# CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

# Petition No. 14/2010

Coram: 1. Dr. Pramod Deo, Chairperson

2. Shri S. Jayaraman, Member

3. Shri V.S.Verma, Member

DATE OF HEARING: 8.3.2011 DATE OF ORDER: 30.9.2011

#### IN THE MATTER OF

Approval of tariff of National Capital Thermal Power Station, Dadri, Stage-II ( $2 \times 490$  MW) for the period from the anticipated date of commercial operation of Unit-I of Stage-II i.e from 30.1.2010 to 31.3.2014

#### AND IN THE MATTER OF

NTPC Ltd, New Delhi

...Petitioner

Vs

- 1. Uttar Pradesh Power Corporation Limited, Lucknow
- 2. North Delhi Power Ltd, Delhi
- 3. BSES-Rajdhani Power Ltd, New Delhi
- 4. BSES-Yamuna Power Ltd, Delhi

....Respondents

# The following were present:

- 1. Shri V.K.Padha, NTPC
- 2. Shri Ajay Dua, NTPC
- 3. Ms. Alka Saigal, NTPC
- 4. Shri Shankar Saran, NTPC
- 5. Shri K.Prasad, UPPCL
- 6. Shri Haridas Maity, BYPL

#### **ORDER**

The petitioner, NTPC has made this application for approval of tariff for National Capital Thermal Power Station, Dadri, Stage-II (2 x 490 MW) (hereinafter referred to as "the generating station") for the period from the anticipated date of commercial operation of Unit-I i.e from 30.1.2010 to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 regulations").

2. The annual fixed charges for the period 2009-14 claimed by the petitioner in its petition dated 15.1.2010 stands revised on account of the revision in the capital cost submitted by it vide affidavit dated 7.1.2011.

## **Interlocutory Application**

- 3. During the pendency of the petition, the petitioner filed Interlocutory Application (I.A.No.9/2010) on 2.2.2010 praying for determination of provisional tariff of the generating station from the date of commercial operation of Unit-I i.e 31.1.2010 to 31.3.2014 in terms of Regulation 44 of the 2009 regulations, and the matter was heard on 9.3.2010. Thereafter, the respondent, UPPCL in its reply vide affidavit dated 16.3.2010 to the said Interlocutory Application submitted that the prayer of the petitioner for relaxation of the provisions of the 2009 regulations should not be allowed. Since pleadings in the petition are complete and the parties have been heard, the petition is being finally disposed of by determining the final tariff of the generating station from the date of its commercial operation till 31.3.2014. The interlocutory Application has become infructuous and is disposed of accordingly.
- 4. Regulation 7 (1) (a) of the 2009 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 the loan (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;"
- 5. The generating station comprises of 2 units of 490 MW each. The investment approval of the project was accorded by the board of the petitioner company at a project cost of ₹5135.33 crore on 31.7.2006. However, the completion cost as stated by the petitioner in its petition is ₹5459.67 crore. In its affidavit dated 30.6.2010, the petitioner has clarified that the completion cost as stated in the petition was an

indicative cost which has been arrived at by applying the escalation rate on approved project cost.

- 6. The petitioner in the affidavit dated 4.6.2010 has submitted that being a Public Sector Undertaking, all contracts have been awarded duly adhering to the guidelines laid down by the Central Government. It has also submitted that the capacity of the generating station was less than 1000 MW and hence the benefits of mega power project could not be availed of and this has resulted in higher cost, on account of higher taxes & duties, which works to about 7% to 10% (approx). The petitioner has further submitted that the land cost increased from ₹2700.00 lakh to ₹7100.00 lakh on account of the revision of rates of the Government land and private land.
- 7. The anticipated dates of commercial operation of Unit-I and Unit-II for which tariff has been claimed by the petitioner were 30.1.2010 and 29.7.2010 respectively, based on the capital cost of ₹250371.70 lakh and ₹397802.39 lakh which is inclusive of notional IDC and short-term FERV. While so, the petitioner vide its affidavit dated 7.1.2011 has submitted as under:

"The Unit-I (490 MW) has been declared under commercial operation with effect from 31.1.2010 and Unit-2 (490 MW) has been declared under commercial operation with effect from 31.7.2010. There are changes in the capital cost with respect to the projections made in the petition".

8. Accordingly, the revised capital cost as on the actual date of commercial operation of Unit-I and Unit-II, claimed by the petitioner is as under:

		(₹in lakh)
	As on 30.1.2010	As on 30.7.2010
Gross Block	228421.89	441656.67
Less: Un-discharged	25954.23	43628.93
liabilities included		
Capital cost on cash basis	202467.66	398027.74

9. The capital cost claimed above is inclusive of Interest During Construction (IDC) and Financing Charges (FC) amounting to ₹16611.10 lakh as on the date of

commercial operation of Unit-I and ₹20402.47 lakh as on the date of commercial operation of Unit-II (also the date of commercial operation of the generating station). The capital cost on cash basis, as on the date of commercial operation (COD) of the generating station is ₹398027.74 lakh and the projected additional capital expenditure within the original project cost claimed from the date of commercial operation of the generating station to the cut-off date (31.3.2013) is ₹96104.00 lakh. As such, the original project cost works out to ₹494131.74 lakh (₹398027.74 + ₹96104.00 lakh) and per mega watt cost of the generating station works out to ₹5.00 crore.

- 10. From the submissions of the petitioner in affidavit dated 20.7.2010, it is observed that the contract for main plant packages and some other packages were awarded on single tender/negotiation basis. Hence, in order to examine the reasonability of the awarded price and the circumstances which compelled the petitioner to award the packages to single bidder/negotiation basis, the Commission in terms of the proceedings held on 11.1.2011 directed the petitioner to furnish information on the following:
  - (i) To explain/justify the compelling reasons for award of the following packages, where the supply/work contract was awarded on negotiation basis/single bidder basis and the reasons for not re-tendering:
    - (a) The main plant package
    - (b) The railway siding
    - (c) Generator Circuit Breakers
    - (d) 220 kV cables
  - (ii) The basis of reasonableness of the cost of above packages where the supply/work contract were awarded on negotiation basis single bidder basis; and
  - (iii) To explain/justify the abnormal variation in the price of coal during the month of December, 2009 along with detailed break-up.

11. In response, the petitioner by its affidavit dated 1.2.2011 has furnished the information as stated in the subsequent paragraphs:

## (a) Main Plant Package

The tender for Main Plant Package comprising of Steam Generator (SG) with ESP and Steam Turbine Generator (STG) for the station was invited on single tender basis from M/s BHEL. These units were targeted to be commissioned in 38 months and 42 months respectively from the date of award for supplying power to Delhi during Commonwealth Games. It was observed in the past that Main Plant tenders floated for both SG & TG Packages for Sipat-II and Kahalgaon-II under international competitive bidding (ICB) procedure, only BHEL participated in the Bidding. In case, ICB procedures were followed, it would have taken 6 to 9 months for award of the contract. However, the time period for tendering and award could be reduced in case negotiation was followed.

Further, it was noted that Department of Public Enterprise vide its office Memorandum No. DPE-13(12)/2003-Fin.Vol-II dated 18.7.2005 regarding Purchase Preference Policy (PPP) while conveying grant of exemption from the PPP to Ministry of Power has stated that the same is subject to the condition that they shall place some orders upon BHEL on a negotiated basis price, benchmarked through competitively bid. The main plant package was negotiated with BHEL based on the last awarded contract placed on BHEL for Kahalgaon stage-II, Phase-II (1x500 MW) on ICB basis with adjustments towards scope changes and price variation on various price components during intervening period."

# (b) Railway Siding Package

The tender for Project Management and construction of Railway Siding system package was awarded on single tender basis since RITES is the only agency approved by Railways which undertakes both design services as well as construction works.

# (c) Generator Circuit Breaker Package

The tender for generator Circuit Breaker Package for the station was invited on open tender basis under ICB procedure. Out of the parties who had purchased tender documents, only bid of M/s ABB Switzerland was received even after extension of date of opening of bid four times on request of prospective bidders. After two rounds of negotiation with M/s ABB, the award was placed on the negotiated price.

# (d) 220 kV Power Cables Package

The tender for 220 kV Power cables Package was invited on open tender basis under ICB procedure. Out of the five parties who had purchase tender documents, only bid of M/s IIjim was received in spite of extension of date of opening. The package was re-tendered after revision of QR. Five parties purchased the bid documents, only one bid was received. In view of urgency and criticality of the time schedule, the package was awarded on lone bidder M/s IIjim.

12. Since further clarification was required, the petitioner was directed by letter dated 27.4.2011 to furnish the following information/documents:

#### (i) Main plant Package: (awarded price Rs. 1996 crore)

What was the quoted price of BHEL and the amount by which the quoted price was brought down and the justification with details for considering awarded prices as reasonable.

#### (ii) The Railway Siding: (awarded price Rs. 56.20 crore.)

Whether the work of The Railway Siding & S&T on behalf of NTPC was executed by M/s RITES in the past, if so, the cost of above work in 2-3 recent projects of NTPC justifying the cost incurred by RITES.

#### (iii) Generator Circuit Breaker: ( awarded price Rs. 13.00 crore)

Basis and justification of cost of the contract awarded to M/s ABB should be submitted along with the cost of such packages in 2-3 recent projects of NTPC.

