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."

24. Gross normative loan and equity amounting to Rs. 142962.35 lakh and Rs. 61269.58 lakh, respectively, as on 31.3.2014, as considered in order dated 28.1.2020 in Petition No.282/GT/2018 (truing up of tariff for the period 2012-14), has been considered as the normative loan and equity as on 1.4.2014. The debt: equity ratio, has been considered as 70:30, in terms of Regulation 19 of the 2014 Tariff Regulations, for the purpose of additional capitalization. The 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 19 (4) of 2014 Tariff Regulations. Accordingly, the details of debt-equity ratio in respect of the generating station as on 1.4.2014 and as on 31.3.2019 are as under:

	Capital cost as on 1.4.2014		Additional Capital Expenditure		Decapitalization		Capital cost as on 31.3.2019	
	Amount	**(%)**	**Amount**	**(%)**	**Amount**	**%**	**Amount**	**(%)**
Debt (A)	142962.35	70.00%	2602.83	70.00%	451.88	70.00%	145113.30	70.00%
Equity (B)	61269.58	30.00%	1115.50	30.00%	193.66	30.00%	62191.42	30.00%
Total (C)=(A)+(B)	204231.93		3718.33		645.54		207304.72	

Return on Equity

25. 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."*

26. 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."

27. Accordingly, the base rate of Return on Equity (ROE) has been grossed up, based on the MAT rate of the Petitioner, for the period 2014-19. Hence, in terms of the above regulations, ROE has been computed as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Equity (A)	61269.58	61641.15	61703.40	61958.14	61979.03
Addition of Equity due to additional capital expenditure (B)	371.57	62.24	254.74	20.90	212.39
Normative Equity-Closing (C) =(A) + (B)	61641.15	61703.40	61958.14	61979.03	62191.42

	2014-15	2015-16	2016-17	2017-18	2018-19
Average Equity (G)=(A+F)/2	61455.37	61672.27	61830.77	61968.58	62085.22
Base Rate (%) (H)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax Rate (%) (I)	20.961%	21.342%	21.342%	21.342%	21.549%
Effective ROE Rate (%) (J)	20.876%	20.977%	20.977%	20.977%	21.032%
Return on Equity (K)= (G)*(J)	**12829.42**	**12936.99**	**12970.24**	**12999.15**	**13057.76**

Interest on Loan

28. 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."

29. Interest on loan has been computed as under:

i) The gross normative loan amounting to Rs. 142962.35 lakh as on 31.3.2014, as considered in order dated 28.1.2020 in Petition No. 282/GT/2018, has been considered as on 1.4.2014.

ii) Cumulative repayment amounting to Rs. 18247.82 lakh as on 31.3.2014, as considered in order dated 28.1.2020 in Petition No. 282/GT/2018, has been considered as on 1.4.2014.

iii)

iv) Accordingly, the net normative opening loan as on 1.4.2014 works out to Rs. 124714.53 lakh.

v) Addition to normative loan on account of additional capital expenditure approved above have been considered.

vi) The Petitioner has claimed interest on loan considering weighted average rate of interest (WAROI) of 9.340% in 2014-15,9.396% in 2015-16, 9.330% in 2016-17, 8.807% in 2017-18 and 8.49% in 2018-19. The same has been considered for tariff.

vii) Depreciation allowed has been considered as repayment of normative loan during the respective year of the 2014-19 tariff period. Further, repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff.

30. Necessary calculations for Interest on loan is as under:

(Rs. in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Gross opening loan	142962.35	143829.36	143974.59	144568.98	144617.74
Cumulative repayment of loan upto previous year	18247.82	28723.30	39180.73	49758.89	60353.74
Net Loan Opening	124714.53	115106.06	104793.85	94810.09	84264.00
Addition due to additional capital expenditure	867.01	145.23	594.40	48.76	495.57
Repayment of loan during the year	10500.55	10525.47	10580.48	10614.73	10585.53
Less: Repayment adjustment on account of de-capitalization	25.07	68.04	2.32	19.88	10.16

	2014-15	2015-16	2016-17	2017-18	2018-19
Net Repayment of loan during the year	10475.48	10457.43	10578.16	10594.85	10575.37
Net Loan Closing	115106.06	104793.85	94810.09	84264.00	74184.19
Average Loan	119910.29	109949.95	99801.97	89537.04	79224.09
Weighted Average Rate of Interest of loan	9.3400%	9.3970%	9.3300%	8.8070%	8.4900%
Interest on Loan	**11199.62**	**10332.00**	**9311.52**	**7885.53**	**6726.13**

Depreciation

31. 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."

