CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 248/GT/2012

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

Date of Hearing: 7.2.2013
Date of Order: 9.5.2013

In the matter of

Approval of generation tariff for Omkareshwar Hydroelectric Project (8 x 65 MW) for the period from 1.4.2009 to 31.3.2014.

AND

In the matter of

NHDC Limited, Bhopal ….**Petitioner**
Vs
1. Madhya Pradesh Power Trading Company Ltd, Jabalpur
2. Narmada Valley Development Department, Bhopal ….**Respondents**

Parties Present:

Shri Anurag Seth, NHDC
Shri Ashish Jain, NHDC

ORDER

The petitioner, NHDC Limited has filed this petition for approval of tariff in respect of Omkareshwar Hydroelectric Project (8 x 65 MW) (hereinafter referred to as "the generating station") for the period from 1.4.2009 to 31.3.2014 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 ('the 2009 Tariff Regulations'). The Commission by its order dated 16.1.2012 in Petition No. 265/2010 had determined the annual fixed charges of the generating station for the period from 20.8.2007 to 31.3.2009. Subsequently, the tariff of the generating station for the said period was revised by order dated 14.3.2012 in Petition No. 265/2010 after correction of errors in order dated 16.1.2012. Thereafter, by order dated 5.9.2012 in Review Petition No.5/2012 in Petition No. 265/2010, the annual fixed charges of the generating station for the period from 20.8.2007 to 31.3.2009 was revised after correction of error in the consideration of weighted average rate of interest on loan.

2. The capital cost (excluding deferred liabilities) allowed for the purpose of tariff for the period from 20.8.2007 to 31.3.2009 in the order dated 14.3.2012 was 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
Additional Capital expenditure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	373.11	2730.48
Closing Capital Cost	16669.51	35873.40	57398.42	81589.19	108283.72	137485.91	169188.67	202002.37	204732.85

3. The annual fixed charges allowed by order dated 5.9.2012 for the period from 20.8.2007 to 31.3.2009 was as under:

(₹ in lakh)

	20.8.2007 to 24.8.2007 (for 1 Machine)	25.8.2007 to 10.9.2007 (for 2 Machine)	11.9.2007 to 25.9.2007 (for 3 Machine)	26.9.2007 to 18.10.2007 (for 4 Machine)	19.10.2007 to 29.10.2007 (for 5 Machine)	30.10.2007 to 9.11.2007 (for 6 Machine)	10.11.2007 to 14.11.2007 (for 7 Machine)	15.11.2007 to 31.3.2008 (for 8 Machine)	2008-09
Depreciation	5.20	38.05	53.72	117.09	74.32	94.37	52.79	1737.83	4644.46
Interest on Loan	11.16	81.65	115.27	251.23	159.47	202.47	113.25	3705.70	12865.76
Return on Equity	9.56	69.98	98.80	215.34	136.69	173.55	97.08	3195.97	8541.44
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1903.19
Interest on Working Capital	0.93	6.82	9.63	20.98	13.32	16.91	9.46	310.79	936.47
O&M Expenses	3.42	24.99	35.29	76.91	48.82	61.98	34.67	1140.36	3070.05
Total	30.28	221.49	312.71	681.56	432.61	549.28	307.24	10090.64	31961.36

4. This multi-purpose project has been 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 being executed by the Government of Madhya Pradesh, 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. Since Unit-I contributes for power generation as well as for irrigation purpose, its costs is apportioned for power generation and irrigation system depending upon the proportion of water utilization for two systems. The irrigation component is apportioned @16.75% of cost of Unit-I and the balance cost is accounted towards cost of power generation. The State of Madhya Pradesh is the only beneficiary of the project. The dates of commercial operation of all the machines are as under:

	Actual date of commissioning
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

Capital cost

5. The petitioner has submitted that the anticipated completion cost of R&R works being executed by the Govt. of Madhya Pradesh (the Respondent No.2 herein) is ₹27617 lakh. 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. Accordingly, as per terms of CCEA clearance, 50% of the increased R&R cost shall be borne by the Govt. of MP as 'subvention' and the balance 50% cost shall be booked to the project, as cost of Unit-I (Dam).

6. The petitioner has claimed the opening capital cost of ₹204732.85 lakh as on 1.4.2009 for the purpose of tariff for power component. The closing capital cost for the purpose of tariff as on

31.3.2009 is ₹204732.85 lakh (excluding un-discharged liability of ₹11406.94 lakh) as per Commission's order dated 14.3.2012 in Petition No.265/2010. This amount of ₹204732.85 lakh (excluding un-discharged liability of ₹11406.94 lakh) has been considered as the opening capital cost as on 1.4.2009 towards the power component of the generating station.

Additional Capital Expenditure

7. Regulation 9 of the 2009 Tariff Regulations, as amended on 21.6.2011 and 31.12.2012, 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 or projected to be 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.

(vi) In case of gas/liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.

Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.

(vii) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receipt system arising due to non-materialisation of full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station.

(viii) Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.

(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility."

8. The year-wise projected additional capital expenditure pertaining to Unit-I (Dam) and Unit-III (Power House) claimed by the petitioner vide its affidavit dated 12.6.2012, are as under:

(₹ in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Liabilities to meet award of arbitration-**Regulation 9(2)(i)**	1292.54	620.11	14000.00	2303.22	500.00
Change in law-**Regulation 9(2)(ii)**	-	-	47098.32	-	-
Any additional work which has become necessary for successful and efficient plant operation-**Regulation 9(2)(iv)**	495.22	426.81	490.53	480.00	2,700.00
Any additional work which has become necessary for successful and efficient plant operation (spares) **Regulation 9(2)(iv)**	2.99	453.94	485.57	0.00	0.00
Total additional capital expenditure claimed for Dam and power house (sum of the above)	1790.75	1500.86	62074.42	2783.22	3200.00

Additional capital expenditure related to Power component after excluding irrigation component and R&R subvention to be borne by Govt. of Madhya Pradesh (A)	1006.27	1098.46	50535.18	1403.82	2638.63
Increase/decrease in un-discharged liabilities in power component from the previous year closing (B)	150.81	(-) 594.58	48022.25	(-) 555.45	(-) 83.25
Additional capital expenditure for power component on cash basis (A-B)	855.46	1693.04	2512.93	1959.27	2721.88