#### (iv) 220 kV Cables: (awarded price Rs. 3.24 crore)

Basis and justification of cost of the contract to the concerned party.

13. The petitioner by its affidavit dated 17.5.2011 has submitted its clarification briefly as under:

## "(i) Main plant Package

M/s BHEL offer contained two options, one with rated steam temperature of 540 deg.C and other offer with steam temperature at reheater outlet of 568 deg.C. For better efficiency, NTPC opted the second offer and the price quoted was brought down and package was awarded at a price of Rs. 998 Crs. for each unit.

#### (ii) The Railway Siding

The tenders for project management and construction for Railway siding and S&T system package for NTPC projects in the past were awarded on RITES on single tender basis.

The awards for the project management and construction for Railway siding and S&T system package for recent NTPC projects like Vindhyachal, Stage-IV, Rihand Stage-III etc. have been placed on RITES on consultancy fee as percentage of Direct Cost of Railway Siding and S&T System of the respective project. The consultancy fee for Dadri – II is also on same terms.

#### (v) Generator Circuit Breaker

The award for GCB package was placed on ABB based on the last award placed for Talcher –II on ABB in Feb, 2001 with due escalation for intervening period. The quoted price was brought down after two rounds of discussion.

#### (vi) 220 kV cables

The cost estimate of package was prepared based on average of the three parties M/s NEXANS, M/s ILJIM and M/s G&W Electrical. The award price was less than the approved cost."

14. The clarification/information submitted by the petitioner as above, do not contribute to our effort to examine the reasonableness of the capital cost of the generating station. Thus, in absence of any material justification to examine the reasonableness of the cost of different packages, the capital cost of the generating station has been examined through a comparative study with the project cost and the

main plant package cost for Extension and Green Field projects of the petitioner, which had been commissioned during the period 2006-2010, given in the table as under:

	Project Costs & main plant cost for NTPC extension projects commissioned during 2006-10							
	Name of the	Installed	Type of	Main	Main Plant	Capital		Capital
	station/state	Capacity	project	Plant	Pkg. award	Cost		Cost
		(MW)		Pkg. cost	date	(Rs.in		/MW <i>(Rs</i>
				(Rs. in		crore)		in crore)
				crore)				
CC	DAL BASED STATI	ONS						
1	Vindhyachal	1000	Extension	2489.68	March/April,	4125.02	As approved	
	Stage-III (2x500		Project		2003		by CEA & the	4.13
	MW)						Board of	4.13
							NTPC	
2	Sipat Stage-II	1000	Green	1753.16	15.12.2003	3975.65	Based on	
	(2x500 MW)		field				certified	
			project				actual	3.98
							expenditure	3.96
							as on	
							23.2.2009	
3	Kahalgaon	1500	Extension	3465.59	July &	5824.45	Upto the cut-	
	Stage-II (3x500		Project		August,		off date i.e.	3.88
	MW)		_		2003 and		31.3.2013	3.00
					March, 2004			
4	NCTPS Dadri,	980	Extension	1996	July &	4941.32	Upto the cut-	
	Stage-II		Project		November		off date i.e.	5.04
	(2x490 MW)				2006		31.3.2013	

15. It could be observed from the above table that the main plant package cost of the generating station is reasonable when compared to Sipat STPS Stage-II (2x500 MW) and is lesser than the cost pertaining to Vindhyachal STPS, Stage-III and Kahalgaon STPS, Stage-II generating stations. All these generating stations of the petitioner have Mega Power Project status, and had availed benefit of lesser taxes and duties, when compared to the generating station (NCTPS-II, Dadri). Even though it appears that the capital cost of this generating station is higher when compared to other generating stations of the petitioner (viz., Vindhyachal STPS Stage-III, Sipat TPS, Stage-II and Kahalgaon STPS Stage-II) the per MW cost of this generating station(NCTPS-II, Dadri) is reasonable, considering the fact that the cost is higher by 7% to 10% (approx) due to taxes & duties (for not being a Mega Power Project), cost of about 1% due to higher land cost and cost of about 12% (considering 4% escalation every year)on account of escalation in price during the three year gap between the placement of orders for the

other three projects and orders for this generating station. Thus, the total percentage increase in capital cost in comparison to other projects works to around 20% to 23% (approx). Considering the above factors in totality, we are of the view that the project cost of the generating station is reasonable. Accordingly, the same is accepted.

16. Based on the above, the capital cost as on the date of commercial operation of Unit-I and Unit-II claimed by the petitioner as under, is allowed and the same has been considered for determination of tariff of the generating station.

		(₹in lakh)
	As on 30.1.2010	As on 30.7.2010
Gross Block	228421.89	441656.67
Less: Un-discharged	25954.23	43628.93
liabilities included		Ì
Capital cost on cash	202467.66	398027.74
basis		

17. The respondent Nos. 1 and 2, namely, UPPCL and NDPL have filed replies to the petition and the petitioner has filed its rejoinder.

# Additional Capital Expenditure for 2009-14 (projected)

- 18. Regulation 9 of the 2009 regulations provides as under:
  - "9. **Additional Capitalisation.** (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.

- (2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:
- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

- (ii) Change in law;
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and
- (v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2009.

19. The projected additional capital expenditure claimed by the petitioner for the period 2010-13, is shown as under:

(₹in lakh)

S1.	Details	Projected additional expenditure					
No. of Form 5B		2010-11	2011-12	2012-13			
1	Cost of Land & Site Development						
1.2	Rehabilitation & Resettlement (R&R)	100.00	100.00	100.00			
1.3	Preliminary Investigation & Site	1048.85		-			
	development						
2	Plant & Equipment						
2.1	Steam Generator Island	23174.28	4672.00	4672.00			
2.2	Turbine Generator Island						
2.3	BOP Mechanical						
2.3.2	CW system	489.51	-	-			
2.3.3	DM water plant	302.39	0.00	100.90			
2.3.4	Clarification plant	834.90	147.00				
2.3.7	Ash Handling System	792.85	0.00	841.80			
2.3.8	Coal Handling Plant	781.52	0.00	2200.00			
2.3.12	Air Condition & Ventilation System	115.67	42.58				
2.3.13	Fire fighting System	407.91	175.66	-			
1.3.14	HP/LP Piping	213.27	188.25	-			
2.4	BOP Electrical						
2.4.1	Switch Yard Package	2803.50	149.95	-			
2.4.2	Transformers Package	883.67		-			
2.4.3	Switch gear Package	211.67		-			
2.4.4	Cables, Cable facilities & grounding	543.57	154.00				
2.5	C&I Package	648.51	573.07	-			
4	Civil Works						
4.1	Main plant/Adm. Building	4071.02	1558.78	-			
4.2	CW system	2389.50	470.00	-			

4.3	Cooling Towers	1886.72	1415.70	-
4.9	MGR & Marshalling Yard	801.17	546.00	0.00
4.13	Township & Colony	1621.16	120.00	0.00
4.15	Lining of Canal	3750.00	11800.00	-
5	Construction & Pre-			
	Commissioning Expenses			
5.5	Tools & Plant	562.50	361.59	ı
6	Overheads	5590.24	6866.79	4824.00
	Total (as claimed in Form-9)	54024	29341	12738

- 20. The petitioner by its affidavit dated 4.6.2010 has submitted that all the projected capital expenditure works are to be completed after the date of commercial operation but before the cut-off date i.e 31.3.2013 and no work is envisaged to go beyond the cut-off date. The petitioner has also submitted that the amount of spares capitalized as on date of commercial operation of the first unit is ₹453.54 lakh The petitioner has further submitted that the anticipated cost in the COD of the first Unit and the projected capital expenditure is based on budget projections. As the budget is made on cash basis, there is no liability in the projected capital cost. It has been further submitted that all the works are covered under Regulation 9(1) of the 2009 regulations.
- 21. The petitioner by its affidavit dated 4.6.2010 has also submitted as under:
  - (i) As per accounting guideline, the expenditure on operators training has been charged to revenue in the year in which it has incurred. The details will be submitted at the time of truing-up for including the same in the capital cost.
  - (ii) For capitalization purposes, the startup fuel cost after netting off against UI income from sale of infirm power has been booked under pre-commissioning expenses. The same will be given at the time of truing-up.
  - (iii) The cost estimates of switch gear package and cabling package has been included in the transformer package. Similarly, the cost estimate of MGR and marshalling yard has been included in MGR/rail line.
- 22. Taking into consideration the documents on record and the submissions made by the parties and considering the claims of the petitioner in the light of the provisions of the 2009 regulations, we allow the projected additional capital expenditure claims of the petitioner, on prudence check, for the period 2010-13, in

terms of Regulation 9(1) of the 2009 regulations, subject to the actual expenditure at the time of truing-up. The petitioner is directed to submit the required details as stated in paragraph 21 above at the time of truing-up.

