.00	657.00	657.00	657.00
9	LIC III (T4,D3)					
		Gross Loan - Opening	2,000.00	2,000.00	2,000.00	2,000.00
		Cumulative repayment	700.00	700.00	900.00	1,100.00
		Net Loan - Opening	1,300.00	1,300.00	1,100.00	900.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	200.00	200.00	200.00
		Net Loan - Closing	1,300.00	1,100.00	900.00	700.00
		Rate of Int on Loan	8.2771%	8.2771%	8.2771%	8.2771%
		Average Loan	1,300.00	1,200.00	1,000.00	800.00
		Interest	107.60	99.33	82.77	66.22
10	Corporation Bank-II (T1,D3)					
		Gross Loan - Opening	3,000.00	3,000.00	3,000.00	3,000.00
		Cumulative repayment	1,071.43	1,071.43	1,500.00	1,928.57
		Net Loan - Opening	1,928.57	1,928.57	1,500.00	1,071.43
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	428.57	428.57	428.57
		Net Loan - Closing	1,928.57	1,500.00	1,071.43	642.86
		Rate of Int on Loan	7.2000%	7.2000%	7.2000%	7.2000%
		Average Loan	1,928.57	1,714.29	1,285.71	857.14
		Interest	138.86	123.43	92.57	61.71
11	Allahabad Bank-II (T1,D3)					
		Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00

		Cumulative repayment	714.29	892.86	1,250.00	1,607.14
		Net Loan - Opening	1,785.71	1,607.14	1,250.00	892.86
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	178.57	357.14	357.14	357.14
		Net Loan - Closing	1,607.14	1,250.00	892.86	535.71
		Rate of Int on Loan	7.0000%	7.0000%	7.0000%	7.0000%
		Average Loan	1,696.43	1,428.57	1,071.43	714.29
		Interest	118.75	100.00	75.00	50.00
12	CBI-II (T1,D2)					
		Gross Loan - Opening	1,000.00	1,000.00	1,000.00	1,000.00
		Cumulative repayment	214.29	285.71	428.57	571.43
		Net Loan - Opening	785.71	714.29	571.43	428.57
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	71.43	142.86	142.86	142.86
		Net Loan - Closing	714.29	571.43	428.57	285.71
		Rate of Int on Loan	7.0000%	7.0000%	7.0000%	7.0000%
		Average Loan	750.00	642.86	500.00	357.14
		Interest	52.50	45.00	35.00	25.00
13	SBI-IV (T1,D1,D2,D3)					
		Gross Loan - Opening	13,300.00	13,300.00	13,300.00	13,300.00
		Cumulative repayment	3,800.00	3,800.00	5,700.00	7,600.00
		Net Loan - Opening	9,500.00	9,500.00	7,600.00	5,700.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	1,900.00	1,900.00	1,900.00
		Net Loan - Closing	9,500.00	7,600.00	5,700.00	3,800.00
		Rate of Int on Loan	10.2500%	10.2500%	10.2500%	10.2500%
		Average Loan	9,500.00	8,550.00	6,650.00	4,750.00
		Interest	973.75	876.38	681.63	486.88
14	PNB-II (T1,D2)					
		Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Cumulative repayment	714.29	1,071.43	1,785.71	2,500.00
		Net Loan - Opening	4,285.71	3,928.57	3,214.29	2,500.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	357.14	714.29	714.29	714.29
		Net Loan - Closing	3,928.57	3,214.29	2,500.00	1,785.71
		Rate of Int on Loan	8.7500%	8.7500%	8.7500%	8.7500%
		Average Loan	4,107.14	3,571.43	2,857.14	2,142.86
		Interest	359.38	312.50	250.00	187.50
15	OBC (T1,D3)					
		Gross Loan - Opening	2,000.00	2,000.00	2,000.00	2,000.00
		Cumulative repayment	-	-	285.71	571.43
		Net Loan - Opening	2,000.00	2,000.00	1,714.29	1,428.57
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	285.71	285.71	285.71
		Net Loan - Closing	2,000.00	1,714.29	1,428.57	1,142.86
		Rate of Int on Loan	8.2500%	8.2500%	8.2500%	8.2500%
