

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 265/2010**

**Coram: Dr.Pramod Deo, Chairperson  
Shri S.Jayaraman, Member  
Shri V.S.Verma, Member**

**[Date of Hearing: 15.3.2011]  
[Date of Order: 16.1. 2012]**

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**IN THE MATTER OF**

Approval of generation tariff for Omkareshwar Hydroelectric Project (8 x 65 MW) for the period from 20.8.2007 to 31.3.2009.

**And in the matter of**

Narmada Hydroelectric Development Corporation Limited, Bhopal.....**Petitioner**

Vs

1. Madhya Pradesh State Electricity Board, Jabalpur
2. Narmada Valley Development Department, Bhopal

..... **Respondents**

**Present:**

1. Shri Subhash Sanyal, NHDC
2. Shri Anurag Seth, NHDC
3. Shri S.K.Mishra, NHDC
4. Shri Ashish Jain, NHDC
5. Shri Rajeev Sachdeva, NHDC
6. Shri Manoj Dubey, MPPTCL

**ORDER**

This petition has been filed by the petitioner, NHDC Ltd, for approval of generation tariff for Omkareshwar Hydroelectric Project (8 x 65 MW) (hereinafter referred to as “the generating station”) for the period from 20.8.2007 to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2004 regulations”).

2. This multi-purpose project is being constructed by the petitioner, which is a joint venture between NHPC and the State Government of Madhya Pradesh. It comprises of 520 MW (8x65 MW) of generating capacity for providing annual energy generation of 1167 MUs in a 90% dependable year. Unit I consists of Dam and appurtenant works, Unit-II consists of irrigation system of canals and distributaries, Unit-III includes power house and water conductor system along with allied works in power generation. Thus, Units I and III are essentially for power generation, named as power component and Unit II for irrigation system named as irrigation component. The State of Madhya Pradesh is the only beneficiary of the project. On account of the ongoing court proceedings and certain R&R related issues, the reservoir of the Omkareshwar project could be filled up to EL189.0M only, compared to the Full Reservoir Level at EL 196.60 M. As a result of this, the maximum output achieved on continuous basis is 50 MW per machine, after conducting the requisite tests as against the installed capacity of 65 MW per machine. The dates of commercial operation of all the machines are as under:

	<b>Actual Date of commissioning</b>
Machine 1	20.8.2007
Machine 2	25.8.2007
Machine 3	11.9.2007
Machine 4	26.9.2007
Machine 5	19.10.2007
Machine 6	30.10.2007
Machine 7	10.11.2007
Machine 8	15.11.2007

3. The Commission by order dated 30.10.2007 in Petition No. 56/2007 while approving the provisional tariff of the generating station, had observed as under:

*“12. In practical sense, commercial operation of a generating station or a unit is considered when it is operated according to the specified process of scheduling, starting with daily declaration of its capability to supply power followed by RLDC giving out its schedule, in consultation with beneficiaries and monitoring the output with reference to the given schedule. In the present case, it appears that this process has already started*

for Machines No. I to III with effect from 20.8.2007, 25.8.2007 and 11.9.2007 respectively and the machines are continuously generating power for a long period of time. Accordingly, power generated cannot be considered as infirm power and provisional tariff needs to be determined. In terms of the 2004 regulations, the petitioner is entitled to receive capacity charge and energy charge for the generating units of the generating station”

13. The petitioner is not responsible for loss of peak power from the generating station (on account of delay in R&R work by the respondent) and therefore we consider this to be a fit case for relaxation of the provision under clause 13 of the 2004 regulations. The petitioner is entitled to recover full annual fixed charges on provisional basis. However, the petitioner is not entitled to claim incentive on account of capacity index until full maximum output of 65 MW per machine is achieved.”

4. The provisional tariff determined by order dated 30.10.2007 is as under:

(₹ in lakh)

<b>Machine</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>	<b>VIII</b>
<b>Anticipated date of commercial operation</b>	<b>20. 8.07</b>	<b>25.8.07</b>	<b>11.9.07</b>	<b>27.9.07</b>	<b>12.10.07</b>	<b>24.10.07</b>	<b>4.11.07</b>	<b>15.11.07</b>
<b>No. Of Days</b>	<b>5</b>	<b>17</b>	<b>16</b>	<b>15</b>	<b>12</b>	<b>11</b>	<b>11</b>	<b>138</b>
Depreciation	572.34	1144.68	1726.66	2302.11	2876.31	3450.41	4024.42	4598.33
Interest on Loan	1203.63	2407.26	3631.17	4841.35	6048.89	7256.23	8463.37	9670.31
Return on Equity	1031.68	2063.37	3112.43	4149.73	5184.77	6219.63	7254.32	8288.83
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	100.75	201.51	303.96	405.27	506.35	607.41	708.46	809.49
O&M Expenses	368.46	736.92	1111.58	1482.05	1851.70	2221.30	2590.83	2960.30
<b>Total Annual fixed charges (annualised)</b>	<b>3276.86</b>	<b>6553.74</b>	<b>9885.79</b>	<b>13180.51</b>	<b>16468.02</b>	<b>19754.98</b>	<b>23041.39</b>	<b>26327.26</b>

5. Also, in the said order dated 30.10.2007, the Commission observed as under:

“17. With the above, the present petition for approval of provisional tariff stands disposed of. The annual fixed charges approved are subject to fresh scrutiny at the time for final determination of tariff as regards the factual details like capital expenditure, loans, etc. The petitioner is directed to file appropriate petition for approval of final tariff in accordance with the 2004 regulations, based on the actual audited accounts as on date of commercial operation of respective machines by 1.10.2008. Till then, the provisional tariff approved in this order shall apply.