# Interest During Construction (IDC) and Financing Charges (FC)

23. In addition to the actual IDC and FC included in the capital cost as stated in paragraph 9 above, the petitioner has also claimed notional IDC, amounting to ₹226.31 lakh and ₹352.44 lakh as on the date of commercial operation of Unit-I and Unit-II, respectively, based on the premise of treating repayments during the period of construction of the project as being financed by equity and treating the same as notional loan. In view of the fact that the petitioner's claim for capital cost as on the date of commercial operation of the generating station (31.7.2010) as well as the additional capital expenditure are based on projections and that Regulation 6 of the 2009 regulations provide for truing-up of the capital cost, the IDC and FC along with notional IDC which form part of Capital cost, are allowed on projected basis, subject to truing-up. However, the admissible IDC (including notional IDC) shall be worked out in accordance with the Regulation 7(1)(a) of the 2009 regulations as quoted in paragraph 4 above.

#### Un-discharged liabilities

24. The petitioner vide its affidavit dated 16.2.2011 has revised the amount of undischarged liabilities from ₹25954.23 lakh to ₹20444.96 lakh as on 30.1.2010. As a result, the capital cost on cash basis as on the date of commercial operation of Unit-I has been revised to ₹207976.93 as against the capital cost of ₹202467.66 lakh submitted earlier. This is subject to truing up in terms of Regulation 6 of the 209 regulations.

#### **Short-Term FERV**

25. The petitioner in its projected capital cost has also included short-term FERV (charged to P&L A/c in books) amounting to (-) ₹968.92 lakh as on the date of commercial operation of both the Units. This has been allowed and is subject to truing-up in terms of the provisions contained in Regulation 6 of the 2009 regulations.

# **Capital Cost**

26. In view of above, the capital cost for the purpose of tariff considered as on the date of commercial operation of both the Units is as under:

		(Rs. in lakh)
	As on 31.1.2010 (Unit-I)	As on 31.7.2010 (Unit-II)
Gross Block	228421.89	441656.67
Less: Un-discharged liabilities included above	20444.96	43628.93
Capital cost on cash basis	207976.93	398027.74
Add: Notional IDC	226.31	352.44
Add: Short-term FERV (charged to P&L A/c)	(-) 968.92	(-) 968.92
Capital cost considered as on the date of commercial operation of both the respective Units	207234.32	397411.26

27. Accordingly, the projected capital cost for 2009-14, allowed for the purpose of tariff is as under:

					(Rs. in lai	kh)
	2009-10	2010-11	2010-11	2011-12	2012-13	2013-14
	(31.1.2010 to	(1.4.2010 to	(31.7.2010 to			
	31.3.2010)	30.7.2010)	31.3.2011)			
Opening capital	207234.32	207234.32	397411.26	451435.26	480776.26	493515.26
cost						
Add: Projected	0.00	0.00	54024.00	29341.00	12739.00	0.00
additional						
capital						
expenditure						
Closing capital	207234.32	207234.32	451435.26	480776.26	493515.26	493515.26
cost						
Average capital	207234.32	207234.32	424423.26	466105.76	487145.76	493515.26
cost						

28. The capital cost allowed as above is subject to truing-up in terms of the provisions contained in Regulation 6 of the 2009 regulations

# **Debt- Equity Ratio**

29. Regulation 12 of the 2009 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 utilised for meeting the capital expenditure of the generating station or the transmission system.

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

- (3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."
- 30. The petitioner has considered the debt-equity ratio of 70:30 as on the date of commercial operation of both the units. Since, the capital cost considered is based on projections, the debt-equity ratio as claimed by the petitioner is allowed. As such, the debt-equity ratio of 70:30 has been considered for computation of tariff for the period 2009-14. However, changes if any, to the debt equity ratio on actual basis would be dealt with as per provisions of the 2009 regulations, at the time of truing up.

# Return on Equity

- 31. Regulation 15 of the 2009 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."

- 32. The petitioner has claimed return on equity of 24.239% (16.00/(1-33.99%)) per annum on the normative equity after considering the base rate of 16.00% in line with the first proviso to Clause (2) of the above regulation with the tax rate of 33.99%. In order to examine if the project is eligible for a base return on equity of 16%, the relevant dates in relation to the completion of the project is noted as under:
  - (i) Date of investment approval: 31.7.2006
  - (ii) Date of commercial operation of Unit-I: 31.1.2010
  - (iii) Date of commercial operation of Unit-II (and generating station): 31.7.2010
- 33. It is noticed from the above that the petitioner has been able to declare the commercial operation of both the units of the generating station within the time limit of 42 and 48 months respectively, as specified in Appendix-II to the 2009 regulations, applicable in case of coal based extension projects. In view of this, the generating station is eligible for a base return on equity of 16%. Accordingly, return on equity has been worked out @24.239% per annum on the normative equity after accounting for additional capital expenditure (after considering the base rate of 16.00% in line with the first proviso to clause (2) of Regulation 15 as above and with the tax rate of 33.99%). Return on Equity is worked out as under:

(₹in lakh) 2009-10 2010-11 2010-11 2011-12 2012-13 2013-14 (31.1.2010 to (1.4.2010 to (31.7.2010 to 31.3.2010) 30.7.2010) 31.3.2011) 62170.30 135430.58 144232.88 148054.58 Normative 62170.30 119223.38 Equity -Opening 0.000.00 3821.70 Add: Addition of 0.00 16207.20 8802.30 equity on account of additional capital expenditure Normative 62170.30 62170.30 135430.58 144232.88 148054.58 148054.58 Equity - Closing Average Equity 62170.30 62170.30 127326.98 139831.73 146143.73 148054.58 Return 15069.46 15069.46 30862.79 33893.81 35423.78 35886.95 on **Equity** 24.239%

#### Interest on loan

- 34. Regulation 16 of the 2009 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."

- 35. 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 ₹145064.03 lakh and ₹278187.88 lakh as on 31.1.2010 and 31.7.2010, respectively.
- (b) The net loan opening as on 31.1.2010 is same as the gross loan since cumulative repayment of loan up to the previous year is 'nil'.
- (c) The rate of interest considered in calculation in case of all loans is on annual rest basis.
- (d) The rate of interest on actual loans prevailing as on the date of commercial operation, as submitted by the petitioner, has been considered for calculations.
- (e) Some of the loans are on floating basis and the applicable rate of interest on these loans as on the date of commercial operation has been considered in the calculation of the weighted average rate of interest on loan.
- (f) Interest rate for Bonds considered in the actual loan portfolio has been arrived at after considering the Surveillance fee of 0.03%.
- (g) Depreciation allowed for the respective years of the tariff period has been considered as repayment.
- (h) Average net loan is calculated as average of opening and closing of loans.
- (i) The petitioner has considered FIFO method of repayment for few of the loans drawn till the date of commercial operation of the generating station, while working out the weighted average rate of interest in Form-13 of the petition. Since, the decision of the Commission in its various orders considering average method of repayment of loan instead of the FIFO method of repayment of loan has been upheld by the Appellate Tribunal for Electricity in its judgments, the weighted average rate of interest of loan has been calculated accordingly.
- (j) The petitioner in its petition has included the proposed drawl of loan from PFC-V in its actual loan portfolio, which had actually materialized. The proposed drawl of Bond XXV on 15.9.2010 has also been considered for calculating the weighted average rate of interest for 2009-14. As such, loans drawn up to date of commercial operation of the generating station have been considered, based on the submissions made by the petitioner.

- (k) The drawl of loan, if any, for funding the projected additional capital expenditure, is made at a later stage, the actual/s loans would be considered at the time of truing-up in terms of the 2009 regulations.
- 36. The actual loans drawn up to date of commercial operation of the generating station and considered for calculation of the weighted average rate of interest on loan is annexed as Annexure-I to this order. The computation of interest on notional loan by applying the weighted average interest rate is as under:

					( (	🕇 in lakh)
	2009-10 (31.1.2010 to 31.3.2010)	2010-11 (1.4.2010 to 30.7.2010)	2010-11 (31.7.2010 to 31.3.2011)	2011-12	2012-13	2013-14
Gross Opening Loan	145064.03	145064.03	278187.88	316004.68	336543.38	345460.68
Cumulative Repayment of Loan	0.00	1617.47	4879.38	18760.98	41565.87	65400.18
Net Loan Opening	145064.03	143446.55	273308.51	297243.70	294977.51	280060.51
Addition of loan due to projected additional capital expenditure	0.00	0.00	37816.80	20538.70	8917.30	0.00
Repayment of loan (Normative)	1617.47	3261.90	13881.61	22804.89	23834.30	24145.94
Net Loan Closing	143446.55	140184.65	297243.70	294977.51	280060.51	255914.56
Average Loan	144255.29	141815.60	285276.10	296110.61	287519.01	267987.53
Weighted Average Rate of Interest on Loan	8.7257%	8.7046%	8.6459%	8.6482%	8.6559%	8.6553%
Interest on Loan	12587.35	12344.52	24664.65	25608.14	24887.29	23195.10

#### Depreciation

- 37. Regulation 17 of the 2009 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 long-term 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 3[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."
- 38. In terms of the above, depreciation has been calculated by applying the weighted average rate of depreciation of 4.7481% for the period from 31.1.2010 to 30.7.2010 and 4.8926% for the period from 31.7.2010 to 31.3.2014, respectively. The depreciation has been calculated as under:

					(₹ iı	n lakh)
	2009-10 (31.1.2010 to 31.3.2010)	2010-11 (1.4.2010 to 30.7.2010)	2010-11 (31.7.2010 to 31.3.2011)	2011-12	2012-13	2013-14
Opening capital cost	207234.32	207234.32	397411.26	451435.26	480776.26	493515.26
Add: Projected Additional capital expenditure			54024.00	29341.00	12739.00	0.00
Closing capital cost	207234.32	207234.32	451435.26	480776.26	493515.26	493515.26
Average capital cost	207234.32	207234.32	424423.26	466105.76	487145.76	493515.26
Rate of depreciation	4.7481%	4.7481%	4.8926%	4.8926%	4.8926%	4.8926%
Depreciation	1617.47	3261.90	13881.61	22804.89	23834.30	24145.94
Depreciation (annualised)	9839.63	9839.63	20765.52	22804.89	23834.30	24145.94

# O & M Expenses

- 39. Clause (a) of Regulation 19 of Regulation of the 2009 regulations provide as under:
  - "19. Operation and Maintenance Expenses: Normative operation and maintenance expenses shall be as follows, namely:
  - (a) Coal based and lignite fired (including those based on CFBC technology) generating stations, other than the generating stations referred to in clauses (b) and (d):

				(₹ in lakh/MW)
Year	200/210/250	300/330/350	500 MW sets	600 MW and
	MW sets	MW sets		above sets
2009-10	18.20	16.00	13.00	11.70
2010-11	19.24	16.92	13.74	12.37
2011-12	20.34	17.88	14.53	13.08
2012-13	21.51	18.91	15.36	13.82
2013-14	22.74	19.99	16.24	14.62

40. Based on the norms applicable for a 500 MW generating unit, the year-wise O&M expenses allowed for the generating station is as under:

(₹ in lakh) 2009-10 2010-11 2010-11 2011-12 2012-13 2013-14 (31.1.2010 to (1.4.2010 to (31.7.2010 to 31.3.2010) 30.7.2010) 31.3.2011) 14239.40 15052.80 15915.20 Annualized O&M 6370.00 6732.60 13465.20 expenses

# **Target Availability**

41. The target availability of 85% has been considered for the purpose of tariff, in terms of the 2009 regulations.

# **Interest on Working Capital**

- 42. Regulation 18(1)(a) of the 2009 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-pit-head 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.
- 43. Interest on Working capital is worked out as under:

## (a) Fuel cost and cost of secondary fuel oil (2 months):

The respondent, UPPCL has submitted that there is abnormal variation in the price of coal for the period from October, 2009 to December, 2009 which needs to be explained by the petitioner. The petitioner has clarified that since coal is transported by rail, there is variation in price and transportation on month to month basis. The variation in coal price was due to receipt of coal from CCL in October, 2009 and in addition to this, from SCCL during November 2009, which was costlier. In the month of December, 2009 the generating station received some imported coal, in addition to the coal received

from CCL and SCCL. Hence, the variation in price of coal. We find force in the submissions of the petitioner. Accordingly, the cost of fuel component in working capital based on price and GCV of coal and HFO (secondary fuel oil) for preceding three months from October, 2009 to December, 2009 for Unit-I and for the preceding three months from April, 2010 to June, 2010 for Unit-I and Unit-II is allowed as under:

						(₹ in lakh	)
		2009-10	2010-11	2010-11	2011-12	2012-13	2013-14
		(31.1.2010 to	(1.4.2010 to	(31.7.2010 to			
		31.3.2010)	30.7.2010)	31.3.2011)			
Cost of coal	for	11843.53	11843.53	26640.84	26713.8	26640.8	26640.8
two months	3				2	4	4
Cost	of	168.17	168.17	363.61	364.60	363.61	363.61
secondary	fuel						
oil for	two						
months							

(b) **Maintenance Spares:** The maintenance spares claimed by the petitioner is in order and is allowed as under:

					(₹ in la	kh)
	2009-10	2010-11	2010-11	2011-12	2012-13	2013-14
	(31.1.2010 to	(1.4.2010 to	(31.7.2010 to			
	31.3.2010)	30.7.2010)	31.3.2011)			
Maintenance	1274.00	1346.52	2693.04	2847.88	3010.56	3183.04
spares						

(c) **Receivables:** Receivables have been worked out as under on the basis of two months of fixed and variable charges. For this purpose, the operational parameters and weighted average price of fuel has been considered.

					(₹	in lakh)
	2009-10	2010-11	2010-11	2011-12	2012-13	2013-14
	(31.1.2010 to	(1.4.2010 to	(31.7.2010 to			
	31.3.2010)	30.7.2010)	31.3.2011)			
Variable charges-	11843.53	11843.53	26640.84	26713.82	26640.84	26640.84
2 months						
Fixed charges-2	8169.94	8192.46	16682.59	17842.92	18293.71	18288.94
months						
Total	20013.48	20035.99	43323.42	44556.74	44934.54	44929.77

(d) **O&M Expenses:** In terms of Regulation 18(1)(a)(v), operation & maintenance expenses for one month, as part of the working capital, is worked out as under

					(₹ in lak	h)
	2009-10	2010-11	2010-11	2011-12	2012-13	2013-14
	(31.1.2010 to	(1.4.2010 to	(31.7.2010 to			
	31.3.2010)	30.7.2010)	31.3.2011)			
O&M expense	530.83	561.05	1122.10	1186.62	1254.40	1326.27
(one month)						

- 44. In terms of Clause (3) of Regulation 18 of the 2009 regulations, the Rate of interest on working capital shall be on normative basis and shall be considered as under:
  - (i) SBI short-term Prime Lending Rate as on 1.4.2009 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 30.6.2010.
  - (ii) SBI Base Rate plus 350 basis points as on 1.7.2010 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 1.7.2010 to 31.3.2014.

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."

- 45. Interest on working capital for Unit-I for the period from 31.1.2010 to 30.7.2010 has been calculated based on the SBI PLR of 12.25% prevailing as on 1.4.2009 (i.e. 1st April of the year in which the Unit-I has been declared under commercial operation). Further, the interest on working capital for the generating station for the period from 31.7.2010 to 31.3.2014 has been calculated based on rate of interest of 11% (SBI Base Rate of 7.50% plus 350 basis points, as on 1.7.2010) prevailing as on 1.7.2010.
- 46. The necessary details in support of calculation of interest on working capital are as under:

						(₹ in lakh)
	2009-10	2010-11	2010-11	2011-12	2012-13	2013-14
	(31.1.2010 to	(1.4.2010 to	(31.7.2010 to			
	31.3.2010)	30.7.2010)	31.3.2011)			
Cost of coal for 2	11843.53	11843.53	26640.84	26713.82	26640.84	26640.84
months						
Cost of secondary fuel	168.17	168.17	363.61	364.60	363.61	363.61
oil for 2 months						
Maintenance spares	1274.00	1346.52	2693.04	2847.88	3010.56	3183.04
Receivables	20013.48	20035.99	43323.42	44556.74	44934.54	44929.77
O&M Expenses	530.83	561.05	1122.10	1186.62	1254.40	1326.27
Total working capital	33830.01	33955.27	74143.00	75669.67	76203.95	76443.52
Rate of interest	12.2500%	12.2500%	11.0000%	11.0000%	11.0000%	11.0000%
Interest on working	4144.18	4159.52	8155.73	8323.66	8382.43	8408.79
capital						

# Expenses on secondary Fuel Oil consumption for coal based generating station

47. Regulation 20 of the 2009 regulations provides for the computation of expenses on secondary fuel oil consumption for coal-based and lignite-fired generating stations as under:

"(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:

= SFC x LPSFi x NAPAF x 24 x NDY x IC x 10

#### Where,

SFC - Normative Specific Fuel Oil consumption in ml/kWh

LPSFi - Weighted Average Landed Price of Secondary Fuel in Rs./ml considered initially

NAPAF - Normative Annual Plant Availability Factor in percentage

NDY - Number of days in a year

IC - Installed Capacity in MW.

(2) Initially, the landed cost incurred by the generating company on secondary fuel oil shall be taken based on actuals of the weighted average price of the three preceding months and in the absence of landed costs for the three preceding months, latest procurement price for the generating station, before the start of the year.

