					(Rs. in lakh)
	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
De-capitalization claimed	(-) 7.01	(-) 58.19	(-) 28.82	(-) 137.26	(-) 4.89
De-capitalization allowed	(-) 5.31	(-) 33.60	(-) 28.82	(-) 137.26	(-) 1.29

Assumed Deletions

27. As per the consistent methodology adopted by the Commission, the 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 de-capitalization of the original value of the old asset. However, in certain cases where decapitalization is affected in books during the following 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". Further, in the absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of new asset @ 5% per annum till the year of capitalization of the old asset.

28. It is observed that the Petitioner has claimed the asset/work i.e. Tata tipper for Rs. 12.14 lakh in 2014-15 on replacement basis. However, the de-capitalization value of the old asset/work provided by the Petitioner is very less. Accordingly, based on above methodology, the assumed deletion considered for this asset is considered as Rs. 8.15 lakh in 2014-15.

29. Based on the above, the total additional capital expenditure allowed for the 2014-19 tariff period is as under:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
A	Additions allowed	21.51	102.86	107.71	278.96	18.11

B	Decapitalization allowed	(-) 5.31	(-) 33.60	(-) 28.82	(-) 137.26	(-) 1.29
C	Assumed Deletions allowed	(-) 8.15	-	-	--	
D	Discharge of Liabilities	0.10	1.14	2.81	21.84	22.95
E	Net Additional Capitalization allowed (A+B+C+D)	**8.16**	**70.39**	**81.70**	**163.54**	**39.77**

<u>Exclusions (additions/deletions incurred, capitalized in books but not to be claimed for tariff purpose) as per reconciliation with books of account</u>

30. The year-wise net expenditure excluded by the Petitioner as per (Form 9C) reconciliation, with books of accounts are as follows: :

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions in Additions	1031.54	1784.72	1767.87	635.63	141.13
Exclusions in Deletions	(-)16105.32	(-)326.25	(-)1741.04	(-)106.85	(-)55.91
Net Exclusions claimed	**(-) 15073.78**	**1458.47**	**26.83**	**528.78**	**85.22**

Exclusions in Additions (capitalized in books but not to be considered for tariff purpose)

31. The Petitioner has submitted that the expenditure as stated in the table above, is incurred on procurement/ replacement of minor assets and capital spares which are not allowed for the purpose of tariff, after the cut-off date of the generating station, in terms of the 2014 Tariff Regulations. The Petitioner has, accordingly, put these additions under exclusion category, by including the positive entries arising due to Inter-head adjustments. As such, the exclusion of such positive entries is allowed and has no impact on tariff. Hence, the same is in order and allowed.

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
i	Minor assets/ Capital spares	1029.58	266.76	1762.45	635.63	136.62
ii	FERV	0.00	1510.85	0.00	0.00	0.00
iii	Inter unit transfers	1.96	7.11	5.42	0.00	4.52
	Total (i+ii+iii)	**1031.54**	**1784.72**	**1767.87**	**635.63**	**141.13**

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

32. The Petitioner has de-capitalized amounts in books of accounts pertaining to minor assets such as computers, office equipment, furniture, ladders, pumps, fixed assets of minor value less than Rs. 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 :

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Minor Assets de-capitalised	(-) 12.65	(-) 322.63	(-) 164.23	(-) 103.86	(-) 55.91
FERV	(-) 16092.62	0.00	(-) 1560.34	0.00	0.00
Inter unit transfer	(-) 0.048	(-) 3.62	(-) 16.48	(-) 2.99	0.00
Total	(-) **16105.32**	(-)**326.25**	(-) **1741.04**	(-) **106.85**	(-)**55.91**

33. As regard exclusion of deletions for minor assets, FERV and inter-unit transfer, the Commission in its order dated 24.2.2016 in Petition No.230/GT/2014 had allowed the exclusion in deletions under the above heads. The Petitioner has furnished proper linkages, for the exclusions claimed. In view of the above, the exclusion in deletions as claimed by the Petitioner, are allowed.

<u>Net Additional Capital Expenditure allowed for the 2014-19 period</u>

34. In view of above, the net additional capital expenditure allowed for the purpose of tariff for the 2014-19 tariff period is as follows:

(Rs. in lakh)

Sl.No	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	**Additions allowed**					
i	**Capitalization against admitted items**					
	Regulation 14(3)(viii)	21.51	43.21	105.23	164.89	0.00
ii	**Capitalization against new items**					
	Regulation 14(3)(iii)	0.00	0.00	0.00	74.13	18.11
	Regulation	0.00	59.64	2.38	39.94	0.00

Sl.No	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	14(3)(viii)					
	Regulation 14(3)(vii)	0.00	0.00	0.09	0.00	0.00
	Sub-total (A)	**21.51**	**102.86**	**107.71**	**278.96**	**18.11**
B	Deletions	13.46	33.60	28.82	137.26	1.29
C	Discharge of Liabilities (C)	0.10	1.14	2.81	21.84	22.95
D	**Net additions (D=A-B+C)**	**8.16**	**70.39**	**81.70**	**163.54**	**39.77**

Capital cost allowed

35. Accordingly, the capital cost allowed for the 2014-19 tariff period is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening capital cost (a)	174954.68	174962.84	175033.23	175114.93	175278.47
Net additional capital expenditure allowed during the year/ period (b)	8.16	70.39	81.70	163.54	39.77
Closing Capital Cost (a)+(b)	**174962.84**	**175033.23**	**175114.93**	**175278.47**	**175318.24**

Debt Equity Ratio

36. Regulation 19 of the 2014 Tariff Regulations provides as under:

"19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

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

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.

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

(2) The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the

generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt;equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

37. Gross normative loan and equity amounting to Rs.127768.69 lakh and Rs. 47185.99 lakh, respectively, as on 31.3.2014, as considered in order dated 26.4.2016 in Petition No.230/GT/2014 has been considered as normative loan and equity as on 1.4.2014. The debt-equity ratio of 70:30 has been considered for the admitted additional capitalization in terms of Regulation 19 of the 2014 Tariff Regulations for the purpose of tariff. De-capitalization of assets has been deducted from the corresponding loan as well as equity, taking into consideration, the debt equity ratio applied in the year in which it was capitalized, as per Regulation 14 (4) of 2014 Tariff Regulations. The opening and closing debt and equity is as under:

(Rs in lakh)

	As on 31.3.2014		**Additional Capitalization**		**De-capitalization**		**As on 31.3.2019**	
	Amount (Rs. in lakh)	**(in %)**	**Amount *(Rs. in lakh)***	**(in %)**	**Amount (Rs. in lakh)**	**(in %)**	**Amount (Rs. in lakh)**	**(in %)**
Debt	127768.69	73.03%	404.60	70.00%	156.36	72.92%	128016.93	73.02%
Equity	47185.99	26.97%	173.40	30.00%	58.08	27.08%	47301.31	26.98%
Total	**174954.68**	**100.00%**	**578.00**	**100.00%**	**214.44**	**100.00%**	**175318.24**	**100.00%**

Return on Equity

38. 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."

39. 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."

40. The Respondent BRPL has made the following submissions:

(a) The truing up exercise under Regulations 8(8) of the 2014 Tariff Regulations, as per clause 3 of Regulation 25 of these regulations is also carried out by the Petitioner in respect of true up of grossed up rate of return on equity at the end of every financial year based on the actual tax paid including interest duly adjusted for any refund of tax including interest received from the income tax authorities. No such details have been filed by the Petitioner as a result of the truing up whether any under-recovery or over-recovery of the grossed-up rate of return either claimed or refunded on year-to-year basis from/to the beneficiaries. The Petitioner is required to file the entire information which is not filed.

(b) The Petitioner may be directed to refund the tax collected from the beneficiaries during tariff period 2014-19 on the basis of the grossing up of the effective tax rate.

41. In response the Petitioner has submitted that;

(a) In terms of Regulation 25 of the 2014 Tariff Regulations, the effective tax rate shall be calculated as per actual tax paid by the generating company [not the generating unit] in line with the provisions of the relevant Finance Act.

(b) Grossing up of ROE has been done by the Petitioner in terms of Regulation 25 of the 2014 Tariff Regulations.

(c) From the 2009-14 tariff period onwards, the beneficiaries were not liable to pay the actual income tax on the income streams of the generating companies, but the liability of the beneficiaries was only limited to paying a rate of return grossed up, at the applicable/ effective tax rate. In addition to the same, deferred tax up to 2009, which would reverse in future in the shape of additional income tax liability to the generator, was also required to be reimbursed.

42. We have considered the matter. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961, as per the MAT rates of the respective financial year, the notified MAT rate for the respective financial year has been considered as the effective tax rate for the purpose of grossing up of ROE for the 2014-19 tariff period, in terms of the provisions of the 2014 Tariff Regulations. Accordingly, the grossing up of base rate has been done with the actual MAT rate of the respective financial year and ROE has been computed in line with Regulations 24 and 25 of the 2014 Tariff Regulations as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Equity (A)	47185.99	47188.87	47211.08	47236.20	47289.34
Additions due to additional capitalization (B)	6.45	30.86	32.31	83.69	5.43
Addition due to un-discharged liability (C)	0.03	0.34	0.84	6.55	6.89
Deletions (D)	3.60	8.99	8.04	37.10	0.35
Closing Equity (E)=(A)+(B)+(C)-(D)	47188.87	47211.08	47236.20	47289.34	47301.31
Average Equity (F)=(A+E)/2	47187.43	47199.98	47223.64	47262.77	47295.33
Base Rate (%) (G)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate (%) (H)	20.9605%	21.3416%	21.3416%	21.3416%	21.5488%
Effective ROE Rate (%) (I)	20.876%	20.977%	20.977%	20.977%	21.032%
Return on Equity (J)= (F)*(I)	**9850.85**	**9901.14**	**9906.10**	**9914.31**	**9947.15**

Interest on loan

43. 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 Decapitalization 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 up to the date of de-capitalization of such asset

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

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

    i. The opening gross normative loan as on 1.4.2014 has been computed in accordance with Regulation 26 of the 2014 Tariff Regulations

    ii. The weighted average rate of interest has been worked out based on the actual loan portfolio of respective year applicable to the project.

iii. The repayment for the year of the 2014-19 tariff period has been considered equal to the depreciation allowed for that year.

iv. Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.