9. The petitioner, in its original petition had submitted that since it is obligatory for the petitioner to demonstrate the peaking capability equivalent to installed capacity of the generating units and due to restriction of raising the water level in reservoir beyond EL of 189.0 M, the Maximum Continuous Rating (MCR) of only 400 MW (instead of 520 MW) could only be demonstrated, the capital expenditure already made by the petitioner so far can only be capitalized under the provisions of Regulation 9(1) of the 2009 Tariff Regulations. As such, the petitioner has prayed that the additional capital expenditure may be allowed under Regulation 9(1) of the 2009 Tariff Regulations, by considering the cut-off date as 31.3.2012, instead of the cut-off date of 31.3.2009 admitted by the Commission in Petition No. 265/2010. In order to harness the full capacity of 520 MW, the petitioner has been endeavoring for filling the reservoir above the existing permissible level of EL 189.0 M against the FRL of EL 196.60 M and MDDL of EL 193.54 M and the capital expenditure on account of balance R&R works was in progress and presently, construction of bridges is in progress in order to provide easy connectivity to the various villages will become islands consequent to the filing beyond the existing permissible level of EL 189.0 M. However, keeping in view that the prayer of the petitioner for considering the cut-off date as 31.3.2012 was disallowed by the Commission vide its order dated 16.1.2012 in Petition No. 265/2010, the petitioner vide its affidavit dated 12.6.2012, has

prayed that the additional capital expenditure claimed under Regulation 9(1) may be considered under Regulation 9(2) of the 2009 Tariff Regulations**.** It has further submitted that the claim for additional capital expenditure under Regulation 9(1)(iv) and 9(1)(v) may however be considered under Regulation 9(2)(iv) of the 2009 Tariff Regulations, in terms of the exercise of 'Power to Relax' by the Commission under Regulation 44 of the 2009 Tariff Regulations. The respondent No.1, MPPMCL vide its affidavit dated 13.12.2012 has submitted that the petition has been filed after completion of more than three years and hence the petitioner may be directed to file actual/audited figures of additional expenditure and no projected /anticipated additional capital expenditure be allowed without audited figures. He also submitted that the claim of the petitioner for considering the COD of the generating station as 1.4.2009 and the cut-off date as 31.3.2012 had attained finality and the same cannot now be reopened / reconsidered under Regulation 44 of the 2009 Tariff Regulations. In response, the petitioner has submitted that the expenditure claimed for 2009-14 is in terms of the provisions of the 2009 Tariff Regulations and the objections raised by the respondent are not sustainable.

10. The submissions have been considered. As regards the filing of petition with actual figures, it is to be noted that the first proviso to Regulation 5(2) of the 2009 Tariff Regulations provides that in case of existing projects, the application shall be based on the admitted capital cost including any capitalization already admitted upto 31.3.2009 and estimated additional capital expenditure for the respective years of the tariff period 2009-14. Also, the last proviso to Regulation 7(2) of the 2009 Tariff Regulations provides that that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff

period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff. Thus, as per the last proviso, the projected additional capital expenditure to be incurred for the respective years of the tariff period 2009-14 shall be considered by the Commission while determining the tariff in respect of the existing projects. Also, the tariff determined for the generating station as above, is subject to truing-up in terms of Regulation 6 of the 2009 Tariff Regulations. The collection of the audited figures of the capital expenditure incurred, the revision of petition to bring on record the revised audited figures, service of copies to the respondents and the completion of pleadings thereafter, would in our view, result in enormous delay in the disposal of the petition for determination of tariff for 2009-14. Hence, taking into consideration the facts in totality and keeping in view the scheme of the 2009 Tariff Regulations, we consider the petition for determination of tariff for 2009-14 based on projected additional capital expenditure. As regards objections on the consideration of additional capital expenditure on projection basis, Regulation 9(2), amended on 31.12.2012 provides for capitalisation of additional expenditure projected to be incurred after the cut-off date. In line with this, the projected additional capital expenditure claimed by the petitioner for 2009-14, is considered in terms of the provisions under Regulation 9(2) of the 2009 Tariff Regulations.

11. After examining the asset-wise details and justification for additional capital expenditure claimed by the petitioner under various categories, the replies of the respondents and after prudence check, the admissibility of the additional capital expenditure is discussed in the subsequent paragraphs.

Liabilities to meet award of arbitration or for compliance of the order or decree of a court- Regulation 9(2)(i)

12. The petitioner has claimed additional capital expenditure, booked to Unit-I (Dam), under this head during 2009-14 as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Expenditure on balance R&R works for compliance of the order	1292.54	620.11	3000.00	2303.22	500.00
Liabilities consequent to award of arbitration	0.00	0.00	11000.00	0.00	0.00
Total claim	**1292.54**	**620.11**	**14000.00**	**2303.22**	**500.00**

13. In justification of its claim as above, the petitioner has submitted that the said expenditure has been incurred/will be incurred on the execution of balance R&R work, as per decree of the Hon'ble Supreme Court and the High Court of Madhya Pradesh, Jabalpur. Keeping in view that the said expenditure towards balance R&R works is in compliance with the order or decree of a court, the same is allowed in terms of Regulation 9(2)(i) of the 2009 Tariff Regulations.

14. As regards the claim of the petitioner for ₹11000 lakh for 2011-12 under 'liabilities consequent to award of arbitration', the respondent no.2, MPPMCL has submitted that the petitioner has not submitted the copy of the award of arbitration for the said claim against which the appeal has been filed by the petitioner. It has therefore prayed that the disputed claim of the petitioner may not be allowed. In response, the petitioner in its rejoinder dated 29.1.2013, has clarified that the claim of ₹11000 lakh has been shown as un-discharged liability upon passing of the arbitration award and tariff will be admissible to the extent of actual discharge of this liability by the petitioner based on the outcome /final verdict of the courts in the matter. It has also submitted that the said liability has been projected to be un-discharged upto 31.3.2014 and does not carry any direct impact

during the tariff period 2009-14. The matter has been considered. In view of the submission of the petitioner that the said liability has been considered as un-discharged during the period 2009-14, the said amount projected to be incurred though allowable under this head is to be deducted to arrive at the admissible additional capital expenditure on cash basis for the purpose of tariff in terms of the provisions of the 2009 Tariff Regulations. However, the same would be considered as and when the petitioner discharges the same based on the outcome /final verdict of the courts in the matter. Accordingly, the year-wise projected expenditure allowed towards Unit-I (Dam), under this head is as under**:**

(₹ in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Expenditure on balance R&R works.	1292.54	620.11	3000.00	2303.22	500.00
Liabilities consequent to award of arbitration	0.00	0.00	11000.00	0.00	0.00
Total	**1292.54**	**620.11**	**14,000.00**	**2,303.22**	**500.00**

Change in law- Regulation 9(2)(ii)

15. The petitioner has claimed additional capital expenditure of ₹47098.32 lakh booked to Unit-I (Dam) for 2011-12 under this head and has submitted as under:

> *"It is submitted that Respondent No. 2 (GoMP) has challenged the decision of MOEF, GOI for depositing the amounts in CAMPA Fund towards the NPV of forest lands used for non-forest purposes at Omkareshwar Project. The estimated liability on this count is ₹470.98 crore which may have to be discharged by the petitioner in future on account of 'change in law'. The petitioner has thus made the provisions on this count during 2011-12 as un-discharged liability to be discharged in future in the eventuality of raising the demand by Respondent No.2 i.e GoMP.*

16. The respondent, MPPMCL vide its affidavit dated 13.12.2012 has submitted that the petitioner's claim for ₹47098 lakh during the year 2011-12 towards the Net Present Value(NPV) of forest lands used for non-forest purposes, is under dispute and the said expenditure is not likely to be discharged during this tariff period. It has therefore prayed that the claim of the petitioner may not be allowed. The respondent, Narmada Valley Development Department (NVDD) vide its affidavit dated 22.11.2012 has submitted that

the estimated liability towards the Net Present Value of forest land as estimated by the Forest Department, Govt. of MP is about ₹34000 lakh and not ₹47098 lakh as indicated by the petitioner in their petition. It has also submitted that the matter of depositing the amount of ₹34000 lakh in CAMPA fund, by the Govt. of MP is under the consideration and the status of the same shall be submitted after the decision of the Cabinet/NVDD. In response, the petitioner has submitted that it has sought clarification from the respondent, NVDD as to whether the demand raised by the Forest Department, Govt. of MP for the amount of ₹33900 lakh was full and final and whether the liability will remain un-discharged up to 31.3.2014. As the confirmation from the respondent is pending, the petitioner has submitted that in case it is required to discharge the said amount during the year 2013-14, it will have impact on the tariff, or otherwise, there would be no bearing on the tariff as the same could be considered as un-discharged liability. We have examined the matter. From the submissions of the parties, it is clear that the said amount (₹47098 or ₹34000 lakh as the case may be) is likely to remain un-discharged during the tariff period 2009-14. Hence, the same is to be deducted for the purpose of tariff as per provisions of the 2009 Tariff Regulations. In case, the petitioner discharges the said amount in full or in part, during the current tariff period, the same shall be dealt with during the truing up exercise in terms of Regulation 6 of the 2009 Tariff Regulations, on submission of required information. Keeping in view that the demand raised by the Government of MP towards NPV of forest lands is in the nature of change in law, we allow the projected expenditure on this count under Regulation 9(2)(ii) of the 2009 Tariff Regulations. However, since the said expenditure is yet to be discharged, we consider the same as un-discharged liability to be deducted for the purpose of tariff of the generating station. However, the amount incurred would be considered for capitalization as and when the petitioner discharges the same based on the decision of the Govt. of MP/respondent NVDD, in the matter.

Additional work necessary for successful and efficient plant operation- Regulation 9(2)(iv)

17. The petitioner has claimed expenditure under this head as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Miscellaneous Assets/Works	495.22	426.81	490.53	480.00	2700.00
Spares	3.00	453.94	485.57	0.00	0.00
Total claim	**498.22**	**880.75**	**976.10**	**480.00**	**2700.00**

18. As stated, the petitioner in its original petition, had claimed the above expenditure under the various provisions of Regulation 9(1) of the 2009 Tariff Regulations which deals with additional capital expenditure with in original scope of works incurred/projected to be incurred within the cut-off date. Since the petitioners' prayer for relaxation of cut-off date was rejected vide order dated 16.1.2012 in Petition No. 265/2010, the petitioner has revised its claim for consideration of additional capital expenditure under the provisions of Regulation 9(2) of the 2009 Tariff Regulations, which relates to additional capital expenditure incurred/projected to be incurred after the cut-off date of the generating station. However, the petitioner has prayed that the additional capital expenditure originally claimed under Regulation 9(I)(ii) and 9(I)iii) pertaining to works deferred for execution and procurement of initial spares respectively are now being claimed under Regulation 9(2)(iv) and the Commission in exercise of its Power to relax' under Regulation 44 may allow the same under this head as the deferred works and capital spares are necessary for completeness as well as for the successful and efficient operation of the generating station. The respondent, MPPMCL vide its affidavit dated 13.12.2012 has submitted that since the cut-off date of the generating station is

31.3.2009 and therefore no additional capital expenditure on works delayed/deferred for execution and also on procurement of initial spares is admissible under the 2009 Tariff Regulations. In response, the petitioner in its rejoinder dated 29.1.2013 has submitted that Regulation 9(2)(iv), besides allowing the capital expenditure on account of damage caused by natural calamities and geological reasons, also allows the capital expenditure incurred due to any additional works which have become necessary for the successful operation of the generating station. It has also reiterated that since its is mandatory on the part of petitioner to demonstrate peaking capabilities equivalent to installed capacity of the machines (65 MW) the various works executed by the petitioner were deferred works and hence the Commission in exercise of its 'Power to relax' under Regulation 44 of the 2009 Tariff Regulations may allow these deferred works and capital spares under Regulation 9(2)(iv) of the 2009 Tariff Regulations. The submissions have been considered. It is noticed that some of the works are within the original scope of work but could not be completed within the cut-off date of the generating station. However, it cannot be denied that some of the works for which expenditure has been claimed under this head, pertain to Plant & Machinery and Civil works related to power house, cross-over bridges over canals, safety and security, etc. which are considered necessary for the efficient and successful operation of the generating station. Hence, in our view, the non consideration of these works which are necessary for the generating station, on the ground that these have been claimed after the cut-off date would not be justified. It is pertinent to mention that the Commission in its order dated 13.6.2012 in Petition No.154/2010, pertaining to tariff of Indira Sagar HE project of the petitioner, has allowed the miscellaneous assets/works within the original scope after the cut-off date under Regulation 9(2)(iv) of the 2009 Tariff Regulations. Similarly, the Commission in its order dated 30.5.2011 in Petition No.60/2010 pertaining to tariff of Dulhasti Hydroelectric

Project of NHPC Ltd has allowed the capitalisation of initial spares procured after the cut-off date as it was within the ceiling limit specified under Regulation 8 of the 2009 Tariff Regulations. Considering the above factors and since these works / are necessary for the efficient operation of the generating station, we consider the admissibility of the expenditure under Regulation 9(2)(iv) of the 2009 Tariff Regulations as stated in the subsequent paragraphs.