32. The COD of the generating station is 4.7.2012 and therefore, the generating station has not completed 12 years of operation, as on 1.4.2014. Accordingly, depreciation has been computed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block (A)	204231.93	205470.51	205677.98	206527.12	206596.77
Net Additional capital expenditure during 2014-19 (B)	1238.58	207.47	849.14	69.65	707.95
Closing gross block (C=A+B)	205470.51	205677.98	206527.12	206596.77	207304.72
Average gross block (D)=(A+C)/2	204851.22	205574.25	206102.55	206561.95	206950.75
Value of Free Hold Land	256.31	281.01	418.51	418.51	418.51
Depreciable Value (E= (D *90%))	184135.42	184763.91	185115.64	185529.09	185879.01
Remaining Depreciable Value at the beginning of the year (F=E-Cum Dep at 'L' at the end of previous year)	165887.60	156040.61	145934.90	135770.20	125525.27
Balance useful Life (H)	33.25	32.25	31.25	30.25	29.25
Rate of Depreciation (G)	5.1259%	5.1200%	5.1336%	5.1388%	5.1150%

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation (I=D*G)	**10500.55**	**10525.47**	**10580.48**	**10614.73**	**10585.53**
Cumulative Depreciation at the end of the year (J=I+ Cum Dep at 'L' at the end of previous year)	28748.37	39248.77	49761.21	60373.62	70939.27
Less: Depreciation adjustment on account of de-capitalization (K)	25.07	68.04	2.32	19.88	10.16
Cumulative Depreciation at the end of the year (L)	**28723.30**	**39180.73**	**49758.89**	**60353.74**	**70929.12**

Operation & Maintenance Expenses

33. Sub-clause (c) of clause (3) of Regulation 29 of the 2014 Tariff Regulations provide the following:

> *"29. Operation and Maintenance Expenses: (3) Hydro Generating Station (c) In case of the hydro generating stations, which have not been in commercial operation for a period of three years as on 1.4.2014, operation and maintenance expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation and resettlement works) for the first year of commercial operation. Further, in such case, operation and maintenance expenses in first year of commercial operation shall be escalated @6.04% per annum up to the year 2013- 14 and then averaged to arrive at the O&M expenses at 2013-14 price level. It shall be thereafter escalated @ 6.64%per annum to arrive at operation and maintenance expenses in respective year of the tariff period."*

34. The Petitioner has claimed O&M expenses as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4513.02	4812.68	5132.25	5473.03	5836.44

35. In terms of the above regulation, Commission vide order dated 29.1.2020 in Petition No. 321/GT/2018 had considered the capital cost of Rs. 205470.50 lakh as on cut-off date (31.3.2015) for calculation of O&M expenses. With regard to Rehabilitation & Resettlement (R&R) expenses, in the absence of R&R cost, as on the cut-off date, the R&R cost capitalized till 31.3.2014, was considered in the above said order for calculation of O&M expenses. However, the Petitioner was directed to

furnish the amount of R&R cost capitalized up to the cut-off date, at the time of truing up of tariff. Accordingly, O&M expenses allowed vide order dated 29.1.2020 is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4511.24	4810.78	5130.22	5470.86	5834.13

36. The capital cost of Rs. 205470.50 lakh, as on the cut-off date (31.3.2015) is as allowed by order dated 29.1.2020, has been considered for the calculation of O&M expenses. However, as regards R&R cost, the Petitioner has claimed O&M expenses based on R&R cost of Rs. 72.81 lakh. It is pertinent to mention that the Commission had allowed an amount of Rs. 154.00 lakh, as on 31.3.2014, and the same was considered for the purpose of O&M expenses. In the absence of any reason for reducing the claim of Rs. 72.81 lakh, we have considered the R&R cost of Rs. 154.00 lakh for the purpose of calculation of O&M expenses. Accordingly, in terms of Regulation 29(3)(c) of the 2014 Tariff Regulations, the O&M expenses allowed for the period 2014-19 is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
4511.24	4810.78	5130.22	5470.86	5834.13

Capital Spares

37. 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".*

38. In terms of the above-quoted proviso, capital spares consumed are admissible separately, at the time of truing up of tariff, based on the details furnished by the

Petitioner. The Petitioner has not claimed any capital spares on consumption basis for the period 2014-19.

Additional O& M Expenses

Goods & Services Tax

39. 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. Further, it 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:

(Rs. in lakh)

2017-18	2018-19 (1.4.2018 to 31.12.2018)	2018-19 (1.1.2019 to 31.3.2019)	Total
43.28	59.99	20.23	123.49

40. 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..."*

41. 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.

Impact of wage revision

42. The Petitioner has submitted that it has filed Petition No. 237/MP/2019 claiming the recovery of impact of wage revision of its employees, deputed employees of KV staff/ DAV and Central Industrial Security Force (CISF) in respect of this generating station for the period from 1.1.2016 to 31.3.2019. It is noticed that the Commission vide its order dated 30.12.2022 had disposed of the prayers of the Petitioner in the said petition. Accordingly, the claims of the Petitioner, under this head, in this petition, has not been considered and will be guided by our decision in order dated 30.12.2022.

