CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 60/2010

Coram:
1. **Dr. Pramod Deo, Chairperson**
2. **Shri S.Jayaraman, Member**
3. **Shri V.S.Verma, Member**
4. **Shri M.Deena Dayalan, Member**

DATE OF HEARING: 20.7.2010 **DATE OF ORDER 30.5.2011**

IN THE MATTER OF

Approval of generation tariff for Dulhasti Hydroelectric Project, (3 x 130 MW) for the period from 1.4.2009 to 31.3.2014.

AND IN THE MATTER OF

NHPC Ltd, Faridabad ….. **Petitioner**

Vs

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

The following were present:

1. Shri N.K.Chadha, NHPC
2. Shri Prashant Kaul, NHPC
3. Shri Ansuman Ray, NHPC
4. Shri Surendra Kumar Meena, NHPC
5. Ms. Reshma Hemrajan, NHPC
6. Ms. Niti Singh, NHPC
7. Shri Padamjit Singh, HPPC
8. Shri T.P.S.Bawa, HPPC

ORDER

This petition has been filed by the petitioner, NHPC Ltd, for Approval of generation tariff for Dulhasti Hydroelectric Project (3 x 130 MW) (hereinafter referred to as "the generating station") for the period from 1.4.2009 to 31.3.2014 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as "the 2009 regulations").

2. The generating station comprises of three units of 130 MW each with an annual design energy of 1907 MUs. All the three units of the generating station had been declared under commercial operation on 7.4.2007.

3. The tariff of the generating station for the period from 7.4.2007 to 31.3.2009 was approved by the Commission vide its order dated 30.11.2009 in Petition No. 72/2009. Subsequently, the Commission by order dated 9.3.2010, revised the annual fixed charges of the generating station after considering the additional capital expenditure for the years 2007-08 and 2008-09. The annual fixed charges approved by the Commission by order dated 9.3.2010, based on the capital cost of Rs. 511605.50 lakh as on 31.3.2009, is as under:

(₹ in lakh)

Annual Fixed Charges	**2007-08**	**2008-09**
Depreciation	14333.83	14626.45
Interest on Loan	23966.63	22425.01
Return on Equity	27357.65	27813.61
Advance against Depreciation	524.60	9715.18
Interest on Working Capital	2238.32	2475.28
O & M Expenses	7492.86	7922.45
Total	**75913.90**	**84978.00**

4. The annual fixed charges claimed by the petitioner is as stated overleaf:

(₹ in lakh)

Annual Fixed Charges	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	37173.66	37326.01	37483.75	37544.83	37560.65
Interest on Loan	20981.52	18866.85	17003.24	14895.14	12809.74
Depreciation	26644.28	26828.04	26974.20	27030.80	27045.46
Interest on Working Capital	2512.83	2518.40	2530.97	2537.14	2544.69
O & M Expenses	14902.08	15754.48	16655.64	17608.34	18615.54
Total	**102214.36**	**101293.78**	**100647.81**	**99616.25**	**98576.08**

5. Reply to the petition has been filed by the respondents, namely the Haryana Power Purchase Centre (HPPC) on behalf of respondent Nos.2 (HPGCL), and UPPCL (Respondent No.6).

CAPITAL COST

(A) Capital Cost as on 1.4.2009

6. The last proviso of Clause 2 of Regulation 7 of the 2009 Regulations, provides as under:

> *"Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure 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."*

7. As stated above, the Commission vide its order dated 9.3.2010 in Petition No.204/2009 had approved the capital cost of ₹511605.50 lakh as on 31.3.2009, after taking into account the additional capital expenditure for the period 2007-09. Accordingly, in terms of the above proviso, the capital cost of ₹511605.50 lakh as on 31.3.2009, has been considered as the opening capital cost as on 1.4.2009, in respect of the generating station for the period 2009-14.

(B) Additional Capital Expenditure for 2009-14 (projected)

8. Regulation 9 of the 2009 regulations provides as under:

> *"9. Additional Capitalization. (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) Undischarged 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;

(iv) 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, undischarged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

(2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

(ii) Change in law;

(iii) Deferred works relating to ash pond or ash handling system in the original scope of work;

(iv) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and

(v) In case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

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

9. The projected additional capital expenditure for the period 2009-14 claimed by the petitioner, is as under:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Capital expenditure incurred or projected to be incurred, after the date of commercial operation and up to the cut-off date-**Regulation 9(1)**	349.86	0.00	0.00	0.00	0.00
Works deferred for execution-**Regulation 9(1)(ii)**	664.35	0.00	0.00	0.00	0.00
Procurement of initial capital spares within the original scope of work-**Regulation 9(1)(iii)**	600.69	0.00	0.00	0.00	0.00
Liabilities to meet award of arbitration or for compliance of the order or decree of a court-**Regulation 9(1)(iv)**	16.00	0.00	0.00	0.00	0.00
Liabilities to meet award of arbitration or for compliance of the order or decree of a court-**Regulation 9(2)(i)**	0.00	160.00	165.00	105.00	5.00
Expenditure necessary for successful and efficient plant operation-**Regulation 9(2)(iv)**	0.00	1510.00	1680.40	230.00	224.95
Initial Spares-**Regulation 8**	0.00	2115.92	0.00	0.00	0.00
Total	**1630.89**	**3785.92**	**1845.40**	**335.00**	**229.95**