45. Accordingly, Interest on loan is computed as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Gross Normative Loan (A)	127768.69	127773.96	127822.15	127878.73	127989.13
Cumulative repayment of loan upto previous year (B)	53397.99	62322.54	71248.79	80177.58	89037.47
Net Loan Opening (C)=(A)-(B)	74370.70	65451.43	56573.35	47701.15	38951.66
Repayment during the year (D)=Depreciation	8929.68	8940.79	8942.71	8933.15	2823.05
Cumulative repayment adjustment on a/c of de-capitalization (E)	5.13	14.53	13.93	73.25	0.71
Net Repayment (F)=(D)-(E)	8924.55	8926.26	8928.79	8859.90	2822.34
Net Addition due to additional capital expenditure (G)	5.27	48.18	56.58	110.40	27.80
Net Loan Closing (H)=(C+G-F)	65451.43	56573.35	47701.15	38951.66	36157.11
Average Loan(I)=(C+H)/2	69911.06	61012.39	52137.25	43326.40	37554.39
Weighted Average Rate of Interest of loan (J)	3.097%	3.007%	3.304%	3.176%	3.293%
Interest on Loan (K=I*J)	**2164.89**	**1834.81**	**1722.80**	**1376.24**	**1236.50**

Depreciation

46. Regulation 27 of 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 on 1.4.2014 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 decapitalized asset during its useful services."

47. The weighted average rate of depreciation has been calculated by the Petitioner in accordance with Regulation 27 of the 2014 Tariff Regulations. The COD of the

generating station is 1.11.2005. The project has completed 12 years of commercial operation during 2017-18 and the remaining depreciable value has been spread over the balance useful life of the generating station from 2018-19 onwards. The calculation of WAROD is enclosed as Annexure-I to this order. Accordingly, depreciation has been worked out as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block (A)	174954.68	174962.84	175033.23	175114.93	175278.47
Net Additional capital expenditure during 2014-19 (B)	8.16	70.39	81.70	163.54	39.77
Closing gross block (C=A+B)	174962.84	175033.23	175114.93	175278.47	175318.24
Average gross block (D)=(A+C)/2	174958.76	174998.03	175074.08	175196.70	175298.36
Land Value (M)	610.75	610.75	610.75	610.75	610.75
Depreciable value (E=(D-M) *90%))	156913.21	156948.55	157017.00	157127.36	157218.85
Remaining Depreciable Value at the beginning of the year (F=E-Cum Dep at 'L' at the end of previous year)	99087.75	90198.55	81340.74	72522.31	63753.90
Rate of Depreciation (G)	5.1039%	5.1091%	5.1080%	5.0989%	Spread over
Balance useful Life (H)	26.58	25.58	24.58	23.58	22.58
Depreciation (I=D*G)	**8929.68**	**8940.79**	**8942.71**	**8933.15**	**2823.05**
Cumulative Depreciation at the end of the year (J=I+ Cum Dep at 'L' at the end of previous year)	66755.14	75690.79	84618.97	93538.19	96287.99
Less: Depreciation adjustment on account of de-capitalization (K)	5.13	14.53	13.93	73.25	0.71
Cumulative Depreciation at the end of the year (L)*	66750.01	75676.26	84605.05	93464.94	96287.28

**Cumulative Depreciation as on 31.3.2014 is Rs. 57825.46 lakh*

Operation & Maintenance Expenses

48. In respect of this generating station, Regulation 29(3)(a) of the 2014 Tariff Regulations, provides as under:

"29(3)(a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 1.4.2014:

(Rs. in lakh)

	2014-15	***2015-16***	***2016-17***	***2017-18***	***2018-19***
Dhauliganga	*7181.89*	*7659.05*	*8167.92*	*8710.59*	*9289.33*

49. Since the Petitioner has claimed O&M expenses in accordance with Regulation 29(3)(a) of the 2014 Tariff Regulations, the claim of the Petitioner is allowed.

(Rs. in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
7181.89	7659.05	8167.92	8710.59	9289.33

Additional O&M expenses

(a) Additional claim due to Cloud Burst

50. The Petitioner has claimed the additional capital expenditure of Rs. 546.24 lakh during 2016-17 on account of damages caused due to cloud burst on 16^{th} and 17^{th} June 2013. It is observed that the Petitioner has also claimed reimbursement of expenditure from insurance company for the damages caused due to above cloud burst. However, the Petitioner has clarified that these expenses claimed do not form part of the above said insurance claim.

As per the consistent methodology, Commission has not allowed capitalization of similar expenditure under the additional capital expenditure in various orders considering it as an expenditure of being recurring/O&M in nature. However, in the present case, the additional expenditure claimed is due to damages caused by natural calamities and are not of recurring nature. Also, the additional expenditure claimed do not form part of the insurance claim as stated by the Petitioner. In this background, we were inclined to allow the claim of the Petitioner, in exercise of the Power under Regulation 54 of the 2014 Tariff Regulations, relax Regulation 29(3)(a) of the 2014 Tariff Regulations. Further, keeping in view the consumers' interest, we, as an exceptional case, allow recovery of the total amount of Rs. 546.24 lakh by the Petitioner as additional O&M expenses in 12 equal installments without any interest there upon. Also, considering the fact that this expenditure is being allowed in exercise of the power to relax, the expenses allowed are not made part of the annual fixed charges determined in this order.

(b) Goods & Services Tax

51. The Petitioner has also claimed reimbursement of additional tax paid due to implementation of GST in respect of generating station as additional O&M expenses and for this purpose, it has requested for relaxation of the provisions of Regulation 29(3) in exercise of the powers vested under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. The Petitioner has further submitted that the implementation of GST is a “Change in law‟ event and the impact of the same should be passed through in tariff. As such, the tax paid in O&M expenditure of plants (service portion) is claimed over and above the O&M expenses of the respective power stations. The Petitioner has submitted that it had filed Petition No. 133/MP/2019, which was disposed of by the Commission vide its order dated 22.8.2019, granting liberty to the Petitioner to raise the claim for reimbursement of additional tax on O&M expenses due to implementation of GST Act, 2017 along with the truing up petition for the 2014-19 tariff period. The additional impact of GST in 2017-18 (1.7.2017 to 31.3.2018) and 2018-19 as submitted by the Petitioner, duly certified by statutory auditors, are as under:

Additional Impact of GST on O&M Expenses (in Rs.)			
2017-18	**2018-19 (01.04.18 to 31.12.18)**	**2018-19 (01.01.19 to 31.03.19)**	**Total**
4670258	5915637	1677547	12263442

52. The matter has been considered. It is observed that the Commission while specifying the O&M expense norms for the 2014-19 tariff period had considered taxes to form part of the O&M expense calculations and, accordingly, had factored the same in the said norms. This is evident from paragraph 49.6 of the SOR (Statement of Objects and Reasons) to the 2014 Tariff Regulations, which is extracted hereunder:

> *"49.6 With regards to suggestion received on other taxes to be allowed, the Commission while approving the norms of O&M expenses has considered the taxes as part of O&M expenses while working out the norms and therefore the same has already been factored in..."*

53. Further, the escalation rates considered in the O&M expense norms under the 2014 Tariff Regulations is only after accounting for the variations during the past five years of the 2014-19 tariff period, which in our view, takes care of any variation in taxes also. It is pertinent to mention that in case of reduction of taxes or duties, no reimbursement is ordered. In this background, we find no reason to allow the prayer for grant of additional O&M expenses towards payment of GST.

(c) Impact of Wage Revision

54. The Petitioner has submitted that it has filed Petition No. 233/MP/2019 claiming recovery of impact of wage revision of its employees for the period from 1.1.2017 to 31.3.2019 and deputed employees of Kendriya Vidyalaya (KV) and Central Industrial Security Force (CISF) in respect of this generating station for the period from 1.1.2016 to 31.3.2019. In view of this, the issue of recovery of impact of wage revision of employees, as stated above, has not been considered in this order.

(d) *Capital Spares*

55. The last proviso to Regulation 29(2) of the 2014 Tariff Regulations provides as under:

> *"Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization".*

56. In terms of the above proviso, capital spares consumed are admissible separately, at the time of truing up of tariff, based on the details furnished by the Petitioner. The capital spares claimed by the Petitioner are as under:

(Rs. in lakh)

	2016-17	**2017-18**
Capital spares (not part of capital cost)	105.99	88.51

57. The Respondent BRPL and Respondent TPDDL have submitted that it may be stated that there is no provision for capitalisation of capital spares for hydro generating stations under the 2014 Tariff Regulations, and accordingly the claim of the Petitioner is without any basis. The Respondent, UPPCL has submitted that the Petitioner has failed to submit necessary details substantiating that the capital spares are already not part of the repair and maintenance expenditure of the power station. It has also submitted that no justification has also been furnished for the requirement of such capital spares which come free with the new machineries which were replaced/required as part of restoration work and the claim for the same was settled by the insurance company. In response the Petitioner has submitted that the Commission had not considered capital spares as part of O&M expenses while notifying the O&M expense norms for the 2014-19 tariff period and hence the consumption of capital spares has been claimed.

58. We have examined the list of spares furnished by the Petitioner. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff Regulations. The term capital spares, in our view, is a piece of equipment, or a spare part, of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in view the principle of materiality and to ensure standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs.1.00 lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the Petition, has been considered for the purpose of tariff. Based on this, the details of capital spares consumption allowed for the 2014-19 tariff period before adjusting the salvage value of old spare is summarized as under:

(Rs. in lakh)

	2016-17	**2017-18**
Total capital spares consumed claimed	105.99	88.51
Less: Value of capital spares below Rs.1.00 lakh disallowed on individual basis	0.00	0.00
Net total value of capital spares considered	**105.99**	**88.51**

59. Further, we are of the view that spares do have salvage value. Accordingly, in line with the practice of considering salvage value, presumed to be recovered by the Petitioner on sale of other capital assets, on becoming unserviceable, the salvage value of 10% has been deducted from the cost of capital spares considered above for 2014-19 tariff period. Therefore, on prudence check of the information furnished by the Petitioner in Form-17 and on applying the said ceiling limit along with deduction of the salvage value @10%, the net capital spares allowed in terms of Regulation 29(2) of 2014 Tariff Regulations is as under:

(Rs. in lakh)

	2016-17	**2017-18**
Net total value of capital spares considered	105.99	88.51

Less: Salvage value @ 10%	10.60	8.85
Net capital spares allowed	**95.39**	**79.66**

(e) Amount not recovered from Insurance Company due to heavy rains and subsequent floods

60. The Petitioner has submitted the following;

> *"Due to heavy rain & subsequent flood in Uttarakhand during 2013-14 (16.06.2013 / 17.06.2013), severe damage and major loss to Power Station equipment's had occurred in Dhauliganga Power Station. The Power Station was covered under Mega Risk Insurance Policy (Insurer: New India Assurance Corporation Limited). After the incident, the same was intimated to the Insurance Company. A detailed survey & analysis of damages occurred in the Power Station was conducted by M/s B S Chawla & Co. (Surveyors & valuers), Mayur Vihar Phase-I, New Delhi. Accordingly, an initial claim of Rs. 221.57 Crore was submitted to the Insurer. After detailed deliberation and discussion between Insured (NHPC Limited) & insurer (New India Assurance Corporation Limited), a final claim of Rs. 182.27 Crore was submitted. The insurer agreed for a claim of Rs. 157.92 Crore only, falling short by Rs. 24.36 Crore against the claim amount of Rs. 182.27 Crore. The insurer had paid an amount of Rs. 35 Cr during FY 2013-14 and the remaining amount of Rs. 122.92 Crore during tariff period 2014-19. As per Accounting practice, the unrecognized amount of Rs. 24.36 Crore has been charged to Profit & Loss A/c by the Power Station.*

61. The Respondent, TPDDL and Respondent UPPCL has made the following submissions:

(a) Insurance is an agreement between the Petitioner and the Insurance Company only.

