

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram**

1. Dr. Pramod Deo, Chairperson
2. Shri. R.Krishnamoorthy, Member
3. Shri. S. Jayaraman, Member
4. Shri. V.S.Verma, Member

**Petition No. 10/2009**

**In the matter of**

Approval of revised fixed charges after considering the impact of additional capital expenditure incurred during 2004-05 and 2005-06 in respect of Chamera Hydroelectric Project, Stage-II for the period 1.4.2004 to 31.3.2009

**And in the matter of**

NHPC Ltd.

**...Petitioner**

Vs

1. Punjab State Electricity Board, Patiala
2. Haryana Power Generation Corporation Ltd., Panchkula
3. BSES Rajdhani Power Ltd., New Delhi
4. BSES Yamuna Power Ltd., New Delhi
5. North Delhi Power Ltd., Delhi
6. Uttar Pradesh Power Corporation Ltd, Lucknow
7. Jaipur Vidyut Vitaran Nigam Ltd., Jaipur
8. Rajasthan Rajya Vidyut Prasaran Nigam Ltd., Jaipur
9. Uttarakhand Power Corporation of Ltd., Dehradun
10. Jodhpur Vidyut Vitaran Nigam Ltd., Jodhpur
11. Himachal Pradesh State Electricity Board, Shimla
12. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
13. Engineering Deptt. UT Secretariat, Chandigarh
14. Power Development Deptt. Govt of J&K, Jammu

**...Respondents**

**The following were present**

1. Shri. Prashant Kaul, NHPC
2. Shri Sameer Aggarwal, NHPC
3. Shri Naveen Samriya, NHPC
4. Shri Anjuman Ray, NHPC
5. Shri S.K.Meena, NHPC

6. Shri D.Chakraborty, NHPC
7. Shri M.S.Balan, NHPC
8. Ms. Reshma Hemrajani, NHPC
9. Ms. Niti Singh, NHPC
10. Shri V.N.Tripathi, NHPC
11. Shri Atul Pasrija, HPPC

**ORDER**  
**(DATE OF HEARING: 17.3.2009)**

This petition has been filed by the petitioner, NHPC Ltd, for revision of fixed charges after considering the impact of additional capital expenditure incurred during 2004-05 and 2005-06 in respect of Chamera Hydroelectric Project (3x100 MW) Stage-II, (hereinafter referred to as “the generating station”) for the period from 1.4.2004 to 31.3.2009 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004, (hereinafter referred to as “the 2004 regulations”). The petitioner has made the following specific prayers:

- “(i) Approve the revised annual fixed charges in respect of Chamera HE project- Stage-II after considering the impact of discharge of deferred liability and impact of net additional capital expenditure as per details given in Annexure-I.*
- (ii) allow the servicing of the capital expenditure from the year the same is incurred.*
- (iii) allow the petitioner to approach the Hon’ble Commission for one more revision of annual fixed charges after the accounts of FY 2008-09 are finalized.*
- (iv) allow the reimbursement of filing fees from the beneficiary respondents.*
- (v) pass any other orders in this regard as the Hon’ble Commission may find appropriate in the circumstances pleaded above”.*

2. The generating station comprises of three Units which were commissioned on 2.11.2003, 1.1.2004 and 31.3.2004. The tariff for the generating station for the period from 1.4.2004 to 31.3.2009 was approved by the Commission vide its order dated 9.5.2006 in Petition No 187/2004, based on capital cost of Rs.195606 lakh (inclusive of FERV) as on 31.3.2004, as given hereunder:

Particulars	(Rs. in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	5427.87	5427.87	5427.87	5427.87	5427.87
Interest on Loan	11025.47	10530.91	9771.89	8656.54	7419.50
Return on Equity	8400.14	8400.14	8400.14	8400.14	8400.14
Advance Against Depreciation	0.00	496.64	5760.19	7216.13	7216.13
Interest on Working Capital	712.46	727.79	822.24	845.22	841.74
O & M Expenses	2934.00	3051.00	3173.00	3300.00	3432.00
<b>TOTAL</b>	<b>28499.94</b>	<b>28634.35</b>	<b>33355.32</b>	<b>33845.90</b>	<b>32737.38</b>