The secondary fuel oil expenses shall be subject to fuel price adjustment at the end of the each year of tariff period as per following formula:

SFC x NAPAF x 24 x NDY x IC x 10 x (LPSFy - LPSFi)

Where,

LPSFy = The weighted average landed price of secondary fuel oil for the year in Rs./ml

48. The following are the operational norms considered by the petitioner for the generating station.

Specific Oil Consumption	Ml/kWh	1.00
Auxiliary Consumption	%	6.00
Heat Rate	Kcal/kWh	2424

49. The respondent, NDPL has submitted that the Gross Station Heat Rate (SHR) claimed by the petitioner is not in accordance with the 2009 regulations as the same should be 2061Kcal/kWh instead of 2424 Kcal/kWh. In response, the petitioner has clarified that the heat rate mentioned by the respondent NDPL is the Turbine cycle Heat Rate. The Heat Rate of 2424Kcal/Kwh has been claimed as per the 2009

Regulations. We agree with the submissions of the petitioner. The operational norms considered as above are in terms of the provisions of the 2009 regulations. Based on the weighted average GCV and price of secondary fuel oil and the operational parameters as discussed above, the cost of secondary fuel oil considered in tariff for the period 2009-14 is as under:

						(Rs. in la
	2009-10	2010-11	2010-11	2011-12	2012-13	2013-14
	(31.1.2010 to	(1.4.2010 to	(31.7.2010 to			
	31.3.2010)	30.7.2010)	31.3.2011)			
Cost of secondary	1009.02	1009.02	2181.64	2187.61	2181.64	2181.64
fuel oil						

# Annual Fixed charges for 2009-14

50. A statement showing summary of the capital cost and other related matters is annexed to this order (Annexure-II). The annual fixed charges for the period 2009-14 in respect of the generating station are summarized as under:

						(₹in lakh)
	2009-10 (31.1.2010 to 31.3.2010)	2010-11 (1.4.2010 to 30.7.2010)	2010-11 (31.7.2010 to 31.3.2011)	2011-12	2012-13	2013-14
No. of days for which tariff is calculated	60	121	244	366	365	365
Return on Equity	15069.46	15069.46	30862.79	33893.81	35423.78	35886.95
Interest on Loan	12587.35	12344.52	24664.65	25608.14	24887.29	23195.10
Depreciation	9839.63	9839.63	20765.52	22804.89	23834.30	24145.94
Interest on Working Capital	4144.18	4159.52	8155.73	8323.66	8382.43	8408.79
O&M Expenses	6370.00	6732.60	13465.20	14239.40	15052.80	15915.20
Cost of secondary fuel oil	1009.02	1009.04	2181.64	2187.61	2181.64	2181.64
Total	49019.65	49154.77	100095.52	107057.52	109762.25	109733.61

Note: (i) All figures are on annualized basis.(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.

51. 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)**

52. Sub-clause (a) of clause (6) of Regulation 21 of the 2009 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:

 $ECR = \{(GHR-SFC \times CVSF) \times LPPF / CVPF + LC \times LPL\} \times 100 / (100-AUX)$ 

#### Where,

AUX = Normative auxiliary energy consumption in percentage.

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

CVSF = Calorific value of secondary fuel, in kCal per ml.

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

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

LC = Normative limestone consumption in kg per kWh.

*LPL* = Weighted average landed price of limestone in Rupees per kg.

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

SFC = Specific fuel oil consumption, in <math>ml per kWh.

53. The Energy charge claimed by the petitioner in its petition is 183.95paise/kWh (ex-bus). The energy charges claimed is based on the fuel price for the months of September 2009, October, 2009 and November 2009. However, the petitioner by its affidavit has submitted the fuel price for immediate three months from the date of commercial operation of Unit-I i.e October, 2009, November 2009 and December, 2009, and accordingly, the Energy Charge (ex-bus) as on 31.1.2010 works out to 207.20 paise/kWh. Similarly, the Energy Charge (ex-bus) for Unit-I and Unit-II (as on 31.7.2010) has been computed based on the GCV and price of fuel for preceding three months i.e April, 2010, May, 2010 and June, 2010 and the same has been works out to 233.04 paise/kWh. For the computation of Energy Charge Rate (ECR), the following norms have been considered.

Description	Unit	As on 31.1.2010	As on 31.7.2010
Capacity	MW	490	980
Gross Station Heat Rate	Kcal/kWh	2424	2424
Auxiliary Energy Consumption	%	6.00	6.00
Weighted Average GCV of oil	Kcal/l	9871.50	9832.00
Weighted Average GCV of coal	Kcal/kg	3726.90	3984.39
Weighted Average price of oil	Rs/Kl	27656.01	29897.39
Weighted Average price of coal	Rs/MT	3006.79	3615.30
Rate of Energy Charge(ex-bus)	Paise/kWh	207.20	233.04

54. However, energy charge on month to month basis will be billed by the petitioner as per Regulation 21 (5) of the 2009 regulations which is extracted below:

"21 (5) The energy charge shall cover the primary fuel cost and limestone consumption cost (where applicable), and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment). Total Energy charge payable to the generating company for a month shall be:

(Energy charge rate in Rs /kWh) x {Scheduled energy (ex-bus) for the month in kWh.}"

# **Application Fees and Publication Fees**

- 55. The petitioner has sought approval for the reimbursement of the fee paid by it for filing the petition for the years 2009-10, 2010-11and 2011-12, and the expenses amounting to ₹108612/-incurred for publication of notices in newspapers in connection with the petition. The respondent, NDPL in its reply dated 17.3.2010 has submitted that the filing fees and the publication expenses should be disallowed in terms of the order of the Commission in Petition No.129/2005. In response, the petitioner has submitted that the filing fees and publication expenses are to be reimbursed in terms of Regulation 42 of the 2009 Regulations.
- 56. Regulation 42 of the 2009 regulations provides as under:

"The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the transmission customers, as the case may be."

57. In terms of 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 filing fees of

₹1796667/- for 2009-10 and ₹1960000/- for 2010-11 towards filing of tariff petition

and the amount of ₹108612/- incurred for publication of notices in newspapers in

connection with the petition, shall be directly recovered from the beneficiaries on pro

rata basis.

58. In addition to the charges approved above, the petitioner is entitled to recover

other taxes etc levied by statutory authorities in accordance with the 2009

regulations, as applicable. However, the claim towards RLDC charges has not been

considered at this stage and the same would be dealt with separately in accordance

with law.

59. 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 our order dated 26.8.2011 in Petition No.

175/2011(suo motu)

60. Petition No.14/2010 stands disposed of in terms of the above.

(V.S.VERMA)

Sd/-(S.JAYARAMAN)

Sd/-(DR.PRAMOD DEO)

CHAIRPERSON

# Annexure-I

# CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST

		31.1.2010	1-4.2010	31.7.2110	1.4.2011	1.4.2012 to 31.3.2013	1.4.2013 to
		to 31.3.2010	to 30.7.2010	to 31.3.2011	to 31.3.2012	31.3.2013	31.3.2014
UBI-II	Gross Loan - Opening	10000.00	10000.00	10000.00	10000.00	10000.00	10000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	1428.50	2857.00
	Net Loan - Opening	10000.00	10000.00	10000.00	10000.00	8571.50	7143.00
	Add: Drawl during the period	-	-	-	1400.50	1400.50	1400 50
	Less: Repayment during the period	-	-	-	1428.50	1428.50	1428.50
	Net Loan - Closing	10000.00	10000.00	10000.00	8571.50	7143.00	5714.50
	Rate of Interest on Loan	9.2500%	9.2500%	8.0000%	8.0000%	8.0000%	8.0000%
	Interest	925.00	925.00	800.00	742.86	628.58	514.30
UBI-III	Gross Loan -	5000.00	5000.00	5000.00	5000.00	5000.00	5000.00
	Opening Cumulative repayment of loan upto Previous Otr	-	-	-	-	-	711.11
	Net Loan - Opening	5000.00	5000.00	5000.00	5000.00	5000.00	4288.89
	Add: Drawl during the period	-	-	-	-	-	-
	Less: Repayment du the period	-	-	-	-	711.11	711.11
	Net Loan - Closing	5000.00	5000.00	5000.00	5000.00	4288.89	3577.78
	Rate of Interest on Loan	9.0000%	9.0000%	9.0000%	9.0000%	9.0000%	9.0000%
	Interest	450.00	450.00	450.00	450.00	418.00	354.00
SBI-III	Gross Loan - Opening	9000.00	9000.00	9000.00	9000.00	9000.00	9000.00
	Cumulative repayment of loan upto Previous Qtr	3857.14	4500.00	4500.00	5785.71	7071.43	8357.14
	Net Loan - Opening	5142.86	4500.00	4500.00	3214.29	1928.57	642.86
	Add: Drawl during the period	-	-	-	-	-	-
	Less: Repayment du the period	642.86	-	1285.71	1285.71	1285.71	642.86
	Net Loan - Closing Rate of Interest on	4500.00 9.7500%	4500.00 9.7500%	3214.29 9.7500%	1928.57 9.7500%	642.86 9.7500%	9.7500%
	Loan Interest	470.09	438.75	376.07	250.71	125.36	31.34
SBI-IV	Gross Loan - Opening	20500.00	20500.00	20500.00	20500.00	20500.00	20500.00
	Cumulative repayment of loan upto Previous Qtr	1464.29	2928.57	2928.57	5857.14	8785.71	11714.29
	Net Loan - Opening	19035.71	17571.43	17571.43	14642.86	11714.29	8785.71
	Add: Drawl during the period	-	-	-	-	-	-