Interest on Working Capital

43. 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

44. The Receivable component of working capital has been worked out based on two months of fixed cost as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
6680.81	6608.15	6505.38	6332.92	6204.15

Working Capital for Maintenance Spares

45. 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
676.69	721.62	769.53	820.63	875.12

Working Capital for O&M Expenses

46. 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
375.94	400.90	427.52	455.91	486.18

Rate of Interest on Working Capital

47. 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."

48. Accordingly, interest on working capital is worked out and allowed 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)	375.94	400.90	427.52	455.91	486.18
Working capital for Maintenance Spares (15% of operation and maintenance expense)	676.69	721.62	769.53	820.63	875.12
Working capital for Receivables (two months of fixed cost)	6680.81	6608.15	6505.38	6332.92	6204.15
Total working capital	**7733.43**	**7730.66**	**7702.43**	**7609.46**	**7565.44**
Rate of Working Capital (%)	13.5000%	13.5000%	13.5000%	13.5000%	13.5000%
Interest on Working Capital	**1,044.01**	**1,043.64**	**1,039.83**	**1,027.28**	**1,021.34**

<u>Annual Fixed Charges for the period 2014-19</u>

49. Based on the above, the annual fixed charges approved for the generating station for the period 2014-19 is summarized below:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	10500.55	10525.47	10580.48	10614.73	10585.53
Interest on Loan	11199.62	10332.00	9311.52	7885.53	6726.13
Return on Equity	12829.42	12936.99	12970.24	12999.15	13057.76
Interest on Working Capital	1044.01	1043.64	1039.83	1027.28	1021.34
O&M Expenses	4511.24	4810.78	5130.22	5470.86	5834.13
Total	**40084.85**	**39648.88**	**39032.29**	**37997.54**	**37224.89**

<u>Normative Annual Plant Availability Factor (NAPAF)</u>

50. Clause (4) of Regulation 37 of the 2014 Tariff Regulations provides for the Normative Annual Plant Availability Factor (NAPAF) of 85% for the instant hydro generating stations. Accordingly, NAPAF of 85% is considered for this generating station.

Design Energy

51. The Commission in order dated 29.1.2020 in Petition No.321/GT/2018 has allowed the annual Design Energy (DE) of 1108.17 million units for the period 2014-19 in respect of this generating station. Accordingly, this DE of 1108.17 million units has been considered and allowed for this generating station for the period 2014-19 as per month-wise details as under:

Month	Design Energy (MUs)
Apr	80.54
May	155.31
Jun	154.47
July	161.89
Aug	163.27
Sept	119.78
Oct	78.89
Nov	52.85
Dec	38.05
Jan	30.69
Feb	24.75
Mar	47.78
Total	**1108.27**

Summary

52. The annual fixed charges allowed vide order dated 29.1.2020 in Petition No. 321/GT/2018 and the annual fixed charges allowed in this order (after truing-up) for the 2014-19 tariff period for the generating station are summarized as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Annual fixed charges allowed vide order dated 29.1.2020 in Petition No. 321/GT/2018	40087.56	39589.31	38957.98	37924.35	37531.11
Annual fixed charges allowed in this order	**40084.85**	**39648.88**	**39032.29**	**37997.54**	**37224.89**

53. The difference between the annual fixed charges recovered by the Petitioner in terms of order dated 29.1.2020 in Petition No. 321/GT/2018 and the annual fixed

charges determined in this order, shall be adjusted in terms of the provisions of Regulation 8(13) of the 2014 Tariff Regulations.

DETERMINATION OF TARIFF FOR THE PERIOD 2019-24

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

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	10,766.08	10,924.91	10,964.58	10,978.54	10,997.40
Interest on Loan	6,269.66	5,515.43	4,637.64	3,674.36	2,668.12
Return on Equity	12,616.56	12,797.22	12,838.36	12,847.89	12,866.78
Interest on WC	925.24	941.39	952.76	963.07	974.12
O&M Expenses	10,247.67	10,736.17	11,247.96	11,784.15	12,345.89
Total	**40,825.22**	**40,915.12**	**40,641.31**	**40,248.01**	**39,852.32**

Capital Cost

55. 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….”

56. 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	207931.04	212897.26	214129.52	214448.09	214675.23
B	Addition during the year / Period	4517.60	1602.88	330.00	260.00	500.00
C	De-capitalisation during the year/period	11.46	380.62	21.43	42.86	0.00
D	Discharges during the year	460.08	10.00	10.00	10.00	10.00
E	**Closing Capital Cost (A+B-C+D)**	**212897.26**	**214129.52**	**214448.09**	**214675.23**	**215185.23**

57. The Commission, in this order, for the period 2014-19, had allowed the closing capital cost of Rs. 207304.72 lakh, as on 31.3.2019. Accordingly, in terms of Regulation 19 of the 2019 Tariff Regulations, the capital cost of Rs. 207304.72 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 period 2019-24.

Additional Capital Expenditure

58. 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.

59. 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.

60. 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.

