CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 237/GT/2014

Coram:

Shri Gireesh B. Pradhan, Chairperson
Shri A. K. Singhal, Member
Shri A.S. Bakshi, Member

Date of Hearing: 28.11.2014
Date of Order : 04.09.2015

IN THE MATTER OF

Revision of Annual Fixed Charges for the period 2012-14 after truing-up exercise and Determination of annual fixed charges for the period 2014-19 in respect of Chamera-I Hydroelectric Power Station

AND

In the matter of

NHPC Limited
NHPC Office Complex,
Sector-33, Faridabad,
Haryana-121003 **…Petitioner**

Vs

1. Punjab State Power Corporation Limited
The Mall, Secretariat Complex,
Patiala – 147001

2. Haryana Power Purchase Centre,
Shakti Bhawan, Sector, 6
Panchkula – 134109

3. BSES Rajdhani Power Ltd
BSES Bhawan, Nehru Place,
New Delhi – 110019

4. BSES Yamuna Power Ltd
BSES Bhawan, Nehru Place,
New Delhi – 110 019

5. Tata Power Delhi Distribution Ltd
33 kV Sub-station, Kingsway Camp,
Delhi –110009

6. Himachal Pradesh State Electricity Board,
VidyutBhawan, Kumar House,
Shimla-171004

7. Uttar Pradesh Power Corporation Ltd
Shakti Bhawan, 14, Ashok Marg, Lucknow – 226001

8. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.
Vidut Bhavan, Janpath,
Jyoti Nagar, Jaipur-302005

9. Jaipur Vidyut Vitaran Nigam Ltd.,
Vidut Bhavan, Janpath,
Jaipur – 302005

10. Jodhpur Vidyut Vitaran Nigam Ltd.
New Power House, Industrial Area,
Jodhpur – 342003

11. Ajmer Vidyut Vitaran Nigam Ltd.
Old Power House, Hatthi Bhatta,
Jaipur Road, Ajmer – 305001

12. Uttaranchal Power Corporation Ltd,
UrjaBhawan, Kanwali Road,
Dehradun-248001

13. Engineering Department, UT Secretariat,
UT Secretariat, Sector 9D
Chandigarh-160009

14. Power Development Department,
New secretariat,
Jammu-180001 (J&K) **…Respondents**

Parties present:

ShriA.K Pandey, NHPC
Shri S.KMeena, NHPC
Shri Piyush Kumar, NHPC
Shri R.B Sharma, Advocate, BRPL

ORDER

This petition has been filed by the petitioner, NHPC limited for revision of tariff of Chamera-I Hydroelectric Power Station (3 x 180 MW) ("the generating station") for the period from 1.4.2012 to 31.3.2014 after truing-up exercise in terms of Regulation 6 of the Central Electricity Regulatory Commission (Terms &Conditions of Tariff) Regulations, 2009 ('the 2009 Tariff Regulations') and for determination of annual fixed charges for the period from 1.4.2014 to 31.3.2019 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014 ('the 2014 Tariff Regulations').

2. The generating station having a capacity of 540 MW is located in the State of Himachal Pradesh and was declared under commercial operation on 1.5.1994.

3. The tariff of the generating station for the period from 1.4.2004 to 31.3.2009 was approved by the Commission vide its order dated 9.5.2006 in Petition No.39/2005 and was revised by order dated 5.2.2007 in Review Petition No.64/2006 (in Petition No.39/2005). Aggrieved by the said order, the petitioner had filed Appeal No.84/2007 before the Appellate Tribunal for Electricity (the Tribunal) raising the issues namely, (a) Allocation of additional capitalization for the period 1.4.2001 to 31.3.2004 towards debt and equity(b) on adoption of new debt equity ratio, the calculations of gross loan, return on equity and interest on loan have been completely distorted; and (c) Error in calculation of depreciable value in respect of unclassified land. As regards the allocation of additional capitalization for the period 1.4.2001 to 31.3.2004, the Commission undertook to review the debt-equity ratio as 68.99:31.01for the period 2004-09 (instead of 69.63:30.37) in the light of the decision in Loktak HEP (another generating station of the petitioner) and pass necessary orders segregating the additional capital expenditure as considered for tariff determination for the period 2001-04. Accordingly, the Tribunal by order dated 5.2.2008 directed the Commission to pass consequential orders.The relevant extract of the order dated 5.2.2008 is as under:

> *"Having considered the whole matter we allow the appeal only to the extent of the two grounds mentioned above and set aside the impugned order and remand the matter to the CERC for reconsideration of the appellants claim*
>
> *"1.With regard to the apportioning of the additional capitalization (including de-capitalization and FERV) for the period 1.4.2001 to 31.3.2004 in the same debt-equity ratio of 68.99:31.01 as admitted in the previous tariff period and*
>
> *2. With regard to the adoption of new debt equity ratio, the calculations of gross loan, RoE and Interest on loan.*
>
> *The Commission is at liberty to give further relief which will be consequent upon the Commission decision on the two above issues. The appellant as well as other respondents will be at liberty to challenge the order that CERC may now pass consequent upon the present directions."*

4. Based on this, the only issue considered by the Tribunal in the said appeal was the error in the calculation of depreciable value of unclassified land and the same was dismissed by the Tribunal vide judgment dated 23.12.2009. During the pendency of the said appeal, the Commission vide order dated 21.12.2009 in Petition No.97/2009 had revised the annual fixed charges for the generating station after considering the additional capital expenditure incurred during the years 2004-05 and 2005-06.Subsequently, by order dated 3.9.2010 in Petition No. 206/2009, the annual fixed charges for 2004-09 was revised after considering the impact of additional capital expenditure for the period 2006-09.

5. Though the tariff of the generating station for the period 2004-09 had been revised by the Commission through various tariff orders, as stated above, it is observed that the segregation of the additional capital expenditure in the debt-equity ratio of 68.99:31.01was inadvertently not considered in terms of the observations of the Tribunal in the said tariff orders, perhaps due to oversight. This inadvertent error is sought to be rectified by considering the debt-equity ratio of 68.99:31.01 for the period 2004-09. Consequent upon this, the other components of tariff will also undergo revision and accordingly the annual fixed charges for the period 2004-09 in respect of this generating station have been revised as stated in the subsequent paragraphs.

6. The annual fixed charges allowed for the generating station for the period 2004-09by orders dated 21.12.2009 and 3.9.2010 is as under:

(` in lakh)

	2004-05	**2005-06**	**2006-07**	**2007-08**	**2008-09**
Depreciation	4920.64	3610.79	3624.12	3640.75	3648.74
Interest on Loan	2.22	0.00	0.00	0.00	0.00
Return on Equity	8592.81	8608.47	8623.21	8635.52	8642.69
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	736.64	741.11	770.11	800.71	832.73
O & M Expenses	5934.00	6171.00	6418.00	6675.00	6942.00
Total	**20186.32**	**19131.37**	**19435.45**	**19751.98**	**20066.16**

Debt-Equity

7. The Commission in its order dated 9.5.2006 had considered the debt-equity ratio as on 1.4.2004 as under:

> ***"DEBT-EQUITY RATIO***
>
> *16. Clause (1) of Regulation 36 of the 2004 regulations inter alia provides that in case of the existing generating stations, debt–equity ratio Considered by the Commission for fixation of tariff for the period ending 31.3.2004 shall be considered for determination of tariff.*
>
> *17. The petitioner has claimed tariff on the basis of debt and equity of 68.99:31.01 as was admitted by the Commission in the petition No. 60/2001 dated 23.2.2005.The additional capital expenditure/de-capitalization amounts as claimed is divided proportionately on the basis of debt-equity ratio as per previous tariff setting and has been deducted as normative loan and normative equity from the loan and equity as on 1.4.2004.*
>
> *18. It is noted that the petitioner in Annexure to Form No. 1 in the petition has shown the capital cost, and financing of capital cost as under:*
>
> *19. Debt and equity allowed to finance the capital expenditure by order dated 23.2.2005 has been considered in the calculation. De-capitalization for the years 2001-02 to 2003-04 and assets declared by the petitioner as "not in use" (taken en-block) declared by the petitioner as on 1.4.2004 respectively amounting to Rs.1445.11 lakh and Rs.289.40 lakh respectively have been adjusted against equity and FERV of Rs.301.25 lakh has been adjusted against loan so as to keep overall debt-equity ratio closer to 70.28:29.72, as notified by the Central Government vide notification dated 8.2.1999. Accordingly, the adjusted debt-equity ratio is 69.63:30.37. The equity as on 1.4.2004 works out to Rs.61344.59 lakh."*

8. Accordingly, the Commission in the said order had adjusted the amount of `1445.11 lakh and `289.40 lakh (on account of de-capitalization) in equity and addition of `301.25 lakh (due to FERV) in loan for the period 2001-04. In Appeal No. 84/2007 filed by the petitioner, the Tribunal by order dated 5.2.2008 had granted liberty to the Commission to reconsider the claim of the petitioner on this issue and pass consequential orders. Based on this, the debt-equity ratio as on 31.3.2004 has been arrived by taking into account the impact of the additional capitalization (including de-capitalization and FERV) for the period 1.4.2001 to 31.3.2004. As such, there will be no change in capital cost, but the debt-equity ratio would undergo revision on this count. Accordingly, the debt-equity ratio of 68.99:31.01 as on 31.3.2001 as was considered by the Commission in order dated 23.2.2005 in Petition No.60/2001 has been taken into consideration. Moreover, the additional capital expenditure due to FERV and de-

capitalization amounts as claimed is divided proportionately on the basis of debt-equity ratio for that period. The debt-equity ratio as on 31.3.2004 has been worked out as under:

2001-04

	As on 31.3.2001 as admitted vide order 60/2005		Additional capitalization and de-capitalization 2004-09 period		Capital Cost as on 31.3.2004	
	` in lakh	%	` in lakh	%	` in lakh	%
Capital Cost	203444.65	100.00	(-) 1433.21	100.00	202011.44	100.00
Debt	140356.46	68.99	(-) 988.77	68.99	139367.69	68.99
Equity	63088.19	31.01	(-) 444.44	31.01	62643.75	31.01

9. Consequent upon the revision of the debt-equity ratio as above, in terms of the orders of the Tribunal, the calculations of depreciation, gross loan, return on equity and interest on loan undergo revision as stated below.