Initial spares

19. As regards initial spares for Unit–III (Power House), the petitioner has submitted that the cost of initial spares amounting to ₹1827.15 lakh has been admitted by the Commission by its order dated 16.1.2012 in Petition No.265/2010. It has also submitted that after inclusion of the additional capital expenditure of ₹942.51 lakh for 2009-12 incurred towards the procurement of initial spares, the total value of initial spares is within the ceiling limit of 1.5% specified under Regulation 8 of the 2009 Tariff Regulations. From the documents available on record, it could be ascertained that the total cost of ₹2769.66 lakh which includes the expenditure of ₹1827.15 lakh allowed towards initial spares vide order dated 16.1.2012 falls within the ceiling limit of 1.5% of the admitted project cost (₹204732.85 lakh as on the cut-off date of the generating station) as specified under Regulation 33 of the 2009 Tariff Regulations. Considering the fact that building the stock of adequate initial spares ensures higher availability of the plant which is in the overall interest of beneficiaries and the generator, we allow the capitalisation of the expenditure towards procurement of initial spares as claimed by the petitioner.

Miscellaneous works/assets

20. The miscellaneous works/assets claimed by the petitioner under this head include cross over structure over canal, construction of storage rack of power house, boundary

walls & barriers for safety purposes, parking for heavy vehicles, levelling & development area near switchyard, measuring instruments and kits, computers, construction of ghats in consultation with local administration, etc. After scrutiny of the assets/works and the justification as furnished by the petitioner for incurring the expenditure, the admissibility of year-wise expenditure after prudence check, is as under:

(₹in lakh)

Year	Amount claimed			Amount allowed		
	Unit-I (Dam)	Unit-III (Power House)	Total	Unit-I (Dam)	Unit-III (Power House)	Total
2009-10	177.97	320.24	**498.22**	166.57	270.72	**437.29**
2010-11	240.40	640.35	**880.75**	236.08	634.82	**870.90**
2011-12	337.43	638.67	**976.10**	328.56	561.22	**889.78**
2012-13	208.32	271.68	**480.00**	208.32	271.68	**480.00**
2013-14	1608.90	1091.10	**2700.00**	1608.90	1091.10	**2700.00**
Total	**2573.02**	**2962.04**	**5535.07**	**2548.44**	**2829.54**	**5377.98**

21. Based on the above, the additional capital expenditure for Unit-1 (Dam) before reduction of Subvention of R&R expenditure, Irrigation component and un-discharged liabilities allowed for 2009-14 is summarized as under;

(₹in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Expenditure on balance R&R works. Regulation 9(2)(i)	1292.54	620.11	3000.00	2303.22	500.00
Liabilities consequent to award of arbitration Regulation 9(2)(i)	0.00	0.00	11000.00	0.00	0.00
Change in law -Regulation 9(2)(ii)	0.00	0.00	47098.32	0.00	0.00
Additional work necessary for successful and efficient plant operation Regulation 9(2)(iv)	166.57	236.08	328.56	208.32	1608.90
Total	**1459.11**	**856.19**	**61426.88**	**2511.54**	2108.90

22. After accounting for the 'subvention' and 'irrigation component' at the rate of 16.75% of Unit-I, the additional capital expenditure allowed before reduction of un-discharged liabilities, towards Dam's share in power component, is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure allowed to Unit-I i.e Dam (a)	1459.11	856.19	61426.88	2511.54	2108.90
Subvention to be paid by Govt. of MP @ 50% of R&R expenditure allowed (b)	646.27	310.06	1500.00	1151.61	250.00
Irrigation component @ 16.75% after 'Subvention' Adjustment (c)	136.15	91.48	10037.75	227.79	311.37
Total grants to be reduced (d=b+c)	782.42	401.53	11537.75	1379.40	561.37
Additional capital expenditure of Dam towards power component {e=(a)-(d)}	**676.69**	**454.66**	**49889.13**	**1132.14**	**1547.54**

23. Based on the above discussions, the additional expenditure allowed before reduction of un-discharged liabilities, towards Unit-III i.e 'Power House' is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure allowed to Unit-III i.e Power house	270.72	634.82	561.22	271.68	1091.10

24. Accordingly, the total expenditure allowed towards "Power Component' before adjustment of un-discharged liabilities is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure of Dam towards power component	676.69	454.66	49889.13	1132.14	1547.54
Additional capital expenditure allowed to Unit-III i.e Power house	270.72	634.82	561.22	271.68	1091.10
Total Additional capital expenditure allowed for Power component	**947.41**	**1089.48**	**50450.35**	**1403.82**	**2638.63**

Un-discharged liabilities

25. The petitioner vide its affidavit dated 30.3.2012 has submitted the details of un-discharged liabilities in Power component as on 31st March of the financial year of the tariff period is as under:

(₹in lakh)

	31.3.2009	31.3.2010	31.3.2011	31.3.2012	31.3.2013	31.3.2014
Un-discharged liabilities	11406.94	11557.75	10963.17	58985.42	58429.97	58346.72

26. These un-discharged liabilities have been deducted from the year in which claimed and added to the years during which the liabilities have been discharged. Accordingly, the additional capital expenditure allowed for the purpose of tariff for 2009-14 is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Additional Capital Expenditure allowed after adjustment of R&R subvention but before adjustment on account of un-discharged liabilities (1)	947.41	1089.48	50450.35	1403.82	2638.63
Un-discharged liabilities at the beginning of the year (2)	11406.94	11557.75	10963.17	58985.42	58429.97
Un-discharged liabilities as on 31st March of the financial year (3)	11557.75	10963.17	58985.42	58429.97	58346.72
Un-discharged liabilities increased / (decreased) during the period (3-2)	150.81	(-) 594.58	48022.26	(-) 555.45	(-) 83.25
Additional Capital Expenditure allowed for the purpose of tariff	**796.60**	**1684.06**	**2428.09**	**1959.27**	**2721.88**

Capital Cost for 2009-14

27. Accordingly, the capital cost approved for the period 2009-14 is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost as on 1st April of the financial year	204732.85	205529.45	207213.51	209641.60	211600.87
Additional Capital Expenditure allowed	796.60	1684.06	2428.09	1959.27	2721.88
Capital Cost as on 31st March of the financial year	205529.45	207213.51	209641.60	211600.87	214322.75

Debt- Equity Ratio

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

> *"(1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*
>
> *Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.*
>
> *Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment*.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the generating station or the transmission system.

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

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

29. In terms of the above regulations, the debt equity ratio of 70:30 has been considered on the additional capital expenditure, after adjustment of the un-discharged liability for the purpose of tariff.

Return on Equity

30. Regulation 15 of the 2009 Tariff Regulations amended on 31.12.2012 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% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation

(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."