61. The Petitioner has claimed projected additional capital expenditure under various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations. Based on this, the details of additional capital expenditure claimed by the Petitioner are examined below:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
4517.60	1602.88	330.00	260.00	500.00

2019-20

(Rs. in lakh)

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
A. Assets allowed during the period 2014-19					
1	RIM treatment of Chamera-III Reservoir	289.85	The Petitioner has submitted that the work was allowed by Commission vide order dated 29.1.2020 in Petition 321/GT/2020. In 2018-19. Work was estimated in 2017 and awarded in May 2018. The contractor has not mobilised to execute the work so another agency was hired through retendering. Work executed during July 2019--Jan 2020. Amount	It is observed that the Commission in its order dated 29.1.2020 in Petition 321/ GT/2018, had allowed an expenditure of Rs.250 lakh for the said asset. Considering the fact that the asset/item was allowed by order dated 29.1.2020, the expenditure claimed is **allowed** under Regulation 26(1)(c) of	**289.85**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			increased due to lapses of time of approx. two year and damage increases at site during these periods at site. claimed under Regulation 26(1)(c) of 2019 Tariff Regulations.	the 2019 Tariff Regulations.	
2	Sewerage treatment plant at Karian and Dharwala	70.00	The Petitioner has submitted that the work was allowed by Commission vide order dated 29.1.2020 in Petition 321/GT/2020. In 2018-19 considering the same mandatory requirement of Himanchal Pradesh Pollution Control Board. However, delay due to mobilization of manpower/material/ equipment at site, Departmental construction of shed for protection of E&M equipment's related to STP, Installation of additional items like Lock and Key after which costly items like motors and panels of STP were installed, the work was delayed. Claimed under Regulation 26(1)(b) of 2019 Tariff Regulations.	It is observed that the Commission vide order dated 29.1.2020 in Petition 321/GT/2018 had allowed an expenditure of Rs.100 lakh for the said asset. Considering the fact that the asset/item was allowed by order dated 29.1.2020 during the period 2014-19, the claim is **allowed** under Regulation 26(1)(b) of 2019 Tariff Regulations.	**70.00**
3	Replacement of KBL make shaft seal cooling pump (KPD 50/20) and motor 18.5 KW	4.14	The Petitioner has submitted that the work was allowed by Commission vide order dated 29.1.2020 in Petition 321/GT/2020. In 2018-19. e supply order was placed in 2018-19 vide SO No. 523 dated 22.11.2018 with delivery period of 04 Months. However, the material was delivered in June 2019. Claimed under Regulation 25(2)(b) of 2019 Tariff Regulations.	It is observed that the Commission vide order dated 29.1.2020 had allowed an expenditure of Rs.100 lakh for this asset Considering the fact that the item had been allowed by order dated 29.1.2020 during the period 2014-19, the claim is **allowed** under Regulation 25(2)(b) of the 2019 Tariff Regulations.	**4.14**
4	Lower and Upper air Guide	7.72	The Petitioner has submitted that the work	It is observed that the Commission vide	**7.72**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			was allowed by Commission vide order dated 29.1.2020 in Petition 321/GT/2018. In 2018-19. e supply order was placed in 2018-19 vide SO No. 523 dated 22.11.2018 with delivery period of 04 Months. However, the material was delivered in June 2019. Claimed under Regulation 25(1) of 2019 Tariff Regulations.	order dated 29.1.2020 in Petition 321/GT/2018 had allowed an expenditure of Rs.8 lakh for this asset (initial spares within the approved limit) . Considering the fact that the item had been allowed by order dated 29.1.2020 during the period 2014-19, the claim is **allowed** under Regulation 25(2)(b) of the 2019 Tariff Regulations	
	Sub Total (A)	**371.71**			**371.71**
B. Replacement of Assets deployed under the original scope of the existing project after cut-off date (Regulation 25)					
1	Replacement of Hydrant for GSU transformer	11.00	The hydrant in one of the transformers stopped working and no display was also coming up. In view of the urgent requirement, faulty Hydrant was replaced by the Hydrant from the Spare GSU transformer for interim arrangement. Now the hydrant was purchased to restore to the original arrangement. Claimed under Regulation 25(2)(b) of 2019 Tariff Regulations.	Considering the submissions of the Petitioner and keeping in view that the expenditure is on account of replacement of asset /work which are within the original scope of work of the project, the claim of the Petitioner is **allowed** under Regulation 25(2)(b) of the 2019 Tariff Regulations. The de-capitalization of old asset/work has been considered under assumed deletion.	**11.00**
2	Replacement of Lightning Arrestor (LA)	0.89	1 No LA installed at Chamba pool line # 2 got damaged in April-2019 as there was heavy rainfall in Power Station vicinity and repeated Lightning strikes were observed. Possible reason for the LA failure may be one or more Lightning strikes hitting transmission system.		**0.89**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			New LA is required as replacement of Faulty one. Claimed under Regulation 25(2)(b) of 2019 Tariff Regulations.		
	Sub-Total (b	**11.89**			**11.89**
C. Additional Capitalization beyond the original scope after cut-off date (Regulation 26)					
1	Land Acquisition (Moukhari Land)	4134.00	Keeping in view the sensitivity of the issue as additional land was required around HRT, the local administration as well as State Forest Minister was pursuing the payment of compensation for affected land, structures and trees of village Moukhari due to seepage water. The occurrence of seepages is not uncommon after the charging of the Water Conductor System and due to redundancy and complexities in the seepage, stopping seepage positively for a long-term basis by adopting any treatment on the hill slopes may remain uncertain. Seepage water is known to find alternate route to come out of the hill slope. Identifying the source of seepage and plugging/ sealing them completely are also complex. It was in the interest of Chamera III Power Station to release the compensation of land to State Govt. immediately for further disbursement to the affected concerned villagers so that resentment of villagers was addressed. It was necessary to settle the issue of acquiring of damaged land at the earliest for maintaining the	The Petitioner has claimed the additional capital expenditure under Regulation 26(1)(b) of the 2019 Tariff Regulations. However, the Petitioner has not submitted any documentary evidence indicating that the claim is on account of 'change in law'. In view of this, the expenditure claimed is **not allowed.** However, the Petitioner may approach the Commission with relevant documents at the time of truing up of tariff.	**0.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			cordial relations with the locals so that Power Station runs smoothly in future as it has been successfully running since its commissioning. As payment of Rs 4134 lakhs has already been approved by the NHPC Board for the payment of compensation to affected landowners by LAO taking in the calculation on account of damaged land, structures and trees of village Moukhari, Solatium plus taxes applicable raised by the concerned Land Acquisition Officer and the same was approved by the State Government. The payment has been done and the possession of land/houses with mutation is under process. Claimed under Regulation 26(1)(b) of 2019 Tariff Regulations.		
	Sub Total (C)	**4134.00**			**0.00**
	Grand Total (A+B+C)	**4517.60**			**383.60**