18. Before parting, we wish to express our concern over the delay and consequent loss of peak power from the generating station. We earnestly hope that the Govt. of Madhya

*Pradesh will make all out efforts to solve the R&R problems of the project-affected families, in the interest of the consumers at large.”*

6. The petitioner in its petition filed on 29.9.2010 had sought for determination of final tariff for the period 20.8.2007 to 31.3.2009 in terms of the 2004 regulations on actual date of commercial operation of the various machines based on audited capitalized cost and for admission of capitalized cost as on 31.3.2009 as per Clause 5(2) of the 2009 Tariff Regulations for determination of final tariff of the generating station as on the projected date of commercial operation to be reckoned from 1.4.2009. The respondent No.1, MPPTCL in its reply filed on 14.3.2011 has submitted that in the absence of the declaration of commercial operation of the generating station by the petitioner, the final tariff petition may not be entertained by the Commission, in the light of Regulation 5(3)(ii) of the 2004 regulations. Apart from its other prayers, it has also submitted that the petition may be dismissed and the petitioner be directed to file a fresh tariff petition after declaration of commercial operation of the generating station. The respondent No.2, NVDD, Government of Madhya Pradesh (GoMP), in its reply, filed on 15.3.2011 has sought review of the capital cost of power component and has submitted that the capitalized cost of Unit-I to Unit-III (power component) is not as per Clause 4 of the cost approval for the project dated 29.5.2003 issued by the Ministry of Power, Government of India, since any increase in the R&R cost due to variation of numbers will be equally shared by the GoMP and the petitioner with incremental GoMP portion coming as grant. Accordingly, the expenditure of ₹6242.20 lakh, which is beyond the limit of ₹11700.00 lakh towards R&R works is to be equally borne by GoMP and the petitioner and hence the amount of ₹3121.10 lakh is to be reflected in the accounts of the petitioner. In response to this, the petitioner in its reply dated 19.4.2011 has submitted that the

responsibility of the petitioner is limited to ensuring the availability of funds to GoMP which is still being met by the petitioner as on date for ongoing balance R&R works being carried out by GoMP and as such the petitioner has not failed in accomplishment of any of the obligations assigned to towards R&R works of the generating station.

7. During the hearing on 15.3.2011, the petitioner submitted that the date of commercial operation of the generating station may be considered as the date of commercial operation the last unit (i.e 15.11.2007) in terms of the 2004 regulations and accordingly, the cut-off date of the generating station as 31.3.2009. It also prayed that the final tariff of the generating station for the period 20.8.2007 to 31.3.2009 may be determined accordingly. Based on the submission of the petitioner that the date of commercial operation of the generating station should be reckoned from 15.11.2007 instead of 1.4.2009 (*as stated in petition*), the Commission directed the petitioner to submit information on the same. The petitioner by its affidavit dated 18.4.2011 has submitted that the date of commercial operation of the station be reckoned as 15.11.2007 and the additional capital expenditure may be determined in terms of Regulation 34(1) of the 2004 regulations, with the cut-off date being 31.3.2009. In view of the above submission, the submissions of the respondent No. 1 are rejected. Accordingly, the date of commercial operation of the last unit i.e 15.11.2007 is considered as the date of commercial operation of the generating station.

8. The annual fixed charges claimed by the petitioner for the period from 20.8.2007 to 31.3.2009 is as under:

(₹ in lakh)

	20.08.07 to 24.08.07 (for 1 Machine)	25.08.07 to 10.09.07 (for 2 Machine)	11.09.07 to 25.09.07 (for 3 Machine)	26.09.07 to 18.10.07 (for 4 Machine)	19.10.07 to 29.10.07 (for 5 Machine)	30.10.07 to 09.11.07 (for 6 Machine)	10.11.07 to 14.11.07 (for 7 Machine)	15.11.07 to 31.03.08 (for 8 Machine)	2008-09
Depreciation	357.23	778.81	1259.90	1808.53	2422.31	3098.93	3840.58	4605.21	4605.21
Interest on Loan	816.81	1757.80	2812.52	3997.87	5305.90	6736.81	8290.24	9879.83	14738.24
Return on Equity	700.12	1506.68	2410.73	3426.75	4547.92	5774.41	7105.92	8468.43	8468.43
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	290.66
Interest on Working Capital	67.72	145.95	233.82	332.74	442.05	561.75	691.85	825.10	932.42
O&M Expenses	250.04	538.10	860.98	1223.84	1624.26	2062.29	2537.83	3024.44	3024.44
<b>Total annual fixed charges (annualised)</b>	<b>2191.92</b>	<b>4727.34</b>	<b>7577.95</b>	<b>10790.03</b>	<b>14342.43</b>	<b>18234.19</b>	<b>22466.43</b>	<b>26803.01</b>	<b>32059.40</b>
<b>No. of days</b>	<b>5</b>	<b>17</b>	<b>15</b>	<b>23</b>	<b>11</b>	<b>11</b>	<b>5</b>	<b>138</b>	<b>365</b>
<b>Total Fixed Charges</b>	<b>29.94</b>	<b>219.58</b>	<b>310.57</b>	<b>678.06</b>	<b>431.06</b>	<b>548.02</b>	<b>306.92</b>	<b>10106.05</b>	<b>32059.40</b>

9. The capital cost claimed by the petitioner for the purpose of tariff is as under:

Period/ date	Machines (Generating units)	Total Capital cost	Irrigation and R&R Grant	Cost of power component	Un discharged liabilities	Net cost considered for tariff	Proportioned net capitalized cost
Up to 20.8.2007	1	163660.61	20416.74	143243.87	10574.75	132669.12	16669.51
25.8.2007	1-2	173752.59	20416.74	153335.84	10574.75	142761.09	35873.40
11.9.2007	1-3	183846.69	20416.74	163429.95	10574.75	152855.20	57398.42
26.9.2007	1-4	193936.77	20416.74	173520.03	10574.75	162945.28	81589.19
19.10.2007	1-5	204042.60	20416.74	183625.86	10574.75	173051.30	108283.72
30.10.2007	1-6	214151.23	20416.74	193734.49	10574.57	183159.74	137485.91
10.11.2007	1-7	224262.32	20416.74	203845.58	10574.75	193270.83	169188.67
15.11.2007	1-8	234348.64	20416.74	213931.90	12302.64	201629.26	201629.26

10. As per approval of project cost by the Ministry of Power, Government of India dated 29.5.2003, the Irrigation component of the said project has been apportioned 16.75% of the cost of Unit-I (Dam & appurtenant works). Accordingly, the net cost of the power component of the generating station, after apportionment, works out to ₹2041.93 crore (including IDC) (at Price Level of November, 2002) as under:

(₹ in crore)

S.No	Description	Amount
(a)	Cost of Works	
	(i) Unit –I (Dam & appurtenant works)	1091.32*
	(ii) Unit –III (Power House & Water conductor System)\	900.29
(b)	Total cost of works	1991.61
(c)	Irrigation component of OSP (16.75% of unit-I)	182.80
(d)	Net Cost of Power Component (b-c-d)	1808.81
(e)	Interest During Construction(IDC)	233.12
(f)	Total cost of Power Component of the generating station	2041.93