Depreciation

10. As per Regulation 21 of the 2004 Tariff Regulations, the remaining depreciable value has been spread over the balance useful life. Accordingly, the depreciation is revised as under:

(` in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Block	**202011.44**	**202228.83**	**202757.18**	**202930.88**	**203343.43**
Additional capital expenditure during 2004-09	217.39	528.35	173.71	412.55	(-)71.40
Closing gross block	202228.83	202757.18	202930.88	203343.43	203272.04
Average gross block	202120.13	202493.00	202844.03	203137.16	2033307.74
Depreciable value	178403.40	178738.98	179054.91	179318.73	179472.25
Balance useful life of the asset	27	26	25	24	23
Remaining depreciable value	98397.67	95155.84	91829.10	88553.13	85046.88
Depreciation	**3644.36**	**3659.84**	**3673.16**	**3689.71**	**3697.69**

Return on Equity

11. Return on Equity @14% as per Regulation 38 (iii) of the 2004 Tariff Regulations, is computed as under:

(` in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Opening equity	62643.75	62708.97	62867.48	62919.59	63043.36
Additional Equity during 2004-09	65.22	158.51	52.11	123.77	(-) 21.42

Closing Equity	62708.97	62867.48	62919.59	63043.36	63021.94
Average Equity	62676.36	62788.22	62893.53	62981.47	63032.65
Return on Equity	**8774.69**	**8790.35**	**8805.09**	**8817.40**	**8824.57**

Interest on Working Capital

12. The Receivable component of the working capital undergoes revision and accordingly, the calculation of Interest on Working Capital @ 10.25% (SBI PLR as on 1.4.2004) is revised as under:

(` in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	3327.87	3527.54	3739.19	3963.54	4201.36
O & M expenses	494.50	514.25	534.83	556.25	578.50
Receivables	3178.44	3227.72	3278.40	3331.14	3383.50
Total	7000.81	7269.51	7552.42	7850.93	8163.36
Interest	**717.58**	**745.12**	**774.12**	**804.72**	**836.74**

13. Accordingly, the annual fixed charges of the generating station for the period 2004-09 shall stand revised as under:

(` in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	3644.36	3659.84	3673.16	3689.71	3697.69
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	8774.69	8790.35	8805.09	8817.40	8824.57
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	717.58	745.12	774.12	804.72	836.74
O & M Expenses	5934.00	6171.00	6418.00	6675.00	6942.00
Total	**19070.63**	**19366.31**	**19670.38**	**19986.84**	**20301.00**

Revision of Annual Fixed Charges for 2012-14

14. The Commission by order dated 12.7.2011 in Petition No. 84/2010 had determined the annual fixed charges for the generating station for the period 2009-14 which was revised by order dated 10.12.2012 in Review Petition No.18/2011. Thereafter, by order dated 11.11.2013 in Petition No.125/GT/2013, the annual fixed charges of the generating station for 2009-14 was revised after truing-up exercise based on the actual additional capital expenditure incurred for the period 2009-12and the proposed additional capital expenditure for 2012-14. The annual fixed charges allowed for the period 2009-14 by the said order dated 11.11.2013 is as under:

(` in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	14517.16	14372.33	14212.72	11014.77	11536.59
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4083.58	4112.94	4123.51	4135.39	4135.03
Interest on Working Capital	832.77	855.82	879.63	841.68	882.63
O & M Expenses	8898.02	9406.98	9945.06	10513.92	11115.31
Total	**28331.53**	**28748.07**	**29160.92**	**26505.76**	**27669.56**

15. As stated, the petitioner in this petition has claimed revision of tariff for the period 2009-14 based on the actual additional capital expenditure incurred during the years 2012-13 and 2013-14 after truing up in accordance with the 2009 Tariff Regulations and for determination of annual fixed charges for the period 2014-19 in terms of the 2014 Tariff Regulations. The annual fixed charges claimed by the petitioner for 2012-14 based on the actual additional capital expenditure incurred during the years 2012-13 and 2013-14 is as under:

(` in lakh)

	2012-13	2013-14
Return on Equity	12211.45	12962.49
Interest on Loan	0.00	0.00
Depreciation	4137.35	4150.93
Interest on Working Capital	866.66	912.68
O & M Expenses	10513.92	11115.31
Annual Fixed Charges	**27729.38**	**29141.56**

16. The projected additional capital expenditure allowed for the period 2012-14 in order dated 11.11.2013 in Petition No.125/GT/2013 *vis-a-vis* the actual additional capital expenditure claimed in this petition are as under:

(` in lakh)

	2012-13	2013-14
Projected additional capital expenditure allowed in order dated 11.11.2013	256.61	(-) 339.81
Actual additional capital expenditure claimed	331.26	142.88

17. During the hearing of the petition on 13.10.2014, the respondent, BRPL raised preliminary objection as regards the clubbing of tariff petitions by the petitioner and submitted that the petitioner may be directed to file separate petitions, for truing-up of

tariff for the period 2009-14 and for determination of tariff for 2014-19. The Commission after hearing the parties by interim order dated 12.11.2014 rejected the contentions of the respondent and held that the petition filed by the petitioner was maintainable. The relevant portion of the order is extracted as under:

> *"17. In our view, clubbing of tariff petitions for truing-up for 2009-14 along with the tariff petitions for 2014-19 and disposing of the same through a single order would not only save time, but also bring about certainty in the recovery of cost by these generating stations of the petitioner and also safeguard the interest of consumers. In this background, the preliminary objections raised by the learned counsel for the respondent, BRPL as to the maintainability of these petitions stands rejected. Hence, we hold that the petitions filed by the petitioner in respect of the said generating stations are maintainable."*

18. Accordingly, the petition was heard on 28.11.2014 and the Commission after directing the parties to complete the pleadings reserved orders in the petition. The respondents, UPPCL, JVVNL, JoVVNL, AVVNL and BRPL have filed replies to the petition and the petitioner has filed its rejoinder to the same. Based on the submissions of the parties and the documents available on record, we proceed to revise the tariff for the period 2009-14 based on truing-up exercise and also determine the tariff for the period 2014-19 in respect of the generating station as stated in the subsequent paragraphs:

Capital cost

19. Regulation 7 (1) (a) of the 2009 Tariff Regulations provides as under:

> *"7. Capital Cost. (1) Capital cost for a project shall include: (a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;"*

20. The Commission in order dated 11.11.2013 in Petition No.125/GT/2013 had considered the closing capital cost of `204102.76lakh as on 31.3.2012 as the opening capital cost as on 1.4.2012for revision of tariff for 2012-14. Accordingly, this capital cost

of `204102.76 lakh has been considered as the opening capital cost as on 1.4.2012 for revision of tariff for 2012-14.

Actual Additional Capital Expenditure

21. Regulation 9 of the 2009 Tariff Regulations, as amended on 21.6.2011,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;*
>
> *(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, 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."

22. The re-conciliation of actual additional capital expenditure claimed in this petition with respect to additional capital expenditure as per books of accounts duly certified by auditor for the period 2012-13 and 2013-14 is as under:

(` in lakh)

Sl. No		**2012-13**	**2013-14**
1	**Additional Capital Expenditure**		
1(a)	**Additions**		
i	Capitalization against works projected and allowed for additional capital expenditure	332.80	126.45
ii	Additional capital expenditure not projected earlier but claimed on actual basis.	28.21	4.01
iii	Inter-Unit transfer considered	5.32	0.00
	Total1(a)	**366.33**	**130.46**
1(b)	**Deletion / Deduction**		
i	Assets deducted on Replacement of New Assets covered under Category A	(-) 9.25	(-)13.03
ii	Deduction of Assets without any Replacement and not Covered under Exclusion Clause		
iii	Inter-Unit transfer out considered for additional capital expenditure	0.00	0.00

	Total 1(b)	(-) 9.25	(-)13.03
1(c)	**Net addition claimed 1(c)=1(a)+1(b)**	**357.08**	**117.43**
2(a)	**Exclusion Category (not to be claimed)**		
i	Additions	127.64	143.76
ii	Deletions	(-) 395.71	(-) 137.89
	Total 2(a)=(i)-(ii)	**(-) 268.07**	**5.87**
	Net additional capital expenditure 1(c)+2(a) as per books of accounts	**89.01**	**123.30**
3	**Net additional capital expenditure claimed for tariff**		
i	Net capital expenditure claimed in petition=1(c)	357.08	117.43
ii	Un-discharged liabilities in the above	26.61	0.70
iii	Liabilities discharged during the year for the period 2009-12	2.98	0.00
iv	Liabilities discharged during the year out of 3(ii)above	0.00	26.61
v	Liabilities discharged out of undischarged amount as on 31.3.2009	0.00	0.00
vi	Assumed/Deemed Deletions	(-) 2.19	(-) 0.47
	Net amount of capital expenditure claimed	**331.26**	**142.88**

23. Based on the above reconciliation, the year-wise admissibility of the additional capital expenditure under various heads is discussed in the subsequent paragraphs.

Additions against works already approved

24. The petitioner has claimed the year-wise actual additional capital expenditure as against the projected capital expenditure on works allowed by the Commission as under:

(` in lakh)

2012-13	2013-14
332.80	126.46

<u>2012-13</u>

25. The details of works/assets, the additional capital expenditure allowed for these works / actual additional capital expenditure against these works along with reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

(` in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1	Equipment required for compliance of OHSAS and Environment policy	10.00	3.36	**Allowed** as the asset/work has already been approved by Commission in order dated 11.11.2013 in Petition No. 125/GT/2013 under Regulation 9(2) (ii) of the 2009 Tariff Regulations
	Total claimed		3.36	
	Total allowed			**3.36**

Works allowed in previous years but capitalized in 2012-13

26. The details of works/assets, the additional capital expenditure allowed for these works / actual additional capital expenditure against these works along with reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations are as under:

(` in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1	Construction of watch tower at Dam	40.00	28.94	**Allowed** as the asset/work has already been approved under Regulation 9(2) (iv) by Commission order dated 12.07.2011 in Petition No.84/2010
2	Fiber reinforced plastic motor boat	10.00	12.57	
3	Security & Surveillance System	46.88	26.70	Expenditure of `48.12 lakh in 2009-10 has been allowed by Commission's order dated 12.7.2011 in Petition No.84/2010.Hence, **allowed** as the asset/work has already been approved by Commission under Regulation 9(2) (iv) towards security of the generating station.
4	Battery charger	25.00	1.29	**Allowed** as the asset/work was already approved under Regulation 9(2)(iv) vide Commission's order dated 12.7.2011 in Petition No.84/2010.
5	Construction of 20 B-Type	112.00 (250-138 [de-	259.94	**Allowed** as the asset/work was already approved under

	quarters	capitalization of old asset])		Regulation 9(2) (iv) vide Commission’s order dated 12.7.2011 in Petition No.84/2010. The gross value of the old asset for `138.00 lakh as provided in Petition No. 84/2010 has been considered under "Assumed Deletions.
	Total claimed		**329.44**	
	Total allowed			**329.44**

2013-14

27. The details of works/assets, the additional capital expenditure allowed for these works / actual additional capital expenditure against these works along with reasons for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

(` in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1.	Addition of OFC network and wireless connectivity of LAN of Chamera Power station-I	5.00	3.91	**Allowed** as the asset/work was already approved under Regulation 9(2) (iv) by Commission’s order dated 12.7.2011 in Petition No, 84/2010.
	Total claimed		**3.91**	
	Total allowed			**3.91**

Works allowed in previous years but capitalized in 2013-14

28. The details of works, the additional capital expenditure allowed for these works, the actual additional capital expenditure incurred against these works along with justification for admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

(` in lakh)