62. In view of the above, the total additional capital expenditure allowed within the original scope, change in law and other than original scope of work is Rs.23.75 lakh, Rs.70.00 lakh and Rs. 289.85 lakh respectively.

<u>2020-21</u>

(Rs. in lakh)

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
A. Allowed by Commission in 2014-19 tariff period					
	Sub Total (A)	**0.00**			**0.00**
B. Additional capitalization within the original scope and after the cut-off date (Regulation 25)					
1	Construction of Administrative Building	860.00	Temporary office building (Prefab) was erected during construction of Project at Dharwala. The said building has already	Since the expenditure form part of the original scope of work, as claimed by the Petitioner, the claim is	860.00

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			completed its useful life. Since the land of Dharwala complex where the temporary building is situated is sinking continuously as a result huge cracks have developed in the existing prefab structure. Provision for Construction of Permanent Administrative Building with plinth area of 2563 Sqm exists in the DPR of Chamera–III project. The estimate and tender for the construction of admin building at karian was done in the year 2012-13 but could not materialise due to excessively high rates. Retendering was done in the successive years but could not be fruitful due to poor response from bidders. Subsequently, the estimate was modified, and tendering was done and awarded in 2018. The Construction of Administrative Building at karian is in progress and most likely to be completed in this FY. The earlier estimated cost of building as provisioned in Add Cap 2014-19 was 300 lakhs at PL 2014 but after escalation and other modification the cost comes out to be 700 lakhs at 2018 price level. (Including Power backup DG). Administrative building cost including furniture & fixtures, ac, etc. has been kept in phase wise manner in FY 2019-20, 2020-21. However, as the building shall be put in use in FY 2020-21, add	**allowed** under Regulation 24(1)(b) of the 2019 Tariff Regulations. The de-capitalization of old asset/work has been considered under assumed deletion.	