(b)The Commission has a limited role to accept the expenses on this account so that the expenses incurred by the Petitioner are paid through tariff by the beneficiaries. There is no congruence on the quantum of loss suffered by the Petitioner which can be either over-estimation of the loss or inability of the Petitioner to justify its loss and under both the circumstance only Petitioner is responsible.

(c) Reliance is placed on the judgment dated 26.2.2015 of the Appellate Tribunal in Appeal No. 107 of 2014 (PGCIL vs CERC & ors). In the said judgment the Tribunal has upheld the view taken by this Commission and held that:

> *"17.10. We further note that in this Appeal, the appellant is pleading the case of contractor or supplier even though the contractor or supplier is not a party to the Appeal. The Central Commission, in the impugned order, has left this issue of delay to be sorted out between the appellant and the BHEL. We find that the learned Central Commission, in the impugned order, has rightly disallowed the delay due to technology transfer and manufacturing of converter transformer by BHEL."*

(d) The details submitted by Petitioner vide affidavit dated 3.9.2021, the Petitioner has simply segregated and listed the claims that have been allowed, partly allowed and disallowed in the annexure.

(e) The Petitioner has relied on Regulations 54 of the 2014 Tariff Regulations, seeking reimbursement of additional expenditure. The Petitioner has stated that the aforesaid claim does not fall within the realms of the 2014 Tariff Regulations and hence it has sought for relaxation of the norms under the said regulations.

(f) The Petitioner has stated that a part of the claim was rejected by the Insurance Company. However, it is not clear as to what steps the Petitioner has taken, post, such rejection. The Commission may exercise prudence principles and put the Petitioner to strict proof for considering the aforesaid claim of the Petitioner.

62. In response, the Petitioner has submitted the following:

(a) The survey report gives details of the works carried out by the Petitioner. The restoration works carried out by the Petitioner were essential for the operation of the plant. Further, the Petitioner has pursued the insurance company for settlement of claim from 19.6.2013, the date on which surveyor first visited the site to the date of final clarification by petitioner on 24.1.2018.

(b) Further, the judgement dated 26.2.2015 in Appeal no 107 of 2014 relied upon by the Respondent is not relevant in the present case as the issue in that appeal was the delay on account of the contractor, whereas the present case is regarding the settlement of insurance claim.

(c) The details submitted in compliance to ROP; the reasons provided by the insurer company in the final survey report are self-explanatory as why the said amount was disallowed by the insurer.

(d) As the works carried out by the Petitioner were essential for successful operation of the plant, the works could not have been avoided and therefore the Commission has been requested to allow Rs. 2436 lakh. as additional O&M expenses by relaxing the provisions of Regulation 29 (3) of the 2014 Tariff Regulations.

(e) From the list of claims it can be established that the works carried out by the Petitioner under restoration works were necessary for the efficient and successful operation of the plant. Further, the Petitioner has claimed an amount of Rs 200 lakh on account of excess minimum clause. It will be pertinent to mention that the premium of insurance policy depends upon various factors including the amount kept under excess minimum clause. If this amount is kept as zero, then the premium to be paid shall increase substantially. Thus, the provision of excess minimum clause of Rs 200 lakh has resulted in reduction in premium of the Insurance which has resulted in the reduction in the O&M expenses.

63. The Commission vide ROP dated 5.8.2021 had directed the Petitioner to submit details of the claim made before the insurer along with documentary evidence and the reason for approval of only part claim by the insurer. In response, the Petitioner vide affidavit dated 18.8.2021 has submitted the final survey report along with supporting documents. As regards the disallowed amount of Rs 2436 lakh by insurer, the breakup details for Rs. 2370.38 lakh is only available.

64. The matter has been examined. It is observed that most of the items disallowed by the insurer are in respect of the works/ assets required for restoration works of the generating station, due to damages caused by floods. Accordingly, after considering the submissions of the parties, we, are inclined to allow recovery of the amount of Rs. 2370.28 lakh, in relaxation of Regulation 29(3)(a) of the 2014 Tariff Regulations, in exercise of the power under Regulation 54 of the 2014 Tariff Regulations, as additional O&M expenses. The said amount shall be payable by the beneficiaries in twelve equal month instalments. Also, considering the fact that this expenditure is being allowed in exercise of the power to relax, the expenses allowed are not made part of the O&M expenses and the consequent annual fixed charges determined in this order.

Interest on Working Capital

65. 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."

Working *Capital for Receivables*

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4834.36	4872.47	4944.05	4980.17	4021.94

Working Capital for Maintenance Spares

67. Maintenance spares @15% of O&M expenses are worked out and allowed as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1077.28	1148.86	1225.19	1306.59	1393.40

Working capital for O&M Expenses

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

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
598.49	638.25	680.66	725.88	774.11

Rate of Interest on Working Capital

69. Clause (3) of Regulation 28 of 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."

70. In terms of the Regulation 28(1)(c) of the 2014 Tariff Regulations, the interest on working capital is worked out as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working capital for O&M Expenses (one month of O&M Expenses)	598.49	638.25	680.66	725.88	774.11
Working capital for Maintenance Spares (15% of operation and maintenance expense)	1077.28	1148.86	1225.19	1306.59	1393.40
Working capital for Receivables (two months of fixed cost)	4834.36	4872.47	4944.05	4980.17	4021.94
Total working capital	6510.14	6659.58	6849.89	7012.64	6189.45
Rate of Working Capital (%)	13.500	13.500	13.500	13.500	13.500
Interest on Working Capital	**878.87**	**899.04**	**924.74**	**946.71**	**835.58**

<u>Annual Fixed Charges</u>

71. Based on the above, the annual fixed charges approved for the generating station for the 2014-19 tariff period is summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8929.68	8940.79	8942.71	8933.15	2823.05
Interest on Loan	2164.89	1834.81	1722.80	1376.24	1236.50
Return on Equity	9850.85	9901.14	9906.10	9914.31	9947.15
O&M Expenses	7181.89	7659.05	8167.92	8710.59	9289.33
Interest on Working Capital	878.87	899.04	924.74	946.71	835.58
Total	**29006.18**	**29234.83**	**29664.27**	**29881.00**	**24131.61**

72. Further, a total amount of Rs.2916.52 lakh (Rs. 546.24 lakh for additional expenditure due to cloud burst as discussed in paragraph 58 above and Rs. 2370.28 lakh not recovered from Insurance Company as discussed in paragraph 73 above) is allowed to be recovered by the Petitioner in 12 equal monthly instalments in addition to the annual fixed charges allowed as above.

73. The difference between the annual fixed charges recovered by the Petitioner in terms of order dated 26.4.2016 in Petition No. 230/GT/2014 and the annual fixed charges determined by this order shall be adjusted in terms of the provisions of Regulation 8(13) of the 2014 Tariff Regulations.

Normative Annual Plant Availability Factor (NAPAF)

74. Since NAPAF of 90% as claimed by the Petitioner is in accordance with Regulation 37(4) of the 2014 Tariff Regulations, the same is allowed.

Design Energy (DE)

75. The Commission vide its order dated 14.3.2011 in Petition No.109/2010 had approved the annual Design Energy (DE) of 1134.69 Million units for the period 2009-14 in respect of this generating station, with the following observations.

> *"92. With regard to change in design energy and peaking capability of the station due to heavy flood and siltation, the petitioner has submitted as under:*
>
> > *"Due to heavy flood and siltation in reservoir area, the design energy and peaking capability of the power station may go under change and that the above effect will be brought to the notice of Hon'ble Commission after detail study and analysis. Hon'ble commission is requested to direct concerned SLDC/ NRLDC to schedule generation as per present operating parameters."*
>
> *93. In consideration of the above, Commission has allowed liberty to the petitioner for approaching Commission through miscellaneous petition for revision of design energy and peaking capability based on the detail study and analysis. However, pending such filing of data/petition, the existing design energy of 1134.69 MUs and NAPAF of 90% shall prevail for the purpose of billing, subject to change based on the decision of Commission regarding revision of these values due to floods and siltation."*

76. The Petitioner has not furnished any details nor filed any separate petition in this regard. Accordingly, the DE of 1134.69 MUs as allowed by Commission vide order dated 24.2.2016 in Petition No. 230/GT/2014, as per month-wise details is allowed.

Months	Design Energy (MU)
April	56.08
May	91.26
June	144.33
July	208.32
August	208.32
September	160.00
October	94.40
November	52.48
December	31.69
January	31.62
February	25.89
March	30.30
Total	**1134.69**

Summary

77. The summary of the annual fixed charges for the 2014-19 tariff period allowed vide order dated 26.4.2016, in Petition No. 230/GT/2014 and the annual fixed charges allowed in this order (after truing-up) for the 2014-19 tariff period for the generating station is as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Annual fixed charges allowed vide order dated 26.4.2016 in Petition No. 230/GT/2014	28999.41	29231.25	29509.16	29820.85	23975.82
Annual fixed charges allowed in this order	**29006.18**	**29234.83**	**29664.27**	**29881.00**	**24131.61**
Capital Spares allowed	0.00	0.00	95.39	79.66	0.00
Additional O&M allowed on account of Cloud Burst (to be recovered in 12 equal monthly instalments)	**546.24**				
Additional O&M allowed on account of insurance Claim (to be recovered in 12 equal monthly instalments)	**2370.28**				

DETERMINATION OF TARIFF FOR THE 2019-24 TARIFF PERIOD

78. The Petitioner, in this petition, has also sought determination of tariff of the generating station for the 2019-24 tariff period, in terms of the provisions of the 2019 Tariff Regulations. The annual fixed charges claimed by the Petitioner for the 2019-24 tariff period are as under:

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2328.86	2352.35	2357.21	2360.55	2364.70
Interest on Loan	1091.73	1027.07	954.61	893.32	808.44
Return on Equity	9523.81	9552.55	9556.91	9559.73	9561.20
O&M Expenses	10052.12	10531.31	11033.32	11559.28	12110.32
Interest on WC	669.19	691.46	714.03	737.84	762.46
Total	**23665.71**	**24154.74**	**24616.08**	**25110.73**	**25607.12**

Capital Cost

79. Clause (1) of Regulation 19 of the 2019 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. However, capital cost for an existing project is governed as per clause (3) of Regulation 19 of the 2019 Tariff Regulations, which provides as under:

"The Capital cost of an existing project shall include the following:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernization as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries…."