10. We now examine the claims of the petitioner for additional capital expenditure for the year 2009-10, under Regulation 9(1) of the 2009 regulations as under:

(₹ in lakh)

Particulars	2009-10
Capital expenditure incurred or projected to be incurred, after the date of commercial operation and up to the cut-off date-**Regulation 9(1)**	**349.86**
Works deferred for execution-**Regulation 9(1)(ii)**	**664.35**
Procurement of initial capital spares within the original scope of work-**Regulation 9(1)(iii)**	**600.69**
Liabilities to meet award of arbitration or for compliance of the order or decree of a court-**Regulation 9(1)(iv)**	**16.00**

11. Out of the expenditure for ₹349.86 lakh, the petitioner has claimed an expenditure of ₹108.10 lakh in respect of capital works like dozers, loaders, tipper, drilling equipments and other miscellaneous assets etc and ₹241.76 lakh towards

rectification of damage caused by natural calamities/geological reasons like treatment of sinking zone at Dam, hill slope stabilization at both banks of dam, construction of pump house at shalimar, construction of cradle box on river Chenab, inline vibration monitoring system, purchase of transformers, cables and welding set, which are beyond the approved scope of the project. Similarly, an expenditure of ₹664.65 lakh under Regulation 9(1)(ii) in respect of capital assets/works such as construction equipment (loaders, compressors, cane, fork lift etc), ambulance, fire tenders, power tunnels and pipelines, dam and barrages, security wall at power house area, office equipment etc, which are within the approved scope of the project and had been deferred for execution. Expenditure for ₹600.69 lakh has been claimed towards initial capital spares like under water parts like runner and its labyrinths (2 sets), exciter and controller spares and cables for internal distribution line. The petitioner has submitted that these capital works/assets are required for the smooth and efficient operation of the generating station and has prayed that the said expenditure may be allowed to be capitalized.

12. The respondent, HPPC has submitted that the claim for additional capital expenditure for ₹443.63 lakh, for underwater parts, runner, labyrinth etc, should be covered under O&M charges. It has also submitted that there is no justification for capitalization of equipment 'wheel dozer' amounting to ₹ 471 lakh when the civil and construction works are complete. The respondent further submitted that an expenditure of ₹150 lakh for black start of power station may not be permitted, as a DG set which may be available in the generating station, could give auxiliary supply to start up the first generating unit and that there was no justification for replacement of equipment like 'Exciter' and 'Controller spares' amounting to ₹133.06 lakh as these assets have given an operational service of only three years. In

response, the petitioner has submitted that the claim for additional capitalization for ₹443.63 lakh for under water parts, runners, labyrinth etc., was on account of heavy silt. It has also clarified that major damage was caused by high concentration of silt during high flow monsoon and the presence of high quartz content in silt the damage to under water parts was high and the trend increasing every year. The petitioner has also submitted that wheel dozers were necessary for the generating station which is located in a hilly area where snow fall varies from 6 feet to 9 feet every year and it is necessary for removal of snow by use of wheel dozers for proper approach and operation and that black start was required in terms of the scheme of NRLDC. The petitioner has further submitted that most of the claims for additional capitalization under the head 'capital spares' have been deducted, since the expenditure has been made from the profits of the generating station, except for the items/assets like 'wheel dozers' and 'black start'. The petitioner has thus prayed that the additional capital expenditure as claimed in the petition be allowed.

13. The submissions of the parties have been examined. The petitioner, in its petition has considered the cut-off date of the generating station as 31.3.2010, in terms of the 2009 regulations. Since the date of commercial operation of the generating station is 7.4.2007, the cut-off date of the generating station should be reckoned as 31.3.2009, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004. Hence, the proposed expenditure in respect of the works/assets (as stated above) is beyond the cut-off date of the generating station. However, keeping in view the security situation in the State of J&K, where the generating station is situated and the extreme weather conditions, these works/assets are considered necessary for the smooth and efficient operation of the generating station, and accordingly, the claims of the petitioner for additional

capital expenditure have been considered under Regulation 9(2)(iv) of the 2009 regulations, instead of its claim under Regulations 9(1). After examining the asset-wise details and justification for additional capitalization claimed by the petitioner, the admissibility of additional capital expenditure for 2009-10 under Regulation 9(2)(iv) is discussed as under.