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			cap has been claimed in FY 2020-21. Claimed under Regulation 25(1) of 2019 Tariff Regulations.		
	Sub Total (B)	**860.00**			**860.00**
C. Replacement of assets deployed under the original scope of the existing project after cut-off date (Regulation 25)					
1	Replacement of Spares of GIS System and Pothead yard. (CB Pole assembly, Isolator, Earth switch, Lighting Arrestor, CTs, CVT, PTs and Wave Trap etc.)	194.91	In November 2018 a sever fault occurred in Unit #1 and Bus bar # 1 of GIS. The mandatory & recommended spares of GIS supplied with E&M Main package of Chamera-III Power station has been utilized in January 2019 for restoration of Unit #1. Also, Double Bus disconnector with Earth switch was brought from Dhauliganga Power Station. For returning back the same to DGPS and other mandatory parts used for restoration and refurbishment of inventory respectively procurement of GIS items is to be needed. Refer item at Sl. No 1 of form 9B (i) 2020-21. Claimed under Regulation 25(2)(b) of 2019 Tariff Regulations.	As the capitalisation of the expenditure for the asset is in the nature of spares, after the cut-off date, the claims are **not allowed.** The corresponding decapitalization on account of the same are also not allowed.	**0.00**
2	Replacement of Spares of GIS System and Pothead yard. (CB Pole active part, Isolator with Earth switch, Lighting Arrestor, CVT)	95.97	In May 2019 a sever fault occurred in transmission line # 2 and Bus bar # 1 of GIS. The mandatory & recommended spares of GIS supplied with E&M Main package of Chamera-III Power station used in restoration work and active part of Circuit Breaker brought from Dhauliganga Power Station is installed in Line-II Breaker. This active part has to returned to Dhauliganga		**0.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			Power Station. Also a "220kV GIS COMMON POINT WITH EARTHING SWITCH" is required for restoring the said line and Bus Bar. Refer item at Sl. No 2 of form 9B (i) 2020-21. Claimed under Regulation 25(2)(b) of 2019 Tariff Regulations.		
3	Replacement of loader cum excavator	40	Loader was purchased in year 2003, It is a replacement of old equipment already with the Power station as it has completed its useful life and is under disposal. Loader was declared surplus. Copy of IOM received from CEP Division CO is enclosed. it has completed its useful life and is under disposal. Copy of useful of as per disposal manual is enclosed. Relevant document attached as Appendix-H. The project is widespread over an area of 45 Kms and there are regular road blocks due to slips and shooting stones in the project area which are to be cleared immediately after occurrence for smooth running of different components of Power station. Refer item at Sl. No 10 of form 9B (i) FY 2018-19. Claimed under Regulation 25(2)(a) of 2019 Tariff Regulations.	Considering the fact that these assets/ works claimed are for replacement of the assets/works which are within the original scope of work of the project and after cut-off date, the additional capital expenditure claimed are **allowed** under Regulation 25(2)(a) of the 2019 Tariff Regulations. The original value of old asset/work has been considered under 'Assumed Deletions'.	**40.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
4	Upgradation of Servers of SCADA System of Powerhouse.	180.00	Existing SCADA system become obsolete owing to several times of mergers and acquisitions. Present time GE has made acquisition of Alstom, various system viz excitation system SCADA system etc completely replaced or going to be replaced with the system available with GE. It is therefore mandatory to upgrade the system in phased manner. Primarily, software of SCADA system supplied by GE is no being supported by hardware supplied by former based on operating system Windows XP i.e., Alstom. Moreover, the existing servers / workstations has completed their useful life. Hence, to run the Powerhouse smoothly, the Servers of the installed SCADA system needs to upgrade with Window 10 or latest version and accordingly the same has been envisaged during the year 2020-21. Refer item at Sl. No 3 of form 9B (i) 2020-21. Claimed under Regulation 25(2)(c) of 2019 Tariff Regulations.	Considering the fact that the expenditure claimed is on account of replacement of asset /work due to obsolescence of technology, the same is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. The original value of old asset/work has been considered under 'Assumed Deletions'.	**180.00**
5	Purchase of LV Bushing of GSU Transformer.	12.00	During inspection of equipment's during maintenance, huge hotspots were observed in the LV Bushing of	As the expenditure claimed is in the nature of O&M expenses, the same is **not allowed.**	**0.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			GSU Transformer and Bushing conductor was discoloured. Minor crack was also observed inside the porcelain and as per the OEM recommendation the same was replaced. The LV bushing supplied by OEM was utilized in year January 2015 in Unit #3 to replace faulty LV bushing,. The new bushing is required as replacement of faulty replaced bushing. Refer item at Sl. No 4 of form 9B (i) 2020-21. Claimed under Regulation 25(2)(b) of 2019 Tariff Regulations.		
6	1 no. Submersible Pump (110KW) for drainage and dewatering system	50	07 Nos. pumps, capacity 110 KW, 300 m3/hr are installed in drainage system, dewatering system and flood dewatering system. Against 07 Nos. pumps, OEM has supplied 02 Nos spare pumps. With the passes of time, out of these two spare pumps one pump got repaired and reinstalled and the efficiency and discharge of this pumps got compromised. Hence additional pump is required for smooth running and functioning of drainage - dewatering system to meet any emergency flood like situation in underground powerhouse. Claimed under Regulation 25(2)(b) of 2019 Tariff Regulations.	As the capitalisation of the expenditure for the asset is in the nature of spares, after the cut-off date, the claims are **not allowed.** The corresponding decapitalization on account of the same are also not allowed	**0.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			Refer item at Sl. No 5 of form 9B (i) 2020-21		
7	Replacement of water tanker	20	Water tanker of capacity 9000 ltr was in use since year 2013 in power house, colony etc. for transportation of drinking water/ sprinkler. It is replacement of old equipment as it met an accident on 22.11.2018 and is a complete loss. Temporary arrangement for supply of water was made with fire tender/through open body truck by fitting synthetic tank. Power station is generally facing problem of availability of drinking and clean water at various locations during monsoon season. Therefore, water tanker was essential to provide drinking & clean water for use & safety of personnel. Refer item at Sl. No 15 of form 9B (i) 2018-19.		**0.00**
	Sub-Total (C)	**592.88**			**220.00**
D. Additional capitalization beyond the original scope after cut-off date (Regulation 26)					
1	2(two) Nos Fixed rope drum hoist /Gantry for Draft tube gate	100.00	As CEA guidelines dated 27.05.2011 to avoid flooding in the powerhouse, every power station must have a draft tube gate for each unit for quick closing of draft tube gate in case of high flood. Also, Power station does not have TRT gate. At present, there are three draft tubes gates with one gantry crane. Therefore, two additional no. fixed rope drum hoist/ Gantry for	The Petitioner has claimed additional capital expenditure of this asset/item under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner has also submitted the CEA guidelines in support of the said claim. Considering the fact that the work is required for safety of	**100.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			draft tube gate are required so that each unit have its own dedicated crane & draft tube gate which save the powerhouse flooding. Claimed under Regulation 26(1)(d) of 2019 Tariff Regulations.	the plant, the claim is **allowed.**	
2	Land acquisition (Moukhari Land)	50.00	The land acquired AT s.no.8 in year 2019-20 has to be fenced and taken in possession of the Power station so that it can be utilised by Power Station. Work was essential to stop unauthorised entrance of person and wild/unclaimed animals. Claimed under Regulation 26(1)(b) of 2019 Tariff Regulations.	The Petitioner has claimed the additional capital expenditure under Regulation 26(1)(b) of the 2019 Tariff Regulations. However, the Petitioner has not submitted any documentary evidence indicating that the claim is on account of 'change in law'. In view of this, the expenditure claimed is **not allowed.** However, the Petitioner may approach the Commission with relevant documents at the time of truing up of tariff.	**0.00**
	Sub Total (D)	**150.00**			**100.00**
	Grand Total (A+B+C+D)	**1602.88**			**1180.00**