Sl. No	Assets/works	Amount allowed on projected basis	Actual expenditure incurred/ claimed	Justification for admissibility of expenditure
1	Replacement of temporary B-Type Quarters with new 32 nos. B-Type Quarter at Upper Simblu	250.00	16.48	A projected expenditure of `259.94 lakh was allowed in 2012-13 vide Commission's order dated 12.7.2011 in Petition No. 84/2010 on the ground that the same is required for efficient and successful operation of the generating station. Hence, **allowed** under Regulation 9(2)(iv) as the asset/work had already been approved.
2	Replacement of existing Distribution Transformer, 250 KVA, 11/0.433 KV	98.48	13.93	`100 lakh was allowed on projection basis vide order dated 12.7.2011 in Petition No. 84/2010. Against the same an actual expenditure of `12.22 lakh was allowed in 2010-11 and `16.13 lakh in 2011-12 vide Commission's order dated 11.11.2013 in Petition No. 125/GT/2013 under Regulation 9(2)(iv) on the ground that the asset/work is required for efficient and successful operation of the generating station.Hence, **allowed** as the asset/work had already been approved**.** The gross value of the old asset for `1.52 lakh has been reduced under "Deletions".
3	Fork Lift	15.00	15.54	**Allowed** on replacement basis under Regulation 9(2)(iv) as the new asset/work had already been approved by Commission vide order dated 12.7.2011in Petition No. 84/2010. The gross value of old asset for`4.46 lakh has been reduced under "Assumed Deletions".
4	Fire tenders	25.63	26.67	**Allowed** on replacement basis under Regulation 9(2) (iv) as the new asset/work had already been approved by Commission vide order dated 12.7.2011 in Petition No. 84/2010. The gross value of old asset for `1.04 lakh has

				been reduced under "Assumed Deletions"
5	High mast lighting, 20 m (4 nos)	40.00	19.62	A projected expenditure of `15.39 lakh in 2011-12 has been allowed by Commission order dated 12.7.2011 in Petition No.84/2010 under Regulation 9(2)(iv) on the ground that the asset/work is required for efficient and successful operation of the generating station. Hence, **allowed** as the assets/works has been already approved.
6	Telephone exchange with accessories	30.00	23.85	**Allowed** as the assets/works has already been approved by Commission under Regulation 9(2) (iv) vide order dated 12.7.2011 in Petition No.84/2010.
7	Security and surveillance system-Door frame and metal detector (DFMD) & Spike road block	95.00	6.43	A projected expenditure of `48.12 lakh has been allowed in 2009-10 and`26.70 lakh in 2012-13vide order dated 12.7.2011 in Petition No.84/2010for Security and surveillance system. Hence, **allowed** as the assets/works have been already approved.
	Total claimed		**122.52**	
	Total allowed			**122.52**

Capital expenditure not projected/allowed by the Commission, but incurred and claimed

29. The details of the actual additional capital expenditure incurred against new works/ assets along with admissibility of the actual additional capital expenditure in terms of 2009 Tariff Regulations is as under:

2012-13

(` in lakh)

Sl. No	Assets/works	Actual expenditure incurred / claimed	Justification submitted by petitioner	Admissibility of expenditure
1	Complete set of flow monitoring, recording and display system (3 nos)	20.17	Old and faulty flow meters were replaced with advance electromagnetic type flow meters.	**Allowed** under Regulation 9(2)(iv) since the asset is considered necessary for efficient operation of the generating station. Since the deletion value of old asset is not available, the assumed deletion of `8.38 lakh has been considered as against the claim of the petitioner @ 10% (`2.02 lakh) of new asset.
2	Server	5.86	In power station several computers/servers are extensively used for down loading data from SEM/UI calculation/ report generation etc. Servers are additionally required for proper and efficient plant operation.	**Not allowed** under Regulation 9(2)(iv) as the asset is of minor nature .
3	Ultrasonic therapy unit & AC/DC suction machine	0.45	Hospital equipment has been purchased for project hospital for better medical facilities for project staff.	**Allowed** under Regulation 9(2)(iv) as the asset is for the benefit of the employees of the generating station working in remote areas which will also ensure the efficient operation of the generating station.
4	Automatic weather station	1.73	Purchased against replacement of old non-functional weather station.	**Allowed** under Regulation 9(2)(iv) since the asset is considered necessary for efficient operation of the generating station. Since the deletion value of old asset is not available, an assumed deletion of `0.72 lakh has been considered as against the claim of the petitioner @ 10% of the cost of new asset.
	Total claimed	**28.21**		
	Total allowed			**22.35**

2013-14

(` in lakh)

Sl. No.	Assets/works	Actual expenditure incurred/ claimed	Justification submitted by the petitioner	Remarks for admissibility
1.	Submersible pumps 35 M head(2nos)	**4.01**	Pumps are needed at Water Supply Installation for providing water supply at the Township area of Project. These pumps were purchased against replacement of two pumps which were surveyed off in 2012-13.	**Allowed** under Regulation 9(2)(iv) as the asset is for the benefit of the employees of the generating station working in remote areas which will also ensure the efficient operation of the generating station. The gross value of `1.04lakh has been included in ''deletions'' for 2012-13.
	Total allowed			**4.01**

30. The petitioner has claimed additional capital expenditure of `5.32 lakh on account of Inter-unit transfer of the Software (MS Office). As the asset is of a minor nature, the capitalization of the same after the cut-off date is not allowed in terms of proviso to the Regulation 9(2)(iv) of the 2009 Tariff Regulations. Hence, the claim of the petitioner is rejected.

Deletions

31. The following year-wise expenditure has been de-capitalized by the petitioner on account of replacement of old assets or without replacement. The de-capitalized assets include distribution transformers, DG sets, pumps, dumpers, fire extinguisher, metal detectors.

(` in lakh)

	2012-13	2013-14
Deletions	(-)9.25	(-)13.03

32. As the corresponding assets do not render any useful service in the operation of the generating station, the de-capitalization of the above expenditure as affected in the

books of accounts has been allowed for the purpose of tariff. Accordingly, the above said amounts have been deleted for the purpose of tariff

Exclusions in additions (incurred, capitalized in books but not to be claimed for tariff purpose)

33. The following year-wise expenditure has been incurred by the petitioner on replacement of minor assets, purchase of capital spares, helicopter, purchase of miscellaneous assets, additions on inter-unit transfers, minor assets etc.,

(` in lakh)

	2012-13	**2013-14**
Exclusions in additions (incurred, capitalized in books but not to be claimed for tariff purpose)	127.64	143.76

34. The expenditure incurred towards procurement/replacement of minor assets and procurement of capital spares after the cut-off date is not permissible for the purpose of tariff in terms of the 2009 Tariff Regulations. Accordingly, the petitioner has considered these additions under exclusion category. As such**,** the exclusions of the positive entries under the head are in order and are allowed.

Exclusions in deletions (de-capitalized in books but not to be considered for tariff purpose)

35. The petitioner has de-capitalized amounts in books of accounts pertaining to capital spares, minor assets such as computers, office equipment, furniture, ladders, pumps, fixed assets of minor value less than `5000 etc., as these are not in use on account of their becoming unserviceable/obsolete and also deletion on account of inter-unit transfer of minor assets, as under :

(`in lakh)

	2012-13	**2013-14**
Minor assets de-capitalized	(-)24.34	(-)36.42
Capital spares de-capitalized on consumption	(-)371.37	(-)101.47
Total exclusions in deletions (de-capitalized in books but not to be considered for tariff)	(-)395.71	(-)137.89

36. The petitioner has prayed that the negative entries may be ignored/ excluded for the purpose of tariff as the corresponding positive entries for purchase of such assets are not being allowed for the purpose of tariff in terms of the provisions of the 2009 Tariff Regulations. In support of this, the petitioner has referred to the observations of the Commission in order dated 7.9.2010 in Petition No.190/2009 as under:

> *"20. After careful consideration, we are of the view that the cost of minor assets originally included in the capital cost of the projects and replaced by new assets should not be reduced from the gross block, if the cost of the new assets is not considered on account of implication of the regulations. In other words, the value of the old assets would continue to form part of the gross block and at the same time the cost of new assets would not be taken into account. The generating station should not be debarred from servicing the capital originally deployed on account of procurement of minor assets, if the services of those assets are being rendered by similar assets which do not form part of the gross block."*

37. Accordingly, in line with the above decision of the Commission, the negative entries corresponding to the deletion of minor assets are allowed to be excluded/ ignored for the purpose of tariff.

38. The petitioner has excluded amounts of (-)`371.37 lakh and (-)`101.47 lakh for the years 2012-13 and 2013-14 respectively for de-capitalization of capital spares. As regards the prayer of the petitioner for exclusion of negative entries corresponding to de-capitalization of capital spares, it is observed that the expenditure on minor assets and capital spares are not allowed to be capitalized after the cut-off date in terms of the 2009 Tariff Regulations. While the recovery of expenditure on capital spares is allowed through O&M expenses on consumption, the recovery of additional expenditure on minor assets beyond the cut-off date is neither allowed to be capitalized nor permissible under O&M expenses. Hence, the observations of the Commission in order dated 7.9.2010 cannot be made applicable in respect of de-capitalization of spares. Accordingly, the claim of the petitioner for exclusion of negative entries arising out of de-capitalization of capital spares is justifiable provided that the de-capitalized spares are the ones which were not considered in the capital base for the purpose of tariff in the year of capitalization.

39. It is pertinent to mention that capitalization of capital spares for the purpose of tariff after the cut-off date was rejected by the Commission from 1.4.2001 i.e all the positive book entries arising out of procurement of capital spares were excluded/ignored for the purpose of tariff during 2001-04. As such, if the de-capitalized spares during 2012-14 are the ones which were procured after 1.4.2001, the negative book entries due to de-capitalization shall be ignored for the purpose of tariff.Accordingly, based on the links provided in Form-9 of the petition, which has been certified by Auditor, it emerges that the capital spares de-capitalized in books of accounts during the years 2012-13 and 2013-14 are the ones which were procured after 1.4.2004 and were not allowed in the capital base for the purpose of tariff. In other words, positive entries arising out of their purchase were also excluded/ ignored for the purpose of tariff.In view of this, the following amounts have been excluded/ignored for the purpose of tariff as under:

(` in lakh)

	2012-13	2013-14
Exclusions in additions	127.64	143.76
Exclusions in deletions	(-)3 95.71	(-) 137.89
Total exclusions allowed	**(-) 268.07**	**5.87**

Assumed Deletions

40. As per consistent methodology adopted by the Commission, expenditure on replacement of assets, if found justified is allowed for the purpose of tariff provided that the capitalization of the said asset is followed by the de-capitalization of the value of the old asset. However, in certain cases where de-capitalization is proposed to be effected /affected during the future years to the year of capitalization of new asset, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as “Assumed deletion”. The amounts considered by the petitioner under this head are as under:

2012-13

(` in lakh)

	Actual expenditure for new asset allowed/ claimed	Assumed deletion of old asset @10% of the value of new asset
Complete set of flow monitoring, recording and display system (3 nos)	20.17	(-) 2.02
Automatic weather station	1.73	(-) 0.17
Sub-total	**21.90**	**(-) 2.19**

2013-14

(` in lakh)

	Actual expenditure incurred/ claimed	Assumed Deletion of old asset = W.D.V
Fork lift	15.54	(-) 0.21
Fire tenders	26.67	(-) 0.26
Sub-total		**(-) 0.47**

<u>Assumed deletion for 2012-13</u>

41. It is observed that against the expenditure towards the replacement of flow meters and weather station during 2012-13, the de-capitalization value of these assets has been considered by the petitioner at the rate of 10% of the value of new asset. However, the methodology of arriving at the fair value of the de-capitalized asset, i.e. escalation rate of 5 % per annum from the COD, as considered in order dated 11.11.2013 in Petition No.125/GT/2013 has been considered, in order to arrive at the gross value of old asset in comparison to the cost of new asset . Further, the gross value of the old asset i.e `138.00 lakh furnished by the petitioner in Petition No. 84/2010 against the work of Construction of 20 B-Type quarters and capitalized in 2012-13, has been considered as 'assumed deletion' in the absence of the gross value of temporary structure which was removed from service,

<u>Assumed deletion for 2012-13</u>

42. The petitioner was directed to furnish the basis for considering 'assumed deletion' amounting to `20,761/- towards Fork lift and `26,065/- towards Fire tender and the petitioner vide affidavit dated 7.10.2014 has clarified as under:

Asset	Actual exp. incurred on procurement of new asset (` in lakh)	Submission of petitioner
Fork lift	15.54	As Fork lift was used during construction period and its salvage value of `20,761/- was capitalized as on COD.
Fire tenders	26.67	Assumed deletion value amounting to `26,065/- is based on WDV of old fire tender.