(a) As the expenditure of ₹349.86 lakh pertain to the restoration of the damage on account of natural calamities like sinking of area near colony and to avoid blockage of road leading to dam and colony where personnel of both the CISF and the petitioner reside, stabilization of both banks of dam, are necessary for successful and efficient operation of the generating station. Hence capitalization of the said amount is allowed.

(b) The claim of the petitioner for ₹664.35 lakh in respect of assets/works like mobile crane (rough terrain), dam and barrages, protection of Dul Dam and wall for power house (for security) and for school and canteen building, and other assets which have been deferred for execution, is justified and is in order. Hence allowed.

(c) The claim for ₹600.69 lakh is in respect of assets which are in the nature of initial capital spares and is within the original scope of work. The said claim is within the ceiling limit specified under Regulation 8 of the 2009 regulations. As only one runner set is sufficient for three or four units of the generating station under normal circumstances, the cost of one set of runner and its labyrinths amounting to Rs ₹221.82 lakh has been allowed to be capitalized for 2009-10. Also, the expenditure in respect of excitation and controller system amounting to ₹133.06 lakh and other assets amounting ₹24.00 lakh is allowed. Hence, a total amount of ₹378.88 lakh has been allowed to be capitalized.

14. Based on the above, a total amount of ₹1393.07 lakh has been allowed to be capitalized under Regulation 9(2)(iv) for the year 2009-10**.**

Liabilities to meet award of arbitration or for compliance of the order or decree of a court-Regulation 9(1)(iv)

15. The claim of the petitioner for ₹16.00 lakh for 2009-10, under this head relates to the payment towards compensation for land acquisition which include provision for unpaid amount and compensation in unforeseen cases. In view of this, the claim for the said amount of ₹16.00 lakh has been allowed to be capitalized.

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

16. The petitioner has claimed a total expenditure of ₹435.00 lakh for 2010-14 (₹160.00 lakh for 2010-11, ₹165.00 lakh for 2011-12, ₹105.00 lakh for 2012-13 and ₹5.00 lakh for 2013-14) under this head, and the same is examined as under:

Year	Assets	Amount (*₹ in lakh*)	Findings
2010-11	Reclamation of muck disposal area of Hasti/Power House	**160.00**	**Allowed,** as these expenditure is in terms of the directions of the Ministry of Environment and Forests (MoEF)
2011-12		**165.00**	
2012-13		**105.00**	
2013-14	Payment of compensation in respect of land	**5.00**	**Allowed** as the expenditure incurred is in compliance with the award/order of Court.

Expenditure which has become necessary for successful and efficient plant operation-Regulation 9(2)(iv)

17. The petitioner has claimed a total expenditure of ₹3645.35 lakh for 2010-14 (₹1510.00 lakh for 2010-11, ₹1680.40 lakh for 2011-12, ₹230.00 lakh for 2012-13 and ₹224.95 lakh for 2013-14) under this head. The year-wise admissibility of the said claim is examined as under:

Year	Assets	Amount (*₹ in lakh*)	Findings
2010-11	Construction of barrack/building for purpose of security, protection of Dul dam area, dam and barrages, security wall for power house and other assets	**260.00**	**Allowed,** as these works are within the original scope of work of the project and has been deferred for execution. Moreover, these works relate to the security of the generating station.
	Treatment of sinking zone of at dam and approach road, hill slope stabilization at both bank, construction of sewerage treatment plant at Semna	**1098.00**	**Allowed.** Though these works are beyond the original scope of work of the project, these are necessary for the successful and efficient operation of the generating station.
	Portable DGA equipments, automatic tan delta kits, domino porta samplers	**152.00**	**Not allowed**. Since the assets are minor in nature and is not to be allowed in terms of the provision under Regulation 9(2)

Year	Assets	Amount (₹ *in lakh*)	Findings
2011-12	Rectification of the damage caused by natural calamities/geological factors, like the treatment of sinking zone at dam, hill slope stabilization and extension of permanent waterway and works, construction of HRT plug, construction of sewerage treatment, constriction of drinking water treatment plant and construction of wall for safety of employees, portable mobile crane, wheel dozer loaders and ambulance, et	**1455.50**	**Allowed.** Though these works are beyond the original scope of work of the project, these are necessary for the successful and efficient operation of the generating station.
	Construction of barrack/building for security purpose, protection of Dul dam area, security wall of power house, grouting and instrumentation work in dam and reclamation of muck disposal area, as per directions of the MoEF	**120.00**	**Allowed,** as these works are within the original scope of work of the project and has been deferred for execution. Moreover, these works relate to the security of the generating station and are necessary for the efficient operation of the station
	Purchase of fire equipment and trucks	**40.00**	**Not allowed**. Since the assets are minor in nature and not allowed in terms of the provision under Regulation 9(2).
	Tipper, fire tender, computer hardware and software,	**64.90**	
2012-13	Rectification of damage caused by natural calamities/geological factors, like the treatment of sinking zone at dam and hill slope stabilization etc.	**200.00**	**Allowed,** as these works are necessary for successful and efficient operation of generating station.
	Computer hardware and software etc	**30.00**	**Not allowed**. Since the assets are minor in nature and not to be allowed in terms of the provision under Regulation 9(2).
2013-14	Rectification of damage caused by natural calamities/geological factors like the treatment of sinking zone at dam and hill slope stabilization etc	**190.00**	**Allowed,** as these works are necessary for successful and efficient operation of generating station.
	Ambassador car, ambulance, computer hardware and software etc,	**34.95**	**Not allowed**. Since the assets are minor in nature and not to be allowed in terms of the provision under Regulation 9(2).