63. In view of the above, the total additional capital expenditure allowed within the original scope of work and other than original scope of work is Rs. 1080.00 lakh and Rs.100.00 lakh respectively.

<u>2021-22</u>

(Rs. in lakh)

S. No	Details of the claims	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
A. Replacement of assets deployed under the original scope of the existing project after cut-off date (Regulation 25)					
1	Replacement of Protection Relays	30.00	Power Station has been commissioned since	Considering the fact that the expenditure	**30.00**

S. No	Details of the claims	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	for: Generator, Transformer (GSU), Bus-bar and Line.		2012 and there has been technological advancement in the architecture of numerical relays. Replacement of protection relays is required for smooth operation and maintenance of power station. Also, as per CEA guidelines Main-I and Main-II protection relays of Distance protection should have different principal/make whereas the earlier installed Relays in Line#1&2 Protection panel are of same make and principle and hence needs to be replaced. Refer item at Sl. No 1 of form 9B (i) 2021-22. Claimed under Regulation 25(2)(c) of 2019 Tariff Regulations.	claimed is on account of replacement of asset /work due to obsolescence of technology, the same is **allowed** under Regulation 25(2)(c) of the 2019 Tariff Regulations. The original value of old asset/work has been considered under 'Assumed Deletions'.	
	Sub-Total (C)	**30.00**			**30.00**
B. Additional capitalization beyond the original scope after cut-off date (Regulation 26)					
1	Protection of TRCM bench from shooting stone	300.00	The location of dam site is prone to shooting stones regularly. After successful commissioning of TRCM, it got damaged due to shooting stone falling over it in very next monsoon and It became non-functional. Therefore, its protection is required before it could get repaired. TRCM is required for efficient working of Intake tunnel/HRT. Protection of TRCM structure is to be done by providing trusses and other iron covering over the structure. Dam Safety Report is attached. It is also certified that Protection work of TRCM is	The Petitioner has claimed the additional capital expenditure of this asset/item under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner has also submitted the Dam Safety Report to substantiate its claim. Considering the fact that the work is required for the safety of the plant the same is **allowed.** However, the Petitioner is directed to submit the details of insurance claims/ proceeds if	**300.00**

S. No	Details of the claims	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			being carried for the first time and is not a part of R&M work. Claimed under Regulation 26(1)(d) of 2019 Tariff Regulations.	any, at the time of truing up of tariff	
	Sub Total (D)	**300.00**			**300.00**
	Grand Total (A+B+C+D)	**330.00**			**330.00**

64. In view of the above, the total additional capital expenditure allowed within the original scope and other than original scope of work is Rs. 30.00 lakh and Rs.300.00 lakh respectively.