43. It is pertinent to mention that WDV does not represent the gross value of the old asset removed from service. However, deprecation booked in IEDC for assets used during the construction period forms part of the capital cost for the purpose of tariff. As such, on de-capitalization of these assets, the acquisition cost/gross value shall be removed for the purpose of tariff, as the full cost of new asset is allowed as replacement. However, in the present case, the petitioner has not furnished the gross value of the old assets in respect of Fork lift and Fire Tenders. As such, in the absence of any information, the deletion value of `4.46 lakh and `1.04 lakh in respect of Fork lift and Fire Tenders respectively has been considered as submitted by the petitioner in Petition No. 84/2010.

44. Accordingly, the assumed deletions claimed and allowed for the purpose of tariff are as under:

(` in lakh)

Sl. No.	Asset/Work	Assumed Deletion	
		Claimed	**Allowed**
2012-13			
1.	Construction of 20 B-Type quarters	0.00	(-) 138.00 (gross value of the old asset as furnished in Petition No. 84/2010).
2.	Complete set of flow monitoring, recording and display system (3 nos.)	(-)2.02	(-)8.38
3.	Automatic weather station	(-)0.17	(-)0.72
	Sub-total	(-)**2.19**	(-)**147.10**
2013-14			
1.	Fork Lift	(-)0.21	(-)4.46
2.	Fire tenders	(-)0.26	(-)1.04
	Sub-total	**(-)0.47**	(-)**5.50**

Un-discharged and discharge of Liabilities

45. The petitioner has submitted the details of the un-discharged liabilities in the actual additional capital expenditure for 2012-14 and discharge of liabilities as under:

(` in lakh)

	2012-13	2013-14
Un-discharged liabilities in the actual additional capital expenditure	26.61	0.70
Liabilities discharged during the year, out of the existing un-discharged liabilities as on 31.3.2012/un-discharged liabilities in actual additional capital expenditure for 2012-13	2.98	26.61

46. The un-discharged liabilities and the discharge of liabilities as furnished by the petitioner as above have been considered for working out the admissible capital expenditure for the period 2012-14.

47. Based on the above discussions, the actual additional capital expenditure allowed for the period 2012-14 for the purpose of tariff is as under:-

(` in lakh)

	2012-13	2013-14
Additions against works already approved by Commission	332.80	126.43
Additions not projected earlier but incurred and claimed	22.35	4.01
Inter-Unit transfer	0.00	0.00
Total additions allowed **(a)**	**355.15**	**130.44**
Deletions allowed **(b)**	(-)9.25	(-)13.03
Assumed deletions considered **(c)**	(-)147.10	(-)5.50
Total additional capital expenditure allowed before un-discharged/ discharged liabilities **(d)=(a)+(b)+(c)**	**198.80**	**111.91**
Less: Un-discharged liabilities in the additional capital expenditure allowed above	26.61	0.70
Add: Liabilities discharged during the year out of un-discharged liability existing as on 31.3.2014	2.98	26.61
Additional Capital Expenditure allowed	**175.17**	**137.82**

Capital cost for 2012-14

48. Accordingly, the capital cost considered for the purpose of the tariff is as under:

(` in lakh)

	2012-13	2013-14
Opening capital cost as on 31.3.2012	204102.76	204277.93
Additional capital expenditure allowed	175.17	137.82
Closing capital cost	**204277.93**	**204415.75**

Debt-Equity Ratio

49. The debt-equity ratio as on 31.3.2009 has been worked out by considering the additional capital expenditure and de-capitalization in the petitions for the period 2004-09 as indicated above. Accordingly, the debt-equity ratio as on 31.3.2009 has been worked out as under:

2004-09

(` in lakh)

	Capital Cost as on 1.4.2004		Net Additional capital expenditure.		Capital Cost as on 31.3.2009	
	` in lakh	**%**	**` in lakh**	**%**	**` in lakh**	**%**
Capital Cost	202011.44	100.00	1260.60	100.00	203272.04	100.00
Debt	139367.69	68.99	882.42	70.00	140250.11	69.00
Equity	62643.75	31.01	378.18	30.00	63021.93	31.00

50. The debt-equity ratio as on 31.3.2009 worked out as above has been considered for revision of tariff for 2009-14 based on truing-up in terms of Regulation 6 of the 2009 Tariff Regulations**.**

Return on Equity

51. The petitioner has considered the applicable tax rate as 20.008% and 20.961% for 2012-13 and 2013-14 respectively. Accordingly pre-tax rate of return on equity has been worked out in terms of Regulation 15(3) and 15(4) of the 2009 Tariff Regulations as under:

	2012-13	**2013-14**
Base Rate for Return on Equity	*15.750%	16.500%
Tax Rate	20.008%	20.961%
Rate of ROE (pre-tax)	19.689%	20.876%

(**Based on 15.5% basis from 1.4.2012 to 31.12.2012 and 16.5% from 1.1.2013 to 31.3.2013)*

52. Considering the pre-tax rate of return on equity, as above, the return on equity for 2012-13 and 2013-14 has been computed as follows:

(` in lakh)

	2012-13	**2013-14**
Opening Gross Notional Equity	63271.14	63323.69
Addition due to Additional Capital Expenditure	52.55	41.35

Closing Equity	63323.69	63365.04
Average Equity	63297.42	63344.36
Rate of ROE (pre-tax)	19.689%	20.876%
Return on Equity	**12462.63**	**13223.77**

Interest on Loan

53. The petitioner has not claimed Interest on loan during the years 2012-13 and 2013-14. The normative loan in respect of the project has already been repaid. The normative loan on account of the admitted additional capital expenditure during the years 2012-13 and 2013-14 have been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. As such, the Interest on loan during the period 2009-14 is worked out as 'Nil'.

Depreciation

54. The date of commercial operation of the generating station is 1.5.1994. Since the station has completed 12 years of operation as on 30.4.2006, the remaining depreciable value has been spread over the balance useful life of the assets. Assets amounting to `156.35 lakh and `18.53 lakh have been de-capitalized during the years 2012-13 and 2013-14 respectively. As per the methodology consistently adopted by the Commission, the amount of cumulative depreciation allowed in tariff against those de-capitalized assets has been calculated on pro-rata basis. The same has been adjusted from the cumulative depreciation of the year of de-capitalization. Accordingly, depreciation has been computed as under:

(` in lakh)

	2012-13	**2013-14**
Gross Block as on 31.3.2012	204102.76	204277.93
Additional capital expenditure during 2012-14	175.17	137.82
Closing gross block	204277.93	204415.75
Average gross block	204190.34	204346.84
Depreciable Value	181516.94	181657.79
Balance useful life of the asset	17.08	16.08
Remaining Depreciable Value	70609.83	66705.41
Depreciation	**4133.24**	**4147.47**

Operation & Maintenance Expenses

55. O&M expenses as allowed in order dated 11.11.2013 in Petition No. 125/GT/2013 has been considered as under:

(` in lakh)

2012-13	2013-14
10513.92	11115.31

Interest on working capital

a) Receivables

In terms of Regulation 18(1) (c) (i) of 2009 Tariff Regulations, receivables equivalent to two months of fixed cost has been considered as under:

(` in lakh)

2012-13	2013-14
4663.60	4900.77

b) Maintenance Spares

Regulation 18(1) (c) (ii) of 2009 Tariff Regulations, provides for Maintenance spares @ 15% of operation and maintenance expenses as specified in Regulation 19, the same has been considered as under:

(` in lakh)

2012-13	2013-14
1577.09	1667.30

c) O&M Expenses

Regulation 18(1) (c) (ii) of 2009 Tariff Regulations provides for operation and maintenance expenses for one month and the same has been considered in tariff as under.

(` in lakh)

2012-13	2013-14
876.16	926.28

Rate of interest on working capital

56. Regulation 18(3) of 2009 Tariff Regulations provide that the Rate of interest on working capital shall be on normative basis and 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 or the transmission system, as the case may be, is declared under commercial operation, whichever is later.

57. In accordance with Regulation 18(3) of the 2009 Tariff Regulations, rate of interest on working capital shall be on normative basis and 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 or the transmission system, as the case may be, is declared under commercial operation, whichever is later. The SBI PLR as on 1.4.2009 was 12.25% has been considered for computation of the interest on working capital. Accordingly, Interest on Working Capital has been calculated as under:

(` in lakh)

	2012-13	2013-14
Maintenance Spares	1577.09	1667.30
O & M expenses	876.16	926.28
Receivables	4663.60	4900.77
Total	7116.85	7494.34
Interest on Working Capital @ 12.25%	**871.81**	**918.06**

Annual Fixed Charges for 2012-14

58. The annual fixed charges for the period 2012-14 allowed for the generating station is summarized as under:

(` in lakh)

	2012-13	2013-14
Return on Equity	12462.63	13223.77
Interest on Loan	0.00	0.00
Depreciation	4133.24	4147.47
Interest on Working Capital	871.81	918.06
O & M Expenses	10513.92	11115.31
Annual Fixed Charges	**27981.60**	**29404.61**

59. The difference between the annual fixed charges already recovered by the petitioner and the annual fixed charges determined by this order as above shall be adjusted in terms of Clause (6) of Regulation 6 of the 2009 Tariff Regulations.