80. The Petitioner vide Form-1i of the petition has claimed capital cost as follows:

(Rs. in lakh)

		2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Capital Cost	176009.93	176907.42	177079.27	177154.27	177254.27
B	Addition during the year / Period	187.81	186.86	75.00	100.00	108.00
C	De-capitalisation during the year/period	214.51	15.01	0.00	0.00	0.00
D	Discharges during the year	924.20	0.00	0.00	0.00	0.00
E	Closing Capital Cost (A+B-C+D)	176907.42	177079.27	177154.27	177254.27	177362.27

81. The Commission in this order has allowed the closing capital cost of Rs. 175318.24 lakh, as on 31.3.2019. Accordingly, in terms of Regulation 19 of the 2019 Tariff Regulations, the capital cost of Rs. 175318.24 lakh, as on 31.3.2019 has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the 2019 tariff period.

Additional Capital Expenditure

82. Clause (2) of Regulation 9 of the 2019 Tariff Regulations provides that the application for determination of tariff shall be on admitted capital cost including additional capital expenditure already admitted and incurred up to 31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the 2019-24 tariff period along with the true up for the 2014-19 period in accordance with the 2014 Tariff Regulations.

83. Regulation 25(1) of the 2019 Tariff Regulations provides as under:

“25. Additional Capitalization within the original scope and after the cut-off date:

(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

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

(d) Liability for works executed prior to the cut-off date;

(e) Force Majeure events;

(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and

(g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

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

26. Additional Capitalization beyond the original scope

(1) 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 beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Force Majeure events;

(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;

(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernization (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(f) Usage of water from sewage treatment plant in thermal generating station.

(2) In case of de-capitalization of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalization shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalization takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalized.

85. The Petitioner has submitted that the projected additional capital expenditure has been claimed under various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations, wherein, some of the admitted capital works have spilled over from the 2014-19 tariff period. The Petitioner vide affidavit dated 30.6.2021, has revised additional capital expenditure as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
187.81	82.70	179.16	100.00	108.00

2019-20

86. The Petitioner has claimed projected additional capital expenditure and de-capitalization in terms of Regulations 25 and 26 of the 2019 Tariff Regulations as under:

(Rs. in lakh)

	2019-20
Items additionally claimed as per actual site requirements	
Items claimed under Regulation 25 (2)(a)	175.73
Items claimed under Regulation 26(1)(d)	12.08
Total projected additional capital expenditure to be incurred [c=(a)+(b)]	**187.81**

(a) Items claimed under Regulation 25(2)(a) of the 2019 Tariff Regulations

87. The Petitioner has claimed additional capital expenditure Rs.175.73 lakh, towards replacement of assets/ works towards the replacement of steel liner in spillway glacis of Dam, DGPS as under:

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on Admissibility	Amount allowed
Replacement of Steel liner in Spillway Glacis of Dam, DGPS	175.73	During monsoon the spillway glacis gets eroded by flowing water every year which affect the safety of structure. To overcome this yearly damages and repair of the same with high strength concrete, Steel liner has been proposed by Design Division in both bays of spillway glacis	Considering the fact that the expenditure claimed is in respect of the assets/works which are within the original scope of the existing project and after cut-off date, the additional capital expenditure of Rs.175.73 lakh is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The de-capitalisation of Rs. 73.43 lakh for this asset is considered under 'De-capitalization'.	175.73

(b) Items claimed under Regulation 26(1)(d) of the 2019 Tariff Regulations

88. The Petitioner has claimed additional capital expenditure of Rs.12.08 lakh, in 2019-20 in respect of assets/ works such as, construction of entrance gate at Power house for Rs. 10.38 lakh and for Elagad and purchase of automatic barrier boom gate for PH and dam for Rs. 1.70 lakh as under:

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
New Items				
Construction of main Entrance	10.38	Asst. Commandant, CISF vide their letter dated	As the expenditure is related to the	10.38

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
New Items				
Gate at Power House, Elagad		29.1.2016 and 4.2.2016 requested to provide permanent boundary wall of 8 feet height and fixing Concertina wire over it to restrict the unauthorised access for the security and safety of Power Station. Accordingly, the main entrance gate for Powerhouse being constructed. Work has been awarded on open tender basis. Work is expected to be completed by June-19.	security and safety of the generating station and is as per advice of CISF, the same is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner is, however, directed to furnish the documentary evidence in support of its claim at the time of truing-up of tariff, failing which the expenditure may not be considered.	
Purchase of automatic barrier Boom gate for P H & DAM	1.70	In view of recommendations by CISF and report on security arrangement, to prevent and avert unauthorized access to Manpower and vehicles, Automatic Boom barrier at power-house and dam complex are to be installed		1.70
Total amount claimed	**12.08**			**12.08**
Total amount allowed				**12.08**

89. In view of the above, the total additional capital expenditure allowed under original scope and other than original scope of work is Rs. 175.73 lakh and Rs. 12.08 lakh respectively.

2020-21

90. The Petitioner has claimed projected additional capital expenditure of Rs. 82.70 lakh in 2020-21 under the provisions of Regulations 25 and 26 of the 2019 Tariff Regulations which are discussed under:

(Rs. in lakh)

	2020-21
Items additionally claimed as per actual site requirements	
Items claimed under Regulation 25 (2)(a)	62.70
Items claimed under Regulation 26(1)(d)	20.00
Total projected additional capital expenditure to be incurred	**82.70**

(a) Items claimed under Regulation 25(2)(a) of the 2019 Tariff Regulations

(Rs. in lakh)

<table>
<tr><th>Head of Work/ Equipment</th><th>Actual additional capital expenditure claimed</th><th>Justification</th><th>Remarks on admissibility</th><th>Amount Allowed</th></tr>
<tr><td>Purchase of MUV</td><td>20.00</td><td>Purchased on replacement basis. The old MUV Tata Safari (UA05-1096) has been disposed of after completing life as per NHPC disposal Policy.</td><td rowspan="3">Considering the fact that the expenditure claimed is in respect of the assets/works which are within the original scope of the existing project and after cut-off date, the additional capital expenditure of Rs.175.73 lakh is allowed under Regulation 25(2)(a) of the 2019 Tariff Regulations.
The de-capitalisation of old assets are Rs 3.35 lakh in 2016-17 for purchase of MUV, Rs.33.63 lakh in 2019-20 for backhoe loader and Rs. 107.44 lakh in 2019-20 for purchase of Hydra. Since the above de-capitalization has already been considered as mentioned above, the Petitioner has not claimed de-capitalization for these assets during 2020-21. The same is in order.</td><td>20.00</td></tr>
<tr><td>Purchase of backhoe loader (1/0.24 cum)</td><td>24.90</td><td>Purchased on replacement basis against wheel loader. The existing wheel loader is 2.7 cum capacity and not suitable for frequent movement for road cleaning in power station area. In addition, no excavator is available for minor excavation works. The life of wheel loader has been completed in years as per NHPC disposal Policy. Hence, it is proposed to purchase 01 no. backhoe loader against disposal of wheel loader.</td><td>24.90</td></tr>
<tr><td>Purchase of Hydra (14-16 Ton Capacity)</td><td>17.80</td><td>Purchased on replacement basis against 20 Ton RT Mobile Crane. The existing Crane is not suitable for carrying the load. Lifting of load in compact space environment and the movement of the crane not possible like in Transformer area etc. Hydra is most</td><td>17.80</td></tr>
</table>

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
		suitable as compared to RT Crane. The life of existing RT Crane has been completed in years as per NHPC disposal Policy.		
Total amount claimed	**62.70**			
Total amount allowed				**62.70**

(b) Items claimed under Regulation 26(1)(d) of the 2019 Tariff Regulations

91. The Petitioner has claimed additional capital expenditure of Rs.20.00 lakh, in 2020-21 in respect of assets/ works such as, installation of CCTV.

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
CCTV	20.00	Security item as per the requirement of CISF and IB recommendation.	As the expenditure is related to the security and safety of the generating station and is as per advice of CISF/IB, the same is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner is directed to furnish documentary evidence in support of its claim at the time of truing-up of tariff, failing which the expenditure may not be considered.	20.00
Total amount clamed	**20.00**			**20.00**
Total amount allowed				**20.00**

92. In view of the above, the total additional capital expenditure allowed under original scope and other than original scope of work is Rs.62.70 lakh and Rs. 20.00 lakh respectively.