\*includes Rehabilitation & Resettlement charges of Rs.117 crore

11. The Equity structure and funding pattern is as under:

Sl. No.		Cost (₹ in crore)	Percentage (%)
1	Equity		15.30%
	(i) NHPC (thro' budgetary support and contribution)	312.42300.	14.70%
	(ii) GoMP	16	
	Total Equity	612.16	30%
2	Loan	1429.35	70%
	Total (Power Component )	2041.93	100.00%
3	Contribution by GoMP towards Irrigation Component in Dam	182.80	
	Grand Total	<b>2224.73</b>	

12. Regulation 33 of the 2004 regulations provides as under:

*“Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined based on the admitted capital expenditure actually incurred up to the date of commercial operation of the generating station and includes capitalized initial capital spares subject to a ceiling norm of 1.5% of the original project cost as on the cutoff date.”*

13. Based on audited accounts, the petitioner has submitted the details of the expenditure capitalized (Power component) as on the date of commercial operation of the generating station as follows:

	Amount (₹ in lakh)
Expenditure as on Date of commercial operation i.e 15.11.2007	<b>234348.64</b>
<b>Less:</b> Cost not charged to power	
(i) Irrigation Component	17295.64
(ii) R&R contribution by GoMP	<u>3121.10</u>
<b>Sub-Total</b>	<b>20416.74</b>
Net expenditure on Power Component, (including IDC)	<b>213931.90</b>

14. The petitioner has submitted that the Cabinet Committee on Economic Affairs (CCEA) had fixed the completion schedule for all eight machines as February' 2008 i.e. within the 10<sup>th</sup> Five Year Plan. Accordingly, the projected expenditure on Power Component of the generating station to be incurred during the 10<sup>th</sup> Plan was informed to CCEA as ₹229802.00 lakh, after considering the price escalation upto the scheduled date of completion. However, the project was commissioned before the scheduled date of commercial operation. The actual escalation of cost which was lesser is detailed as under:

(₹ in lakh)					
	At November, 2002 PL vide letter dated 29.5.2003	Projected Cost upto February, 2008 based on the anticipated Escalation percentage		Escalated Cost upto November, 2007 based on the actual Escalation percentage	
		% (Average)	Escalated Cost	% (Average)	Escalated Cost
Unit – I (Dam) – Civil Works	109132.67	6% PA	127328.51	4.272% PA	122010.09
Less: Irrigation Component @ 16.75%	18279.72		21327.53		20436.69
Cost of Unit – I (Dam) chargeable to Power Component	90852.95		106000.98		101573.40
Unit – III (Power House)					
-Civil Works	27032.06	6% PA	31658.53		30301.53
-E&M works	62996.78	2% PA	66902.48	2.68% PA	68196.27
Cost of Unit – III (PH) chargeable to Power Component	90028.84		98561.00	2.68% PA	98497.80
Total Cost of Power Component of Unit (Dam) & Unit – III (PH)	180881.79		204561.99		200071.20
Add: Interest During Construction	23312.00		25242.00		16552.35
Total Cost of Power Component of Unit – I (Dam) & Unit – III (PH) including IDC	204193.79		229803.99		216623.55

15. Although Revised Capital Estimate (RCE) for the generating station has not been approved, the actual escalated cost is considered to be reasonable. The expenditure of ₹213931.90 lakh as on the date of commercial operation of the generating station is within the approved cost of ₹216623.55 lakh. Hence, the capital cost of ₹213931.90 lakh, as on 15.11.2007, inclusive of un-discharged liabilities of ₹12302.64 lakh is admitted for the purpose of tariff.

16. As per Clause 4 of the order of approval of project cost by the Ministry of Power,



Government of India dated 29.5.2003, the estimated cost of R&R works had been capped at ₹11700.00 lakh and any increase in this cost beyond this cost is to be borne equally by the GoMP and the petitioner. The petitioner has submitted that the matter of R&R is sub-judice and balance R&R works as per directions of the Hon'ble Courts are still in progress. As per audited statement, the Gross Capitalized Cost (including IDC and net-off infirm power charges) is ₹234348.64 lakh as on 15.11.2007 i.e. upto the date of commercial operation of Machine 8 of the generating station, which includes an amount of ₹17942.20 lakh towards R&R cost which has to be borne by the petitioner has been booked to the cost of Unit-I (Dam). The total amount spent on R&R is ₹19902.00 lakh as on 31.3.2009 and the 50% share of GoMP over and above the cap of ₹117000.00 lakh is ₹4101.00 lakh as on 31.3.2009.

17. Accordingly, for the purpose of determination of tariff as on the date of commercial operation of various Machines, the gross capital cost has been apportioned towards Power component after deduction of Irrigation component and GoMP, R&R subvention of ₹3121.10 lakh as on 15.11.2007 (date of commercial operation of the generating station). The proportioned capital cost booked to each machine is based on the actual cost incurred on the commissioning of each machine and booking of expenditure towards Works, Irrigation components, R&R and others in equal proportion to all machines.

### **Undischarged liabilities**

18. The petitioner has submitted that there is un-discharged liability in the cost of the power component as under:

Period/ date	Amount (₹ in lakh)
Up to 20.8.2007	10574.75
25.8.2007	10574.75
11.9.2007	10574.75
26.9.2007	10574.75
19.10.2007	10574.75
30.10.2007	10574.57
10.11.2007	10574.75
<b>15.11.2007</b>	<b>12302.64</b>

19. Based on the above, the proportioned net capitalized cost considered for tariff as the date of commercial operation of the machines is ₹201629.26 lakh as under:

(₹ in lakh)

Period/ date	Machines (Generating units)	Total Capital cost (Rs. In lakh)	Irrigation component and R&R subvention	Cost of power component	Un discharged liabilities	Net cost considered for tariff	Proportional net capitalized cost
Up to 20.8.2007	1	163660.61	20416.74	143243.87	10574.75	132669.12	16669.51
25.8.2007	1-2	173752.59	20416.74	153335.84	10574.75	142761.09	35873.40
11.9.2007	1-3	183846.69	20416.74	163429.95	10574.75	152855.20	57398.42
26.9.2007	1-4	193936.77	20416.74	173520.03	10574.75	162945.28	81589.19
19.10.2007	1-5	204042.60	20416.74	183625.86	10574.75	173051.30	108283.72
30.10.2007	1-6	214151.23	20416.74	193734.49	10574.57	183159.74	137485.91
10.11.2007	1-7	224262.32	20416.74	203845.58	10574.75	193270.83	169188.67
15.11.2007	1-8	234348.64	20416.74	213931.90	12302.64	201629.26	201629.26

### **Infirm Power**

20. The petitioner has submitted that the revenue from sale of infirm power amounting to ₹418.00 lakh has been adjusted in the capital cost of the generating station at the rate of 55.48 paise/per kWh as allowed by the Commission in its order dated 30.10.2007 in Petition No 56/2007.