Determination of Annual Fixed Charges for the period 2014-19

60. As stated, the petitioner in this petition has also prayed for the determination of annual fixed charges of the generating station for the period 2014-19 in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

(` in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	12987.06	13144.28	13285.83	13292.55	13295.46
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4174.50	4337.58	4494.24	4502.51	4506.81
Interest on Working Capital	984.19	1030.70	1079.31	1124.18	1171.82
O & M Expenses	10664.95	11373.53	12129.19	12935.05	13794.46
Total	**28810.70**	**29886.09**	**30988.57**	**31854.28**	**32768.55**

61. In response to the directions of the Commission, the petitioner has submitted additional information and has served copies of the same on the respondents. The respondents UPPCL, the discoms of Rajasthan (JVVNL, JoVVNL and AVVNL) and BRPL have filed replies to the petition and the petitioner has filed its rejoinder to the said replies filed by the respondents. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the generating station for the period 2014-19 as stated in the subsequent paragraphs.

Capital Cost

62. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects. Clause (3) of Regulation 9 provides as under:

> *"9(3) The Capital cost of an existing project shall include the following:*
>
> *(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;*
>
> *(b) xxxx*
>
> *(c) xxxx*

63. The closing capital cost considered by the Commission as on 31.3.2014 in this order is `204415.75 lakh. This amount has been considered as the opening capital cost as on 1.4.2014 for computation of tariff for the period 2014-19.

Actual/ Projected Additional Capital Expenditure during 2014-19

64. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted upto 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2014-15 to 2018-19.

65. Regulation 14 (3) of the 2014 Tariff Regulations, provides as under:

> *"14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may 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 of law;*
>
> *(ii) Change in law or compliance of any existing law;*
>
> *(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*
>
> *(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*
>
> *(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
>
> *(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
>
> *(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*

(viii) 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) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

(ix) 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 due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and

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

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, 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. 1.4.2014:

Provided further that any capital expenditure other than that of the nature specified above in (i) to (iv) in case of coal/lignite based station shall be met out of compensation allowance:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation."

66. The year-wise breakup of the projected additional capital expenditure claimed by the petitioner is as under:

(` *in lakh*)

2014-15	2015-16	2016-17	2017-18	2018-19
697.00	4407.00	152.00	82.00	20.00

67. Before proceeding, we examine some of the general issues raised by the respondent, UPPCL and BRPL as regards the claim for additional capitalization of assets/items by the petitioner during 2014-19. The petitioner in this petition has claimed additional capital expenditure for assets/items for the period 2014-19 under Regulation 14(3) (viii) of the 2014 Tariff Regulations. The respondent, UPPCL has submitted that the

claim of the petitioner for purchase of assets/items for 2014-19 may be charged against the O&M expenses allowed to the generating station. The respondent, BRPL has submitted that the claim of the petitioner for projected additional capital expenditure under Regulation 14(3)(viii) shall be read with Regulation 14(3)(vii) which require that the claim for expenditure for replacement of assets which are necessary for efficient operation of the plant shall be substantiated with technical justification duly supported by documentary evidence like test results carried out by independent agency in case of deterioration of the assets. Accordingly, it has been submitted the claim may be rejected as the same has not been submitted in this case. The respondent has added that the expenditure on procurement of minor assets may not be allowed.

68. In response to the submissions of respondent UPPCL, the petitioner has clarified that the projected additional expenditure are of capital nature and hence cannot be charged to O&M expenses. The petitioner has further stated that the expenditures have been claimed strictly as per Regulation 14(3)(viii) of 2014 Tariff Regulations as the same are required for successful & efficient operation of the generating station and all assets proposed for capitalization are of capital nature and therefore may be allowed by the Commission. In response to the submissions of the respondent, BRPL the petitioner has stated that the production of test results carried out by independent agency is neither required nor economically advisable for such small and essential requirements as the hiring of independent agency for such small items will be cost prohibitive and be shall be an additional burden on the beneficiaries. The petitioner has clarified that Regulation 14(3)(vii) is not applicable in respect of the assets indicated by the respondent BRPL as these are being replaced on account of expiry of their useful life. It has further pointed out that Regulation 14(3)(vii) is only applicable in case of damage due to natural calamities and degradation.

69. We have examined the matter. The petitioner has claimed capitalization of the expenditure under Regulation 14(3)(viii) which also provides for capitalization of expenditure incurred due to additional work which has become necessary for successful and efficient operation of plant. The submission of the respondent, UPPCL that assets/works claimed by the petitioner should be considered under O&M expenses cannot be accepted as the expenditure claimed for capitalization is in respect of works of capital nature and are not in the nature of revenue expenses. Moreover, the contention of the respondent, BRPL that Regulation 14(3)(viii) should be read with Regulation 14(3)(vii) in respect of expenditure incurred on replacement assets and that the same should be supported by documentary evidence like test results carried out by independent agency in case of deterioration of the assets, is also not acceptable. In our view, the requirement of documentary evidence like test results etc., carried out by independent agency will be necessary in case of assets which have deteriorated prior to the expiry of useful life and accordingly sought to be replaced. In the instant case, these assets are being replaced on account of obsolescence /deterioration etc., after expiry of its useful life in consideration of year-wise assets which were put to use and accordingly additional capitalization has been sought on the grounds that they are necessary for successful and efficient operation of the plant. Since the capital expenditure incurred or projected to be incurred are admitted after prudence check, in terms of the 2014 Tariff Regulations, only those expenditures which are necessary for efficient and successful operation of the plant are only serviced through tariff by the respondents. This will adequately take care of the apprehensions of the respondents. In response to the directions of the Commission, the petitioner vide affidavit 7.10.2014 has submitted the additional information.

70. Accordingly, based on the submissions of the parties and the documents available on record, the claims of the petitioner for the period 2014-19 are considered and allowed

on prudence check, after reduction of the gross value of old assets, wherever necessary, as detailed in the subsequent paragraphs.

2014-15

(` in lakh)

Sl. No.	Assets/ Works	Amount claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Purchase of High Mast Lighting	11.00	**New Work:** The generating station lies on the border of Kathua district of State of J&K. To facilitate security and tracking of any unwanted movement at critical areas at night it is required to have optimum level of illumination at identified places. High Mast type lighting has more coverage per watt of installation, ease of maintenance due to centralization and aesthetic appeal.7 Nos. of High mast lighting has already been capitalised at the different vital installation such as Dams, PH portal, Switch yard, Admin Building and TRT outlet. For providing the adequate illumination for other vital installations of the power station, 02 Nos. high mast lighting are required to be installed at SMD Complex (Store and Mechanical complex) and Upper Simblu Colony near Hospital building. The respondent, BRPL has submitted that no documentary evidence or advice from appropriate government agencies or authorities has been cited by the petitioner. In response, the petitioner has clarified that the item is extremely critical from security point of view and necessary justification has been provided in the petition. It has also submitted that the items have been proposed	The petitioner has claimed the capitalization of the item / works under Regulation 14(3)(viii) on the ground that it has become necessary for successful and efficient plant operation. It is also noticed from Annexure-I of the rejoinder that the items have been proposed by CISF. The petitioner vide affidavit dated 31.12.2014 has submitted that the capitalization of the expenditure is based on the guidelines for physical security of hydro power projects as recommended by the National infrastructure protection plan for hydro power stations. In view of this and considering the fact that the threat perception for this generating station is high (as concluded by IB) we allow the capitalization of this item/works as claimed by the petitioner.	**11.00**

			by CISF.		
2	Security and Surveillance System	10.00	**New Work:** Being the proximity of J&K and various guidelines received from Intelligence Bureau, Security and Surveillance System is very important for the generating station. Already CCTV camera and Access Control System has been installed at various location of the Power Station and capitalised in 2009-10. Some locations are still required to be covered under this system. Besides the above, various new security devices/gadgets like Non-lethal Weapons, Riot Drill Equipment, HF sets, water scanners, 5.56 mm Rifle etc is required by CISF. Some security equipments like HHMD, Dragon lights etc. became old and outlived their life and already surveyed off in the year 2013. So new HHMDs and Dragon Lights are required for CISF. The respondent, BRPL has submitted that no documentary evidence or advice from appropriate government agencies or authorities has been cited by the petitioner. In response, the petitioner has clarified that the items have been proposed by CISF.	The petitioner has claimed the capitalization of the item / works under Regulation 14(3)(viii) on the ground that it has become necessary for successful and efficient plant operation. It is also noticed from Annexure-I of the rejoinder that the items have been proposed by CISF. In view of this and considering the fact that the threat perception for this generating station is high (as concluded by IB) we **allow** the capitalization of this item/works as claimed by the petitioner.	**10.00**
3	Supply and Installation of PLC based Data acquisition system	25.00	**New Work:** Presently no real time online monitoring and recording of electrical parameters like MW, Mvar, Voltage, Current etc of generating units and feeders are available at CPS-I. Monitoring and recording of these parameters is very vital for the assessment of the healthiness of system. It is also prudent to mention that as per the IEGC Grid code, CERC has approved	**Allowed** under Regulation 14(3)(viii) as the asset is considered necessary for monitoring and recording of vital parameters for the purpose of grid security.	**25.00**

			"Procedure for Assessment of Frequency Response Characteristic" (FRC) of control areas in Indian Power System" and accordingly in the event of any grid disturbance due to tripping of any generating unit or feeder in the Grid, all the power station must furnish the frequency response characteristics of Generating unit in form of graph of load, frequency v/s Time. Since no such real time monitoring and recording system is available at the generating station, it is not possible to furnish the data asked by the different authorities. Therefore, a proposal for supply and installation of PLC based data acquisition system at the station has been already initiated and is under tendering stage. The respondent BRPL has contended that no rationality has been advanced and the proposal has no justification. In response, the petitioner has clarified that the work is proposed in compliance with the IEGC Grid Code and the procedure for Assessment Procedure for Assessment of Frequency Response Characteristic (FRC). Accordingly, one unit of the power station is identified for Frequency Response Analysis.		