2021-22

93. The Petitioner has claimed projected additional capital expenditure of Rs. 179.16 lakh in 2021-22 under the provisions of Regulations 25 and 26 of the 2019 Tariff Regulations which are under:

(Rs. in lakh)

	2021-22
Items additionally claimed as per actual site requirements (a)	
Items claimed under Regulation 25 (2)(a)	75.00
Items allowed in previous orders (b)	
Items claimed under Regulation 26(1)(a)	104.16
Total projected additional capital expenditure to be incurred (c=(a)+(b))	**179.16**

(a) Items claimed under Regulation 25(2)(a) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	**Actual additional capital expenditure claimed**	**Justification**	**Remarks on admissibility**	**Amount Allowed**
Providing and fixing of colour coated MS sheet lining in MAT of Power House.	75.00	The existing lining of main access tunnel got damaged and the seepage water getting dripped from various location affecting the safety of human/ electrical/ electronic instruments/ equipment. Therefore, it has been proposed to provide and fix colour coated MS sheet lining in the main access tunnel of powerhouse in place of existing damaged FRP lining.	Considering the fact that these assets/ works are claimed as replacement of assets/works which are within the original scope of the existing project and after cut-off date, the additional capital expenditure of Rs. 75.00 lakh is allowed under Regulation 25(2)(a) of the 2019 Tariff Regulations. The de-capitalisation of old asset is Rs 15.01 lakh which has been considered under the head 'De-capitalization' during 2020-21. Since the above decapitalization has already been considered as mentioned above. Accordingly, the Petitioner has not claimed de-capitalization for this asset during 2021-22. The same is in order.	75.00
Total amount claimed	**75.00**			

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Total amount allowed				**75.00**

(b) Items claimed under Regulation 26(1)(a) of the 2019 Tariff Regulations

94. The Petitioner has claimed additional capital expenditure of Rs.104.16 lakh, in 2021-22 in respect of assets/ works such as, purchase of submersible pumps along with panels, cables and pipeline etc for disaster management as discussed under:

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Purchase of submersible pumps along with panels, cables and pipeline etc for disaster management	104.16	These assets/ works were admitted vide order dated order dated 24.2.2016 in Petition No. 230/GT/2014 (projected item No.4 of 201 5-16)	It is noticed that the Commission vide order dated 24.2.2016 had allowed the projected additional capital expenditure for this asset/ work for Rs.162.00 lakh in Petition No. 230/GT/2014 under Regulation 14(3)(viii) of 2014 Tariff Regulations and has been spilled over from the 2014-19 tariff period. The Petitioner has further submitted that the purchase/ work orders/ LOA have been placed for all necessary equipments/ work and the same shall be completed in 2019-24 tariff period. It is noticed from the records that Commission vide its order dated 24.2.2016 in Petition No. 230/GT/2014 had allowed these works under Regulation 14(3)(viii) keeping in view that the additional capital expenditure were required for efficient operation of the plant. In view of this, and since these assets/works are spill over works which are in progress and are expected to	104.16

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
			be completed during 2019-24 tariff period, we allow additional capitalization of the same. Accordingly, the projected additional capital expenditure claimed by the Petitioner is **allowed.**	
Total amount clamed	**104.16**			
Total amount allowed				**104.16**

95. In view of the above, the total additional capital expenditure allowed under original scope and other than original scope of work is Rs.75.00 lakh and Rs.104.16 lakh respectively.

<u>2022-23</u>

96. The Petitioner has claimed projected additional capital expenditure of Rs 100 lakh under Regulation 26(1)(d) of the 2014 Tariff Regulations and the same is examined below:

(a) Items claimed under Regulation 26(1)(d) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Construction of permanent barrack, recreation hall, mess for CISF at NHPC Colony, Dobat	100.00	CISF vide their letter dated 14.6.2015 and 17.10.2014, requested for construction of well-furnished permanent barrack for their personnel.	As the expenditure is related to the security and safety of the generating station and is as per advice of CISF, the same is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations.	100.00
Total amount clamed	**100.00**			**100.00**

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Total amount allowed				**100.00**

97. In view of the above, the total additional capital expenditure allowed other than original scope of work is Rs.100.00 lakh respectively.

<u>2023-24</u>

98. The Petitioner has claimed projected additional capital expenditure of Rs. 108.00 lakh in 2022-23 under Regulations 25 and 26 of the 2019 Tariff Regulations which are discussed under:

(Rs. in lakh)

	2023-24
Items additionally claimed as per actual site requirements (a)	
Items claimed under Regulation 25 (2)(a)	15.00
Items claimed under Regulation 26(1)(d)	93.00
Total projected additional capital expenditure to be incurred	**108.00**

(a) Items claimed under Regulation 25(2)(a) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Replacement of 140KVA DG Set	15.00	Existing DG set of 312.5 KVA is about 20 years old and needs replacement.	Considering the fact that additional capital expenditure claimed is towards the replacement of assets/works which are within the original scope of the existing project and after cut-off date, the claim for Rs. 15.00 lakh is **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has not furnished the decapitalized value of old asset and the	15.00

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
			same has been computed as Rs. 6.54 lakh and the same has been considered under 'assumed deletion'.	
Total amount clamed	**15.00**			**15.00**
Total amount allowed				**15.00**

(b) Items claimed under Regulation 26(1)(d) of the 2019 Tariff Regulations

(Rs. in lakh)

Head of Work/ Equipment	Actual additional capital expenditure claimed	Justification	Remarks on admissibility	Amount Allowed
Construction of permanent barrack, recreation hall, mess for CISF at NHPC Colony, Dobat.	93.00	CISF vide their letter dated 14.6.2015 and 17.10.2014, requested for construction of well-furnished permanent barrack for their personnel.	As the expenditure is related to the security and safety of the generating station and is as per advice of CISF, the same is **allowed** under Regulation 26(1)(d) of the 2019 Tariff Regulations.	93.00
Total amount clamed	**93.00**			**93.00**
Total amount allowed				**93.00**

99. In view of the above, the total additional capital expenditure allowed after considering the assets/ works allowed other than the original scope of work of project is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure allowed within the original scope of work of project (a)	175.73	62.70	75.00	0.00	15.00
Additional capital expenditure allowed other than the original scope of work of project (b)	12.08	20.00	104.16	100.00	93.00

Total Additional capital Expenditure allowed (c)=(a)+(b)	**187.81**	**82.70**	**179.16**	**100.00**	**108.00**

De-capitalization

100. The Petitioner has claimed the de-capitalization, as per Form 9Bi, as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
(-)214.51	(-)15.01	0.00	0.00	0.00

101. Since these assets are not in use, the de-capitalization as claimed by the Petitioner is allowed. Accordingly, year-wise details of de-capitalization considered is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
(-) 214.51	(-)15.01	0.00	0.00	0.00

Assumed Deletion

102. As per consistent methodology adopted by the Commission, the 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 de-capitalization of the original value of the old asset. However, in certain cases where de-capitalization is affected in books during the following 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”. Further, in the absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of new asset @ 5% per annum till the year of capitalization of the old asset.

103. It is observed that the Petitioner has claimed the asset/work such as DG set in 2023-24 on replacement basis. However, the Petitioner in this petition has not provided the de-capitalization value of the old asset/works which have been replaced. Accordingly, based on above methodology, the assumed deletion for additional capital expenditure of Rs. 15.00 lakh works out to be Rs. 6.23 lakh. Accordingly, the total de-capitalization during the 2019-24 tariff period is worked out as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
(-) 214.51	(-)15.01	0.00	0.00	(-) 6.23

Net Additional capital expenditure allowed for the 2019-24 period

104. In view of above, the net additional capital expenditure allowed for the 2019-24 tariff period is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure allowed (a)	187.81	82.70	179.16	100.00	108.00
Less: De-capitalisation considered (b)	214.51	15.01	0.00	0.00	6.23
Allowed recognised discharge (against claimed) of Undischarged liabilities	923.33*	0.00	0.00	0.00	0.00
Net additional capital expenditure allowed (c)=(a)-(b)	**896.63**	**67.69**	**179.16**	**100.00**	**101.77**

**Closing liability allowed as on 31.3.2019 subject to truing up*

Capital cost allowed

105. Accordingly, the capital cost allowed for the purpose of tariff for the 2019-24 tariff period is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	175318.24	176214.87	176282.56	176461.72	176561.72
Net Additional capital	896.63	67.69	179.16	100.00	101.77

	2019-20	2020-21	2021-22	2022-23	2023-24
expenditure allowed during the year/ period					
Closing Capital Cost	**176214.87**	**176282.56**	**176461.72**	**176561.72**	**176663.49**

Debt-Equity Ratio

106. Regulation 18 of the 2019 Tariff Regulations provides as under:

"18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

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

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication, system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but

where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation."

107. In terms of the above regulations, the debt equity ratio in admitted additional capital expenditure as 70:30, after adjustment of un-discharged liability for the purpose of tariff. De-capitalization of assets has been deducted from the corresponding loan as well as equity taking into consideration the debt equity ratio applied in the year in which it was capitalized as per Regulation 26 (2) of 2019 Tariff Regulations.

<table>
<tr><th></th><th colspan="2">As on 31.3.2019</th><th colspan="2">Additional Capitalization</th><th colspan="2">De-Capitalization</th><th colspan="2">As on 31.3.2024</th></tr>
<tr><th></th><th>Amount (Rs. in lakh)</th><th>(in %)</th><th>Amount (Rs. in lakh)</th><th>(in %)</th><th>Amount (Rs. in lakh)</th><th>(in %)</th><th>Amount (Rs. in lakh)</th><th>(in %)</th></tr>
<tr><td>Debt</td><td>128016.93</td><td>73.02%</td><td>1106.70</td><td>70.00</td><td>168.51</td><td>71.48</td><td>128955.12</td><td>73.00</td></tr>
<tr><td>Equity</td><td>47301.31</td><td>26.98%</td><td>474.30</td><td>30.00</td><td>67.25</td><td>28.52</td><td>47708.37</td><td>27.00</td></tr>
<tr><td>Total</td><td>175318.24</td><td>100.00%</td><td>1581.00</td><td>100.00</td><td>235.76</td><td>100.00</td><td>176663.49</td><td>100.00</td></tr>
</table>

Return on Equity

108. Regulations 30 and 31 of the 2019 tariff Regulations provide as under:

"30. Return on Equity

(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of 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 return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% 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) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station, with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

31. Tax on Return on Equity:

(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations 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 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 paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded 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.

Illustration-

(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess: Rate of return on equity = 15.50/(1-0.2155) = 19.758%

(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for 2019-20 is Rs. 1,000 Crore;

(b) Estimated Advance Tax for the year on above is Rs. 240 Crore;

(c) Effective Tax Rate for the year 2019-20 = Rs. 240 Crore/Rs. 1000 Crore = 24%;

(d) Rate of return on equity = 15.50/ (1-0.24) = 20.395%.

(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 2019-24 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 customers, as the case may be, on year to year basis."