31. Though, the petitioner in its petition has considered the rate of Return on Equity @ 18.674%, based on prevailing MAT rate (Basic rate of 15%+10% Surcharge+3% Education Cess =16.995%) for 2009-10, it has in its rejoinder filed vide affidavit dated 29.1.2013 has claimed the Return on Equity at the base rate of 16.5%. In view of this, the ROE has been considered on pre-tax basis at the base rate of 15.5% for the period from 1.4.2009 to 31.12.2012 and at the base rate of 16.5% for the period from 1.1.2013 to 31.3.2014. The computation of Return on Equity is as under:

(₹ in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Gross Notional equity	61419.86	61658.84	62164.05	62892.48	63480.26
Addition due to Additional capitalization	238.98	505.22	728.43	587.78	816.56
Closing Equity	61658.84	62164.05	62892.48	63480.26	64296.83
Average Equity	61539.35	61911.44	62528.27	63186.37	63888.54
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.5%/16.5%	16.500%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity	17.481%	17.481%	17.481%	17.481%/ 18.608%	18.608%
Return on Equity	**10757.41**	**10822.46**	**10930.28**	**11223.47**	**11888.59**

Interest on loan

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) The opening gross normative loan as on 1.4.2009 has been arrived at in accordance with Regulation 16 of the 2009 Tariff Regulations.

(b) The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project.

(c) The repayment for the year of the tariff period 2009-14 has been considered equal to the depreciation allowed for that year.

(d) The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest and enclosed as Annexure-I to this order.

34. Interest on loan is worked out as under:

(₹ in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Gross Normative Loan	143313.00	143870.62	145049.46	146749.12	148120.61
Cumulative Repayment upto Previous Year	8721.02	18862.08	29064.46	39368.49	49780.96
Net Loan-Opening	134591.98	125008.53	115985.00	107380.63	98339.64
Repayment during the year	10141.06	10202.38	10,304.03	10412.48	10528.19
Addition due to Additional Capitalization (2009-14)	557.62	1178.84	1,699.66	1371.49	1905.32
Net Loan-Closing	125008.53	115985.00	107380.63	98339.64	89716.77

Average Loan	129800.26	120496.76	111682.81	102860.14	94028.21
Weighted Average Rate of Interest on Loan	11.89%	11.89%	11.23%	10.80%	10.80%
Interest on loan	**15433.25**	**14327.07**	**12538.45**	**11108.89**	**10155.05**

Depreciation

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

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

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

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

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

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

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

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

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

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

36. In terms of the above regulations, the weighted average rate of depreciation of 4.9437% has been considered for the calculation of depreciation. Accordingly, depreciation has been worked out as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block as on 31.3.2009	204732.85	205529.45	207213.51	209641.60	211600.87
Additional capital expenditure during 2009-14	796.60	1684.06	2428.09	1959.27	2721.88
Closing gross block	205529.45	207213.51	209641.60	211600.87	214322.75
Average gross block	205131.15	206371.48	208427.56	210621.24	212961.81
Rate of Depreciation	4.9437%	4.9437%	4.9437%	4.9437%	4.9437%
Depreciable Value	184618.04	185734.33	187584.80	189559.11	191665.63
Remaining Depreciable Value	175897.02	166872.25	158520.34	150190.62	141884.66
Depreciation	**10141.06**	**10202.38**	**10304.03**	**10412.48**	**10528.19**

Operation & Maintenance Expenses

37. Regulation 19(f) of the 2009 Tariff Regulations provides for normative operation and maintenance expenses for hydro generating stations as under:

> *(i) Operation and maintenance expenses, for the existing generating stations which have been in operation for 5 years or more in the base year of 2007-08, shall be derived on the basis of actual operation and maintenance expenses for the years 2003-04 to 2007-08, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.*
>
> *(ii) The normalized operation and maintenance expenses after prudence check, for the years 2003-04 to 2007-08, shall be escalated at the rate of 5.17% to arrive at the normalized operation and maintenance expenses at the 2007-08 price level respectively and then averaged to arrive at normalized average operation and maintenance expenses for the 2003-04 to 2007-08 at 2007-08 price level. The average normalized operation and maintenance expenses at 2007-08 price level shall be escalated at the rate of 5.72% to arrive at the operation and maintenance expenses for year 2009-10:*
>
> *Provided that operation and maintenance expenses for the year 2009-10 shall be further rationalized considering 50% increase in employee cost on account of pay revision of the employees of the Public Sector Undertakings to arrive at the permissible operation and maintenance expenses for the year 2009-10.*
>
> *(iii) The operation and maintenance expenses for the year 2009-10 shall be escalated further at the rate of 5.72% per annum to arrive at permissible operation and maintenance expenses for the subsequent years of the tariff period.*
>
> *(iv) In case of the hydro generating stations, which have not been in commercial operation for the period of five years as on 1.4.2009, operation and maintenance expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation and resettlement works). Further, in such case, operation and maintenance expenses in first year of commercial operation shall be escalated @ 5.17% per annum up to the year 2007-08 and then averaged to arrive at the O & M expenses in respective year of the tariff period. [The impact of pay revision on employee cost for arriving at the operation and maintenance expenses for the year 2009-10 shall be considered in accordance with the procedure given in proviso to sub-clause (ii) of clause (f) of this regulation.*"

38. In terms of Regulation 3(29) of the 2009 Tariff Regulations, the term 'original project cost' is defined as the capital expenditure incurred by the generating company or the

transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission.

39. The petitioner has claimed O&M Expenses for the period 2009-14 to 2013-14 as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Operation and maintenance Expenses	5151.78	5446.46	5758.00	6087.36	6435.55

40. The O&M expenses claimed by the petitioner as above is based on capital cost of ₹202985.60 lakh, after excluding cost of R&R works as on cut-off date i.e 31.3.2009 and the actual expenditure of the generating station for the years 2007-08 and 2008-09.

41. As regards the actual O&M data for the years 2007-08 and 2008-09 considered by the petitioner for giving effect to the increase in salary during 2009-10, it is pertinent to mention that the units of the generating station were declared under commercial operation on different dates during the year 2007-08 (from 20.08.2007 to 15.11.2007) and as such, the data for O&M expenses for the year 2007-08, as submitted by the petitioner, is required to be escalated, in order to arrive at the annualized O&M expenses. However, while dealing with similar cases, where part year expenses were available, it has been observed that escalating the same for arriving at the annualized expenditure yields erroneous results. As such, in the instant case the part year data of the year 2007-08 has not been considered for the purpose of arriving at the allowable O&M expenses for the period 2009-14.