3. None of the respondents has filed its reply.

### **ADDITIONAL CAPITALISATION**

4. Regulation 34 of the 2004 regulations provides for considering the additional capital expenditure for tariff purposes as under:

*“(1) The following capital expenditure within the original scope of work actually incurred after the date of commercial operation and up to the cut off date may be admitted by the Commission subject to prudence check.*

- (i) Deferred liabilities,*
- (ii) Works deferred for execution,*
- (iii) Procurement of initial capital spares in the original scope of works subject to ceiling specified in regulation 33,*
- (iv) Liabilities to meet award of arbitration or in compliance of the order or decree of a court, and*
- (v) On account of change in law.*

*Provided that original scope of works along with estimates of expenditure shall be submitted along with the application for provisional tariff.*

*Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of generating station.*

*(2) Subject to the provision of clause (3) of this regulation, the capital expenditure of the following nature actually incurred after the cut off date may be admitted by the Commission subject to prudence check:*

*(i) Deferred liabilities relating to works/services within the original scope of work;*

*(ii) Liabilities to meet award of arbitration or in compliance of the order or decree of a court;*

*(iii) On account of change in law; and*

*(iv) Any additional works/service which has become necessary for efficient and successful operation of plant but not included in the original capital cost.*

*(3) Any expenditure incurred on acquiring minor items/assets like tools and tackles, personal computers, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, T.V, washing machine, heat-convectors, mattresses, carpets, etc brought after the cut off date shall not be considered for additional capitalization for determination of tariff with effect from 1.4.2004.*

**Note**

*The list of items is illustrative and not exhaustive.*

*(4) Impact of additional capitalisation in tariff revision may be considered by the Commission twice in a tariff period, including revision of tariff after the cut off date.*

**Note 1**

*Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 36.*

**Note 2**

*Any expenditure on replacement of old assets shall be considered after writing off the gross value of the original assets from the original capital cost, except such items as are listed in Clause (3) of this regulation.*

**Note 3**

*Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 36.*

**Note 4**

*Any expenditure admitted on renovation and modernization and life extension shall be serviced on normative debt-equity ratio specified in regulation 36 after writing off the original amount of the replaced assets from the original capital cost."*

5. The additional capital expenditure for the years 2004-05 and 2005-06, claimed by the petitioner are as under:

(Rs. In lakh)

Particulars	2004-05	2005-06
Additional capital expenditure (as per books of accounts)	6375.38	3979.56
Less: Additional capital expenditure due to FERV	3238.35	3532.45
Less: Minor assets	0.00	62.77
Less: Undischarged liability	512.64	0.00
Add: Undischarged liability paid	0.00	339.56
Additional capital expenditure claimed	<b>2624.39</b>	<b>723.90</b>

6. The Commission at the hearing on 17.3.2009 directed the petitioner to furnish detailed categorization and consolidation for each asset under different clauses of Regulation 34 of the 2004 regulations for which capitalization had been claimed, with proper justification. The petitioner by its affidavit dated 2.4.2009 had submitted details of capitalization of items under different clauses of Regulation 34 of the 2004 regulations. The year-wise and category-wise additional capital expenditure claimed by the petitioner is as under:

(Rs in lakh)

Sl.	Particulars	Category	2004-05	2005-06
1	Deferred liabilities	34(1)(i)	1225.09	0
2	Works deferred for execution	34(1)(ii)	1811.13	0
3	Procurement of initial capital spares in the original scope of works	34(1)(iii)	15.56	0
4	Liabilities to meet award of arbitration or in compliance of the order or decree of a court	34(1)(iv)	0.15	0
5	Deferred liabilities relating to works/services within the original scope of work	34(2)(i)	0	165.49
6	Liabilities to meet award of arbitration or in compliance of the order or decree of a court	34(2)(ii)	0	7.85
7	On account of change in law	34(2)(iii)	0	39.22
8	Additional works/service necessary for efficient and successful operation of plant but not included in the original capital cost	34(2)(iv)	0	189.11
9	Expenditure incurred on acquiring minor items/assets	34(3)	0	62.78