109. The Petitioner has furnished the Chartered Accountant certificate for calculation of the effective tax rate for the year 2019-20. Based on the additional capital expenditure allowed in this order, Return on Equity (ROE) has been calculated, considering the weighted average rate of interest. For equity base, ROE has been calculated by grossing up of ROE during the 2019-24 tariff period. The Petitioner has applied the MAT rate of 17.472% for the year 2019-20 and the same is allowed. The Petitioner has further claimed the ROE on the additional capital expenditure beyond original scope of work at the weighted average rate of interest of each year for the 2019-24 tariff period in line with the second proviso to Regulation 30 of 2019 Tariff Regulation. Regulation 30(1) of the 2019 Tariff Regulations provides for computation of ROE, on the equity base, as determined in accordance with Regulation 18 of the 2019 Tariff Regulations. While clause (1) of Regulation 18 provides for the determination of the debt-equity ratio for new projects, clauses (3) and (4) of the said Regulation provides for consideration/ determination of the debt-equity ratio in

respect of the generating stations declared under commercial operation prior to 1.4.2019. Further, clause (5) of the said regulation provides that the admitted additional capital expenditure incurred or projected to be incurred on or after 1.4.2019, is to be serviced in the manner specified in clause (1) of Regulation 18 of the 2019 Tariff Regulations. On the same analogy, Regulation 30(2) of the 2019 Tariff Regulations provides for the computation of at the base rate of 15.50% (for thermal generating stations) while the proviso to Regulation 30(2) provide for computation of ROE in respect of additional capitalization after cut-off date, beyond the original scope, excluding additional capitalization due to change in law, at the weighted average rate of interest on actual loan portfolio of the generating station. It is however noticed that as per clause (1) of Regulations 31 of the 2019 Tariff Regulations (Tax on ROE), the base rate of return on equity, as allowed by the Commission under Regulation 30 of the said regulations, is required to be grossed up with the effective tax rate of the respective financial year. Thus, we are of the view that on a harmonious construction of the provisions of Regulation 18 with Regulation 30 and 31 of the 2019 Tariff Regulations, the ROE computed at the pre-determined base rate of 15.50% and ROE computed at the weighted average rate of interest (WAROI) are required to be grossed up with the effective tax rate of the respective financial year. Accordingly, ROE has been worked out and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	47301.31	47570.16	47584.46	47606.96	47606.96
Total addition due to Capitalization (B)	56.34	24.81	53.75	30.00	32.40
Addition due to additional capitalization within scope of work (C)	3.62	6.00	31.25	30.00	27.90

	2019-20	2020-21	2021-22	2022-23	2023-24
Undischarged liability (D)	277.00	0.00	0.00	0.00	0.00
Deletions (E)	60.87	4.50	0.00	0.00	1.87
Closing Equity (F)=(A)+(B)-(C)+(D)-(E)	47570.16	47584.46	47606.96	47606.96	47609.59
Average Equity (E)=(A+D)/2	47435.74	47577.31	47595.71	47606.96	47608.28
Base rate (%) (F)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax rate (%) (G)	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE rate (%) (H)	19.993%	19.993%	19.993%	19.993%	19.993%
Return on Equity within the original scope of work (I)=(E)*(H)	**9483.83**	**9512.13**	**9515.81**	**9518.06**	**9518.32**
Addition due to additional capitalization beyond scope of work					
Opening Equity (J)	0.00	3.62	9.62	40.87	70.87
Addition due to Capitalization beyond scope of work (k)=(B)-(C)	3.62	6.00	31.25	30.00	27.90
Closing Equity (L)=(J)+(K)	3.62	9.62	40.87	70.87	98.77
Average Equity (M)=(J+L)/2	1.81	6.62	25.25	55.87	84.82
Rate of return for additional capitalization beyond original scope (i.e. weighted average rate of interest approved by the Commission) (%) (N)	3.066%	3.053%	3.042%	3.072%	3.018%
Effective Tax rate (%)	17.472%	17.472%	17.472%	17.472%	17.472%
Effective ROE rate (%)	3.715%	3.699%	3.686%	3.722%	3.657%
Return on equity for additional capitalization beyond original scope (O)=(M)*(N)	**0.07**	**0.25**	**0.93**	**2.08**	**3.10**
Total Return on Equity (P)=(O)+(I)	**9483.89**	**9512.38**	**9516.74**	**9520.14**	**9521.43**

Interest on loan

110. Regulation 32 of the 2019 Tariff Regulations provides as under:

"32. Interest on loan capital:

(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalization 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 up to the date of de-capitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the 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 changes to the terms and conditions of the loans shall be reflected from the date of such re-financing."

111. The salient features for computation of interest on loan are summarized below:

a) The gross normative loan has been considered as on 1.4.2019.
b) Cumulative repayment as on 31.3.2019 has been considered.
c) The repayment for the year of the 2019-24 tariff period has been considered equal to the depreciation allowed for that year.

d) Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest as claimed by the Petitioner.

112. Accordingly, Interest on loan has been worked out as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross opening loan (A)	128016.93	128641.09	128688.47	128813.88	128883.88
Cumulative repayment of loan upto previous year (B)	91859.81	94047.74	96368.76	98703.22	101043.02
Net Loan Opening (C)=(A)-(B)	36157.11	34593.35	32319.71	30110.66	27840.86
Repayment during the year (D)	2307.95	2329.60	2334.47	2339.80	2343.82

	2019-20	2020-21	2021-22	2022-23	2023-24
Adjustment of cumulative repayment on account of decapitalization (E)	120.02	8.59	0.00	0.00	3.80
Net Repayment (F=D-E)	2187.93	2321.01	2334.47	2339.80	2340.01
Addition due to additional capital expenditure (G)	131.47	57.89	125.41	70.00	75.60
Addition due to Discharge of Liability (H)	646.33	0.00	0.00	0.00	0.00
Adjustment on account of decapitalization (I)	153.64	10.51	0.00	0.00	4.36
Net Loan Closing (J)=(C-F+G+H-I)	34593.35	32319.71	30110.66	27840.86	25572.09
Average Loan (K)=(C+J)/2	35375.23	33456.53	31215.19	28975.76	26706.47
Weighted Average Rate of Interest of loan (L)	3.066%	3.053%	3.042%	3.072%	3.018%
Interest on Loan (M=K*L)	**1084.46**	**1021.29**	**949.67**	**890.12**	**805.92**

Depreciation

113. Regulation 33 of the 2019 Tariff Regulations provides as under:

"33. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. 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:

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 a 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 the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

Provided also 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 unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or 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-I 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 on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 from the gross depreciable value of the assets.

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

(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."

114. Accordingly, the cumulative depreciation amounting to Rs.96287.28 lakh as on 31.3.2019, has been considered for the purpose of tariff. The COD of the generating station is 1.11.2005. The project has completed 12 years of commercial operation during 2017-18 and the remaining depreciable value has been spread over the balance useful life of the generating station from 2018-19 onwards. In terms of the 2014 Tariff Regulations, the useful life of a hydro generating station was 35 years. However, the 2019 Tariff Regulations stipulates that the useful life of a hydro

generating station is 40 years. Accordingly, the balance useful life of the generating station as on 1.4.2019 has been considered as 26.58 years in line with the 2019 Tariff Regulations. Accordingly, depreciation has been computed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross block (A)	175318.24	176214.87	176282.56	176461.72	176561.72
Net Additional capital expenditure during 2019-24 (B)	896.63	67.69	179.16	100.00	101.77
Closing gross block (C=A+B)	176214.87	176282.56	176461.72	176561.72	176663.49
Average gross block (D)=(A+C)/2	175766.56	176248.72	176372.14	176511.72	176612.60
Land Value (L)	610.75	610.75	610.75	610.75	610.75
Depreciable Value (E=(D-L)*90%)	157640.23	158074.17	158185.25	158310.87	158401.67
Remaining Depreciable Value at the beginning of the year (F=E-Cum Dep at 'K' at the end of previous year)	61352.94	59598.96	57389.02	55180.18	52931.18
Balance useful Life (H)	26.58	25.58	24.58	23.58	22.58
Depreciation (I=F/H)	**2307.95**	**2329.60**	**2334.47**	**2339.80**	**2343.82**
Cumulative Depreciation at the end of the year (J=I+ Cum Dep at 'K' at the end of previous year)	98595.23	100804.81	103130.69	105470.49	107814.31
Adjustment on account of Decapitalization (P)	120.02	8.59	0.00	0.00	3.80
Cumulative Depreciation at the end of the year (K=J-P)*	98475.21	100796.23	103130.69	105470.49	107810.50

*. *Cumulative Depreciation as on 31.3.2019 is Rs. 96287.28 lakh*

Operation & Maintenance Expenses

115. Regulation 35(2)(a) of the 2019 Tariff Regulations provides as under:

(2) Hydro Generating Station: (a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 1.4.2019:

Particulars	***2019-20***	***2022-21***	***2021-22***	***2022-23***	***2023-24***
Dhauliganga	*8813.40*	*9233.50*	*9673.61*	*10134.71*	*10617.79*

Note: The impact in respect of revision of minimum wage and GST, if any, will be considered at the time of determination of tariff.

xxxxxx"

116. The Petitioner has claimed the following additional O&M expenses:

(Rs. in lakh)

Period	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses as per Regulation 35(3)(a) (A)	8813.40	9233.50	9673.61	10134.71	10617.79
Additional O&M expenses due to 7th Pay Commission wage revision- 3rd PRC applicable to CPSUs (B)	1137.41	1191.66	1248.51	1308.06	1370.45
Additional O&M expenses due to 7th Pay Commission wage Revision of Kendriya Vidyalaya (KV) Staff (C)	21.76	22.80	23.88	25.02	26.22
Impact of Goods & Service Tax (D)	79.55	83.35	87.32	91.49	95.85
Total O&M Expenses claimed (A+B+C+D)	**10052.12**	**10531.31**	**11033.32**	**11559.28**	**12110.32**
Security Expenses (E)	1070.14	1121.19	1174.67	1230.70	1289.41

117. As the Petitioner has claimed normative O&M expenses in accordance with Regulation 35(2)(a) of the 2019 Tariff Regulations as above, the same is allowed. However, as per note under Regulation 35(2)(a) of the 2019 Tariff Regulations impact in respect of revision of pay/wage and GST is also required to be considered at the time of determination of tariff for the 2019-24 tariff period. As per Para 10.7.4 of the Statement of Reasons to the 2019 Tariff Regulations, in case of hydro generating stations, the O&M expenses norms are provided for each of the generating stations in absolute terms, i.e. Rs.in lakh for each year. As it was not practicable to derive a common impact for all the hydro generating stations on account of employees pay revision, escalation in minimum wages and GST, it was decided that the impact on O&M expenses due to these components shall be considered for each hydro generating station separately at the time of their tariff petition for the 2019-24 tariff period. Accordingly, the allowable impact of pay

revision and GST in addition to normative O&M expenses in accordance with Regulation 35(2)(a) of the 2019 Tariff Regulations are dealt in the following paragraphs.