Normalization of O&M expenditure for the year 2008-09

42. The actual O & M expenses for the year 2008-09 as submitted by petitioner are as under:

(₹ in lakh)

S. No.	ITEMS	2008-09
(A)	**Break up of O&M Expenses**	
1	Consumption of Stores and Spares	00.00
2	Repair and Maintenance	396.61
3	Insurance	1208.17
4	Security	33.05
5	**Administrative Expenses**	
a	Rent	85.50
b	Electricity Charges	249.82
c	Travelling and Conveyance	16.40
d	Communication Expenses	11.50
e	Advertising Expenses	26.06
f	Foundation Laying and Inauguration	0.00
g	Donation	0.00
h	Entertainment	0.76
	Sub Total (Administrative Expenses)	**390.04**
6	**Employee Cost:**	
a	Salaries, Wages and allowances	942.13
b	Staff Welfare Expenses	54.93
c	Productivity Linked Incentive	70.08
d	Expenditure on VRS	0.00
e	Ex-gratia	12.77
	Sub Total (Employee Cost)	**1079.91**
7	Loss of Stores	0.00
8	Provisions	0.00
9	Corporate Office Expenses allocation	636.23
10	Others (Specify items)	125.00
11	**Total (1 to 10)**	**3869.01**
12	Revenue/Recoveries, if any	48.05
13	Net Expenses	**3820.96**

Note: Provision for wage revision/ arrears of salary w.e.f. 01-01-2007 has already been considered in the books of accounts for the years 2007-08 and 2008-09

Actual O&M details of Corporate Centre

Sl.No.	ITEMS	2008-09
(A)	**Breakup of Corporate expenses**	
1	**Employees' remuneration and benefits**	
a	Salary, Wages, Allowances & Benefits	1004.16
b	Employee Expenses (including Administration fee)	256.08
c	Staff welfare Expenses	99.69
d	Leave Salary and pension contribution	
2	**Repairs & maintenance**	
a	Buildings	30.61

b	Plant & Machinery	11.58
c	Others	9.32
3	**Administration & other expenses**	
a	Rent/ Hiring charges	56.54
b	Rates and taxes	3.72
c	Insurance	5.06
d	Security expenses	12.01
e	Electricity charges	56.14
f	Travelling & conveyance	74.09
g	Expenses on staff cars	2.02
h	Telephone, telex & postage	20.61
i	Advertisement & publicity	38.73
j	Entertainment and hospitality expenses	12.66
k	Donation	
l	Printing & stationery	21.11
m	Books & Periodicals	4.07
n	Audit Expenses	9.11
o	Design and consultancy charges	
	Indigenous	4.30
	Expenditure on land not belonging to Corporation	
p	Loss on sale of asset	0.65
q	Other general exp expenses	83.65
r	Director Expenses	0.03
s	Depreciation	58.48
	Provisions	0.74
	Total expenditure for the year	**1875.17**
	Less: Receipts and Recoveries	
	Interest on Term Deposits	0.00
	Interest on Loans and advances to staff	23.35
	Other Misc. Income	10.99
	Provisions/Liability not required written back	6.48
	Total receipts & recoveries	**40.83**
	Net expenditure for the year	1834.34
	Add: Prior period expenses	25.42
	Total expenditure	**1859.76**
(B)	**Allocation of Corporate Expenses to functional units**	
2	Incidental Expenditure During Construction transferred to CWIP of ISP	0.00
3	Incidental Expenditure During Construction transferred to CWIP of OSP	0.00
(C)	**Allocation of Corporate Expenses relating to functional activity of power generation to various generating stations**	
1	Corporate office Management Expenses transferred to Operational Units of ISP	1223.52
2	Corporate office Management Expenses transferred to Operational Units of OSP	636.23

43. The apportionment of Corporate expenses between Indira Sagar (1000 MW) and Omkareshwar Project (520 MW) of the petitioner, is based on the capacity of these projects. As per consistent methodology adopted by the Commission, while normalizing the data, the Productivity Linked Incentive, ex-gratia, donations and loss of store are removed from the claim of the petitioner as these expenditure are required to be met from the incentive the petitioner earns by way of better operation of the generating station in comparison to norms specified by the Commission. From the data submitted by the petitioner for the period 2008-09, it is observed that the same includes provision for wage revision / arrears of salary for 2007-08 and 2008-09. Hence, the petitioner was directed to submit, on affidavit, the details of provisions considering the fact that effect of salary increase is considered during 2009-10 as per the methodology indicated in Regulation 19(2)(f)(iv) above. In response, the petitioner vide its affidavit dated 9.4.2013 has submitted the details of the provisions included in the employee cost for the year 2008-09. Accordingly, after considering the said details and after reducing the provisions, productivity linked incentive and ex-gratia, the normalized O&M expenses for the year 2008-09 as considered for arriving at the employee cost percentage for giving effect to increase in salary, is as under:

Normalised O&M expenses

(₹ in lakh)

S. No.	ITEMS	2008-09
(A)	**Break up of O&M Expenses**	
1	Consumption of Stores and Spares	00.00
2	Repair and Maintenance	396.61
3	Insurance	1208.17
4	Security	33.05
5	**Administrative Expenses**	
a	- Rent	85.50
b	- Electricity Charges	249.82
c	- Travelling and Conveyance	16.40
d	- Communication Expenses	11.50
e	- Advertising Expenses	26.06
f	- Foundation Laying and Inauguration	0.00

g	- Donation	0.00
h	- Entertainment	0.76
	Sub Total (Administrative Expenses)	**390.04**
6	**Employee Cost**	
a	- Salaries, Wages and allowances	656.34
b	- Staff Welfare Expenses	54.93
c	- Productivity Linked Incentive	0.00
d	- Expenditure on VRS	0.00
e	- Ex-gratia	0.00
	Sub Total (Employee Cost)	**711.27**
7	Loss of Stores	0.00
8	Provisions	0.00
9	Corporate Office Expenses allocation	404.73
10	Others (Specify items)	125.00
11	**Total (1 to 10)**	**3268.87**
12	Revenue/Recoveries, if any	48.05
13	Net Expenses	**3220.82**

Normalised O&M details of Corporate Centre

(₹ in lakh)

Sl.No.	ITEMS	2008-09
(A)	**Breakup of Corporate expenses**	
1	**EMPLOYEES' REMUNERATION AND BENEFITS**	
a	Salary, Wages, Allowances & Benefits	545.49
b	Employee Expenses (including Administration Fee)	113.59
c	Staff welfare Expenses	50.97
d	Leave Salary and pension contribution	0.00
	Total employee cost	**710.05**
2	**REPAIRS & MAINTENANCE**	
a	Buildings	30.61
b	Plant & Machinery	11.58
c	Others	9.32
3	**Administration & other expenses**	
a	Rent/ Hiring charges	56.54
b	Rates and taxes	3.72
c	Insurance	5.06
d	Security expenses	12.01
e	Electricity charges	56.14
f	Travelling & conveyance	74.09
g	Expenses on staff cars	2.02
h	Telephone, telex & postage	20.61
i	Advertisement & publicity	38.73
j	Entertainment and hospitality exp.	12.66
k	Donation	
l	Printing & stationery	21.11
m	Books & Periodicals	4.07
n	Audit Expenses	9.11
o	DESIGN AND CONSULTANCY CHARGES	
	Indigenous	4.30