4	Replacement of Portable DGA Instrument	36.00	**On replacement basis:** A Dissolved Gas Analysis (DGA) instrument was purchased in the year 1999. This instrument is very vital and extensively used for the Dissolve gas analysis of the Transformer oil. During use several problems have been observed in the instrument which were got rectified by the OEM i.e. M/s Morgan Schaffer, Canada. At present, equipment is not working satisfactorily and its rectification cannot be carried out in India and rectification of the faulty equipment from Canada is not economical. DGA Instrument now available in the market has several advance features which is very essential for analysis purpose. Since the available equipment at the generating station has already completed its useful life, it is proposed to purchase one no. of new advance DGA instrument to replace the old and faulty DGA equipment.	**Allowed** under Regulation 14(3)(viii) since the asset is considered necessary for efficient and successful operation of the generating station. The gross value of old asset is considered as `38.52 lakh.	**(-) 2.52** (36.00-38.52)
5	Purchase of Hospital Equipment	2.00	**New Work:** Hospital with latest medical equipment is one of the mandatory requirements of any Project which caters the medical facilities of Power Station personnel as well as adjacent local population as a part of community service. Several new and latest medical equipments have been purchased under this head for proper and better diagnosis and better medical facility. It is therefore required to purchase new equipments like Stethoscopes, Portable Foetal doplars, Scoop Strecher etc. The respondent BRPL has submitted that these items are of a minor nature. The	**Allowed** under Regulation 14(3)(viii) as the said asset is for the benefit of employees working in the generating station which in turn will ensure the efficient operation of the generating station	**2.00**

			respondent, UPPCL has submitted that the expenses under this head may be charged to O&M expenses. The petitioner has clarified that these assets are of a capital nature and are required for successful & efficient operation of the generating station.		
6	Replacement of Hospital Equipment	1.00	**On replacement basis** Since the commissioning of the project hospital, several medical equipments were purchased for betterment of medical facility. Due to continuous R&D and application of information technology to clinical purpose, new instruments are available which have intelligent functions and are more accurate. It is therefore required to replace old ECG Machine. The respondent BRPL has submitted that these items are of a minor nature. The respondent, UPPCL has submitted that the expenses under this head may be charged to O&M expenses. The petitioner has clarified that these assets are of a capital nature and are required for successful & efficient operation of the generating station.	**Allowed** under Regulation 14(3)(viii) as the said asset is for the benefit of employees working in the generating station which in turn will ensure the efficient operation of the generating station. The gross value of old ECG machine has been considered as `0.72 lakh.	**0.28** (1.00-0.72)
7	Replacement of 40MT Hydraulic Crane	177.00	**On replacement basis:** The existing crane was purchased in the year 1986 and has outlived more than 27 years. Presently the crane is under breakdown and case has already processed for disposal of the equipment. As this equipment is required for loading / unloading of heavy materials in the power station for maintenance works, hence requires to be replaced. The respondent, UPPCL has	**Allowed** under Regulation 14(3)(viii) since the asset is considered necessary for efficient and successful operation of the generating station. The gross value of old asset has been considered as `46.54 lakh.	**130.46** (177.00-46.54)

			submitted that the expenses under this head may be charged to O&M expenses. The petitioner has clarified that these assets are of a capital nature and are required for successful & efficient operation of the generating station.		
8	Replacement of wheel dozer	232.00	**On replacement basis:** The existing wheel dozer was purchased in the year of 1986 and has outlived more than 27 years. This equipment has completed the scheduled life in terms of years & running hours as per the disposal policy and frequent breakdown of the equipment hampers the works and hence requires to be replaced. The respondent, UPPCL has submitted that the expenses under this head may be charged to O&M expenses. The petitioner has clarified that these assets are of a capital nature and are required for successful & efficient operation of the generating station.	**Allowed** under Regulation 14(3)(viii) since the asset is considered necessary for efficient and successful operation of the generating station. The gross value of old asset has been considered as `3.98 lakh.	**228.02** (232.00-3.98)
9	Replacement of 1 MVA DG Set at Switch Yard and addition of 500 kVA DG set for DAM	160.00	**On replacement basis: An a**mount of `60.00 lakh was already approved by Commission in 2010-11 and `150.00 lakh in 2011-12 towards the replacement of DG Set at the station. A supply order for the supply and installation of 1 MVA DG set for Switchyard to meet the emergency power of Power House and Switchyard has already placed for`119 lacs and 1 no. of 500 kVA DG set for DAM to meet the emergency power of DAM and is under tendering stage. Total purchase cost of two DG sets is `160.00 lakh.	**Allowed** under Regulation 14(3)(viii) as the asset is considered necessary for efficient and successful operation of the generating station. The gross value of old DG sets asset is considered as `21.19 lakh.	**138.81** (160.00-21.19)
10	Replacement of Distribution Transformers	15.00	**On replacement basis:** A total amount of `100 lakh was approved by the	**Allowed** under Regulation 14(3)(viii) since	**11.82** (15.00-3.18)

			Commission during 2009-14 towards the replacement of distribution transformers. Out of this, `42.29 lakh has already been capitalised during 2009-14. Since one no. of 1000 kVA and two nos. of 250 kVA distribution transformers have already outlived their life and needs to be replaced, on the basis of requirement at Power station it has been planned to replace this 1000 kVA distribution transformer with 2 nos. of 500 kVA distribution transformers and accordingly a proposal for purchase of 02 Nos. of 500 kVA distribution transformer & 02 Nos. of 250 KVA distribution transformers were already initiated in 2013-14, out of which a purchase order for the supply of 02 Nos. of 500 kVA Distribution Transformer for`8.60lakh has already been placed and the proposal of 02 Nos. of Distribution Transformer is under tendering stage.	the asset is considered necessary for efficient & successful operation of the generating station. The gross value of old asset has been considered as `3.18 lakh.	
11	Replacement of 5 MVA Substation Transformer	28.00	**On replacement basis:** An amount of `25.00lakheach was approved by Commission for the years 2010-11 and 2011-12 for replacement of 5 MVA Substation transformer. Order for supply of one number 5 MVA sub-station transformer amounting `27.80 lakh has already been placed.	**Allowed** under Regulation 14(3)(viii) as the work which has been approved is for efficient and successful operation of the generating station. The gross value of old asset has been considered as `1.25 lakh.	**26.75** (28.00-1.25)
Total amount claimed		**697.00**			
Total amount allowed					**581.62**

2015-16

(` in lakh)

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Purchase, Erection, Testing and Commissioning of 420 kV GIS Bus bar extension Bay	2317.00	During the 14th TCC and 15th NRPC meeting held in December 2009, M/s PGCIL had proposed to install 3 phase 125 MVAR Bus reactor at the station control over voltage in Northern Region. The administrative approval by the competent authority for the same has been conveyed by O&M division, corporate office vide letter dated 15.12.2010. After administrative approval by the competent authority, O&M Division has initiated proposal for implementation. In this regard a case for extension of existing 420 kV GIS bay for the installation and commissioning of 3 nos. single phase 42 MVar bus Reactor is already initiated. *The Commission vide technical validation has asked the petitioner to explain the reason as to why these assets have not been installed so far while PGCIL proposal is about 5 years old and to furnish documents regarding administrative approval to undertake the works. The petitioner vide affidavit dated 7.10.2014 has furnished the letter dated 15.12.2010 on administrative approval and minutes of 15th NRPC meeting (24.12.2009) regarding the approval of the proposal for GIS extension bay and installation of bus reactors at Chamera-I power station. Regarding the delay to take up the work, it has been submitted by the petitioner that tending process for above work was started in December 2010. However, due to high offered cost for GIS extension bay w.r.t. estimated cost, the tender was again initiated on*	**Allowed** under Regulation 14(3)(viii) considering the submissions of the petitioner and since the said proposal/ scheme is to control improve high voltage conditions in the Northern Region grid and is based on recommendations of PGCIL.	2317.00

			open tender basis, but due to certain changes in technical specification of GIS extension bay, tending process of bus reactor was terminated in May 2014. After incorporating revised technical specification, tendering process of both cases is under process. The respondent BRPL has submitted that there may not be any urgent requirement for capitalisation especially when the petitioner has delayed its implementation for more than 5 years. The respondent, UPPCL has submitted that there is no reason as to why the O&M division has directed to undertake the said work and allowing the expenditure will result in delicacy. In response, the petitioner has submitted that detailed justification for capitalisation of the expenditure has been submitted with supporting documents. It has also clarified that in the 14th TCC and 15th NRPC meeting, the TCC members agreed on the proposal of PGCIL for implementation of bus reactor at the generating station to be taken up by the generating company.		
2	Purchase, Erection, Testing and Commission-ing of three nos. of 42 MVAR Single Phase Bus Reactor	1334.00	During the 14th TCC and 15th NRPC meeting held in December 2009, M/s PGCIL has proposed to install 3 phase 125 MVAR Bus reactor to control over voltage in Northern Region. The administrative approval by the competent authority for the same has been conveyed by O&M division, corporate office vide letter dated 15/12/2010. After accord of administrative approval by the competent authority, O&M Division has initiated proposal for	**Allowed** under Regulation 14(3)(viii) considering the submissions of the petitioner and since the said proposal/ scheme is to control improve high voltage conditions in the Northern Region grid and is based on recommendations of PGCIL.	1334.00

			implementation. In this regard a case for the supply, installation and commissioning of 3 nos. of Single Phase 420 kV/√3, 42 MVAR Reactor is already under tendering stage at Corporate office contract division.		
3	Civil Works for the installation of Bus Reactor	223.00	For the erection and commissioning of Bus Reactors and extension of bay, civil works at Switchyard of Chamera Power Station-I is required.	**Allowed** under Regulation 14(3)(viii) as the works are considered necessary for efficient and successful operation of the generating station	223.00
4	Security Fencing for Switchyard	113.00	Being a close proximity of J&K, security instruction has been received from various agencies to strengthen the security of the station. As per the letter dated 22/09/2013 by GM (E&FMS), Corporate Office, the switchyard area of the power station needs to be constructed as per new security guidelines. At present the Switchyard is fenced by wire mesh fencing of approx 6' height and hence new masonry wall is required to be constructed as per the guidelines issued vide above letter. The respondent, BRPL has submitted that no documentary evidence or advice from appropriate government agencies or authorities has been cited by the petitioner. In response, the petitioner has clarified that the expenditure incurred is in terms of the guidelines issued by CEA on 2.9.2011 based on the recommendations of the Committee on National Infrastructure Protection	Considering the submissions of the petitioner and since the asset/work is necessary to provide additional safety cover to the switchyard of the generating station, the expenditure is **allowed** under the Regulation 14(3)(viii) of the 2014 Tariff Regulations.	113.00

			Plan for hydro power stations.		
5	Security and Surveillance System	15.00	Being the proximity of J&K and various guidelines received from Intelligence Bureau, Security and Surveillance System is very important for the power station. In this context CCTV Camera and Access Control System has already been installed at various locations of the Power Station and capitalized in the year 2009-10. Some location is still required to be covered under this System. Besides above, various new security devices /gadgets like Non Lethal Weapons, Riot Drill Equipment, HF sets, water scanners, 5.56 mm Rifle etc is required by CISF at power station. Some of the security equipments like HHMD, Dragon lights etc. have became old and outlived their life and already surveyed off in the year 2013. So new HHMDs and Dragon Lights are required for CISF.	The petitioner has claimed the capitalization of the item / works under Regulation 14(3)(viii) on the ground that it has become necessary for successful and efficient plant operation. It is also noticed from Annexure-I of the rejoinder that the items have been proposed by CISF.In view of this and considering the fact that the threat perception for this generating station is high (as concluded by IB) we **allow** the capitalization of this item /works as claimed by the petitioner.	15.00
6	Addition of OFC Network and Wireless Connectivity of LAN at CPS-I	10.00	ERP has already been implemented in the generating station. For smooth running of this system, various sites of the project are connected on OFC Network for which work has been awarded and capitalised in the previous years. In addition, it is proposed to install secured Wireless Network at various offices of the generating station. This network is also needed to be continuously upgraded by adoption of new and upcoming technology.	**Allowed** under Regulation 14(3)(viii) as the generating station is remotely located and the asset is considered necessary for efficient and successful operation of the generating station.	10.00