18. Based on the above discussions, amounts of ₹1358.00 lakh, ₹1575.50 lakh, ₹200.00 lakh, and ₹190.00 lakh has been allowed to be capitalized for the years 2010-14 under Regulation 9(2)(iv).

Regulation-8

19. Regulation 8 of the 2009 regulations provides as under:

> *"**Initial Spares.** Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:*
>
> *(i) xx*
> *(ii) xx*
>
> *(iii) Hydro generating stations- 1.5%*
>
> *Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to clause (2) of regulation 7, such norms shall apply to the exclusion of the norms specified herein.*

20. The petitioner has claimed an amount of ₹2115.92 lakh during 2010-11 under this head, as initial spares like underwater parts runner, and its labyrinths,(2 sets), excitation and controller spare for main generating equipment. The respondent HPPC has objected to the capitalization of the above.

21. The petitioner has claimed initial spares as mentioned in the preceding para under Regulation 8 of the 2009 regulations. It is observed that Regulation 8 provides for ceiling norms for capitalization of initial spares for the project only and not for considering the actual claims of the petitioner for capitalization of initial spares. The expenditure on initial spares is permitted to be capitalized under Regulation 7 upto the date of commercial operation and under Regulation 9 upto the cut-off date. However, there is no provision under Regulation 9 (2) to admit the capital spares after the cut-off date. The petitioner has incurred the expenditure on spares for the generating station after the cut-off date. Since the expenditure on spares is within the ceiling norms of 1.5% and considering the security environment in the State of

J&K under which the petitioner has executed the project, these spares are considered necessary for the efficient and successful operation of the generating station, we consider the claim of the petitioner under Regulation 9(2)(iv) of the 2009 regulations.

22. Under normal circumstances, only one runner set is used as a spare for three or four units of the generating station. Hence, only an amount of ₹665.45 lakh is considered. Similarly, the expenditure of ₹785.02 lakh for assets like Exciter and controller system which are in the nature of initial spares has been considered. As stated, capitalization of these spares is within the limit of 1.5% of the original project cost as specified by the Commission. In view of this, the expenditure on initial spares totaling ₹1450.47 lakh (₹665.45 lakh + ₹785.02 lakh) is allowed to be capitalized during 2010-11, under Regulation 9(2)(iv) of the 2009 regulations.

23. Based on the above discussions, the additional capital expenditure allowed before adjustment of un-discharged/discharged liabilities is as under:

(₹ in lakh)

	2009-10	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Regulation 9(1): The capital expenditure incurred or projected to be incurred, within the original scope of work, after the date of commercial operation and up to the cut-off date					
Liabilities to meet award of arbitration or for compliance of the order or decree of a court- **Regulation 9(1)(iv)**	16.00	0.00	0.00	0.00	0.00
Regulation 9(2) : The capital expenditure incurred after the cut-off date:					
Liabilities to meet award of arbitration or for compliance of the order or decree of a court- **Regulation 9(2)(i)**	0.00	160.00	165.00	105.00	5.00
Expenditure necessary on account of damage caused by natural calamities and for successful and efficient plant operation- **Regulation 9(2)(iv)**	1393.07	2808.47	1575.50	200.00	190.00
Total	**1409.07**	**2968.47**	**1740.50**	**305.00**	**195.00**

(C) Un-discharged Liabilities

24. The petitioner vide its affidavit dated 25.2.2010 has submitted that the un-discharged liabilities of ₹1640.45 lakh as on the date of date of commercial operation and ₹22.30 lakh during the period 2007-09 (totaling ₹1662.75 lakh) has been projected to be discharged during the year 2009-10.The projected discharge of un-discharged liability of ₹1662.75 lakh during the year 2009-10 is allowed.

25. Accordingly, the above amounts have been deducted during the year in which the liabilities have been charged and added during the year in which the liabilities have been discharged.