	Expenditure on land not belonging to Corporation	
p	Loss on sale of asset	0.00
q	Other general exp expenses	83.65
r	Director Expenses	0.03
s	Depreciation	58.48
	Provisions	
	Total expenditure for the year	**1223.90**
	LESS: RECEIPTS AND RECOVERIES	
	Interest on Term Deposits	0.00
	Interest on Loans and advances to staff	23.35
	Other Misc. Income	10.99
	Provisions/Liability not required written back	6.48
	Total receipts & Recoveries	**40.83**
	Net expenditure for the year	1183.06
	Add: Prior period expenses	
	Total expenditure	**1183.06**
(B)	**Allocation of Corporate Expenses to Functional Units**	
2	Incidental Expenditure During Construction Transferred to CWIP of ISP	0.00
3	Incidental Expenditure During Construction Transferred to CWIP of OSP	0.00
(C)	**Allocation of Corporate Expenses relating to functional activity of power Generation to various generating stations**	
1	Corporate office Management Expenses Transferred to Operational Units of ISP	778.33
2	Corporate office Management Expenses Transferred to Operational Units of OSP	404.73

44. The employee cost expenditure as percentage of O&M expenses works out as under:

(₹ in lakh)

Employee cost of generating station	711.27
Employee cost of corporate centre allocated to generating station based on the capacity (710.05*520/1520)	242.91
Total employee cost	**954.18**
Net Expenses	**3220.82**
% of Employee cost claimed by the petitioner	**29.63%**

45. In terms of Regulation 19(2)(f)(iv), 2% of the original capital cost as admitted by the Commission, as on cut-off date i.e 31.3.2009, is to be allowed as O&M expenses for the first year of operation which is to be escalated by 5.72% per annum to arrive at the permissible O&M expenditure for the year 2009-10 (without salary increase). Thereafter,

increase in salary to the tune of 50% is allowed considering the employee cost percentage as arrived at, in order to work out the allowable O&M expenses for the year 2009-10 (with salary increase). The same shall be escalated @ 5.72% per year to arrive at the allowable O&M expenses during the respective years of the tariff period. Accordingly, the calculation for O&M expenses allowable for the period 2009-14 is as under:

(₹in lakh)

Capital cost as on cut-off date i.e 31.3.2009 for the purpose of O&M	204732.85
R&R expenditure included in the above	13154.16
Capital cost for the purpose of O&M after excluding R&R cost	191578.69
O&M for the first year of operation i.e 2007-08 @ 2% of above	3831.57

46. Based on the above, the O&M expenses allowed for the tariff period 2009-14, is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
O&M allowed	4916.79	5198.03	5495.35	5809.69	6142.00

Interest on Working Capital

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

(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 19;

(iii) Operation and maintenance expenses for one month.

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

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

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

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

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

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

Maintenance Spares in working capital

50. In terms of the above provisions, maintenance spares considered for the purpose of tariff is as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	737.52	779.70	824.30	871.45	921.30

Receivables

51. Receivable component of the working capital has been worked out on the basis of two months of fixed cost as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Receivables	7041.95	6924.46	6707.82	6587.94	6616.65

O&M Expenses

52. O & M expenses for 1 month for the purpose of working capital is as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
O & M for 1 month	409.73	433.17	457.95	484.14	511.83

53. SBI PLR of 12.25% as on 1.4.2009 has been considered. Necessary computations in support of calculation of interest on working capital are as under as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	737.52	779.70	824.30	871.45	921.30
O & M expenses	409.73	433.17	457.95	484.14	511.83
Receivables	7041.95	6924.46	6707.82	6587.94	6616.65
Total	8189.20	8137.33	7990.06	7943.53	8049.79
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on Working Capital	**1003.18**	**996.82**	**978.78**	**973.08**	**986.10**

Annual Fixed charges for 2009-14

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

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	10757.41	10822.46	10930.28	11223.47	11888.59
Interest on Loan	15433.25	14327.07	12538.45	11108.89	10155.05
Depreciation	10141.06	10202.38	10304.03	10412.48	10528.19
Interest on Working Capital	1003.18	996.82	978.78	973.08	986.10
O & M Expenses	4916.79	5198.03	5495.35	5809.69	6142.00
Total	**42251.69**	**41546.76**	**40246.89**	**39527.62**	**39699.92**

55. The recovery of the annual fixed charges shall be subject to truing up, in terms of Regulation 6 of the 2009 Tariff Regulations.

Design Energy (Stage-wise) and Commencement of Stage–II of the generating station

56. The design energy as approved by CEA for the project is 1167 MUs corresponding to FRL of EL 196.60 MUs. However, due to R&R issues, the reservoir could only be filled up to EL189.0 M. As such, during 2007-09, the machines were operating under the reduced head with capacity reduction from 65 MW to 50 MW. The Commission vide its order dated 16.1.2012 in Petition No. 265/2010 had allowed design energy of 896.44 MUs corresponding to EL 189 M, based on CEA letter dated 19.3.2009.

57. The petitioner has submitted that the design energy of 1167 MUs corresponding to reservoir level of 196.6 M and 896.44 MUs corresponding to the reservoir level of 189.0

M, as approved by the Commission, are applicable till the stage the consumptive utilization of water for irrigation remains below the level of 6 $BM^{3.}$ The petitioner in this regard has further submitted as under:

Under clause 3 of TEC, the following three stages commensurate with the consumptive utilization of water for irrigation by State of M.P with corresponding firm power from the power component, were defined-

Stage of Irrigation Development	***Total Irrigation Utilization in Basin (BM^3) by Madhya Pradesh***	***Firm Power (MW)***
Stage-I	*$\leq$ 6.00*	*133.17*
Stage – II	*>6.00 $\leq$13.00*	*From 133.17 to 79.41*
Stage III	*>13.00$\leq$18.25*	*From 79.41 to 64.55*
Final Stage	*>18.25*	*64.55*

Consequent upon utilization of Narmada Water by State of Madhya Pradesh beyond 6.0 $BM^{3,}$ the Stage – II of the project can be treated commenced from year 2010-11

58. Accordingly, the petitioner has submitted the following formula for the determination of reduced firm power during the stage-II, which was originally envisaged after 20 years of operation of the generating station, but has been treated as commenced from the year 2010-11 due to increased water consumption beyond 6 BM^3 for irrigation:

F.P (Stage-II) = 133.17 – (133.17-79.41)*(Q-6.00)/(13-6.00)
Or F.P (Stage-II) = 133.17-7.68(Q-6.00)

59. Based on the above formula, the following firm power and modified design energy has been calculated by the petitioner for water usage of 6.624 BM^3 for irrigation, during the year 2010-11.