	Less: Repayment during the period	1464.29	-	2928.57	2928.57	2928.57	2928.57
	Net Loan - Closing Rate of Int on	17571.43 9.5000%	17571.43 9.5000%	14642.86 9.5000%	11714.29 9.5000%	8785.71 9.5000%	5857.14 9.5000%
	Loan Interest	1738.84	1669.29	1530.18	1251.96	973.75	695.54
SBI-V (T1,	Gross Loan - Opening	3000.00	3000.00	3000.00	3000.00	3000.00	3000.00
·	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	428.57	857.14
	Net Loan - Opening	3000.00	3000.00	3000.00	3000.00	2571.43	2142.86
	Add: Drawl during the period	-	-	-	-	-	-
	Less: Repayment du the period	-	-	-	428.57	428.57	428.57
	Net Loan - Closing Rate of Int on Loan	3000.00 9.5000%	3000.00 9.5000%	3000.00 9.5000%	2571.43 9.5000%	2142.86 9.5000%	1714.29 9.5000%
	Interest	285.00	285.00	285.00	264.64	223.93	183.21
SBI-V (Other)	Gross Loan - Opening	5,000.00	5,000.00	7,500.00	7,500.00	7,500.00	7,500.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	1,071.43	2,142.86
	Net Loan - Opening	5,000.00	5,000.00	7,500.00	7,500.00	6,428.57	5,357.14
	Add: Drawl during the period	-	2,500.00				
	Less: Repayment du the period	-	-		1,071.43	1,071.43	1,071.43
	Net Loan - Closing	5,000.00	7,500.00	7,500.00	6,428.57	5,357.14	4,285.71
	Rate of Interest on Loan	9.5000%	9.5000%	9.5000%	9.5000%	9.5000%	9.5000%
	Interest	475.00	593.75	712.50	661.61	559.82	458.04
Andhra Bank	Gross Loan - Opening	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	571.43
	Net Loan - Opening	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	3,428.57
	Add: Drawl du the period	-	-	,	·		·
	Less: Repayment du the period	-	-			571.43	571.43
	Net Loan - Closing	4,000.00	4,000.00	4,000.00	4,000.00	3,428.57	2,857.14
	Rate of Int on Loan	8.6500%	8.6500%	8.6500%	8.6500%	8.6500%	8.6500%
	Interest	346.00	346.00	346.00	346.00	321.29	271.86
CBI-III	Gross Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	714.29	2,142.86

						,	
	Net Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00	9,285.71	7,857.14
	Add: Drawl du the	-	-	10,000.00	10,000.00	3,400111	,,007,11
	Less: Repayment du the period	-	-		714.29	1,428.57	1,428.57
	Net Loan - Closing	10,000.00	10,000.00	10,000.00	9,285.71	7,857.14	6,428.57
	Rate of Int on Loan	8.5000%	8.5000%	8.5000%	8.5000%	8.5000%	8.5000%
	Interest	850.00	850.00	850.00	819.64	728.57	607.14
CBI-IV	Gross Loan - Opening	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	71.43
	Net Loan - Opening Add: Drawl du the	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	928.57
	period  Less: Repayment du the period	-	-			71.43	142.86
	Net Loan - Closing	1,000.00	1,000.00	1,000.00	1,000.00	928.57	785.71
	Rate of Int on Loan	9.5000%	9.5000%	9.5000%	9.5000%	9.5000%	9.5000%
	Interest	95.00	95.00	95.00	95.00	91.61	81.43
IDFC-I	Gross Loan -						
	Opening Cumulative	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
	repayment of loan upto Previous Qtr	-	-	-	-	750.00	1,750.00
	Net Loan - Opening Add: Drawl du the	10,000.00	10,000.00	10,000.00	10,000.00	9,250.00	8,250.00
	period	-	-				
	Less: Repayment du the period	-	-		750.00	1,000.00	1,000.00
	Net Loan - Closing	10,000.00	10,000.00	10,000.00	9,250.00	8,250.00	7,250.00
	Rate of Int on Loan	9.0200%	9.0200%	7.9000%	7.9000%	7.9000%	7.9000%
	Interest	902.00	902.00	790.00	760.38	691.25	612.25
IDFC-II	Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	375.00
	Net Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	4,625.00
	Add: Drawl du the period Less: Repayment	-	-				
	du the period	-	-			375.00	500.00
	Net Loan - Closing	5,000.00	5,000.00	5,000.00	5,000.00	4,625.00	4,125.00
	Rate of Int on	9.3000%	9.3000%	8.9800%	8.9800%	8.9800%	8.9800%

	Loan						
	Interest						
		465.00	465.00	449.00	449.00	432.16	392.88
IDFC-II	Gross Loan -						
1010-11	Opening	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	450.00
	Net Loan - Opening	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	5,550.00
	Add: Drawl du the period	-	-				
	Less: Repayment du the period	-	-			450.00	600.00
	Net Loan - Closing	6,000.00	6,000.00	6,000.00	6,000.00	5,550.00	4,950.00
	Rate of Int on Loan	8.6800%	8.6800%	8.9800%	8.9800%	8.9800%	8.9800%
	Interest	520.80	520.80	538.80	538.80	518.60	471.45
LIC-III	Gross Loan - Opening	9,500.00	9,500.00	9,500.00	9,500.00	9,500.00	9,500.00
	Cumulative repayment of loan upto Previous Qtr	2,375.00	2,375.00	2,850.00	3,325.00	4,275.00	5,225.00
	Net Loan - Opening Add: Drawl du the	7,125.00	7,125.00	6,650.00	6,175.00	5,225.00	4,275.00
	period  Less: Repayment du the period	-	475.00	475.00	950.00	950.00	950.00
	Net Loan - Closing	7,125.00	6,650.00	6,175.00	5,225.00	4,275.00	3,325.00
	Rate of Int on Loan	8.2771%	8.2771%	8.2771%	8.2771%	8.2771%	8.2771%
	Interest	589.74	570.09	530.77	471.79	393.16	314.53
LIC-IV	Gross Loan -						
LIC-IV	Opening	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	1,001.00
	Net Loan - Opening	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	5,999.00
	Add: Drawl du the period	_	_				
	Less: Repayment du the period	-	-			1,001.00	1,001.00
	Net Loan - Closing	7,000.00	7,000.00	7,000.00	7,000.00	5,999.00	4,998.00
	Rate of Int on Loan	9.6400%	9.6400%	9.6400%	9.6400%	9.6400%	9.6400%
	Interest	674.80	674.80	674.80	674.80	626.55	530.06
LIC-IV	Gross Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00

	Cumulative repayment of loan	-	-	-	-	-	1,430.00
	upto Previous Qtr Net Loan -						
	Opening Add: Drawl du the	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	8,570.00
	period Less: Repayment	-	-				
	du the period	-	-			1,430.00	1,430.00
	Net Loan - Closing	10,000.00	10,000.00	10,000.00	10,000.00	8,570.00	7,140.00
	Rate of Int on Loan	9.7700%	9.7700%	9.7700%	9.7700%	9.7700%	9.7700%
	Interest	977.00	977.00	977.00	977.00	907.14	767.43
LIC-V	Gross Loan -						
	Opening Cumulative	7,500.00	7,500.00	7,500.00	7,500.00	7,500.00	7,500.00
	repayment of loan upto Previous Qtr	-	-	-	-	-	1,072.50
	Net Loan - Opening	7,500.00	7,500.00	7,500.00	7,500.00	7,500.00	6,427.50
	Add: Drawl during the period	-	-				
	Less: Repayment du the period	-	-			1,072.50	1,072.50
	Net Loan - Closing	7,500.00	7,500.00	7,500.00	7,500.00	6,427.50	5,355.00
	Rate of Int on Loan	11.0000%	11.0000%	11.0000%	11.0000%	11.0000%	11.0000%
	Interest	825.00	825.00	825.00	825.00	766.01	648.04
OBC	Gross Loan -						
	Opening	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00	11,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	1,571.43	3,142.86
	Net Loan - Opening	11,000.00	11,000.00	11,000.00	11,000.00	9,428.57	7,857.14
	Add: Drawl du the period	-	-				
	Less: Repayment during the period	-	-		1,571.43	1,571.43	1,571.43
	Net Loan - Closing	11,000.00	11,000.00	11,000.00	9,428.57	7,857.14	6,285.71
	Rate of Interest on Loan	8.2500%	8.2500%	8.2500%	8.2500%	8.2500%	8.2500%
	Interest	907.50	907.50	907.50	842.68	713.04	583.39
PNB-II	Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	Cumulative repayment of loan upto Previous Qtr	-	357.14	357.14	1,071.43	1,785.71	2,500.00
	Net Loan - Opening	5,000.00	4,642.86	4,642.86	3,928.57	3,214.29	2,500.00
	Add: Drawl during the period	-	-				

	Less: Repayment du the period	357.14	-	714.29	714.29	714.29	714.29
	Net Loan - Closing	4,642.86	4,642.86	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%	8.7500%	8.7500%
	Interest	421.88	406.25	375.00	312.50	250.00	187.50
South Indian Bank-II	Gross Loan - Opening	100.00	100.00	100.00	100.00	100.00	100.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	7.14
	Net Loan - Opening	100.00	100.00	100.00	100.00	100.00	92.86
	Add: Drawl du the period	-	-				
	Less: Repayment du the period	-	-			7.14	14.29
	Net Loan - Closing	100.00	100.00	100.00	100.00	92.86	78.57
	Rate of Int on Loan	10.0000%	10.0000%	10.0000%	10.0000%	10.0000%	10.0000%
	Interest	10.00	10.00	10.00	10.00	9.64	8.57
Vijaya Bank-II	Gross Loan - Opening	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	500.00	1,000.00	1,500.00
	Net Loan - Opening	3,500.00	3,500.00	3,500.00	3,000.00	2,500.00	2,000.00
	Add: Drawl du the period	-	-				
	Less: Repayment du the period	-	-	500.00	500.00	500.00	500.00
	Net Loan - Closing	3,500.00	3,500.00	3,000.00	2,500.00	2,000.00	1,500.00
	Rate of Int on Loan	8.5000%	8.5000%	9.5000%	9.5000%	9.5000%	9.5000%
	Interest	297.50	297.50	308.75	261.25	213.75	166.25
Allahabad Bank-II	Gross Loan - Opening	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00
	Cumulative repayment of loan upto Previous Qtr	285.71	428.57	428.57	714.29	1,000.00	1,285.71
	Net Loan - Opening	1,714.29	1,571.43	1,571.43	1,285.71	1,000.00	714.29
	Add: Drawl du the period	-	-				
	Less: Repayment du the period	142.86	-	285.71	285.71	285.71	285.71
	Net Loan - Closing	1,571.43	1,571.43	1,285.71	1,000.00	714.29	428.57
	Rate of Int on Loan	7.0000%	7.0000%	7.0000%	7.0000%	7.0000%	7.0000%
	Interest						