10	Expenditure on replacement of old assets	34 (Note-2)	(-) 0.78	0
11	New works not within the original scope of work		89.53	0
12	<b>TOTAL</b>		<b>3140.68</b>	<b>464.45</b>
13	Deletion of assets		3.66	17.34
14	<b>TOTAL</b>		<b>3137.02</b>	<b>447.11</b>
15	Exclusion of assets		0	62.77
16	<b>TOTAL</b>		<b>3137.02</b>	<b>384.34</b>

### **Undischarged liability**

7. The petitioner has submitted that the additional capital expenditure for the period 2004-05, is inclusive of undischarged liability of Rs 512.64 lakh, as on 31.3.2005. The petitioner has also submitted that an amount of Rs 339.56 lakh has been discharged during the year 2005-06, and hence the balance undischarged liability was Rs.173.08 lakh, as on 31.3.2006. The petitioner has also submitted that there is no undischarged liability during the year 2005-06.

8. After examining the asset-wise details and justification for additional capitalization claimed by the petitioner, under various categories and by applying prudence check, the admissibility of additional capitalization for the years 2004-05 and 2005-06 is discussed in the subsequent paragraphs

### **Additional Capitalization for 2004-05**

9. The petitioner has claimed additional capital expenditure for the period 2004-05 (excluding undischarged liability as on 31.3.2005), as under:

(Rs in lakh)

<b>Category</b>		<b>2004-05</b>
Deferred liabilities		1225.09
Works deferred for execution		1811.13
Procurement of initial capital spares in the original scope of works		15.56
Liabilities to meet award of arbitration or in compliance of the order or decree of a court		0.15
New assets	5.84	
<b>Less: Replaced assets</b>	6.62	(-) 0.78
Deletion of assets not in use		(-) 3.66
<b>Total</b>		<b>3047.50</b>
New works not within the original scope of work		89.53
<b>Total additional capital expenditure</b>		<b>3137.02</b>

10. The date of commercial operation of the generating station was 31.3.2004 and hence the cut-off date for capitalization of additional expenditure for the generating station has been considered as 31.3.2005. Hence, additional capital expenditure incurred during 2004-05 on acquiring assets under various categories of Regulation 34 of the 2004 regulations, on replacement of old assets has been considered after writing off the gross value of the original assets from the original capital cost and after deletion of the assets not in use, subject to the limit of the sanctioned capital cost, after prudence check.

**Expenditure on account of deferred liabilities {(Regulation 34(1)(i)}**

11. The petitioner has claimed an amount of Rs. 1225.09 lakh under this head for the year 2004-05, on account of balance payments/adjustments against the works within the original scope but actually incurred after the date of commercial operation and upto the cut-off date. The expenditure incurred by the petitioner is of

the nature of deferred liabilities, on account of balance payments against works/services within the original scope of work already admitted such as the construction of roads at dam site, buildings containing GPM, approach road for security personnel for communication, takeover of bridge, CISF accommodation with sanitary water supply and electrification, major works like switchgear switch yard etc. The capital expenditure incurred on this count is in order. It is further observed that the petitioner has also de-capitalised excess liability amounting to Rs. 5.91 lakh included in the cost of the project up to 31.3.2004, during the year 2004-05, against some works like construction of permanent administration block and gymnasium building, helipad for landing helicopter, construction of permanent quarters, steel fencing of quarters and land scaping etc. The above works have been capitalized upto the cut off-date under the approved project cost and hence, the capitalization of expenditure of Rs.1225.09 lakh under this head after excluding the de-capitalised excess liability, is allowed. .

**Additional capital expenditure relating to new works deferred for execution within the original scope of work {(Regulation 34(1)(ii)}**

12. The petitioner has claimed capital expenditure of Rs.1811.13 lakh under this head on account of new works under original scope of work like main generating equipments, generator transformer, air conditioning plant, computer for local area network, software for inventory management, batteries etc. The above works have been capitalized upto the cut-off date under the approved project cost and hence, the capitalization of expenditure of Rs.1811.13 lakh under this head is allowed.