		Average Loan	2,000.00	1,857.14	1,571.43	1,285.71
		Interest	165.00	153.21	129.64	106.07
16	LIC IV (T1,D2)					
		Gross Loan - Opening	7,000.00	7,000.00	7,000.00	7,000.00
		Cumulative repayment	-	-	-	1,001.00
		Net Loan - Opening	7,000.00	7,000.00	7,000.00	5,999.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	1,001.00	1,001.00

		Net Loan - Closing	7,000.00	7,000.00	5,999.00	4,998.00
		Rate of Int on Loan	9.7700%	9.7700%	9.7700%	9.7700%
		Average Loan	7,000.00	7,000.00	6,499.50	5,498.50
		Interest	683.90	683.90	635.00	537.20
17	IDFC (T1,D1)					
		Gross Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00
		Cumulative repayment	-	-	750.00	1,750.00
		Net Loan - Opening	10,000.00	10,000.00	9,250.00	8,250.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	750.00	1,000.00	1,000.00
		Net Loan - Closing	10,000.00	9,250.00	8,250.00	7,250.00
		Rate of Int on Loan	7.9000%	7.9000%	7.9000%	7.9000%
		Average Loan	10,000.00	9,625.00	8,750.00	7,750.00
		Interest	790.00	760.38	691.25	612.25
18	PFC (T1,D1)					
		Gross Loan - Opening	3,000.00	3,000.00	3,000.00	3,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	3,000.00	3,000.00	3,000.00	3,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	187.50
		Net Loan - Closing	3,000.00	3,000.00	3,000.00	2,812.50
		Rate of Int on Loan	10.3000%	10.3000%	10.3000%	10.3000%
		Average Loan	3,000.00	3,000.00	3,000.00	2,906.25
		Interest	309.00	309.00	309.00	299.34
19	PFC (T1,D2)					
		Gross Loan - Opening	3,000.00	3,000.00	3,000.00	3,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	3,000.00	3,000.00	3,000.00	3,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	187.50
		Net Loan - Closing	3,000.00	3,000.00	3,000.00	2,812.50
		Rate of Int on Loan	8.9700%	8.9700%	8.9700%	8.9700%
		Average Loan	3,000.00	3,000.00	3,000.00	2,906.25
		Interest	269.10	269.10	269.10	260.69
20	PFC (T2,D1)					
		Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	312.50
		Net Loan - Closing	5,000.00	5,000.00	5,000.00	4,687.50
		Rate of Int on Loan	7.9300%	7.9300%	7.9300%	7.9300%
		Average Loan	5,000.00	5,000.00	5,000.00	4,843.75
		Interest	396.50	396.50	396.50	384.11
21	PFC (T2,D5)					
		Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	312.50
		Net Loan - Closing	5,000.00	5,000.00	5,000.00	4,687.50
		Rate of Int on Loan	7.9300%	7.9300%	7.9300%	7.9300%
		Average Loan	5,000.00	5,000.00	5,000.00	4,843.75
		Interest	396.50	396.50	396.50	384.11
22	PFC (T2,D9)					

		Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	312.50
		Net Loan - Closing	5,000.00	5,000.00	5,000.00	4,687.50
		Rate of Int on Loan	8.0600%	8.0600%	8.0600%	8.0600%
		Average Loan	5,000.00	5,000.00	5,000.00	4,843.75
		Interest	403.00	403.00	403.00	390.41
23	PFC (T2,D10)					
		Gross Loan - Opening	1,500.00	1,500.00	1,500.00	1,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	1,500.00	1,500.00	1,500.00	1,500.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	93.75
		Net Loan - Closing	1,500.00	1,500.00	1,500.00	1,406.25
		Rate of Int on Loan	8.1300%	8.1300%	8.1300%	8.1300%
		Average Loan	1,500.00	1,500.00	1,500.00	1,453.13
		Interest	121.95	121.95	121.95	118.14
24	PFC (T2,D12)					
		Gross Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	625.00