### **Initial Spares**

21. The initial capital spares included in the project cost amounting to about ₹1827.15 lakh are within the ceiling norm of 1.5% of the admitted project cost of ₹213931.9 lakh. This has been considered.

### **Interest during Construction**

22. The capital cost as on the date of commercial operation is ₹213931.91 lakh which is inclusive of ₹16552.35 lakh incurred on account of interest during construction towards loan. The petitioner has deployed more than 30% equity throughout the construction period. This has been considered.

### **Incentive**

23. The Commission in its order dated 30.10.2007 in Petition No.56/2007 has observed as under:

*“14. The petitioner has claimed an amount of Rs.4673 lakh, as incentive, to be recovered from the beneficiaries, towards reduction in IDC, on account of early commissioning of the generating station, in terms of clause 40(5) of the 2004 regulations. The petitioner may claim incentive at the time of determination of the final tariff for the generating station.”*

24. Based on the above, the petitioner, in its petition has prayed for grant of incentive as per Regulation 40 (5) of 2004 regulations for completion of the generating station ahead of schedule. The generating station which was scheduled to be commissioned during February 2008 has been commissioned on 15.11.2007. Thus, in terms of the above regulation, the generating station is eligible for an incentive for an amount equal to *pro rata* reduction in IDC achieved on commissioning ahead of the schedule.

25. The approved IDC was ₹23312.00 lakh as per the Government of India order dated 29.5.2003 with commissioning schedule as February, 2008. Against this, the actual IDC is lesser as the generating station has been commissioned ahead of the schedule by 106 days. Accordingly, the petitioner's entitlement for incentive is as under:

- (i) Normative loan as on 15.11.2007 = ₹141140.48 lakh  
(ii) Applicable rate of interest =7% per annum.  
(iii) Reduction in IDC on *pro rata* basis for 106 days =  $141140.48 \times 7 \times 106/366$   
----- = ₹2861.37 lakh  
100

26. The incentive worked out as above shall be recovered by the petitioner in 12 equal monthly installments during the first year of operation of the generating station.

### **Additional Capitalization**

27. Regulation 34 (1) of the 2004 regulations provides 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.”*

28. The claim of the petitioner for additional capital expenditure from the date of commercial operation upto the “cut-off” date of the generating station is as under:

		<i>(₹ in lakh)</i>	
		<b>15.11.2007 to 31.3.2008</b>	<b>1.4.2008 to 31.3.2009</b>
(i)	Deferred Liabilities <i>[Regulation-34(1) (i)]</i>	374.41	206.00
(ii)	Works deferred for execution <i>[Regulation-34(1) (ii)]</i>	-	554.00
(iii)	Liabilities to meet award of arbitration in compliance of the order of decree of court <i>[Regulation-34 (1) (iv)]</i>	-	1963.00
(iv)	On account of Change in Law <i>[Regulation-34 (1) (v)]</i>	-	365.00
<b>Additional Capital Expenditure claimed</b>		<b>374.41</b>	<b>3087.00</b>

**(A) Additional Capital Expenditure for 2007-08 (15.11.2007 to 31.3.2008)**

**Deferred liabilities-Regulation 34(1)(i)**

29. The petitioner has claimed the amount of ₹374.41 lakh under this head towards deferred liabilities pertaining to EM equipment of GPM, Generator transformer, main turnkey contract, and equipment's supplied prior to the date of commercial operation. These are within the original scope of work actually incurred after the date of commercial operation and upto the cut-off date. Out of this, the amounts which have been accounted to Unit -I (dam) and Unit-III (Power house) are ₹7.79 lakh and ₹366.62 lakh respectively. In view of this, the expenditure under this head is allowed to be capitalized.

**(B) Additional Capitalization for the period 2008-09**

30. The petitioner has claimed expenditure of ₹3087.00 lakh in respect of works within the original scope of work and deferred for execution and completed after the date of commercial operation of the generating station. These works include, landscaping, partition work at store, construction of protection wall, masonry boundary wall, electrification of quarters, etc. Out of this, the amounts accounted for Unit-I (dam) and Unit-III (Power house) is ₹2609.00 lakh and ₹478.00 lakh respectively. The details are as under:

**Deferred liabilities-Regulation 34(1)(i)**

31. Expenditure for ₹206.00 lakh on account of deferred liabilities pertaining to main turnkey contract within the original scope of work has been allowed to be capitalized, under this head.

**Works deferred for execution [Regulation-34(1) (ii)]**

32. Expenditure for ₹554.00 lakh on account of deferred works for execution which

are within the original scope of work is allowed to be capitalized under this head.

**Liabilities to meet award of arbitration in compliance of the order of decree of court [Regulation-34 (1) (iv)]**

33. Expenditure for ₹1963.00 lakh is in respect of works which are within the original scope of work and these works are in progress as per direction/orders of the Hon'ble Court. As these are R&R expenses, the expenditure is allowed to be capitalized.

**On account of Change-in-Law [Regulation-34 (1) (v)]**

34. Expenditure for ₹365.00 lakh in order to meet the expenditure on account of labour welfare cess, service taxes, has been allowed under this head.

35. As explained in paragraph 16 above, the subvention share of GoMP towards R&R work, booked to Unit-I (Dam) is ₹4101 lakh as on 31.3.2009. The amount contributable by GoMP as on 15.11.2007 is ₹3121 lakh. Out of ₹2609.45 lakh capitalized for Unit-I (Dam) during 2008-09, the subvention share is ₹979.68 lakh. The additional capitalization cost excluding subvention is ₹1629.76 lakh chargeable to Unit-I (Dam) civil work and ₹478.00 lakh is chargeable to Unit-III. Accordingly, the break-up of the additional capital expenditure for the period from 15.11.2007 to 31.3.2009 is as under:

	(₹ in lakh)	
	15.11.2007 to 31.3.2008	1.4.2008 to 31.3.2009
Unit-I (Dam) Civil Works	7.79	1629.76
Less: Irrigation Component (16.75%)	1.30	272.98
Cost of Unit I Chargeable to power component	6.49	1356.78
Unit-III (Power Component)	366.62	478.00
Add: IDC	0.00	0.00
<b>Total additional capital expenditure allowed</b>	<b>373.11</b>	<b>1834.78</b>