Tamilnadu Mercantile Bank	Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	357.14	1,071.43	1,785.71
	Net Loan - Opening	5,000.00	5,000.00	5,000.00	4,642.86	3,928.57	3,214.29
	Add: Drawl du the period	-	-				
	Less: Repayment du the period	-	-	357.14	714.29	714.29	714.29
	Net Loan - Closing	5,000.00	5,000.00	4,642.86	3,928.57	3,214.29	2,500.00
	Rate of Int on Loan	10.0000%	10.0000%	10.0000%	10.0000%	10.0000%	10.0000%
	Interest	500.00	500.00	482.14	428.57	357.14	285.71
PFC-V	Gross Loan - Opening	9,500.00	9,500.00	9,500.00	9,500.00	9,500.00	9,500.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	
	Net Loan - Opening	9,500.00	9,500.00	9,500.00	9,500.00	9.500.00	9,500.00
	Add: Drawl du the period	-	-	3,000.00	3,000.00	3,000.00	2,000.00
	Less: Repayment du the period	-	-				593.75
	Net Loan - Closing	9,500.00	9,500.00	9,500.00	9,500.00	9,500.00	8,906.25
	Rate of Int on Loan	7.9300%	7.9300%	7.9300%	7.9300%	7.9300%	7.9300%
	Interest	753.35	753.35	753.35	753.35	753.35	729.81
PFC-V	Gross Loan -						
	Opening Cumulative	5,500.00	5,500.00	5,500.00	5,500.00	5,500.00	5,500.00
	repayment of loan upto Previous Qtr	-	-	-	-	-	
	Net Loan - Opening	5,500.00	5,500.00	5,500.00	5,500.00	5,500.00	5,500.00
	Add: Drawl du the period	-	-				
	Less: Repayment du the period	-	-				343.75
	Net Loan - Closing	5,500.00	5,500.00	5,500.00	5,500.00	5,500.00	5,156.25
	Rate of Int on Loan	8.2300%	8.2300%	8.2300%	8.2300%	8.2300%	8.2300%
	Interest	452.65	452.65	452.65	452.65	452.65	438.50
PFC-V	Gross Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	
	Net Loan - Opening	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00

	Add: Drawl du the period	_					
	Less: Repayment du the period	-	-				625.00
	Net Loan - Closing						
	Rate of Int on	10,000.00 8.1000%	10,000.00 8.1000%	10,000.00 8.1000%	10,000.00 8.1000%	10,000.00 8.1000%	9,375.00 8.1000%
	Loan Interest	810.00	810.00	810.00	810.00	810.00	784.69
PFC-V	Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	-
	Net Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	Add: Drawl du the	-	-				
	Less: Repayment du the period	-	-				312.50
	Net Loan - Closing	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	4,687.50
	Rate of Int on Loan	8.0300%	8.0300%	8.0300%	8.0300%	8.0300%	8.0300%
	Interest	401.50	401.50	401.50	401.50	401.50	388.95
PFC-V	Gross Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	-
	Net Loan - Opening	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
	Add: Drawl du the period	-	-				
	Less: Repayment du the period	-	-				156.25
	Net Loan - Closing	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00	2,343.75
	Rate of Int on Loan	8.0600%	8.0600%	8.0600%	8.0600%	8.0600%	8.0600%
	Interest	201.50	201.50	201.50	201.50	201.50	195.20
PFC-V	Gross Loan -		F 000 05	F 000 05	F.063.33	5 000 00	# 000 c-
	Opening Cumulative repayment of loan		5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	upto Previous Qtr Net Loan - Opening	_	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	Add: Drawl du the period	5,000.00	-	3,000.00	3,000.00	5,000.00	3,000.00
	Less: Repayment du the period	-	-				312.50
	Net Loan - Closing	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	4,687.50
	Rate of Int on Loan	8.2200%	8.2200%	8.2200%	8.2200%	8.2200%	8.2200%

	Interest	225 52	444.00	444.00			200.45
		205.50	411.00	411.00	411.00	411.00	398.16
PFC-V	Gross Loan -						
11-0-4	Opening	-	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
	Cumulative						
	repayment of loan	-	-	-	-	-	-
	upto Previous Qtr						
	Net Loan - Opening	_	10.000.00	10.000.00	10,000.00	10,000.00	10,000.00
	Add: Drawl du the		10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
	period	10,000.00	-				
	Less: Repayment						
	du the period	-	-				625.00
	Net Loan - Closing						
		10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	9,375.00
	Rate of Int on Loan	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%	8.2000%
	Interest						
	III COTOGE	410.00	820.00	820.00	820.00	820.00	794.38
PFC-V	Gross Loan - Opening	_	_	2,500.00	2,500.00	2,500.00	2,500.00
	Cumulative			2,000.00	2,000.00	2,000.00	2,000.00
	repayment of loan	-	-	-	-	-	-
	upto Previous Qtr						
	Net Loan -			2 = 2 2 2 2		2 #22 22	
	Opening Add: Drawl du the	-	-	2,500.00	2,500.00	2,500.00	2,500.00
	period	_	2,500.00				
	Less: Repayment		2,000.00				
	du the period	-	-				156.25
	Net Loan - Closing						
		-	2,500.00	2,500.00	2,500.00	2,500.00	2,343.75
	Rate of Int on	7.7500%	7.7500%	7.7500%	7.7500%	7.7500%	7.7500%
	Loan Interest						
	Interest	_	96.88	193.75	193.75	193.75	187.70
			70.00	1500	1300	1300	100
PFC-V	Gross Loan -						
	Opening	-	-	2,000.00	2,000.00	2,000.00	2,000.00
	Cumulative						
	repayment of loan upto Previous Qtr	-	-	-	-	-	-
	Net Loan -						
	Opening	-	-	2,000.00	2,000.00	2,000.00	2,000.00
	Add: Drawl du the			·	·	·	•
	period	-	2,000.00				
	Less: Repayment						105.00
	du the period	-	-				125.00
	Net Loan - Closing				2.05	0.055.55	
	Rate of Int on	7.8200%	2,000.00 7.8200%	2,000.00 7.8200%	2,000.00 7.8200%	2,000.00 7.8200%	1,875.00
	Loan	7.8200%	7.8200%	7.8200%	1.8200%	7.8200%	7.8200%
	Interest						
		-	78.20	156.40	156.40	156.40	151.51
D 1 ******	Over I						
Bond-XXII	Gross Loan - Opening	500.00	500.00	500.00	500.00	500.00	500.00
	Cumulative	200.00	200.00	200.00	230.00	230.00	555.50
	repayment of loan	-	-	-	-	50.00	100.00
	upto Previous Qtr						

	Net Loan -	E00.00	<b>5</b> 00.00	E00.00	F00.00	450.00	400.00
	Opening Add: Drawl du the	500.00	500.00	500.00	500.00	450.00	400.00
	period	-	-				
	Less: Repayment du the period	-	-		50.00	50.00	50.00
	Net Loan - Closing	500.00	500.00	500.00	450.00	400.00	350.00
	Rate of Int on Loan Interest	8.2071%	8.2071%	8.2071%	8.2071%	8.2071%	8.2071%
	merest	41.04	41.04	41.04	38.98	34.88	30.78
Bond-XXIV	Gross Loan - Opening	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	400.00	800.00
	Net Loan - Opening Add: Drawl du the	4,000.00	4,000.00	4,000.00	4,000.00	3,600.00	3,200.00
	period  Less: Repayment du the period	-	-		400.00	400.00	400.00
	Net Loan - Closing	4,000.00	4,000.00	4,000.00	3,600.00	3,200.00	2,800.00
	Rate of Int on Loan	8.6377%	8.6377%	8.6377%	8.6377%	8.6377%	8.6377%
	Interest	345.51	345.51	345.51	328.23	293.68	259.13
Bond-XXV	Gross Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	715.00
	Net Loan - Opening	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	4,285.00
	Add: Drawl du the period	-	-	3,000.00	3,000.00	3,000.00	4,200.00
	Less: Repayment du the period	-	-			715.00	715.00
	Net Loan - Closing	5,000.00	5,000.00	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%	9.4000%	9.4000%
	Interest	470.00	470.00	470.00	470.00	436.40	369.19
Bond-XXVI	Gross Loan - Opening	12,500.00	12,500.00	12,500.00	12,500.00	12,500.00	12,500.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	1,787.50
	Net Loan - Opening Add: Drawl du the period	12,500.00	12,500.00	12,500.00	12,500.00	12,500.00	10,712.50
	Less: Repayment du the period	-	-			1,787.50	1,787.50
	Net Loan - Closing						