7	Equipment for compliance of OHSAS and environment policy requirement	12.00	The generating station has been certified to meet the standards of OHSAS and environment. The requirements of OHSAS and environment certification are upgraded from time to time for the adoption of best practices prevailing in the industry all over the world. Various equipments like water purification systems, waste disposal and treatment equipments, air/water/soil pollution control and mitigation equipment etc. are required to be purchased to fulfill these requirements. The respondent, BRPL has submitted that no document/notification has been cited and the claim is made under Regulation 14(3)(viii) of the 2009 Tariff Regulations. In response, the petitioner has clarified that these items are required for time to time compliance of OHSAS and environmental policy requirement and necessary justification has been provided in the petition.	**Allowed** under Regulation 14(3)(viii) considering the fact that the asset is required to meet the standards of OHSAS and environment policy.	12.00
8	Replacement of Elevator at PH and Dam	81.00	**On replacement basis:** One number elevator at Power House and one elevator at DAM were installed by M/s OTIS during the construction of the project in the year 1994. With the continuous use, wear/tear and due to inherent working conditions at underground power house, this lift has started giving problem time to time. Since these elevators at PH and DAM have already outlived their life, it is proposed to replace these elevators with new Elevator for smooth operation of the power plant & dam.	**Allowed** under Regulation 14(3)(viii) for replacement of old elevators, since the asset is considered necessary for efficient and successful operation of the generating station & dam. The gross value of old elevators is considered as `27.50 lakh.	**53.50** (81.00-27.50)

9	Purchase of Hospital Equipment	0.45	Project Hospital with latest medical equipment is one of the mandatory requirements of any project which caters the medical facilities of power station personnel as well as adjacent local population as a part of community service. Several new and latest medical equipments has been purchased under this head for proper and better diagnosis and better medical facility. It is therefore required to purchase new 'Scoop Stretcher' for better care of injured patient during emergency and accidental condition.	**Allowed** under Regulation 14(3)(viii) as the said asset is for the benefit of employees working in the generating station which in turn will ensure the efficient operation of the generating station	0.45
10	Replacement of Hospital Equipment	1.55	**On replacement basis:** Since the commissioning of the project hospital several medical equipments were purchased for betterment of medical facility. Due to continuous R&D and application of information technology to clinical purpose, new instruments are available which have intelligent functions and are more accurate. It is therefore required to replace the old automatic urine analyzer.	**Allowed** under Regulation 14(3)(viii) as the said asset is for the benefit of employees working in the generating station which in turn will ensure the efficient operation of the generating station. The gross value of old urine analyzer has been considered as `0.74 lakh.	**0.81** (1.55-0.74)
11	Construction of executive field hostel/ transit camp	300.00	The additional capitalization of `200.00 lakh was already approved by Commission in 2011-12 for these works. A proposal has already been initiated. Construction of Executive Field Hostel / Transit Camp is expected to be capitalized in the 2015-16.	**Allowed** under Regulation 14(3)(viii) as the work has been approved works by Commission by order dated 12.7.2013.	**300.00**
Total amount claimed		**4407.00**			
Total amount allowed					**4378.76**

2016-17

(` in lakh)

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Security and Surveillance System	15.00	Being the proximity of J&K and various guidelines received from Intelligence Bureau Security and Surveillance System is very important for the station. In this context already CCTV Camera and Access Control System has been installed at various location of the Power Station and capitalised in the year 2009-10. Some location is still required to be covered under this system. Besides above, various new security devices/ gadgets like Non Lethal Weapons, Riot Drill Equipment HF sets, water scanners, 5.56 mm Rifle etc is required by CISF. Some security equipments like HHMD, Dragon lights etc. became old and outlived their life and already surveyed off in the year 2013. So new HHMDs and Dragon Lights are required for CISF.	The petitioner has claimed the capitalization of the item / works under Regulation 14(3)(viii) on the ground that it has become necessary for successful and efficient plant operation. It is also noticed from Annexure-I of the rejoinder that the items have been proposed by CISF. In view of this and considering the fact that the threat perception for this generating station is high (as concluded by IB) we **allow** the capitalization of this item/works as claimed by the petitioner.	15.00
2	Equipment for compliance of OHSAS and environment policy requirement	5.00	The generating station has been certified to meet standards of OHSAS and environment. The requirements of OHSAS and environment certification are upgraded from time-to-time for the adoption of best practices prevailing in the industry all over the world. Various equipments like water purification systems, waste disposal and treatment equipments, air /water/ soil pollution control and mitigation equipment etc. are required to be purchased to fulfill these requirements.	**Allowed** under Regulation 14(3)(viii) considering the fact that the asset is required to meet the standards of OHSAS and environment policy.	5.00

3	Replacement of Hospital Equipment	12.00	**On replacement basis**: Since commissioning of the project hospital several medical equipments were purchased for betterment of medical facility. Due to continuous R&D and application of information technology to clinical purpose, new instruments are available which have intelligent functions and are more accurate. The reliability and result-interpretation of medical equipments and systems are vital for proper diagnosis. It is therefore required to replace Auto analyzer (Biochemistry).	**Allowed** under Regulation 14(3)(viii) as the said asset is for the benefit of employees working in the generating station which in turn will ensure the efficient operation of the generating station. The de-capitalization of old asset has been considered as `5.72 lakh.	**6.28** (12.00-5.72)
4	Replacement of Flat Body Truck	21.00	**On replacement basis:** The existing flat body truck has completed the scheduled life in terms of year & KMs run as per the disposal policy and the condition of the truck is in bad shape which requires replacement.	**Allowed** under Regulation 14(3)(viii) towards the replacement of old truck as the same has outlived its life. The gross value of old truck has been considered as `1.91 lakh.	**19.09** (21.00-1.91)
5	Replacement of Dux Dumper with Heavy Duty Tipper	23.00	**On replacement basis:** The existing Dux Dumper was purchased in the year of 1986 and has outlived more than 27 years and spares for the repair / maintenance is not available in India and the condition of machine is very poor which requires replacement. Object Id as per the FAR: 0415010003 Acquisition year of the equipment: year 1986 Acquisition Cost of the equipment: `32.16 lakh	**Allowed** under Regulation 14(3)(viii) towards the replacement of old dumper as the same has outlived its life. The gross value of old dumper has been considered as `32.16 lakh.	**(-) 9.16** (23.00-32.16)

6	Replacement of Wheel Loader with Backhoe Excavator - Loader Machine	40.00	**On replacement basis** For routine loading & excavating works such muck clearance at the roads and civil works at the project site. The existing Wheel loader was purchased in the year of 1985 which has outlived more than 28 years. This equipment has completed the scheduled life in terms of years & running Hrs. as per the disposal policy and the frequent breakdown of the equipment hampers the works and hence requires replacement of the equipment.	**Allowed** under Regulation 14(3)(viii) towards the replacement of old wheel loader as the same has outlived its life. The gross value of old wheel loader has been considered as `39.67 lakh.	**0.33** (40.00-39.67)
7	Replacement of Fire Tender	36.00	**On replacement basis:** The existing Fire Tender was purchased in the year of 1986 and has outlived more than 27 years. Keeping the safety point of view this fire tender has to be replaced and the vehicle / equipment should be in very good condition for fire fighting.	**Allowed** under Regulation 14(3)(viii) for replacement of old fire tender as it has outlived its life. The gross value of old fire tender has been considered as `5.21 lakh.	**30.79** (36.00-5.21)
Total amount claimed		**152.00**			
Total amount allowed					**67.33**

2017-18

(` *in lakh)*

Sl. No.	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount allowed
1	Security and Surveillance System	15.00	Being the proximity of J&K and various guidelines received from Intelligence Bureau Security and Surveillance System is very important for Chamera Power Station-I. In this context already CCTV Camera and Access Control System has been installed at various location of the Power Station and capitalised in the year 2009-10. Some location is still required to be covered under this system. Besides above, various new security devices/ gadgets like Non	The petitioner has claimed the capitalization of the item / works under Regulation 14(3)(viii) on the ground that it has become necessary for successful and efficient plant operation. It is also noticed from Annexure-I of the rejoinder that the items have been proposed by CISF. In view of this and	15.00

			Lethal Weapons, Riot Drill Equipment HF sets, water scanners, 5.56 mm Rifle etc is required by CISF at Chamera-I. Some security equipments like HHMD, Dragon lights etc. became old and outlived their life and already surveyed off in the year 2013. So new HHMDs and Dragon Lights are required for CISF.	considering the fact that the threat perception for this generating station is high (as concluded by IB) we **allow** the capitalization of this item/works as claimed by the petitioner.	
2	Addition of OFC Network and Wireless Connectivity of LAN at CPS-I	10.00	ERP has already been implemented at CPS-I. For smooth running of this System various sites of the Project are connected on OFC Network for which work has been awarded and capitalised in the previous years. In addition it is proposed to install secured Wireless Network at various offices of the generating station. This network is also needed to be continuously upgraded by adoption of new and upcoming technology.	**Allowed** under Regulation 14(3)(viii) as the generating station is remotely located and the asset is considered necessary for efficient and successful operation of the generating station..	10.00
3	Equipment for compliance of OHSAS and environment policy requirement	5.00	The generating station has been certified to meet standards of OHSAS and environment. The requirements of OHSAS and environment certification are upgraded from time-to-time for the adoption of best practices prevailing in the industry all over the world. Various equipments like water purification systems, waste disposal and treatment equipments, air/water/soil pollution control and mitigation equipment etc. are required to be purchased to fulfill these requirements.	**Allowed** under Regulation 14(3)(viii) considering the fact that the asset is required to meet the standards of OHSAS and environment policy.	5.00
4	Replacement of Hospital Equipment	16.00	**On replacement basis** Since the commissioning of the project hospital several medical equipments were purchased for betterment of medical facility. Due to continuous R&D and application of information technology to clinical purpose, new instruments are	**Allowed** under Regulation 14(3)(viii) as the said asset is for the benefit of employees working in the generating station which in turn will ensure the efficient operation of	**11.36** (16.00-4.64)

			available which have intelligent functions and are more accurate. The reliability and result-interpretation of medical equipments and systems are vital for proper diagnosis. It is therefore required to replace the old Automatic cell counter and ECG Machines with new Automatic cell counter (`14.50 lakh) and ECG Machines (`1.50 lakh).	the generating station. The total gross value of old assets has been considered as `4.64 lakh.	
5	Replacement of 10MT Fork Lifter	36.00	**On replacement basis** The existing Fork lifter was purchased in the year of 1989 and has outlived more than 24 years. The body of the equipment has been rusted and parts become worn-out. As this equipment is required for loading / unloading of materials in the stores, safety of the materials is very important and hence requires being replaced so that the shifting of materials / loads shall be done safe & securing. Object Id as per the FAR: 492010001:Acquisition year of the equipment: year 1989 Acquisition Cost of the equipment: `13.64 lakh	**Allowed** under Regulation 14(3)(viii) towards the replacement of old Fork Lifter, as the asset is considered necessary for efficient operation of the generating station. The gross value of old asset has been considered as `13.64 lakh.	22.36 (36.00-13.64)
Total amount claimed		**82.00**			
Total amount allowed					**63.72**

2018-19

(` in lakh)