Additional O& M Expenses

118. The Petitioner has claimed additional O&M expenses on account of the impact of pay revision of NHPC staff and KV staff, impact of GST and Security as under:

(Rs. in lakh)

Period	2019-20	2020-21	2021-22	2022-23	2023-24
Additional O&M expenses due to 7th Pay Commission wage revision-3rd PRC applicable to CPSUs (a)	1137.41	1191.66	1248.51	1308.06	1370.45
Additional O&M expenses due to 7th Pay Commission wage Revision of Kendriya Vidyalaya (KV) Staff (b)	21.76	22.80	23.88	25.02	26.22
Impact of Goods & Service Tax (c)	79.55	83.35	87.32	91.49	95.85
Security Expenses (d)	1070.14	1121.19	1174.67	1230.70	1289.41
Total O&M Expenses claimed (a+b+c+d)	**2308.87**	**2419.00**	**2534.38**	**2655.27**	**2781.93**

(a) Impact of wage revision

119. As stated in paragraph 51 above, the impact of pay revision for the generating station has not been determined in this order, as the same will be governed by the decision of the Commission in Petition No.233/MP/2019 filed by the Petitioner and pending for consideration of this Commission. Since the claim of the Petitioner for the 2019-24 tariff is based on the impact of wage/ pay revision allowed as on 2018-19, the impact of pay revision and increased ceiling in gratuity as claimed by the Petitioner for the 2019-24 tariff period, has not been considered in this order. However, the same will be considered at the time of truing up of tariff for the 2019-24 tariff period.

(b) Goods & Service Tax

120. The Petitioner has claimed impact of GST for the period 2019-24 on the basis of the actual impact of GST during 2018-19. The Petitioner has submitted the total GST amount of Rs.122.63 lakh for the period from 1.7.2017 to 31.3.2019, based on actual audited accounts for 21 months (Rs.46.70 lakh in 2017-18 and Rs.75.93 lakh in 2018-19). On scrutiny of above of the details it is noticed that the claim of Petitioner also includes impact of GST on security expenses. As per Regulation 35(2)(d) of the 2019 Tariff Regulations, security expenses shall be allowed separately after prudence check. As such, an amount of Rs.42.48 lakh (excluding impact of GST on security expenses of Rs.74.34 lakh) for the period from 1.7.2017 to 31.3.2019, has been normalized and an amount of Rs.44.51 lakh has been worked out for 2019-20 (after escalating above amount of Rs. 42.48 lakh @ 4.77%). Accordingly, the base value of 2019-20 has been escalated @4.77% and GST impact has been worked out and allowed for the 2020-24 period, as per note under Regulation 35(2)(a) of the 2019 Tariff Regulations as given below:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
44.51	46.63	48.86	51.19	53.63

Security Expenses

121. Regulation 35(2)(c) of 2019 Tarff Regulations provides as under:

"(c) The Security Expenses and Capital Spares for hydro generating stations shall be allowed separately after prudence check:

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification."

122. The estimated security expenses claimed by the Petitioner for the period 2019-24 based on security requirement of the generating station is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1070.14	1121.19	1174.67	1230.70	1289.41

123. The Petitioner has claimed actual security expenses of Rs.1021.42 lakh in 2018-19 and has escalated the same at the rate of 4.77%. Considering the security requirements of the generating station, we allow the projected security expenses as claimed by the Petitioner for the 2019-24 tariff period. The Petitioner is however, directed to submit the actual security expenses incurred, duly audited, at the time of truing up of tariff. Accordingly, the estimated security expenses allowed are as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1070.14	1121.19	1174.67	1230.70	1289.41

Capital Spares

124. As regards capital spares, the Petitioner has submitted that same will be claimed at the time of truing-up of tariff based on the actual expenses incurred. In view of this, capital spares have not been considered in this order.

125. Accordingly, the total O&M expenses allowed for the generating station are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses (a)	8813.40	9233.50	9673.61	10134.71	10617.79
Additional O&M expenses due to 7th Pay Commission wage Revision- 3rd PRC applicable to CPSUs (b)	0.00	0.00	0.00	0.00	0.00
Additional O&M expenses due to 7th Pay Commission wage	0.00	0.00	0.00	0.00	0.00

	2019-20	2020-21	2021-22	2022-23	2023-24
Revision of Kendriya Vidyalaya (KV) Staff (c)					
Impact of Goods & Service Tax (d)	44.51	46.63	48.86	51.19	53.63
Total expenses including GST (e=a+b+c+d)	**8857.91**	**9280.13**	**9722.47**	**10185.90**	**10671.42**
Security Expenses (f)	1070.14	1121.19	1174.67	1230.70	1289.41
Total additional O&M Expenses (g=e+f)	**9928.05**	**10401.32**	**10897.14**	**11416.60**	**11960.83**

Interest on Working Capital

126. Sub-section (c) of clause (1) of Regulation 34 of the 2019 Tariff Regulations provides as under:

> *"34. Interest on Working Capital: (1) The working capital shall cover*
>
> *(c) For Hydro generating station (Including Pumped Storage Hydro Generating Station) and transmission system:*
>
> *(i) Receivables equivalent to 45 days of annual fixed cost;*
>
> *(ii) Maintenance spares @ 15% of operation and maintenance expense including security expenses; and*
>
> *(iii) Operation and maintenance expenses including security expenses for one month"*

Working Capital for Receivables

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2880.82	2942.71	2993.34	3053.46	3104.63

Working Capital for Maintenance Spares

128. Maintenance spares @15% of O&M expenses are worked out and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1489.21	1560.20	1634.57	1712.49	1794.12

Working capital for O&M Expenses

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

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
827.34	866.78	908.09	951.38	996.74

Rate of Interest on Working Capital

130. Regulation 34(3) of the 2019 Tariff Regulations provides as under:

"34(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 2019-24 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." Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24."

131. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered on projection basis, for the 2019-24 tariff period is 12.05% (i.e., 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for 2019-24 tariff period is being determined during 2021-22, SBI MCLR as on 1.4.2020 (7.75%) and as on 1.4.2021 (7.00%) is also available which is lower in comparison to the same, as on 1.4.2019 (8.55%). Since the rate of interest on working capital is subject to revision at the time of truing-up of tariff, based on the bank rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020 and 1.4.2021, for the subsequent financial years. Accordingly, the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25% and for the subsequent years the rate of interest of 10.50% has been considered (i.e., 1-year SBI MCLR of 7.75% as on 1.4.2020 + 350 basis points and 1-year SBI MCLR of 7.00% as on 1.4.2021 + 350 basis points). Accordingly, Interest on working capital is allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Working capital for O&M expenses (one month of O&M Expenses)	827.34	866.78	908.09	951.38	996.74
Working capital for Maintenance Spares (15% of operation and maintenance expense)	1489.21	1560.20	1634.57	1712.49	1794.12
Working capital for Receivables (45 days of annual fixed cost)	2880.82	2942.71	2993.34	3053.46	3104.63
Total Working capital	**5197.36**	**5369.69**	**5536.00**	**5717.34**	**5895.49**
Rate of interest (%)	12.050	11.250	10.500	10.500	10.500
Interest on Working capital	626.28	604.09	581.28	600.32	619.03

Annual Fixed Charges

132. Based on the above, the annual fixed charges approved for the generating station for the 2019-24 tariff period are summarized as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2307.95	2329.60	2334.47	2339.80	2343.82
Interest on loan	1084.46	1021.29	949.67	890.12	805.92
Return on Equity	9483.89	9512.38	9516.74	9520.14	9521.43
Interest on Working capital	626.28	604.09	581.28	600.32	619.03
O&M Expenses	8857.91	9280.13	9722.47	10185.90	10671.42
Security Expenses	1070.14	1121.19	1174.67	1230.70	1289.41
Total	**23430.64**	**23868.68**	**24279.30**	**24766.98**	**25251.01**

133. The annual fixed charges approved as above, is subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations.

Normative Annual Plant Availability Factor (NAPAF)

134. The Petitioner has claimed NAPAF of 90% in terms of Regulation 50(A)(4) of the 2019 Tariff Regulations and, hence, the same has been considered.

Design Energy

135. The Commission in its order dated 14.3.2011 in Petition No.109/2010 had approved the annual Design Energy (DE) of 1134.69 Million units for the period 2009-14 in respect of this generating station. This DE has been considered for this generating station for the period 2019-24 as per month-wise details as under:

Months	Design Energy (MU)
April	56.08
May	91.26
June	144.33
July	208.32
August	208.32
September	160.00
October	94.40
November	52.48
December	31.69
January	31.62
February	25.89
March	30.30
Total	**1134.69**

Application Fee and Publication Expenses

136. The Petitioner has sought the reimbursement of fees paid by it for filing the tariff petition and for publication expenses in respect of the same. Accordingly, in terms of the Regulation 70(1) of the 2019 Tariff Regulations, the Petitioner shall be entitled for the reimbursement of filing fees and publication expenses in connection with the present petition, directly from the beneficiaries, on pro-rata basis.

137. Similarly, RLDC fees & charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2015, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled recovery of statutory taxes, levies,

duties, cess etc. levied by the statutory authorities in accordance with the 2014 Tariff Regulations.

Summary

138. The annual fixed charges claimed and allowed for the 2019-24 tariff period is summarized below:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Annual fixed charges claimed	23665.71	24154.74	24616.08	25110.73	25607.12
Annual Fixed Charges allowed	**23430.64**	**23868.68**	**24279.30**	**24766.98**	**25251.01**

139. Annexure-I attached herewith form part of this order.

140. Petition No. 284/GT/2020 is disposed of in terms of the above.

Sd/-	***Sd/-***	***Sd/-***
(Pravas Kumar Singh)	**(Arun Goyal)**	**(I. S. Jha)**
Member	**Member**	**Member**

Annexure I

2014-15

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2014 (Rs. In Lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
	1	2 (as on 31.03.2014)	3	4 = Col.2 X Col.3
1	LAND- FREE HOLD	610.75	0.00	0.00
2	LAND-LEASEHOLD	47.46	3.34	1.59
3	BUILDING CONTAINING GPM	13098.20	3.34	437.48
4	BUILDING	4160.95	3.34	138.98
5	BUILDINGS-TEMPORARY	83.73	100.00	83.73
6	ROADS, BRIDGES, CULVERTS, AERODROMES	1937.90	3.34	64.73
7	DAMS & BARRAGES	71159.57	5.28	3757.23
8	TUNNEL/CHANNELS/P. STOCK	53012.34	5.28	2799.05
9	MAIN GENERATING EQUIP.	22694.50	5.28	1198.27
10	TRANSFORMER & OTHER POWER PLANT SYSTEMS	7334.01	5.28	387.24
11	DC SYSTEMS/ BATTERY SYSTEMS	147.66	5.28	7.80
12	POWER & CONTROL CABLES	295.89	5.28	15.62
13	AIR CONDITIONING AND VENTILATION SYSTEMS	858.79	5.28	45.34
14	POWER LINE CARRIER COMM. SYSTEMS	54.20	5.28	2.86
15	SUB-STATION EQUIPMENTS, SWITCH GEARS &CABLES, LIGHTENING ARRESTORS	246.54	5.28	13.02
16	UNDERGROUND CABLE AND DUCT SYSTEM	61.67	5.28	3.26
17	TRANSMITION LINES	260.51	5.28	13.75
18	INTERNAL DISTRIBUTION LINES	12.80	5.28	0.68
19	PLANT & MACH. OTHERS- D G SETS	64.52	5.28	3.41
20	CONSTRUCTION EQUIPMENT	306.80	5.28	16.20
21	WATER SUPPLY SYSTEM/ DRAINAGE&SEWERAGE	110.15	5.28	5.82
22	POWER SUPPLY SYSTEM-ADMINISTRATIVE BLOCK	1.27	5.28	0.07
23	VEHICLES	20.64	9.50	1.96
24	BOATS	0.00	9.50	0.00
25	FURNITURES & FIXTURES	110.46	6.33	6.99
26	COMPUTERS	89.64	15.00	13.45
27	SETLITE COMM. EQUIPT.	18.64	6.33	1.18
28	OTHER COMM. EQUIPT.	26.47	6.33	1.68
29	OFFICE EQUIPT- AIR CONDITIONER	16.22	9.50	1.54
30	OFFICE EQUIPT- OTHERS	117.01	6.33	7.41