26. In view of the above, the additional capital expenditure allowed for the purpose of tariff, after considering the un-discharged liabilities and liabilities discharged, is as under:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Additional Capitalization Recommended (before adjustment on account of un-discharged liabilities)	1409.07	2968.47	1740.50	305.00	195.00
Add: Liabilities discharged during the year (related to un-discharged liability as on 31.3.2009	1662.75	0.00	0.00	0.00	0.00
Additional capital expenditure allowed	**3071.82**	**2968.47**	**1740.50**	**305.00**	**195.00**

(D) Capital Cost for 2009-14

27. As already stated, the Commission had admitted capital cost of ₹511605.50 lakh as on 31.3.2009 for the period 2004-09.

28. Taking into account the capital cost of the generating station as on 1.4.2009 and the additional capital expenditure approved as per para 26 above, the capital cost for the period 2009-14, is worked out as stated overleaf:

(₹ in lakh)

Year	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost as on 1st April of the financial year	511605.50	514677.32	517645.79	519386.29	519691.29
Additional capitalization allowed	3071.82	2968.47	1740.50	305.00	195.00
Capital cost as on 31st March of the financial year	**514677.32**	**517645.79**	**519386.29**	**519691.29**	**519886.29**

Debt-Equity Ratio

29. Regulation 12 of the 2009 regulations provides that:

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

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

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

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

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

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

30. The petitioner has considered 70% of the amount of its claim for additional capital expenditure as Normative Loan.

31. The Commission in its order dated 9.3.2010 in Petition No.204/2009 pertaining to revision of tariff based on additional capital expenditure for the period 2007-09, had observed as stated overleaf:

24. The petitioner has stated that the additional capital expenditure has been financed through internal resources. As per the approved revised cost estimate (RCE-II) of the Govt. of India letter dated.22.8.2008, corresponding to an approved capital cost of Rs.522849.00 lakh, the equity was frozen at Rs.198668.67 lakh. The Commission in its order dated 30.11.2009 in Petition No. 72/2009 had allowed the equity of Rs.198668.67 lakh on the date of commercial operation for the purpose of tariff. Accordingly, any additional capital expenditure incurred after the date of commercial operation, till the admitted capital cost becomes Rs.522849.00 lakh, is to be considered as debt. After consideration of the admitted additional capital expenditure of Rs.3188.55 lakh and Rs.567.58 lakh during the year 2007-08 and 2008- 09 respectively, the admitted capital cost for works out to Rs.511037.92 lakh and Rs.511605.50 lakh for the year 2007-08 and 2008-09 respectively, which is below the admitted capital cost of Rs.522849.00 lakh. Accordingly, the admitted additional capital expenditure has been considered as debt for the purpose of tariff.

32. Accordingly, after consideration of the admitted additional capital expenditure of ₹3071.82 lakh, ₹2968.47 lakh, ₹1740.50 lakh, ₹305.00 lakh and ₹195.00 lakh during the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 respectively, the admitted capital cost works out to ₹519886.29 lakh. This admitted capital cost is less than the Revised Cost Estimate (RCE) approved by the Govt. of India vide letter No. 5/2/2001(NHPC) Vol.III dated 22.8.2008 for ₹522849.00 lakh. Accordingly, the admitted additional capital expenditure has been considered as debt for the purpose of tariff.

Return on Equity

33. Regulation 15 of the 2009 regulations provides that

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

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

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

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

(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be.

Provided that return on equity with respect to the actual 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 separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

(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.

34. The petitioner has considered 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.

35. In terms of the provisions of the above regulations, Return on equity has been worked out @17.481% per annum on the normative equity, after accounting for the additional capital expenditure, considering the base rate of 15.5% and MAT rate of 11.33%. Return on equity has been worked out as under:

(₹ in lakh)

Return on Equity	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Gross Notional Equity	198668.67	198668.67	198668.67	198668.67	198668.67
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	198668.67	198668.67	198668.67	198668.67	198668.67
Average Equity	198668.67	198668.67	198668.67	198668.67	198668.67
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre-Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax) - *Annualised*	**34728.37**	**34728.37**	**34728.37**	**34728.37**	**34728.37**

36. Any change in rate of return on equity due to changes in the tax rate would however be considered at the time of truing up.

Interest on loan

37. Regulation 16 of the 2009 regulations provides as under:

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

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

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

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

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

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

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

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

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

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

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

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

38. The interest on loan has been computed as under:

(a) The opening gross normative loan as on the date of commercial operation of each unit has been arrived at in accordance with the provisions of the above regulation.

(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.