## Capital cost

36. The capital cost (excluding deferred liabilities) for the purpose of tariff for the period from 20.8.2007 to 31.3.2009 is as under:

(₹ in lakh)

	20.8.07 to 24.8.07 (for 1 Machine)	25.08.07 to 10.9.07 (for 2 Machine)	11.9.07 to 25.9.07 (for 3 Machine)	26.9.07 to 18.10.07 (for 4 Machine)	19.10.07 to 29.10.07 (for 5 Machine)	30.10.07 to 09.11.07 (for 6 Machine)	10.11.07 to 14.11.07 (for 7 Machine)	15.11.07 to 31.3.08 (for 8 Machine)	2008-09
Opening Capital Cost	16669.51	35873.40	57398.42	81589.19	108283.72	137485.91	169188.67	201629.26	202002.37
Add Cap	0.00	0.00	0.00	0.00	0.00	0.00	0.00	373.11	1834.78
<b>Closing Capital cost</b>	<b>16669.51</b>	<b>35873.40</b>	<b>57398.42</b>	<b>81589.19</b>	<b>108283.72</b>	<b>137485.91</b>	<b>169188.67</b>	<b>202002.37</b>	<b>203837.15</b>

## Debt Equity Ratio

37. Regulation 36 of the 2004 regulations provides as under:

*“(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,-*

*(1) 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.

38. The original project cost approved by the Ministry of Power, Government of India, dated 29.5.2003 was ₹204193.00 lakh with a debt-equity ratio of 70:30. Accordingly, the debt equity ratio of 70:30 has been considered for the purpose of capital cost as well as admitted additional capital expenditure. The petitioner has deployed more than 30% equity during the construction period of the generating station. The fund deployment position is detailed as under:

( ₹ in lakh)								
		EQUITY		DEBT		TOTAL	EQUITY %	DEBT %
<b>2003-04</b>	<b>Q1</b>	3308.00	3308.00		0.00	3308.00	100.00%	0.00%
	<b>Q2</b>	14400.00	17708.00		0.00	17708.00	100.00%	0.00%
	<b>Q3</b>	5000.00	22708.00		0.00	22708.00	100.00%	0.00%
	<b>Q4</b>	13326.00	36034.00		0.00	36034.00	100.00%	0.00%
<b>2004-05</b>	<b>Q1</b>	2727.00	38761.00		0.00	38761.00	100.00%	0.00%
	<b>Q2</b>	0.00	38761.00		0.00	38761.00	100.00%	0.00%
	<b>Q3</b>	8558.00	47319.00		0.00	47319.00	100.00%	0.00%
	<b>Q4</b>	10939.00	58258.00		0.00	58258.00	100.00%	0.00%
<b>2005-06</b>	<b>Q1</b>	3000.00	61258.00	5000.00	5000.00	66258.00	92.45%	7.55%
	<b>Q2</b>		61258.00	6500.00	11500.00	72758.00	84.19%	15.81%
	<b>Q3</b>		61258.00	13000.00	24500.00	85758.00	71.43%	28.57%
	<b>Q4</b>		61258.00	22974.40	47474.40	108732.40	56.34%	43.66%
<b>2006-07</b>	<b>Q1</b>		61258.00	33744.00	81218.40	142476.40	43.00%	57.00%
	<b>Q2</b>		61258.00	18459.60	99678.00	160936.00	38.06%	61.94%
	<b>Q3</b>		61258.00	14848.00	114526.00	175784.00	34.85%	65.15%
	<b>Q4</b>		61258.00	10458.00	124984.00	186242.00	32.89%	67.11%
<b>2007-08</b>	<b>Q1</b>		61258.00	3100.00	128084.00	189342.00	32.35%	67.65%
	<b>Q2</b>		61258.00	1500.00	129584.00	190842.00	32.10%	67.90%
	<b>Q3</b>		61258.00	5415.68	134999.68	196257.68	31.21%	68.79%

### Return on Equity



39. As per clause (iii) of Regulation 38 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with regulation 20 @ 14% per annum. Equity invested in foreign currency is to be allowed a return in the same currency and the payment on this account is made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

40. The petitioner has claimed return on equity @ 14% and the same is worked out and allowed as under.

	(₹ in lakh)								
	20.08.07 to 24.08.07 (for 1 Machine)	25.08.07 to 10.09.07 (for 2 Machine)	11.09.07 to 25.09.07 (for 3 Machine)	26.09.07 to 18.10.07 (for 4 Machine)	19.10.07 to 29.10.07 (for 5 Machine)	30.10.07 to 09.11.07 (for 6 Machine)	10.11.07 to 14.11.07 (for 7 Machine)	15.11.07 to 31.03.08 (for 8 Machine)	2008-09
Opening Equity	5000.85	10762.02	17219.53	24476.76	32485.12	41245.77	50756.60	60488.78	60600.71
Add: Additional Capitalization	0.00	0.00	0.00	0.00	0.00	0.00	0.00	111.93	550.43
Closing Equity	5000.85	10762.02	17219.53	24476.76	32485.12	41245.77	50756.60	60600.71	61151.15
Average Equity	5000.85	10762.02	17219.53	24476.76	32485.12	41245.77	50756.60	60544.74	60875.93
<b>Return on Equity</b>	<b>9.56</b>	<b>69.98</b>	<b>98.80</b>	<b>215.34</b>	<b>136.69</b>	<b>173.55</b>	<b>97.08</b>	<b>3195.97</b>	<b>8522.63</b>

### Interest on Loan

41. Regulation 38(i) of the 2004 regulations provides as under:

(a) Interest on loan capital shall be computed loan wise on the loans arrived at in the manner indicated in Regulation 36;

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan in accordance with Regulation 36 minus cumulative repayment as admitted by the Commission or any other authority having power to do so, up to 31.3.2004. The repayment for the period 2004-09 shall be worked out on a normative basis;

(c) The generating company shall make every effort to re-finance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such re-financing shall be borne by the beneficiaries;

(d) The changes to the loan terms and conditions shall be reflected from the date of such re-financing and benefit passed on to the beneficiaries;

(e) In case of dispute, any of the parties may approach the Commission with proper application. However, the beneficiaries shall not withhold any payment ordered by the Commission to the generating company during pendency of any dispute relating to re-financing of loan;

(f) In case any moratorium period is availed of by the generating company, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly;

(g) The generating company shall not make any profit on account of re-financing of loan and interest on loan;

(h) The generating company may, at its discretion, swap loans having floating rate of interest with loans having fixed rate of interest, or vice-versa, at its own cost, and gains or losses as a result of such swapping shall accrue to the generating company:

Provided that the beneficiaries shall be liable to pay interest for the loans initially contracted, whether on floating or fixed rate of interest.