Sl. No	Assets/ Works	Amount Claimed	Justification submitted by the petitioner	Remarks on admissibility	Amount Allowed
1	Security and Surveillance System	15.00	Being the proximity of J&K and various guidelines received from Intelligence Bureau Security and Surveillance System is very important for Chamera Power Station-I. In this context already CCTV Camera and Access Control System has been installed at various location of the Power Station and capitalized in the year 2009-10. Some location is still required to be covered	The petitioner has claimed the capitalization of the item / works under Regulation 14(3)(viii) on the ground that it has become necessary for successful and efficient plant operation. It is also noticed from Annexure-I of the rejoinder that the	15.00

			under this System. Besides above, various new security devices /gadgets like Non Lethal Weapons, Riot Drill Equipment , HF sets, water scanners, 5.56 mm Rifle etc is required by CISF. Some security equipments like HHMD, Dragon lights etc. became old and outlived their life and already surveyed off in the year 2013. So new HHMDs and Dragon Lights are required for CISF.	items have been proposed by CISF. In view of this and considering the fact that the threat perception for this generating station is high (as concluded by IB) we **allow** the capitalization of this item /works as claimed by the petitioner.	
2	Equipment for compliance of OHSAS and environment policy requirement	5.00	The generating station has been certified to meet standards of OHSAS and environment. The requirements of OHSAS and environment certification are upgraded from time-to-time for the adoption of best practices prevailing in the industry all over the world. Various equipments like water purification systems, waste disposal and treatment equipments, air/water/soil pollution control and mitigation equipment etc. are required to be purchased to fulfill these requirements.	**Allowed** under Regulation 14(3)(viii) considering the fact that the asset is required to meet the standards of OHSAS and environment policy.	5.00
Total amount claimed		**20.00**			
Total amount allowed					**20.00**

De-capitalization of assets

71. The petitioner has claimed de-capitalization of the assets based on replacement of old assets, which have outlived their useful life. The cost of acquisition of old asset /equipment as provided has been considered as the de-capitalized value of the old asset for the purpose of computation of the net additional capital expenditure to be allowed.

(` in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
115.38	28.24	84.67	18.28	0.00

Additional capital expenditure allowed for 2014-19

72. Based on the above, the net additional capital expenditure allowed for the period 2014-19 is summarized as under:

(` in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Additional capital expenditure allowed	697.00	4407.00	152.00	82.00	20.00
De-capitalization	115.38	28.24	84.67	18.28	0.00
Net Additional Capital expenditure allowed	**581.62**	**4378.76**	**67.33**	**63.72**	**20.00**

Capital Cost for 2014-19

73. As stated, the closing capital cost as on 31.3.2014 is `204415.75 lakh as stated in para47 of this order. The same has been considered as the opening capital cost as on 1.4.2014. Accordingly, the capital cost considered for the purpose of tariff for the period 2014-19 is as under:

(` in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	204415.75	204997.37	209376.13	209443.46	209507.18
Additional Capital expenditure allowed	581.62	4378.76	67.33	63.72	20.00
Capital Cost as on 31st March of the year	**204997.37**	**209376.13**	**209443.46**	**209507.18**	**209527.18**

Return on Equity

74. Regulation 24 of the 2014 Tariff Regulations provides as under:

> *“**24. Return on Equity**: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*
>
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*
>
> *Provided that:*
>
> *i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*
>
> *ii). the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*

iii). additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

iv). the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

75. Regulation 25 of the 2014 Tariff Regulations provides as under:

"Tax on Return on Equity

(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis."

76. The petitioner has considered the Rate of Return on Equity as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Base Rate	16.500%	16.500%	16.500%	16.500%	16.500%
Tax Rate (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of ROE (pre-tax)	20.876%	20.876%	20.876%	20.876%	20.876%

77. Based on the above, Return on Equity has been computed as under:

(` in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Notional Equity	63365.04	63539.53	64853.15	64873.35	64892.47
Addition due to Additional capital expenditure	174.49	1313.63	20.20	19.12	6.00
Closing Equity	63539.53	64853.15	64873.35	64892.47	64898.47
Average Equity	63452.28	64196.34	64863.25	64882.91	64895.47
Rate of Return on Equity	20.876%	20.876%	20.876%	20.876%	20.876%
Return on Equity	**13246.30**	**13401.63**	**13540.85**	**13544.96**	**13547.58**

Interest on Loan

78. Regulation 26 of the 2014 Tariff Regulations provides as under:

> ***"26. Interest on loan capital:*** *(1)The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*
>
> *(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.*
>
> *(4) Notwithstanding any moratorium period availed by the generating company orthe 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 depreciation allowed for the year or part of the year.*
>
> *(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*
>
> *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 beneficiaries or the long term transmission customers /DICs 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."

79. The normative loan for the project has already been repaid. The normative loan on account of the admitted additional capital expenditure during the respective years of the tariff period have also been considered as fully paid, as the admitted depreciation is more than the amount of normative loan in these years. As such, Interest on loan during the period 2014-19 is worked out as 'Nil'.

(` in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative loan	141050.71	141457.84	144522.98	144570.11	144614.71
Cumulative repayment upto previous year	142399.83	142806.96	145872.10	145919.23	145963.83
Net loan-opening	0.00	0.00	0.00	0.00	0.00
Repayment during the year	407.13	3065.13	47.13	44.60	14.00
Additions due to additional capital expenditure	407.13	3065.13	47.13	44.60	14.00
Net loan-closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on loan	-	-	-	-	-
Interest on normative loan	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Depreciation

80. Regulation 27of the 2014 Tariff Regulations provides as under:

> ***"27. Depreciation:*** *(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.*
>
> *Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*
>
> *(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. 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.*
>
> *(3) 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 station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*
>
> *Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*
>
> *Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.*
>
> *(4) 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.*
>
> *(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in* ***Appendix-II*** *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 the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.*
>
> *(6) In case of the existing projects, the balance depreciable value as on1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.*

(7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project(five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services."

81. The COD of the generating station is 1.5.1994. Since the generating station has completed 12 years of operation as on 30.4.2006, the remaining depreciable value has been spread over the balance useful life of the assets. Assets amounting to `115.38 lakhs, `28.24 lakh, `84.67 lakh, `18.28 lakh and `nil are proposed to be de-capitalized during 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 respectively. As per the prevailing practice, the amount of cumulative depreciation allowed in tariff against those de-capitalized assets has been calculated on pro-rata basis. The same has been adjusted from the cumulative depreciation of the year of de-capitalization. Accordingly, depreciation has been computed as follows:

(` In lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block as on 31.3.2014	204415.75	204997.37	209376.13	209443.46	209507.18
Projected Additional capital expenditure during 2014-19	581.62	4378.76	67.33	63.72	20.00
Closing gross block	204997.37	209376.13	209443.46	209507.18	209527.18
Average gross block	204706.56	207186.75	209409.80	209475.32	209517.18
Depreciable Value	181981.54	184213.71	186214.45	186273.42	186311.10
Balance useful life of the asset (years)	15.08	14.08	13.08	12.08	11.08
Remaining Depreciable Value	62892.49	61023.40	58707.29	54331.28	49973.08
Depreciation	**4170.59**	**4334.05**	**4488.33**	**4497.62**	**4510.21**

O&M Expenses

82. The generating station is in operation for three or more years as on 1.4.2014. Accordingly, in terms of sub-section (a) of clause (3) of Regulation 29 of the 2014 Tariff

Regulations, the year-wise O&M expense norms considered for the generating station of the petitioner for the period 2014-19 is as under:

(` in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
10664.95	**11373.53**	**12129.19**	**12935.05**	**13794.46**

Interest on working capital

83. Sub-section (c) of Clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

> ***"28. Interest on Working Capital:***
>
> *(1) The working capital shall cover*
>
> *(c) Hydro generating station including pumped storage hydro electric generating Station and transmission system including communication system:*
>
> *(i) Receivables equivalent to two months of fixed cost;*
>
> *(ii) Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and*
>
> *(iii) Operation and maintenance expenses for one month."*

84. Accordingly, receivables are allowed as under:

(` in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Two months of annual fixed cost	4845.32	5024.29	5207.24	5351.25	5504.99

85. Accordingly, maintenance spares allowed are as under:

(` in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Cost of maintenance spares (15% of O & M)	1599.74	1706.03	1819.38	1940.26	2069.17

86. Accordingly, O&M expenses for one month are allowed as under:

(` in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
O & M for one month	888.75	947.79	1010.77	1077.92	1149.54

Rate of interest on working capital

87. Clause (3) of Regulation 28of the 2014 Tariff Regulations provides as under:

> *"Interest on working Capital: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later."*

88. In terms of the above regulations, the Bank Rate of 13.50% (Base Rate + 350 Basis Points) as on 1.4.2014 has been considered by the petitioner. This has been considered in the calculations for the purpose of tariff.

Interest on Working Capital

89. Necessary computations in support of interest on working capital are appended below:

(` in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	1599.74	1706.03	1819.38	1940.26	2069.17
O & M expenses	888.75	947.79	1010.77	1077.92	1149.54
Receivables	4845.32	5024.29	5207.24	5351.25	5504.99
Total	7333.81	7678.11	8037.39	8369.43	8723.70
Interest on Working Capital @13.50%	**990.06**	**1036.55**	**1085.05**	**1129.87**	**1177.70**

90. Accordingly, the annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under**:**

(`In lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	13246.30	13401.63	13540.85	13544.96	13547.58
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Depreciation	4170.59	4334.05	4488.33	4497.62	4510.21
Interest on Working Capital	990.06	1036.55	1085.05	1129.87	1177.70
O & M Expenses	10664.95	11373.53	12129.19	12935.05	13794.46
Annual Fixed Charges	**29071.90**	**30145.76**	**31243.42**	**32107.50**	**33029.95**

Normative Annual Plant Availability Factor

91. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations already

in operation. Accordingly, the NAPAF of 90% has been considered for this generating station.

Design Energy

92. The Commission in its order dated 12.7.2011 in Petition No.84/2010 had approved the annual Design Energy (DE) of 1664.55 Million unitsfor the period 2009-14 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19 as per month-wise details as under:

Month	Design Energy (MUs)
April	99.02
May	184.54
June	183.46
July	279.62
August	340.25
September	168.17
October	96.93
November	65.91
December	59.93
January	64.45
February	58.13
March	64.15
Total	**1664.55**

Application Fee and Publication Expenses

93. The petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees for the period 2014-19 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The petitioner vide affidavit dated 14.11.2014 has also submitted that an amount of `397671/- has been incurred towards publication of the tariff petition 2014-19 in the newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations, we direct that the petitioner shall be entitled to recover the filing fees and the expenses incurred on publication of notices for the period 2014-19 directly from the respondents.

94. The annual fixed charges approved for the period 2014-19 as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

95. Petition No. 237/GT/2014 is disposed of in terms of the above.

-Sd/-	**-Sd/-**	**-Sd/-**
(A.S. Bakshi)	**(A.K.Singhal)**	**(Gireesh B. Pradhan)**
Member	**Member**	**Chairperson**