39. The calculation of the weighted average interest on loan is annexed to this order. Interest on loan has been worked out as under:

(₹ in lakh)

Interest on Loan	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Gross Normative Loan	312936.83	316008.65	318977.12	320717.62	321022.62
Cumulative Repayment upto Previous Year	39200.07	65838.39	92633.50	119550.83	146521.25
Net Loan-Opening	273736.75	250170.26	226343.62	201166.79	174501.37
Repayment during the year	26638.32	26795.10	26917.33	26970.42	26983.40
Addition due to Additional Capitalization	3071.82	2968.47	1740.50	305.00	195.00
Net Loan-Closing	250170.26	226343.62	201166.79	174501.37	147712.97
Average Loan	261953.51	238256.94	213755.21	187834.08	161107.17
Weighted Average Rate of Interest on Loan	8.02%	7.94%	7.99%	7.99%	8.03%
Interest on Loan	**21007.12**	**18917.26**	**17088.25**	**15005.51**	**12929.73**

Depreciation

40. Regulation 17 of the 2009 regulations provides that*:*

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

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

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

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

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

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

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

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting 3[the cumulative depreciation including Advance against Depreciation] as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets.

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

41. In terms of the above, depreciation has been calculated considering the weighted average rate of depreciation of 5.191% during the respective years of the tariff period. Accordingly, depreciation has been worked out as under:

(₹ in lakh)

Depreciation	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block as on the date of commercial operation	511605.50	514677.32	517645.79	519386.29	519691.29
Additional capital expenditure during 2009-14	3071.82	2968.47	1740.50	305.00	195.00
Closing gross block	514677.32	517645.79	519386.29	519691.29	519886.29
Average gross block	513141.41	516161.56	518516.04	519538.79	519788.79
Rate of Depreciation	5.191%	5.191%	5.191%	5.191%	5.191%
Depreciable Value @ 90%	461827.27	464545.40	466664.44	467584.91	467809.91
Balance Useful life of the asset	33.0	32.0	31.0	30.0	29.0
Remaining Depreciable Value	422628.19	398708.00	374031.93	348035.08	321289.65
Depreciation	**26638.32**	**26795.10**	**26917.33**	**26970.42**	**26983.40**

O&M Expenses

42. Sub-clause (iv) of Clause (f) of Regulation 19 of the 2009 regulations provides for normative operation and maintenance expenses for hydro generating stations as under:

"*In case of the hydro generating stations, which have not been in commercial operation for the period of five years as on 01.04.2009, 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.]"*

43. The O&M expenses claimed by the petitioner are as under*:*

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
O&M expenses	14902.08	15754.48	16655.64	17608.34	18615.54

44. The petitioner has claimed O&M expenses based on the original capital cost of ₹514551.83 lakh excluding the cost of rehabilitation and resettlement works, but including the impact of pay revision on employee cost. The impact of wage revision considered by the petitioner is based on the actual O&M expenses of ₹9111.69 lakh for the year 2007-08 and considering the percentage of employee cost expenses as 59.12 % of the O&M expenses of the year 2007-08. The expenses, on account of employees cost forms a major part of the total O&M expenses as under:

(a) Salaries, wages and allowances, which include honorarium, leave encashment, provident fund contribution, compensation under statutory provision, gratuity and provision on account of gratuity made on actuarial valuation basis every year, wage revision arrears.

(b) Staff welfare expenses, as per policy of the petitioner company includes Leave Travel Concession (LTC), medical reimbursement, liveries and uniform, ex-gratia, grants and subsidies to sports / canteen, New Year gifts, project school and hospital expenses, transport expenses productivity-linked incentives etc.

45. The break-up of the actual O & M expenses for the year 2007-08 claimed by petitioner is as under:

(₹in lakh)

S. No.	ITEMS	2007-08
1	Consumption of stores and spares	6.39
2	Repair and Maintenance	524.05
3	Insurance	2532.24
4	Security	21.17
5	**Administrative expenses**	
(a)	Rent	55.86
(b)	Electricity charges	237.78
(c)	Travelling and conveyance	54.09
(d)	Communication expenses	23.62
(e)	Advertising expenses	3.93
(f)	Foundation laying and inauguration	0.00

(g)	Donation	0.00
(h)	Entertainment	0.42
(i)	Filing fees	-
	Sub-total- 5 (a) to (i)	**375.70**
6	**Employee cost**	
(a)	(i) Salaries, wages and allowances (Project)	2910.05
	(ii) Salaries, wages and allowances (allocation of Corporate office/ Regional office)	571.70
	(iii) Salaries, wages to CISF and Kendriya Vidyalaya	1276.73
(b)	Staff welfare expenses	431.11
(c)	Productivity linked Incentive	187.78
(d)	Expenditure on VRS	9.60
(e)	Ex-gratia	0.00
	Sub Total - 6 (a) to (e)	**5386.97**
7	Loss of stores	3.12
8	Provisions	34.38
9	Corporate Office expenses allocation	97.64
10	**Others items**	
	Rates & Taxes	3.65
	Expenses on staff cars	111.36
	Printing & stationery	18.81
	Books & Periodicals	0.43
	Consultancy charges	3.12
	Expenditure on compensatory afforestation	0.00
	Expenditure on land not belonging to corporation.	2.72
	Loss on sale of assets	0.58
	Audit expenses	0.50
	Research & Development expenses	0.00
	Exchange Rate Variation	-
	Operating expenses of DG set	9.09
	Community development expenses	8.00
	Horticulture expenses	0.04
	Payment to Kendriya Vidyalaya	0.00
	Guest house/Transit hostel expenses-	5.40
	Scholarship	0.00
	Training expenses	2.76
	Water charges	0.00
	Expenses on departmental meetings	0.50
	Consumption of loose tools	0.96
	Participation fee for conference	0.00
	Festival celebration expenses	1.00
	Miscellaneous expenses	4.05
	Other General expenses -balancing figure	1.62
	Sub-total (10)	**174.59**
11	**Total (1 to 10)**	**9156.25**
12	Revenue/recoveries, if any	44.56
13	**Net Expenses**	**9111.69**