42. The calculation for Interest on loan for the purpose of tariff is as under:

(a) The opening gross normative loan as on the date of commercial operation of each machine has been arrived at in accordance with Regulation 36 of the 2004 regulations.

(b) On the basis of actual rate of interest applied on the yearly average loan, the weighted average rate of interest has been worked out 7.00% and 9.38% for the years 2007-08 and 2008-09 respectively and the same has been applied on the normative average loan during the year to arrive at the interest on loan.

43. The computations of interest on notional loan by applying weighted average interest rate are appended herein below:

	(₹ in lakh)								
	20.08.07 to 24.08.07 (for 1 Machine)	25.08.07 to 10.09.07 (for 2 Machine)	11.09.07 to 25.09.07 (for 3 Machine)	26.09.07 to 18.10.07 (for 4 Machine)	19.10.07 to 29.10.07 (for 5 Machine)	30.10.07 to 09.11.07 (for 6 Machine)	10.11.07 to 14.11.07 (for 7 Machine)	15.11.07 to 31.03.08 (for 8 Machine)	2008-09
Gross Opening Loan	11668.66	25111.38	40178.89	57112.43	75798.60	96240.14	118432.07	141140.48	141401.66
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	11668.66	25111.38	40178.89	57112.43	75798.60	96240.14	118432.07	141140.48	141401.66
Repayment during the year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Add: Additional Capitalization/drawl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	261.18	1284.35
Net Loan-Closing	11668.66	25111.38	40178.89	57112.43	75798.60	96240.14	118432.07	141401.66	142686.01
Average Loan	11668.66	25111.38	40178.89	57112.43	75798.60	96240.14	118432.07	141271.07	142043.83
Weighted Average Rate of Interest on Loan	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	9.38%
<b>Interest</b>	<b>11.16</b>	<b>81.65</b>	<b>115.27</b>	<b>251.23</b>	<b>159.47</b>	<b>202.47</b>	<b>113.25</b>	<b>3728.63</b>	<b>13326.99</b>

## Depreciation

44. Regulation 38(ii)(a) of the 2004 regulations provides as under:

*“Depreciation shall be computed in the following manner, namely:*

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

(ii) Depreciation shall be calculated annually based on straight line method over the useful life of the asset and at the rates prescribed in Appendix II to these regulations.

The residual life of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset. The historical capital cost of the asset shall include additional capitalisation on account of Foreign Exchange Rate Variation up to 31.3.2004 already allowed by the Central Government/ Commission.

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

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

45. In terms of above provisions, land is not segregated into freehold land and leasehold land in the Regulation, 2004. In view of this, the total value of land, both freehold and leasehold, has been excluded from the capital cost while computing 90% of the historical cost of the asset. The weighted average rate of depreciation of 2.284%, calculated as above, has been considered for the calculation of depreciation. The necessary calculation for depreciation is as under:

	(₹ in lakh)								
	20.8.07 to 24.8.07 (for 1 Machine)	25.8.07 to 10.9.07 (for 2 Machine)	11.9.07 to 25.9.07 (for 3 Machine)	26.9.07 to 18.10.07 (for 4 Machine)	19.10.07 to 29.10.07 (for 5 Machine)	30.10.07 to 09.11.07 (for 6 Machine)	10.11.07 to 14.11.07 (for 7 Machine)	15.11.07 to 31.3.08 (for 8 Machine)	2008-09
Opening Gross block	16669.51	35873.40	57398.42	81589.19	108283.72	137485.91	169188.67	201629.26	202002.37
Add: Additional Capitalization	0.00	0.00	0.00	0.00	0.00	0.00	0.00	373.11	1834.78
Closing Gross block	16669.51	35873.40	57398.42	81589.19	108283.72	137485.91	169188.67	202002.37	203837.15
<b>Average Gross block</b>	<b>16669.51</b>	<b>35873.40</b>	<b>57398.42</b>	<b>81589.19</b>	<b>108283.72</b>	<b>137485.91</b>	<b>169188.67</b>	<b>201815.82</b>	<b>202919.76</b>
Value of Land	152.71	152.71	152.71	152.71	152.71	152.71	152.71	152.71	152.71
Rate of Depreciation									
Depreciable Value	14865.12	32148.62	51521.14	73292.83	97317.91	123599.88	152132.36	181496.79	182490.35
Remaining Depreciable Value at the beginning	14865.12	32143.98	51487.04	73244.61	97212.72	123533.08	152047.53	181449.33	182485.71
<b>Depreciation</b>	<b>4.64</b>	<b>34.10</b>	<b>48.22</b>	<b>105.19</b>	<b>66.80</b>	<b>84.84</b>	<b>47.46</b>	<b>1562.86</b>	<b>4167.67</b>
Cumulative Depreciation/ AAD		38.74	86.96	192.15	258.95	343.78	391.25	1954.11	6121.78

### Advance Against Depreciation

46. Regulation 38(ii) (b) of the 2004 regulations provides that, in addition to allowable depreciation, the generating company shall be entitled to Advance Against Depreciation, computed in the manner given hereunder:

*AAD = Loan repayment amount as per regulation 38 (i) subject to a ceiling of 1/10th of loan amount as per regulation 36 minus depreciation as per schedule*

*Provided that Advance against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year;*

*Provided further that Advance against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.*

47. In terms of the above, the Advance Against Depreciation has been computed as 'nil' for the years 2007-08 and 2008-09 as under:

	<i>(₹ in lakh)</i>								
	<b>20.08.07 to 24.08.07 (for 1 Machine)</b>	<b>25.08.07 to 10.09.07 (for 2 Machine)</b>	<b>11.09.07 to 25.09.07 (for 3 Machine)</b>	<b>26.09.07 to 18.10.07 (for 4 Machine)</b>	<b>19.10.07 to 29.10.07 (for 5 Machine)</b>	<b>30.10.07 to 09.11.07 (for 6 Machine)</b>	<b>10.11.07 to 14.11.07 (for 7 Machine)</b>	<b>15.11.07 to 31.03.08 (for 8 Machine)</b>	<b>2008-09</b>
1/10th of Gross Loan(s)	1166.87	2511.14	4017.89	5711.24	7579.86	9624.01	11843.21	14114.05	14140.17
Repayment of the Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minimum of the above	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation during the year	4.64	34.10	48.22	105.19	66.80	84.84	47.46	1562.86	4167.67
(A) Difference	(-) 4.64	(-) 34.10	(-) 48.22	(-) 105.19	(-) 66.80	(-) 84.84	(-) 47.46	(-) 1562.86	(-) 4167.67
Cumulative Repayment of the Loan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation/ Advance against Depreciation	4.64	38.74	82.32	153.41	171.98	151.63	132.30	1610.32	4172.31
(B) Difference	(-) 4.64	(-) 38.74	(-) 82.32	(-) 153.41	(-) 171.98	(-) 151.63	(-) 132.30	(-) 1610.32	(-) 4172.31
<b>Advance against Depreciation Minimum of (A) and (B)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## **Operation & Maintenance Expenses**

48. Clause (iv)(c) of Regulation 38 of the 2004 regulations pertaining to O & M expenses of hydro stations states as under:

*“In case of the hydroelectric generating stations declared under commercial operation on or after 1.4.2004, the base operation and maintenance expenses shall be fixed at 1.5% of the actual capital cost as admitted by the Commission, in the year of commissioning and shall be subject to an annual escalation of 4% per annum for the subsequent years.”*

49. The O&M expenses @ 1.5% of the admitted capital cost as on the date of commercial operation of the machines of the generating station as per the 2004 regulations as been worked out. However for the year 2008-09, the O&M expenses have been escalated @ 4% for the full year instead of considering pro rata escalation after completion of one year of date of commercial operation. After considering pro rata escalation during 2008-09, the O&M expenses allowed for calculation of tariff for the tariff period based on the apportioned cost charged to each machine as on the date of its commercial operation, is as under.

<i>(₹ in lakh)</i>		
	<b>Claimed</b>	<b>Allowed</b>
From 20/8/2007 to 24/8/2007 (1 Machine)	3.42	3.42
From 25/8/2007 to 10/9/2007 (2 Machine)	24.99	24.99
From 11/9/2007 to 25/9/2007 (3 Machine)	35.29	35.29
From 26/9/2007 to 18/10/2007 (4 Machine)	76.91	76.91
From 19/10/2007 to 29/10/2007 (5 Machine)	48.82	48.82
From 30/10/2007 to 09/11/2007 (6 Machine)	61.98	61.98
From 10/11/2007 to 14/11/2007 (7 Machine)	34.67	34.67
From 15/11/2007 to 31/3/2008 (8 Machine)	1140.36	1140.36
From 1/4/2008 to 31/3/2009	3024.44	3070.05

### **Interest on working capital**

50. In accordance with clause (v) of Regulation 38 of the 2004 regulations, working capital in case of hydro generating stations shall cover:

(i) *Operation and Maintenance expenses for one month;*

(ii) *Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and*

(iii) *Receivables equivalent to two months of fixed charges for sale of electricity, calculated on normative capacity index.*

51. Under the 2004 regulations, the rate of interest on working capital shall be on a normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2004 or on 1st April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later. Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency

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

### **Maintenance Spares**

53. Based on the methodology in the 2004 regulations, the cost of maintenance spares for calculating working capital has been calculated based on the date of commercial operation of each of the machines, to work out the cost of maintenance spares for the purpose of tariff. The maintenance spares allowed by this order is as under:

<i>(₹ in lakh)</i>	
	<b>Amount</b>
From 20/8/2007 to 24/8/2007 (1 Machine)	2.28
From 25/8/2007 to 10/9/2007 (2 Machine)	16.66
From 11/9/2007 to 25/9/2007 (3 Machine)	23.52
From 26/9/2007 to 18/10/2007 (4 Machine)	51.27
From 19/10/2007 to 29/10/2007 (5 Machine)	32.54
From 30/10/2007 to 09/11/2007 (6 Machine)	41.32
From 10/11/2007 to 14/11/2007 (7 Machine)	23.11
From 15/11/2007 to 31/3/2008 (8 Machine)	760.24
From 1/4/2008 to 31/3/2009	2020.02

### **O&M Expenses**

54. O&M expenses for working capital have been worked out for 1 month of O&M expenses approved above are considered in working capital of the respective year.

<i>(₹ in lakh)</i>	
	<b>Amount</b>
From 20/8/2007 to 24/8/2007 (1 Machine)	0.29

From 25/8/2007 to 10/9/2007 (2 Machine)	2.08
From 11/9/2007 to 25/9/2007 (3 Machine)	2.94
From 26/9/2007 to 18/10/2007 (4 Machine)	6.41
From 19/10/2007 to 29/10/2007 (5 Machine)	4.07
From 30/10/2007 to 09/11/2007 (6 Machine)	5.17
From 10/11/2007 to 14/11/2007 (7 Machine)	2.89
From 15/11/2007 to 31/3/2008 (8 Machine)	95.03
From 1/4/2008 to 31/3/2009	255.84

## Receivables

55. The receivables have been worked out on the basis of two months of fixed and variable charges, as under:

	(₹ in lakh)
	<b>Amount</b>
From 20/8/2007 to 24/8/2007 (1 Machine)	4.95
From 25/8/2007 to 10/9/2007 (2 Machine)	36.24
From 11/9/2007 to 25/9/2007 (3 Machine)	51.18
From 26/9/2007 to 18/10/2007 (4 Machine)	111.57
From 19/10/2007 to 29/10/2007 (5 Machine)	70.82
From 30/10/2007 to 09/11/2007 (6 Machine)	89.92
From 10/11/2007 to 14/11/2007 (7 Machine)	50.30
From 15/11/2007 to 31/3/2008 (8 Machine)	1655.91
From 1/4/2008 to 31/3/2009	4996.36

56. The average SBI PLR of 10.25% as on 1.4.2004 has been considered as the rate of interest on working capital during the tariff period 2007-08 to 2008-09.