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2014 (Rs. In Lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
31	INTANGIBLE ASSETS	13.97	15.00	2.10
32	OTHER ASSETS	54.12	5.28	2.86
33	ASSETS OF MINOR VALUE	22.32	5.28	1.18
	TOTAL	**177050.33**		**9036.43**
Weighted Average Rate of Depreciation (%)				**5.104**

2015-16

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2015 (Rs. In lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
	1	2 (as on 31.03.2015)	3	4 = Col.2 X Col.3
1	LAND- FREE HOLD	610.75	0.00	0.00
2	LAND-LEASEHOLD	47.46	3.34	1.59
3	BUILDING CONTAINING GPM	11922.91	3.34	398.23
4	BUILDING	3 (932.04	3.34	131.33
5	BUILDINGS-TEMPORARY	83.73	100.00	83.73
6	ROADS, BRIDGES, CULVERTS, AERODROMES	1780.80	3.34	59.48
7	DAMS & BARRAGES	64504.44	5.28	3405.83
8	TUNNEL/CHANNELS/P. STOCK	48074.46	5.28	2538.33
9	MAIN GENERATING EQUIP.	21059.92	5.28	1111.96
10	TRANSFORMER & OTHER POWER PLANT SYSTEMS	6647.31	5.28	350.98
11	DC SYSTEMS/ BATTERY SYSTEMS	133.84	5.28	7.07
12	POWER & CONTROL CABLES	268.15	5.28	14.16
13	AIR CONDITIONING AND VENTILATION SYSTEMS	778.11	5.28	41.08
14	POWER LINE CARRIER COMM. SYSTEMS	49.13	5.28	2.59
15	SUB-STATION EQUIPMENTS, SWITCH GEARS &CABLES, LIGHTENING ARRESTORS	238.71	5.28	12.60
16	UNDERGROUND CABLE AND DUCT SYSTEM	68.34	5.28	3.61
17	TRANSMITION LINES	260.51	5.28	13.75
18	INTERNAL DISTRIBUTION LINES	15.18	5.28	0.80

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2015 (Rs. In lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
19	PLANT & MACH. OTHERS	92.36	5.28	4.88
20	CONSTRUCTION EQUIPMENT	387.15	5.28	20.44
21	WATER SUPPLY SYSTEM/ DRAINAGE&SEWERAGE	131.21	5.28	6.93
22	POWER SUPPLY SYSTEM-ADMINISTRATIVE BLOCK	7.50	5.28	0.40
23	VEHICLES	46.93	9.50	4.46
24	BOATS	0.00	9.50	0.00
25	FURNITURES & FIXTURES	152.75	6.33	9.67
26	COMPUTERS	109.99	15.00	16.50
27	SETLITE COMM. EQUIPT.	18.64	6.33	1.18
28	NETWORKING DEVICES & SERVER	27.48	6.33	1.74
29	OTHER COMM. EQUIPT.	63.86	6.33	4.04
30	OFFICE EQUIPT- AIR CONDITIONER	20.96	9.50	1.99
31	OFFICE EQUIPT- OTHERS	134.16	6.33	8.49
32	INTANGIBLE ASSETS	13.97	15.00	2.10
33	OTHER ASSETS	296.06	5.28	15.63
34	ASSETS OF MINOR VALUE	32.64	5.28	1.72
	TOTAL	**162011.45**		**8277.29**
Weighted Average Rate of Depreciation (%)				**5.109**

2016-17

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2016 (Rs. In lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
	1	2 (as on 31.03.2016)	3	4 = Col.2 X Col.3
1	LAND- FREE HOLD	601.38	0.00	0.00
2	LAND-LEASEHOLD	47.46	3.34	1.59
3	BUILDING CONTAINING GPM	12032.40	3.34	401.88
4	BUILDING	4056.70	3.34	135.49
5	BUILDINGS-TEMPORARY	83.73	100.00	83.73
6	ROADS, BRIDGES, CULVERTS, AERODROMES	1865.15	3.34	62.30
7	DAMS & BARRAGES	65141.86	5.28	3439.49
8	TUNNEL/CHANNELS/P. STOCK	48533.26	5.28	2562.56

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2016 (Rs. In lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
9	MAIN GENERATING EQUIP.	21374.90	5.28	1128.59
10	TRANSFORMER & OTHER POWER PLANT SYSTEMS	6706.39	5.28	354.10
11	DC SYSTEMS/ BATTERY SYSTEMS	139.93	5.28	7.39
12	POWER & CONTROL CABLES	270.73	5.28	14.29
13	AIR CONDITIONING AND VENTILATION SYSTEMS	761.00	5.28	40.18
14	POWER LINE CARRIER COMM. SYSTEMS	49.60	5.28	2.62
15	SUB-STATION EQUIPMENTS, SWITCH GEARS &CABLES, LIGHTENING ARRESTORS	236.27	5.28	12.48
16	UNDERGROUND CABLE AND DUCT SYSTEM	57.13	5.28	3.02
17	TRANSMITION LINES	260.51	5.28	13.75
18	INTERNAL DISTRIBUTION LINES	28.88	5.28	1.52
19	PLANT & MACH. OTHERS	84.30	5.28	4.45
20	CONSTRUCTION EQUIPMENT	306.03	5.28	16.16
21	WATER SUPPLY SYSTEM/ DRAINAGE&SEWERAGE	144.86	5.28	7.65
22	POWER SUPPLY SYSTEM-ADMINISTRATIVE BLOCK	2.82	5.28	0.15
23	VEHICLES	45.89	9.50	4.36
24	BOATS	0.00	9.50	0.00
25	FURNITURES & FIXTURES	173.60	6.33	10.99
26	COMPUTERS	120.59	15.00	18.09
27	SETLITE COMM. EQUIPT.	15.59	6.33	0.99
28	NETWORKING DEVICES & SERVER	27.48	6.33	1.74
29	OTHER COMM. EQUIPT.	48.25	6.33	3.05
30	OFFICE EQUIPT- AIR CONDITIONER	19.81	9.50	1.88
31	OFFICE EQUIPT- OTHERS	146.70	6.33	9.29
32	INTANGIBLE ASSETS	13.97	15.00	2.10
33	OTHER ASSETS	191.26	5.28	10.10
34	ASSETS OF MINOR VALUE	37.49	5.28	1.98
	TOTAL	**163625.93**		**8357.95**
Weighted Average Rate of Depreciation (%)				**5.108**

2017-18

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2017 (Rs. In lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
	1	2 (as on 31.03.2017)	3	4 = Col.2 X Col.3
1	LAND- FREE HOLD	601.38	0.00	0.00
2	LAND-LEASEHOLD	47.46	3.34	1.59
3	BUILDING CONTAINING GPM	11919.33	3.34	398.11
4	BUILDING	4638.46	3.34	154.92
5	BUILDINGS-TEMPORARY	73.84	100.00	73.84
6	ROADS, BRIDGES, CULVERTS, AERODROMES	1849.61	3.34	61.78
7	DAMS & BARRAGES	64503.25	5.28	3405.77
8	TUNNEL/CHANNELS/P. STOCK	48079.19	5.28	2538.58
9	MAIN GENERATING EQUIP.	22637.05	5.28	1195.24
10	TRANSFORMER & OTHER POWER PLANT SYSTEMS	6684.56	5.28	352.94
11	DC SYSTEMS/ BATTERY SYSTEMS	138.60	5.28	7.32
12	POWER & CONTROL CABLES	268.07	5.28	14.15
13	AIR CONDITIONING AND VENTILATION SYSTEMS	777.87	5.28	41.07
14	POWER LINE CARRIER COMM. SYSTEMS	49.11	5.28	2.59
15	SUB-STATION EQUIPMENTS, SWITCH GEARS &CABLES, LIGHTENING ARRESTORS	230.25	5.28	12.16
16	UNDERGROUND CABLE AND DUCT SYSTEM	56.59	5.28	2.99
17	TRANSMITION LINES	260.51	5.28	13.75
18	INTERNAL DISTRIBUTION LINES	31.91	5.28	1.68
19	PLANT & MACH. OTHERS	84.30	5.28	4.45
20	CONSTRUCTION EQUIPMENT	444.63	5.28	23.48
21	WATER SUPPLY SYSTEM/ DRAINAGE&SEWERAGE	15.79	5.28	0.83
22	POWER SUPPLY SYSTEM-ADMINISTRATIVE BLOCK	2.82	5.28	0.15
23	VEHICLES	72.81	9.50	6.92
24	BOATS	0.00	9.50	0.00
25	FURNITURES & FIXTURES	172.39	6.33	10.91
26	COMPUTERS	127.23	15.00	19.08

Sl. No.	Name of the Assets[1]	Gross Block as on 31.03.2017 (Rs. In lakh)	Depreciation Rates as per CERC's Depreciation Rate Schedule (%)	Depreciation Amount (Rs. In lakh)
27	SETLITE COMM. EQUIPT.	14.67	6.33	0.93
28	NETWORKING DEVICES & SERVER	27.48	6.33	1.74
29	OTHER COMM. EQUIPT.	52.79	6.33	3.34
30	OFFICE EQUIPT- AIR CONDITIONER	19.81	9.50	1.88
31	OFFICE EQUIPT- OTHERS	130.91	6.33	8.29
32	INTANGIBLE ASSETS	18.95	15.00	2.84
33	OTHER ASSETS	244.84	5.28	12.93
34	ASSETS OF MINOR VALUE	39.79	5.28	2.10
	TOTAL	**164316.25**		**8378.36**
Weighted Average Rate of Depreciation (%)				**5.0989**