46. It is observed from the above table, that the petitioner has considered items such as (a) productivity linked incentive, (b) expenditure on VRS (c) loss of stores and provisions (d) loss on sale of assets (e) festival celebration expenses etc, in its calculations for arriving at the percentage of the employee's cost in O&M expenses. The inclusion of these items for O & M expenses is not justified for the reasons hereunder:

Items	Reasons
Loss of sale of assets	Should be borne by the petitioner and not to be charged on the beneficiaries
Ex-gratia	Incentive should be paid out of profit of the petitioner company
Expenses on new year gifts	Should be borne by the petitioner company out of its profits not to be charged on the beneficiaries
VRS expenses	Expenses not of a regular nature. Also, the likely pattern of expenses on this count, during the period 2009-14 has not been indicated
Expenses on account of productivity-linked Incentive (under section 31 A of Payment of Bonus Act)	Expenses incurred are on account of incentive paid to the employees for maintaining high availability of the generating station to achieve higher generation. The incentive payment is made separately and claimed in the bill of the beneficiaries.
Salaries, wages and allowances (allocation of corporate office/ Regional office)	Considered separately under Corporate expenses.

47. Based on the above, O & M expenses for 2007-08 considered for calculation of employee cost is as under:

(₹ in lakh)

S. No.	ITEMS	2007-08
1	Consumption of stores and spares	6.39
2	Repair and Maintenance	524.05
3	Insurance	2532.24
4	Security	21.17
5	**Administrative expenses**	
(a)	Rent	55.86
(b)	Electricity charges	237.78
(c)	Travelling and conveyance	54.09
(d)	Communication expenses	23.62
(e)	Advertising expenses	3.93
(f)	Foundation laying and inauguration	0.00

(g)	Donation	0.00
(h)	Entertainment	0.42
(i)	Filing fees	-
	Sub-total- 5 (a) to (i)	**375.70**
6	**Employee cost**	
(a)	(i) Salaries, wages and allowances (Project)	2910.05
	(ii) Salaries, wages and allowances (allocation of Corporate office/ Regional office)	0.00
	(iii) Salaries, Wages to CISF and Kendriya Vidyalaya	1276.73
(b)	Staff welfare expenses	431.11
(c)	Productivity linked Incentive	0.00
(d)	Expenditure on VRS	0.00
(e)	Ex-gratia	0.00
	Sub Total - 6 (a) to (e) *	**4617.89**
7	Loss of stores	0.00
8	Provisions	0.00
9	(i) Corporate Office expenses allocation (a) Allocation of employee cost to project = **Rs 402.84 lakh** (b) Other expenses to project = **Rs 120.88 lakh**	523.72
	(ii) Regional Office expenses allocation (a) Employee cost to Regional Office = Rs 64.56 lakh **(b)** Other expenses to Regional Office =Rs 10.50 lakh	75.06
10	**Others items**	
	Rates & Taxes	3.65
	Expenses on staff cars	111.36
	Printing & stationery	18.81
	Books & Periodicals	0.43
	Consultancy charges	3.12
	Expenditure on compensatory a forestation	0.00
	Expenditure on land not belonging to corporation.	0.00
	Loss on sale of assets	0.00
	Audit expenses	0.50
	Research & Development expenses	0.00
	Exchange Rate Variation	-
	Operating expenses of DG set	9.09
	Community development expenses	8.00
	Horticulture expenses	0.04
	Payment to Kendriya Vidyalaya	0.00
	Guest house/Transit hostel expenses-	5.40
	Scholarship	0.00
	Training expenses	2.76
	Water charges	0.00
	Expenses on departmental meetings	0.50
	Consumption of loose tools	0.96
	Participation fee for conference	0.00
	Festival celebration expenses	1.00
	Miscellaneous expenses	4.05
	Other General expenses -balancing figure	1.62
	Sub-total (10)	**171.29**
11	**Total (1 to 10)**	**8847.51**
12	Revenue/recoveries, if any	44.56
13	**Net Expenses**	**8802.95**