	T	12,500.00	12,500.00	12,500.00	12,500.00	10,712.50	8,925.00
		*	·		· ·		
	Rate of Int on Loan	9.0900%	9.0900%	9.0900%	9.0900%	9.0900%	9.0900%
	Interest	1,136.25	1,136.25	1,136.25	1,136.25	1,055.01	892.52
Bond- XXVII	Gross Loan -	22,500.00	22 500 00	22,500.00	22,500.00	22,500.00	22,500.00
AAVII	Opening Cumulative repayment of loan upto Previous Qtr	-	22,500.00	-	-	-	- 22,300.00
	Net Loan - Opening	22,500.00	22,500.00	22,500.00	22,500.00	22,500.00	22,500.00
	Add: Drawl du the period						
	Less: Repayment du the period	-	-				
	Net Loan - Closing	22,500.00	22,500.00	22,500.00	22,500.00	22,500.00	22,500.00
	Rate of Int on Loan	11.2800%	11.2800%	11.2800%	11.2800%	11.2800%	11.2800%
	Interest	2,538.00	2,538.00	2,538.00	2,538.00	2,538.00	2,538.00
Bond-XXIX	Gross Loan - Opening	1,400.00	1,400.00	1,400.00	1,400.00	1,400.00	1,400.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	-
	Net Loan - Opening Add: Drawl du the	1,400.00	1,400.00	1,400.00	1,400.00	1,400.00	1,400.00
	period  Less: Repayment du the period	-	-				
	Net Loan - Closing	1,400.00	1,400.00	1,400.00	1,400.00	1,400.00	1,400.00
	Rate of Int on Loan	8.6800%	8.6800%	8.6800%	8.6800%	8.6800%	8.6800%
	Interest	121.52	121.52	121.52	121.52	121.52	121.52
Bond-XXX	Gross Loan -						
BUILU-AAA	Opening	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	-
	Net Loan - Opening	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00
	Add: Drawl du the period Less: Repayment	-	-				
	du the period  Net Loan - Closing	-	-				
	Rate of Int on	20,000.00 7.9200%	20,000.00 7.9200%	20,000.00 7.9200%	20,000.00 7.9200%	20,000.00 7.9200%	20,000.00 7.9200%
	Loan Interest						
		1,584.00	1,584.00	1,584.00	1,584.00	1,584.00	1,584.00
Bond- XXXIII	Gross Loan - Opening	_	1,700.00	1,700.00	1,700.00	1,700.00	1,700.00

	Loan Interest	199.52	199.52	203.16	191.87	169.30	146.73
	Rate of Interest on	1.6250%	1.6250%	1.7640%	1.7640%	1.7640%	1.7640%
	du the period Net Loan - Closing	- 12278.22	- 12278.22	11517.02	10237.35	8957.68	7678.02
	the period Less: Repayment	-	-		1279.67	1279.67	1279.67
	Net Loan - Opening Add: Drawl during	12278.22	12278.22	11517.02	11517.02	10237.35	8957.68
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	1279.67	2559.34
NIB (DI,II,V,VI, VII)	Gross Loan - Opening	12278.22	12278.22	11517.02	11517.02	11517.02	11,517.02
	Interest	-	-	66.11	132.23	132.23	132.23
	Rate of Interest on Loan	0.0000%	0.0000%	8.8150%	8.8150%	8.8150%	8.8150%
	Net Loan - Closing	-	-	1,500.00	1,500.00	1,500.00	1,500.00
	Less: Repayment du the period	-	-	,			
	Add: Drawl during the period	-	-	1,500.00			
	Net Loan - Opening	-	-	_	1,500.00	1,500.00	1,500.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	-
Bond- XXXV	Gross Loan - Opening	_	-	-	1,500.00	1,500.00	1,500.00
	Interest	-	21.85	43.70	43.70	43.70	43.70
	Rate of Interest on Loan	8.7400%	8.7400%	8.7400%	8.7400%	8.7400%	8.7400%
	Net Loan - Closing	_	500.00	500.00	500.00	500.00	500.00
	period Less: Repayment du the period	-	500.00				
	Opening Add: Drawl du the	-	-	500.00	500.00	500.00	500.00
	repayment of loan upto Previous Qtr Net Loan -	-	-	-	-	-	•
XXXIV	Opening Cumulative	-	-	500.00	500.00	500.00	500.00
Bond-	Gross Loan -		110132	110132	110132	110,32	110,72
	Interest	74.46	148.92	148.92	148.92	148.92	148.92
	Rate of Int on Loan	1,700.00 8.7600%	8.7600%	1,700.00 8.7600%	1,700.00 8.7600%	1,700.00 8.7600%	1,700.00 8.7600%
	Net Loan - Closing	1 700 00	1,700.00	1 700 00	1 700 00	1 700 00	1 700 00
	Less: Repayment du the period	_	_				
	Add: Drawl du the period	1,700.00	-,: -	_,,	_,,	-,	_,,
	Net Loan - Opening	_	1,700.00	1,700.00	1,700.00	1,700.00	1,700.00
	Cumulative repayment of loan upto Previous Qtr	-	-	-	-	-	

	Interest	22585.94	23450.40	23311.87	22448.06	20767.13	18540.52
	Loan	8.7257%	8.7046%	8.0459%	8.0482%	8.0559%	8.0553%
	Rate of Interest on	8.7257%	8.7046%	8.6459%	8.6482%	8.6559%	8.6553%
	Less: Repayment du the period Net Loan - Closing	2607.14	475.00 272913.93	6546.43 267106.31	15072.45 252033.85	2228.85 227805.00	27189.57
	Add: Drawl during the period	16700.00	7500.00	1500.00	-	-	-
	Net Loan - Opening	251796.07	265888.93	272152.74	267106.31	252033.85	227805.00
	Cumulative repayment of loan upto Previous Qtr	7982.14	10589.29	11064.29	17610.71	32683.17	56912.02
	Gross Loan - Opening	259778.22	276478.22	283217.02	284717.02	284717.02	284717.02
Grand TOTAL							

# Annexure-II

		Summary Sheet		
	mpany: NTPC Ltd.			
Pet	ition No.: 14/2010			
	nerating Station: NCTPS D	adri, Stage-II (2 x 490 MW)		
Tar	riff Period : 2009-14			
				(Rs. in lakh)
A		ct as on 31.7.2010 (date of com	mercial operation)	397411.26
	(2) Means of Financing Capi			
	Debt (Notional)	70.00%	278187.88	
	Equity (Notional)	30.00%	119223.38	
	Total	100.00%	397411.26	
	(3) Normative Loan outstand			273308.51
	Gross Loan as on 31.7.20		278187.88	
	Less: Repayment upto 31		479.38	
	Normative Loan outstan		273308.51	
В	31.7.2010 to 31.3.2014	diture projected to be incurred	during the period	
	From 31.7.2010 to 31.3.2014		54024.00	
	2011-12		29341.00	
	2011-12		12739.00	
	2012-13		12/109.00	96104.00
	(2) Means of Financing the l	enditure	2310 1.00	
	Debt (Notional)	70.00%	67272.80	
	Equity (Notional)	30.00%	28831.20	
	Total	100.00%	96104.00	
С	(1) Total Capital Cost of the			493515.26
-	(2) Normative Loan outstand		255914.56	
	Gross Loan as on 31.7.2010	278187.88		
	Add: Addition to loan due to p	projected Additional Capital	67272.80	
	Expenditure			
			345460.68	
	Less: Repayment upto 30.7.20		4879.38	
	Less: Repayment during 31.7		13881.61	
	Less: Repayment during 2011		22804.89	
	Less: Repayment during 2012		23834.30	
	Less: Repayment during 2013		24145.94	
		g as on 31.3.2010 (to be repaid	255914.56	
_	beyond 31.3.2010)	1 4 01 0 0014		00546.10
D	Total Depreciation recovere	a upto 31.3.2014	M-4-1	89546.12
	Bassamed 11mts 20 7 0010		<b>Total</b> 4879.38	
	Recovered upto 30.7.2010 From 31.7.2010 to 31.3.2011			
	2011-12		13881.61 22804.89	
	2011-12		23834.30	
	2013-14		24145.94	
	Less: Cumulative Depreciation	n adjustment due to de-		
	capitalization of assets	radjaotinent ade to de		
	1	Total	89546.12	
E	Balance Depreciation to be	345638.41		
	Capital cost as on 31.7.2010		397411.26	
	Add: Additional Capital Exper	diture projected to be incurred	96104.00	
	during 31.7.2010 to 31.3.201			
	Capital cost as on 31.03.20		493515.26	
	Average Capital Cost as on 31	.3.2014	493515.26	
	Less: Cost of Freehold Land		9976.90	
			483538.36	
	90% of the Capital Cost as ab		435184.52	
	Cumulative depreciation reco		89546.12	
	Balance Depreciation to be	recovered as on 31.3.2014	345638.41	