**Initial spares capitalized within the original scope of work {Regulation 34(1)(iii)}**

13. The petitioner has claimed capital expenditure on spares amounting to Rs.15.56 lakh under this head for the year 2004-05, on account of new works under the approved scheme like stores and spares for main generating equipment. The petitioner has submitted that the 2004 regulations allow capitalization of spares up to 1.5% of the original capital cost and spares amounting to Rs.15.56 lakh have been capitalized upto the cut-off date. The petitioner's claim for capitalization for spares of Rs.15.56 lakh is within the limits of the ceiling norms specified in the regulations. Hence, capitalization of initial spares under this head is allowed.

**Liabilities to meet award of arbitration or for compliance of the order or decree of a court {Regulation 34(1)(iv)}**

14. The petitioner has claimed an amount of Rs.0.15 lakh for the year 2004-05 on account of payment of compensation for damage of joint gharat at Jarangla, in compliance with the terms of the agreement entered into with the State Govt. Hence, the expenditure claimed under this head is allowed to be capitalized.

**Expenditure on replacement of assets**

15. An amount of Rs. 0.78 lakh for the year 2004-05 has been sought to be de-capitalised under this head. The petitioner has submitted that it had de-capitalised an amount of Rs. 6.62 lakh during the year 2004-05, for transfer of a car to other

office of the petitioner. The petitioner has also submitted that subsequent to the de-capitalisation, it had purchased a new asset, viz jeep, amounting to Rs 5.84 lakh, as replacement item during the year 2004-05. Hence, the de-capitalization of Rs.0.78 lakh is allowed as under:

(Rs in lakh)	
New assets	5.84
Less: Cost of replaced assets	6.62
Allowed	<b>(-) 0.78</b>

#### **Assets not in use as on 1.4.2005**

16. The petitioner has de-capitalised an amount of Rs 3.66 lakh towards unserviceable and old assets like station wagon and jeep which have been taken out of service as they have been auctioned and are not in use. As unserviceable assets taken out cannot be allowed to remain in the capital base for the purposes of tariff, the value of such assets, amounting to Rs.3.66 lakh for the year 2004-05 has been taken out from the gross block as on 1.4.2005.

#### **Additional works/service necessary for efficient and successful operation of plant but not included in the original capital cost.**

17. The petitioner also claimed additional capital expenditure amounting to Rs. 89.53 lakh during the year 2004-05, for capital expenditure incurred on acquiring assets not within the original scope of work, but incurred before the cut-off date. Most of the assets claimed under this head are construction of CISF accommodation for security of the dam, purchase of rifle racks, fencing around the township, procurement of computers/printers, digital copier, purchase of steel racks for power house, suspended sediment silt sampler for laboratory and meter testing, vacuum cleaner for

office flooring, excise duty liability, EPABX system for communication, video conferencing equipment, which are essential from the view point of security, laboratory equipments, communication system, etc. However, expenditure on minor assets like sofa seaters, furniture's, TV, water heater, telephone sets, voltage stabilizer, etc for office and guest house, amounting to Rs.12.63 lakh has been disallowed. Considering the necessity of these items, the additional capital expenditure of Rs 76.89 lakh under this head is allowed.

18. Based on the discussions in the preceding paragraphs, the additional capital expenditure allowed during the period 2004-05 is as under:

(Rs in lakh)			
<b>Category</b>		<b>Claimed</b>	<b>Allowed</b>
Deferred liabilities		1225.09	1225.09
Works deferred for execution		1811.13	1811.13
Procurement of initial capital spares in the original scope of works		15.56	15.56
Liabilities to meet award of arbitration or in compliance of the order or decree of a court		0.15	0.15
New assets	5.84		
<b>Less:</b> Replaced assets	6.62	(-) 0.78	(-) 0.78
Deletion of assets not in use		(-) 3.66	(-) 3.66
<b>Total</b>		<b>3047.50</b>	<b>3047.50</b>
New works not within the original scope of work		89.53	76.89
Total additional capital expenditure		<b>3137.02</b>	<b>3124.39</b>
Less: Undischarged liability		512.64	512.64
<b>Additional capital expenditure</b>		<b>2624.38</b>	<b>2611.75</b>

### **Additional Capitalization for 2005-06**

19. The petitioner has claimed additional capital expenditure of Rs 384.34 lakh for the period 2005-06 as under and the admissibility of additional capitalization is discussed in the succeeding paragraphs.