**Excluding the employee cost allocated to project*

48. Thus, the total employee cost works out to ₹ 5085.29 lakh (₹4617.89 lakh + ₹402.84 lakh + ₹64.56 lakh) and the total O & M expenses works out to Rs. 8802.95 lakh. Based on this, the percentage of employee cost allowed is 57.77%. Accordingly, the O&M expenses allowed for the period 2009-14 is as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Operation and Maintenance expenses	14824.24	15672.19	16568.64	17516.36	18518.30

Interest on Working Capital

49. In accordance with sub-clause (c) of clause (1) of Regulation 18 of the 2009 regulations, working capital in case of 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.

50. Clauses (3) and (4) of Regulation 18 of the 2009 regulations, the rate of interest on working capital shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 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.

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

(a) **Receivables**: In terms of the provisions of the above regulations, receivables equivalent to two months of fixed cost, considered for the purpose of tariff, is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Receivables	16609.40	16428.90	16295.39	16115.92	15940.30

(b) **Maintenance Spares:** In terms of the provisions of the above regulations, 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	2223.64	2350.83	2485.30	2627.45	2777.74

(c) **O&M Expenses:** In terms of the provisions of the above regulations Operation and maintenance expenses for one month considered for the purpose of tariff, is as under:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses	1235.35	1309.54	1380.72	1459.70	1543.19

52. In terms of Clauses (3) and (4) of Regulation 18 of the 2009 regulations, the SBI PLR as on 1.4.2009 was 12.25%. This has been considered by the petitioner. The same interest rate has been considered in the calculations, for the purpose of tariff.

53. Necessary computations in support of calculation of interest on working capital is as under:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	2223.64	2350.83	2485.30	2627.45	2777.74
O & M expenses (1 month)	1235.35	1309.54	1380.72	1459.70	1543.19
Receivables	16609.40	16428.90	16295.39	16115.92	15940.30
Total	20068.39	20085.75	20161.41	20203.07	20261.23
Rate of interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on working capital	**2458.38**	**2460.50**	**2469.77**	**2474.88**	**2482.00**

Annual Fixed Charges

54. The annual fixed charges approved for the generating station for the period from 1.4.2009 to 31.3.2014 is as under:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	34728.37	34728.37	34728.37	34728.37	34728.37
Interest on Loan	21007.12	18917.26	17088.25	15005.51	12929.73
Depreciation	26638.32	26795.10	26917.33	26970.42	26983.40
Interest on Working Capital	2458.38	2460.50	2469.77	2474.88	2482.00
O & M Expenses	14824.24	15672.19	16568.64	17516.36	18518.30
Total	**99656.42**	**98573.42**	**97772.36**	**96695.54**	**95641.79**

55. The petitioner shall be entitled to compute and recover the annual fixed charges and energy charges in accordance with Regulation 22 of the 2009 regulations.

56. Regulation 6 of the 2009 regulation provides as under:

> *"6. Truing up of Capital Expenditure and Tariff.*
>
> *(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.*
>
> *Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013-14 for revision of tariff."*

57. The recovery of the annual fixed charges shall be subject to truing up, in terms of the above provisions of the regulations.

Design Energy

58. The month-wise details of design energy in respect of the generating station is indicated in the table overleaf:

Month	Design Energy (MUs)
April	110.7
May	230.3
June	266.7
July	275.6
August	275.6
September	261.3
October	134.5
November	84.0
December	73.4
January	64.3
February	55.6
March	74.6
Total	**1907**

59. Monthly energy charges shall be computed in terms of the provisions contained in Regulation 22 of the 2009 regulations.

Application fee and the publication expenses

60. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition for determination of tariff for the generating station. However, the details of the actual expenditure incurred for publication of notice in the newspapers, has not been submitted by the petitioner.

61. Regulation 42 of the 2009 regulations provides as under:

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

62. The Commission in its 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) had decided that filing fees in respect of main petitions for determination of tariff and the expenses on publication of notices are to be reimbursed.

63. Accordingly, the expenses incurred by the petitioner on application filing fees amounting to ₹7,80,000/-each for the years 2009-10 and 2010-11 in connection with the present petition, shall be directly recovered from the beneficiaries, on *pro rata* basis. However, the reimbursement of charges towards the publication of notices in newspapers shall be recovered on *pro rata* basis, on submission of documentary proof of the same.

64. Petition No.60/2010 is disposed of in terms of the above.

Sd/-	**Sd/-**	**Sd/-**	**Sd/-**
[M.DEENA DAYALAN]	**[V.S.VERMA)**	**[S. JAYARAMAN]**	**[DR.PRAMOD DEO]**
MEMBER	**MEMBER**	**MEMBER**	**CHAIRPERSON**