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

	(₹ in lakh)								
	(₹ in lakh)								
	20.08.07 to 24.08.07 (for 1 Machine)	25.08.07 to 10.09.07 (for 2 Machine)	11.09.07 to 25.09.07 (for 3 Machine)	26.09.07 to 18.10.07 (for 4 Machine)	19.10.07 to 29.10.07 (for 5 Machine)	30.10.07 to 09.11.07 (for 6 Machine)	10.11.07 to 14.11.07 (for 7 Machine)	15.11.07 to 31.03.08 (for 8 Machine)	2008- 09
Maintenance Spares	2.28	16.66	23.52	51.27	32.54	41.32	23.11	760.24	2020.02
O & M expenses	0.29	2.08	2.94	6.41	4.07	5.17	2.89	95.03	255.84
Receivables	4.95	36.24	51.18	111.57	70.82	89.92	50.30	1655.91	4996.36
<b>Total</b>	<b>7.51</b>	<b>54.99</b>	<b>77.65</b>	<b>169.25</b>	<b>107.43</b>	<b>136.41</b>	<b>76.30</b>	<b>2511.18</b>	<b>7272.23</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest on Working Capital</b>	<b>0.92</b>	<b>6.74</b>	<b>9.51</b>	<b>20.73</b>	<b>13.16</b>	<b>16.71</b>	<b>9.35</b>	<b>307.62</b>	<b>890.85</b>

## Annual Fixed Charges

58. The annual fixed charges for the period 20.8.2007 to 31.3.2009 allowed in this order are summed up as under:

	(₹ in lakh)								
	20.08.07 to 24.08.07 (for 1 Machine)	25.08.07 to 10.09.07 (for 2 Machine)	11.09.07 to 25.09.07 (for 3 Machine)	26.09.07 to 18.10.07 (for 4 Machine)	19.10.07 to 29.10.07 (for 5 Machine)	30.10.07 to 09.11.07 (for 6 Machine)	10.11.07 to 14.11.07 (for 7 Machine)	15.11.07 to 31.03.08 (for 8 Machine)	2008-09
Depreciation	4.64	34.10	48.22	105.19	66.80	84.84	47.46	1562.86	4167.67
Interest on Loan	11.16	81.65	115.27	251.23	159.47	202.47	113.25	3728.63	13326.99
Return on Equity	9.56	69.98	98.80	215.34	136.69	173.55	97.08	3195.97	8522.63
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.92	6.74	9.51	20.73	13.16	16.71	9.35	307.62	890.85
O & M Expenses	3.42	24.99	35.29	76.91	48.82	61.98	34.67	1140.36	3070.05
<b>Total</b>	<b>29.70</b>	<b>217.46</b>	<b>307.09</b>	<b>669.40</b>	<b>424.93</b>	<b>539.55</b>	<b>301.81</b>	<b>9935.44</b>	<b>29978.18</b>

59. The respondent No.1, MPPTCL has submitted that it is grossly unjustified on the part of the petitioner to claim full fixed charges corresponding to 520 MW capacity when it is able to deliver only 400 MW. The petitioner in response has submitted that the issue had been considered by the Commission in its order dated 30.10.2007 in Petition No. 56/2007 and in terms of this order, full annual fixed charges may be allowed.

60. In our order dated 30.10.2007 in Petition No. 56/2007, the Commission had observed as under:

*“13. The petitioner is not responsible for loss of peak power from the generating station (on account of delay in R&R work by the respondent) and therefore we consider this to be a fit case for relaxation of the provision under clause 13 of the 2004 regulations. The petitioner is entitled to recover full annual fixed charges on provisional basis. However, the petitioner is not entitled to claim incentive on account of capacity index until full maximum output of 65 MW per machine is achieved.”*

61. The petitioner has submitted that it had completed all main structures of power component of the generating station like dam, power house etc by November, 2007, but the balance R&R works are still under execution by the GoMP and presently the generation is being done by maintaining the reservoir at EL 189.0 M as permitted by



the order of the Hon'ble Court. In view of the submissions, we allow the petitioner to recover the full fixed charges corresponding to an output of 50 MW as against the installed capacity of 65 MW per machine. However, the petitioner is not entitled to claim incentive on account of capacity index until full maximum output of 65 MW per machine is achieved.

**Design Energy**

62. As stated, the main structure of the power component of the generating station like dam, power house has been completed by November, 2007. However, due to constraints in filling up the reservoir of the generating station beyond EL 189.0 M against the FRL of 196.6 M, (in terms of directions of the Hon'ble Courts) and with machine output as 50 MW against the rated capacity of 65 MW, the maximum available capacity of the generating station is 400 MW and corresponding to this capacity, the annual design energy as approved by CEA vide its letter dated 19.3.2009 works out to 896 MU (as against 1068 MU for FRL of 196.6 M) as under. However, the design energy corresponding to the period from 20.8.2007 to 31.3.2008 is 440.85 MU.

<b>MONTH</b>	<b>ENERGY (MU)</b>
April,2008	73.68
May,2008	76.14
June,2008	73.68
July,2008	76.14
August,2008	76.14
September,2008	73.68
October,2008	76.14
November,2008	73.68
December,2008	76.14
January,2009	76.14
February,2009	68.77
March, 2009	76.14
<b>TOTAL</b>	<b>896.44 MU</b>

**Energy Charge Rate (ECR)**

63. In terms of Regulation 39(2) of the 2004 regulations, the rate of primary energy for all hydro electric power generating stations , except for pumped storage generating stations shall be equal to the average of the lowest variable charges of the Central Sector Thermal Power Generating Station of the concerned region (*in this case-Western*) for all months of the previous year .The primary energy charges shall be computed based on the primary rate and the saleable scheduled primary energy of the generating station. Accordingly, the primary energy rate for various periods is as under:

	<b>Primary Energy Rate (<i>in Paise/ Unit</i>)</b>
20.8.2007 to 31.3.2008	56.209
1.4.2008 to 31.3.2009	58.482

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

65. 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 wherein it was directed that filing fee during the period 2004-09 would not be reimbursed, as the same has been factored in the normalized O&M expenses under the 2004 regulations. As regards expenditure of ₹12510/-incurred towards publication of notice of the petition in newspapers, we direct that the petitioner shall claim reimbursement of the said expenditure directly from the respondents in one installment in the ratio applicable for sharing of fixed charges on production of evidence of incurring expenditure to the respondents.

66. The petitioner is already billing the respondents on provisional basis in accordance with the order dated 30.10.2007 in Petition No.56/2007. The provisional billing of tariff shall be adjusted in the light of the final tariff now approved by us.

67. Petition No. 265/2010 disposed of in terms of the above.

*Sd/-*  
**[V.S.VERMA]**  
**MEMBER**

*Sd/-*  
**[S.JAYARAMAN]**  
**MEMBER**

*Sd/-*  
**[DR.PRAMOD DEO]**  
**CHAIRPERSON**