(Rs in lakh)

	Category	2005-06
Deferred liabilities relating to works/services within the original scope of work	34(2)(i)	165.49
Liabilities to meet award of arbitration or in compliance of the order or decree of a court	34(2)(ii)	7.85
On account of change in law	34(2)(iii)	39.22
Additional works/service necessary for efficient and successful operation of plant but not included in the original capital cost	34(2)(iv)	189.11
Expenditure incurred on acquiring minor items/assets	34(3)	62.77
<b>TOTAL</b>		<b>464.45</b>
Deletion of assets not in use		(-) 17.34
<b>TOTAL</b>		<b>447.11</b>
Expenditure incurred on acquiring minor items/assets	34(3)	62.77
<b>TOTAL</b>		<b>384.34</b>

**Deferred liabilities relating to works/services within the original scope of work {Regulation 34(2)(i)}**

20. The petitioner has claimed an amount of Rs. 165.49 lakh under this head for the year 2005-06, on account of balance payments/adjustments against the works within the original scope but actually incurred after the date of commercial operation and upto the cut-off date. The expenditure incurred by the petitioner is of the nature of deferred liabilities, on account of balance payments against works/services within the original scope of work already admitted such as the construction of roads at dam site, buildings containing GPM, updation of retention money and exposure fees in respect of insulated switch gears, battery systems, power plant transformers, air-conditioning & ventilation systems, street lighting, communication equipments, control and protection systems, main generating equipment, adjustment of excess liability etc. The above works have been

capitalized upto the cut off-date under the approved project cost and hence, the capitalization of expenditure of Rs.165.49 lakh under this head after excluding the de-capitalised excess liability has been allowed.

**Liabilities to meet award of arbitration or in compliance of the order or decree of a court {Regulation 34(2)(ii)}**

21. The petitioner has claimed an amount of Rs.7.85 lakh for the year 2005-06 on account of payment of compensation as per provisions of RR Plan dated 30.3.2005, to persons who have been ousted from their lands and houses on account of the construction work of the project. Hence, the expenditure claimed under this head has been capitalized.

**On account of change in law {Regulation 34(2)(iii)}**

22. Expenditure of Rs.39.22 lakh in the year 2005-06 has been incurred by the petitioner under this head for construction of sewerage and effluents disposal system, to meet the requirements under the provisions of the Water (Prevention & Control of Pollution) Act, 1974. Accordingly, the claim for Rs.39.22 lakh is allowed and the expenditure has been capitalized.

**Additional works/service necessary for efficient and successful operation of plant but not included in the original capital cost {Regulation 34(2)(iv)}**

23. The petitioner has claimed an expenditure of Rs.189.11 lakh for the period 2005-06) on new works under this head. Against this claim for capitalization, expenditure amounting to Rs.14.94 lakh relates to capitalization towards installation and implementation of material management software, miscellaneous

power plant equipment issued from stores, oil purification for maintainenece of HM equipments and steel racks for storage of generating equipments, which are disallowed. The balance expenditure of Rs.174.17 lakh claimed for the works pertaining to safety and security of the dam and power house, laboratory equipments, communication system, and environmental protection, are necessary for efficient operation of the generating station and as such are allowed to be capitalized.

**Assets not in use as on 1.4.2005**

24. The petitioner has de-capitalised an amount of Rs 17.34 lakh towards unserviceable and old assets like station wagon, jeep, ambulance, car and communication equipments which have been sold and /or transferred to other generating station of the petitioner and adjustment of payment for computer software. As unserviceable assets taken out cannot be allowed to remain in the capital base for the purposes of tariff, the values of such assets, amounting to Rs.17.34 lakh for the year 2005-06 have been taken out from the gross block as on 1.4.2005.