		Net Loan - Closing	10,000.00	10,000.00	10,000.00	9,375.00
		Rate of Int on Loan	8.2600%	8.2600%	8.2600%	8.2600%
		Average Loan	10,000.00	10,000.00	10,000.00	9,687.50
		Interest	826.00	826.00	826.00	800.19
25	LIC V (T1,D2)					
		Gross Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00
		Cumulative repayment	-	-	-	1,430.00
		Net Loan - Opening	10,000.00	10,000.00	10,000.00	8,570.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	1,430.00	1,430.00
		Net Loan - Closing	10,000.00	10,000.00	8,570.00	7,140.00
		Rate of Int on Loan	11.0000%	11.0000%	11.0000%	11.0000%
		Average Loan	10,000.00	10,000.00	9,285.00	7,855.00
		Interest	1,100.00	1,100.00	1,021.35	864.05
26	SBI V (T1,D1)					
		Gross Loan - Opening	6,000.00	6,000.00	6,000.00	6,000.00
		Cumulative repayment	-	-	857.14	1,714.29
		Net Loan - Opening	6,000.00	6,000.00	5,142.86	4,285.71
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	857.14	857.14	857.14
		Net Loan - Closing	6,000.00	5,142.86	4,285.71	3,428.57
		Rate of Int on Loan	10.2500%	10.2500%	10.2500%	10.2500%
		Average Loan	6,000.00	5,571.43	4,714.29	3,857.14
		Interest	615.00	571.07	483.21	395.36
27	BOM-III (T1,D1)					
		Gross Loan - Opening	500.00	500.00	500.00	500.00
		Cumulative repayment	-	-	-	35.71
		Net Loan - Opening	500.00	500.00	500.00	464.29
		Add: Drawl du the period	-	-	-	-

		Less: Repayment	-	-	35.71	71.43
		Net Loan - Closing	500.00	500.00	464.29	392.86
		Rate of Int on Loan	9.5000%	9.5000%	9.5000%	9.5000%
		Average Loan	500.00	500.00	482.14	428.57
		Interest	47.50	47.50	45.80	40.71
29	HDFC-II (T1,D1)					
		Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	2,500.00	2,500.00	2,500.00	2,500.00
		Rate of Int on Loan	9.9500%	9.9500%	9.9500%	9.9500%
		Average Loan	2,500.00	2,500.00	2,500.00	2,500.00
		Interest	248.75	248.75	248.75	248.75
30	HDFC-II (T1,D3)					
		Gross Loan - Opening	1,500.00	1,500.00	1,500.00	1,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	1,500.00	1,500.00	1,500.00	1,500.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	1,500.00	1,500.00	1,500.00	1,500.00
		Rate of Int on Loan	9.9500%	9.9500%	9.9500%	9.9500%
		Average Loan	1,500.00	1,500.00	1,500.00	1,500.00
		Interest	149.25	149.25	149.25	149.25
31	Vijaya Bank-IV (T1,D2)					
		Gross Loan - Opening	3,000.00	3,000.00	3,000.00	3,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	3,000.00	3,000.00	3,000.00	3,000.00
		Add: Drawl during the period	-	-	-	-
		Less: Repayment	-	-	-	214.29
		Net Loan - Closing	3,000.00	3,000.00	3,000.00	2,785.71
		Rate of Int on Loan	9.7500%	9.7500%	9.7500%	9.7500%
		Average Loan	3,000.00	3,000.00	3,000.00	2,892.86
		Interest	292.50	292.50	292.50	282.05
32	SBI V (T2,D2)					
		Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Cumulative repayment	-	-	357.14	714.29
		Net Loan - Opening	2,500.00	2,500.00	2,142.86	1,785.71
		Add: Drawl during the period	-	-	-	-
		Less: Repayment	-	357.14	357.14	357.14
		Net Loan - Closing	2,500.00	2,142.86	1,785.71	1,428.57
		Rate of Int on Loan	10.2500%	10.2500%	10.2500%	10.2500%
		Average Loan	2,500.00	2,321.43	1,964.29	1,607.14
		Interest	256.25	237.95	201.34	164.73
33	PFC V (T3,D7)					
		Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Add: Drawl during the period	-	-	-	-