Reservoir level (M)	Firm power (MW)	Modified design energy (MUs)
189	98.75	865.05
196.60	128.38	1124.61

60. The figures of modified design energy, as calculated by the petitioner above have been verified and are found to be in order. The petitioner has not, in categorical terms submitted as to when the reservoir level will reach its FRL level of EL 196.60 M. From

Form-2 annexed to the petition, it appears that full reservoir operation shall commence from the year 2012-13. However, in order to avoid any uncertainty in this regard, the following design energy corresponding to both reservoir levels and consumptive water requirement of 6.624 BM^3 have been allowed, for billing purpose, as the base figures are to be trued-up depending upon the permitted level of reservoir filling and actual consumptive water utilization to be certified by Narmada Control Authority at the end of each year:

	Design energy corresponding to 189 M (MU)	**Design energy corresponding to 196.6 M (MU)**
2009-10 (stage-I of irrigation requirement)	896.44	1166.57
2010-14 (stage-II of irrigation requirement at 6.624 BM^3)	865.05	1124.61

61. The details of month wise design energy corresponding to the above four design energy, is as under:

Month	**Design Energy (MUs),At restricted reservoir level of EL 189.0 m ****		**Design Energy (MUs) At FRL (Stage-I)**	
	With Irrigation requirement less than 6 BM^3	**With Irrigation requirement at 6.624 BM^3**	**With Irrigation requirement less than 6 BM^3**	**With Irrigation requirement at 6.624 BM^3**
April	73.68	71.10	95.88	92.44
May	76.14	73.47	99.08	95.51
June	73.68	71.10	95.88	92.44
July	76.14	73.47	99.08	95.51
August	76.14	73.47	99.08	95.51
September	73.68	71.10	95.88	92.44
October	76.14	73.47	99.08	95.51
November	73.68	71.10	95.88	92.44
December	76.14	73.47	99.08	95.51
January	76.14	73.47	99.08	95.51
February	68.77	66.36	89.49	86.28
March	76.14	73.47	99.08	95.51
Total	**896.44**	**865.05**	**1166.57**	**1124.61**

Application fee and the publication expenses

62. The petitioner has sought approval for the reimbursement of fee of ₹74,88,000/- (Rupees seventy four lakh eighty eight thousand only) for the period 2009-14, deposited towards filing of tariff petition and towards the expenses incurred for publication of notices in connection with the petition. The petitioner by its affidavit dated 9.5.2012 has submitted that an expenditure of ₹17161/- has been incurred by it for publication of notice in the newspapers.

63. In terms of Regulation 42 of the 2009 Tariff Regulations and based on the decision of the commission in order dated 11.1.2010 in Petition No.109/2009 (pertaining to approval of tariff for SUGEN power plant for the period from DOCO to 31.3.2014), the expenses incurred by the petitioner on petition filing fees for the period 2009-14 and the expenses towards publication of notice shall be directly recovered from the beneficiaries, on *pro rata* basis on production of documentary proof.

64. The petitioner is billing the respondents in accordance with the Commission's orders dated 16.1.2012/14.3.2012 in Petition No.265/2010. The provisional billing of annual fixed charges shall be adjusted in terms of the proviso to Regulation 5 (3) of the 2009 Tariff Regulations, amended on 21.6.2011.

65. This disposes of Petition No. 248/GT/2012.

Sd/-	***Sd/-***	***Sd/-***	***Sd/-***
(M.Deena Dayalan)	**(V.S.Verma)**	**(S.Jayaraman)**	**(Dr.Pramod Deo)**
Member	**Member**	**Member**	**Chairperson**

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

	2009-10	2010-11	2011-12	2012-13	2013-14
	365	365	365	365	365
CONSORTIOM OF BANKS(LEAD BANKER-UNION BANK)					
Gross Loan-Opening	1,35,000.00	1,35,000.00	1,35,000.00	1,35,000.00	1,35,000.00
Cum. Repayment	1,35,000.00	1,35,000.00	1,35,000.00	1,35,000.00	1,35,000.00
Net Gross Loan-Opening	-	-	-	-	-
Drawl during the period					
Repayment during the period					
Net Loan Closing	-	-	-	-	-
Average Loan	-	-	-	-	-
Rate of Interest	7.00%	7.00%	7.00%	7.00%	7.00%
Interest on Loan	-	-	-	-	-
PFC LOAN					
Gross Loan-Opening	1,35,000.00	1,35,000.00	1,35,000.00	1,35,000.00	1,35,000.00
Cum. Repayment	6,750.00	20,250.00	33,750.00	47,250.00	60,750.00
Net Gross Loan-Opening	1,28,250.00	1,14,750.00	1,01,250.00	87,750.00	74,250.00
Drawl during the period	-	-	-	-	-
Repayment during the period	13,500.00	13,500.00	13,500.00	13,500.00	13,500.00
Net Loan Closing	1,14,750.00	1,01,250.00	87,750.00	74,250.00	60,750.00
Average Loan	1,21,500.00	1,08,000.00	94,500.00	81,000.00	67,500.00
Rate of Interest	11.89%	11.89%	11.23%	10.80%	10.80%
Interest on Loan	14,446.35	12,841.20	10,609.36	8,748.00	7,290.00
TOTAL LOAN					
Gross Loan-Opening	2,70,000.00	2,70,000.00	2,70,000.00	2,70,000.00	2,70,000.00
Cum. Repayment	1,41,750.00	1,55,250.00	1,68,750.00	1,82,250.00	1,95,750.00
Net Loan-Opening	1,28,250.00	1,14,750.00	1,01,250.00	87,750.00	74,250.00
Drawl during the period	-	-	-	-	-
Repayment during the period	13,500.00	13,500.00	13,500.00	13,500.00	13,500.00
Net Loan Closing	1,14,750.00	1,01,250.00	87,750.00	74,250.00	60,750.00
Average Net Loan	1,21,500.00	1,08,000.00	94,500.00	81,000.00	67,500.00
Interest on Loan	14,446.35	12,841.20	10,609.36	8,748.00	7,290.00
Weighted average Rate of Interest on Loan	11.89%	11.89%	11.23%	10.80%	10.80%
Annualised WARI	11.89%	11.89%	11.23%	10.80%	10.80%