**Undischarged liability**

25. As stated at para 7 above, the petitioner has made payment of an amount of Rs 339.56 lakh towards undischarged liability during the year 2005-06 against the undischarged liability of Rs 512.64 lakh as on 31.3.2005. Hence, the amount of Rs 339.56 is allowed to be capitalized for the purpose of tariff.

26. Based on the above discussions, the additional capital expenditure incurred for the year 2005-06 is as under:

(Rs in lakh)		
	<b>Claimed</b>	<b>Allowed</b>
Deferred liabilities relating to works/services within the original scope of work	165.49	165.49
Liabilities to meet award of arbitration or in compliance of the order or decree of a court	7.85	7.85
On account of change in law	39.22	39.22
Additional works/service necessary for efficient and successful operation of plant but not included in the original capital cost	189.11	174.17
Deletion of assets not in use	(-) 17.34	(-) 17.34
<b>TOTAL</b>	<b>384.34</b>	<b>369.39</b>
Undischarged liability discharged	-	339.56
<b>TOTAL</b>	<b>384.34</b>	<b>708.95</b>

#### **FERV**

27. The impact of FERV on additional capitalization has not been claimed by the petitioner as the petitioner has billed the said amount directly to the beneficiaries in accordance with the 2004 regulations.

#### **Capital cost**

28. As already noted, the Commission had admitted capital cost of Rs.195606 lakh (inclusive of FERV) as on 31.3.2004, for determining tariff for the period 2004-09.

29. Taking into account the capital cost of the generating station as on 1.4.2004 and the additional capital expenditure approved for the years 2004-05 and 2005-06

as per paras 18 & 26 above, the capital cost for the period 2004-09 is worked out as under:

(Rs. In lakh)					
Particulars	2004-05	2005-06	2006-07	2007-0	2008-09
Opening Capital cost as on 1 <sup>st</sup> April of the financial year	195606.00	198217.75	198926.70	198926.70	198926.70
Additional capital expenditure for the financial year	2611.75	708.95	0.00	0.00	0.00
Capital cost as on 31 <sup>st</sup> March of the financial year	<b>198217.75</b>	<b>198926.70</b>	<b>198926.70</b>	<b>198926.70</b>	<b>198926.70</b>

### Debt-Equity Ratio

30. Clause 2 of Regulation 36 of the Tariff Regulations, 2004, as amended, provides as follows:

*“(1) In case of the existing generating stations, debt-equity ratio considered by the Commission for the period ending 31.3.2004 shall be considered for determination of tariff with effect from 1.4.2004:*

*Provided that in cases where the tariff for the period ending 31.3.2004 has not been determined by the Commission, debt-equity ratio shall be as may be decided by the Commission:*

*Provided further that in case of the existing generating stations where additional capitalisation has been completed on or after 1.4.2004 and admitted by the Commission under Regulation 34, equity in the additional capitalization to be considered shall be,-*

*30% of the additional capital expenditure admitted by the Commission, or equity approved by the competent authority in the financial package, for additional capitalization, or actual equity employed, whichever is the least:*

*Provided further that in case of additional capital expenditure admitted under the second proviso, the Commission may consider equity of more than 30% if the generating company is able to satisfy the Commission that deployment of such equity of more than 30% was in the interest of general public.*

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

*Provided that where equity actually employed to finance the project is less than 30%, the actual debt and equity shall be considered for determination of tariff:*

*Provided further that the Commission may in appropriate cases consider equity higher than 30% for determination of tariff, where the generating company is able to establish to the satisfaction of the Commission that deployment of equity higher than 30% was in the interest of general public”.*



*(3) In case of the generating stations for which investment approval is accorded on or after 1.4.2004, debt and equity in the ratio of 70:30 shall be considered for determination of tariff:*

*Provided that where equity actually employed is more than 30%, equity in excess of 30% shall be treated as notional loan;*