		Less: Repayment	-	-	-	156.25

		Net Loan - Closing	2,500.00	2,500.00	2,500.00	2,343.75
		Rate of Int on Loan	9.8700%	9.8700%	9.8700%	9.8700%
		Average Loan	2,500.00	2,500.00	2,500.00	2,421.88
		Interest	246.75	246.75	246.75	239.04
34	PFC V (T3,D5)					
		Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Add: Drawl during the period	-	-	-	-
		Less: Repayment	-	-	-	156.25
		Net Loan - Closing	2,500.00	2,500.00	2,500.00	2,343.75
		Rate of Int on Loan	9.3400%	9.3400%	9.3400%	9.3400%
		Average Loan	2,500.00	2,500.00	2,500.00	2,421.88
		Interest	233.50	233.50	233.50	226.20
35	PFC V (T3,D1)					
		Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00
		Add: Drawl during the period	-	-	-	-
		Less: Repayment	-	-	-	156.25
		Net Loan - Closing	2,500.00	2,500.00	2,500.00	2,343.75
		Rate of Int on Loan	7.7500%	7.7500%	7.7500%	7.7500%
		Average Loan	2,500.00	2,500.00	2,500.00	2,421.88
		Interest	193.75	193.75	193.75	187.70
36	SBI VI (T2,D3)					
		Gross Loan - Opening	2,000.00	2,000.00	2,000.00	2,000.00
		Cumulative repayment	-	-	-	285.71
		Net Loan - Opening	2,000.00	2,000.00	2,000.00	1,714.29
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	285.71	285.71
		Net Loan - Closing	2,000.00	2,000.00	1,714.29	1,428.57
		Rate of Int on Loan	10.1500%	10.1500%	10.1500%	10.1500%
		Average Loan	2,000.00	2,000.00	1,857.14	1,571.43
		Interest	203.00	203.00	188.50	159.50
37	SBI VI (T2,D5)					
		Gross Loan - Opening	1,500.00	1,500.00	1,500.00	1,500.00
		Cumulative repayment	-	-	-	214.29
		Net Loan - Opening	1,500.00	1,500.00	1,500.00	1,285.71
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	214.29	214.29
		Net Loan - Closing	1,500.00	1,500.00	1,285.71	1,071.43
		Rate of Int on Loan	10.1500%	10.1500%	10.1500%	10.1500%
		Average Loan	1,500.00	1,500.00	1,392.86	1,178.57
		Interest	152.25	152.25	141.38	119.63
38	Bond XXXV					
		Gross Loan - Opening	1,000.00	1,000.00	1,000.00	1,000.00
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	1,000.00	1,000.00	1,000.00	1,000.00
		Add: Drawl du the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	1,000.00	1,000.00	1,000.00	1,000.00
		Rate of Int on Loan	8.8150%	8.8150%	8.8150%	8.8150%

		Average Loan	1,000.00	1,000.00	1,000.00	1,000.00
		Interest	88.15	88.15	88.15	88.15
39	5.8750% Eurobonds- II					
		Gross Loan - Opening (\$20030502 @ ₹45.67/\$)	9,147.93	9,147.93	9,147.93	9,147.93
		Cumulative repayment	-	-	-	-
		Net Loan - Opening	9,147.93	9,147.93	9,147.93	9,147.93
		Add: Drawl during the period	-	-	-	-
		Less: Repayment	-	-	-	-
		Net Loan - Closing	9,147.93	9,147.93	9,147.93	9,147.93
		Rate of Int on Loan	7.5510%	7.5717%	7.5510%	7.5510%
		Average Loan	9,147.93	9,147.93	9,147.93	9,147.93
		Interest	690.76	692.65	690.76	690.76
40	Grand Total					
		Gross Loan - Opening		1,58,500.00	1,58,500.00	1,58,500.00
		Cumulative repayment	7,214.29	7,821.43	14,034.29	25,251.36
		Net loan opening		1,59,826.50	1,53,613.64	1,42,396.57
		Add: Drawl during the period	-	-	-	-
		Less: Repayment	607.14	6,212.86	11,217.07	13,967.07
		Net Loan - Closing		1,53,613.64	1,42,396.57	1,28,429.50
		Rate of Interest on Loan	9.1275%	9.1315%	9.1192%	9.0978%
		Average Loan		1,56,720.07	1,48,005.11	1,35,413.04
		Interest	14,615.93	14,310.82	13,496.84	12,319.63