*Provided further that where deployment of equity is less than 30%, the actual debt and equity shall be considered for determination of tariff.*

*(4) The debt and equity amount arrived at in accordance with above clause (1), (2) or (3), as the case may be, shall be used for calculation of interest on loan, return on equity, advance against depreciation and foreign exchange rate variation.”*

31. The petitioner has furnished the details of financing of the additional capital expenditure at annexure-III of the petition. It is observed that that the funds deployed in the form of equity is more than 30% of the total investment. The petitioner, in its calculation had applied the debt-equity ratio of 70:30 on the additional capital expenditure before adjustment of the undischarged liability. Since the equity component of additional capitalization is more than 30%, the debt-equity ratio of 70:30 has been considered for additional capitalization after adjustment of the undischarged liability, in terms of sub-clause (a) of clause (1) of Regulation 36 of the 2004 regulations. Accordingly, additional notional equity for the generating station on account of capitalization approved, works out as under:

(Rs. in lakh)

	<b>2004-05</b>	<b>2005-06</b>
Notional Equity	783.53	212.69

### **Return on Equity**

32. Return on equity is allowed @ 14% on the average normative equity, as under:

(Rs in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Opening Equity	60001.00	60784.53	60997.21	60997.21	60997.21
Addition due to additional capital expenditure	783.53	212.69	0.00	0.00	0.00
Closing Equity	60784.53	60997.21	60997.21	60997.21	60997.21
Average Equity	60392.76	60890.87	60997.21	60997.21	60997.21
Return on Equity	<b>8454.99</b>	<b>8524.72</b>	<b>8539.61</b>	<b>8539.61</b>	<b>8539.61</b>

### Interest on Loan

33. Interest on loan has been worked out as in order dated 9.5.2006 in Petition No. 187/2004. Amounts of Rs.8291.55 lakh, Rs.654.65 lakh and Rs.7.37 lakh of undischarged liability discharged during the years 2004-05, 2005-06 and 2006-07 respectively, have been added back to the normative loan of the respective year in the computation of interest on loan .The weighted average rate of interest, as worked out in order dated 9.5.2006 in Petition No. 187/2004, has been considered.

34. Interest on loan has been computed as under:

(Rs in lakh)

Interest on Loan	Upto 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross loan as per order dated 9.5.2006	135605.00					
Less: Un-discharged liabilities as on 31.3.2004	(-) 9165.00					
Gross Normative loan	126440.00	126440.00	136559.78	137710.70	137718.07	137718.07
Cumulative repayment upto previous year		0.00	5896.26	13095.96	25336.31	40219.83
Net loan-opening		126440.00	130663.51	124614.74	112381.76	97498.24
Addition due to additional capital expenditure		1828.23	496.27	0.00	0.00	0.00
Addition due to discharge of Un-discharged liabilities as on 31.3.2004		8291.55	654.66	7.37	0.00	0.00
Repayment during the year		5896.26	7199.69	12240.35	14883.52	14883.52
Net loan-closing		130663.51	124614.74	112381.76	97498.24	82614.71
Average loan		128551.76	127639.13	118498.25	104940.00	90056.48
Weighted average rate of Interest on loan		8.9281%	8.9837%	9.0223%	9.0255%	9.0142%
<b>Interest on loan</b>		<b>11477.22</b>	<b>11466.69</b>	<b>10691.32</b>	<b>9471.36</b>	<b>8117.88</b>

## Depreciation

35. For calculating depreciation, the cumulative depreciation of 1185.97 lakh recovered upto 31.3.2004 and the weighted average rate of depreciation of 2.77% as per order dated 9.5.2006 in Petition No. 187/2004 has been considered.

36. Accordingly, depreciation of the generating station has been worked out as under:

(Rs in lakh)

Depreciation	2004-05	2005-06	2006-07	2007-08	2008-09
Rate of Depreciation	2.77%	2.77%	2.77%	2.77%	2.77%
Depreciable Value	176677.72	178164.97	178484.00	178484.00	178484.00
Balance Useful life of the asset	35.00	34.00	33.00	32.00	31.00
Remaining depreciable value	175491.74	171514.89	165388.04	153147.69	139375.88
Depreciation	<b>5464.10</b>	<b>5510.18</b>	<b>5520.01</b>	<b>5520.01</b>	<b>5520.01</b>

## Advance Against Depreciation

37. Advance Against Depreciation as considered in order dated 9.5.2006 has been re-calculated after considering the additional capital expenditure. The Advance Against Depreciation has been worked as under:

(Rs in lakh)

Advance against Depreciation	Upto 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	0.10	12644.00	13655.98	13771.07	13771.81	13771.81
Repayment of the Loan		5896.26	7199.69	12240.35	14883.52	14883.52
Minimum of the above		5896.26	7199.69	12240.35	13771.81	13771.81
Depreciation during the year		5464.10	5510.18	5520.01	5520.01	5520.01
(A) Difference		432.16	1689.52	6720.34	8251.80	8251.80
Cumulative Repayment of the Loan		5896.26	13095.96	25336.31	40219.83	55103.36
Cumulative Depreciation/ Advance against Depreciation		6650.08	12160.25	18615.97	30856.32	44628.13
(B) Difference		(-) 753.82	935.70	6720.34	9363.51	10475.23
Advance against Depreciation Minimum of (A) and (B)		0.00	935.70	6720.34	8251.80	8251.80

## O&M Expenses

38. O&M expenses as considered in the order dated 9.5.2006 in Petition No.187/2004 have been considered.

## Interest on Working Capital

39. For the purpose of calculation of working capital, the operating parameters including the price of fuel components as considered in the order dated 9.5.2006 have been kept unchanged. The “receivables” component of the working capital has been revised for the reason of revision of return on equity, interest on loan, etc. The necessary details in support of calculation of interest on working capital are as under:

(Rs in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Maintenance spares	1956.38	2073.76	2198.19	2330.08	2469.89
O & M expenses	244.50	254.25	264.42	275.00	286.00
Receivables	4842.03	5040.60	5917.20	5994.03	5789.53
Total	7,042.92	7,368.61	8,379.81	8,599.11	8,545.42
Interest on working capital @10.25% p.a.	<b>721.90</b>	<b>755.28</b>	<b>858.93</b>	<b>881.41</b>	<b>875.91</b>

40. The SBI PLR of 10.25% as on 1.4.2004 has been considered as the rate of interest on working capital during the tariff period as considered in order dated 9.5.2006.

## ANNUAL FIXED CHARGES

41. The revised annual fixed charges for the period from 1.4.2004 to 31.3.2009 are summarized as under

(Rs in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	5464.10	5510.18	5520.01	5520.01	5520.01
Interest on Loan	11477.22	11466.69	10691.32	9471.36	8117.88
Return on Equity	8454.99	8524.72	8539.61	8539.61	8539.61
Advance against Depreciation	0.00	935.70	6720.34	8251.80	8251.80
Interest on Working Capital	721.90	755.28	858.93	881.41	875.91
O & M Expenses	2934.00	3051.00	3173.00	3300.00	3432.00
<b>Total</b>	<b>29052.21</b>	<b>30243.57</b>	<b>35503.22</b>	<b>35964.19</b>	<b>34737.20</b>

42. The reimbursement of the filing fee is not being allowed in view of the Commission's general order dated 11.9.2008 in Petition No.129/2005.

43. The petitioner shall claim the difference between the fixed charges approved vide order dated 9.5.2006 and those approved now, from the beneficiaries in three equal monthly installments.

44. Petition No.10/2009 stands disposed of in terms of the above.

Sd/- <b>(V.S.VERMA)</b> <b>MEMBER</b>	Sd/- <b>(S. JAYARAMAN)</b> <b>MEMBER</b>	Sd/- <b>(R.KRISHNAMOORTHY)</b> <b>MEMBER</b>	Sd/- <b>(DR.PRAMOD DEO)</b> <b>CHAIRPERSON</b>
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New Delhi dated the 9<sup>th</sup> day of June, 2009