<u>2022-23</u>

(Rs. in lakh)

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
A.	**Replacement of assets deployed under the original scope of the existing project after the cut-off date**				
1	Replacement of 220V and 48V Battery Banks for Power House	60.00	2 nos of battery banks of 220V & 48 V are installed for control and monitoring system of powerhouse. These battery banks were installed in year 2010-11 and continuously charged since erection & commissioning of Powerhouse. Battery bank is installed inside an underground Powerhouse and sulphation and tank leakage is observed in many batteries. In order to keep the battery bank operational, some of the batteries have been replaced with the new spare available batteries. But, in order to ensure long life and	The Petitioner has claimed additional expenditure of this asset under Regulation 26 (2) of the 2019 Tariff Regulations. However, considering the nature of the expenditure and keeping in view that the expenditure is on account of replacement of old asset /work which are part of the original scope of work of the project, the claim of the Petitioner is allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The de-capitalization of old asset/work	**60.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			Power backup 01 number battery bank replacement is proposed. The useful life of the battery banks has been exhausted and needs to be replaced in phased manner. Hence, replacement of 1 no. each 220V and 48 V battery bank in year 2022-23 is to be carried out. Refer item at Sl. No 1 of form 9B (i) 2022-23. Claimed under Regulation 26(2) of 2019 Tariff Regulations.	has been considered under assumed deletion.	
	Sub-Total (C)	**60.00**			**60.00**
B. Additional capitalization beyond the original scope after cut-off date (Regulation 26)					
1	Protection of Dam from falling of boulder	200.00	The location of dam site is prone to shooting stones regularly as experienced in past; hence protection of manpower as well as structure is to be done by providing steel structure over for smooth operation and maintenance of the dam. Dam area, right bank road to SFT & Dhakog and certain location of left bank downstream road are under threat of shooting stone in monsoon season, high wind summer season and in winter after snowfall. The source of these shooting stone is widely distributed and non-approachable. Hence only greater impact area time to time (which is dynamic) is being taken up for the protection and is a continues process. Claimed under Regulation 26()(d)of 2019 Tariff Regulations.	The Petitioner has claimed the additional capital expenditure of this asset/item under Regulation 26(1)(d) of the 2019 Tariff Regulations. The Petitioner has also submitted the Dam Safety Report to substantiate its claim. Considering the fact that the work is required for the safety of the plant the same is **allowed.** However, the Petitioner is directed to submit the details of insurance claims/ proceeds if any, at the time of truing up of tariff	**200.00**
	Sub Total (D)	**200.00**			**200.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
	Grand Total (A+B+C+D)	**260.00**			**260.00**

65. In view of the above, the total additional capital expenditure allowed within the original scope of work and other than original scope of work is Rs.60.00 lakh and Rs.200.00 lakh respectively.

2023-24

(Rs. in lakh)

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
A.	**Replacement of assets deployed under the original scope of the existing project after cut-off date (Regulation 25)**				
1	Construction of field hostel	500.00	There is no permanent field hostel in the Power Station. The existing temporary structure taken from M/s JPIL in the year 2008 is being used as a field hostel for the employees of CPS-III since then and it was enough to cater to the need at that time. Therefore, it did not seem to be necessary back then to construct another Field Hostel. But after a lapse of 13 more years after handover from JPIL, at present the condition of the field hostel has deteriorated to such an extent that the maintenance staff of CPS-III is being engaged with this structure on regular basis which is creating lot of inconvenience to the occupants and also taking up lot of the resources of the Department in	Considering the fact that these assets/ works claimed are for replacement of the assets/works which are within the original scope of work of the project and after cut-off date, the additional capital expenditure claimed are **allowed** under Regulation 25(2)(b) of the 2019 Tariff Regulations. The original value of old asset/work has been considered under 'Assumed Deletions'.	**500.00**

S. No	Details of the claim	Amount claimed	Justification submitted by the Petitioner	Remarks on admissibility	Amount Allowed
			maintaining the building in proper shape. The building has completed its useful life and now the construction of a new permanent field hostel has become the need of the hour to accommodate staff and officers. Construction of Field Hostel of Plinth area 1923 sqm was in original scope of work. This includes furniture and other amenities required for Field hostel. Claimed under Regulation 25(1) of 2019 Tariff Regulations.		
	Sub-Total (C)	**500.00**			**500.00**
	Grand Total (A+B+C+D)	**500.00**			**500.00**

66. In view of the above, the total additional capital expenditure allowed within the original scope of work and other than original scope of work is Rs.500.00 lakh and Rs.0.00 lakh respectively.

De-capitalization

67. 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
(-)11.46	(-)380.62	(-)21.43	(-)42.86	(-)0.00

68. Since these assets are not in use, the de-capitalization as claimed by the Petitioner is allowed, keeping in view the additional capital expenditure of allowed items. It is observed that the Petitioner has claimed 'Assumed Deletions' for the said assets. Accordingly, the same has been dealt in the subsequent para.

Assumed Deletions

69. As per consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified, is to be allowed for the purpose of tariff, provided that the capitalization of the said asset is followed by the 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 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.

70. Accordingly, based on above methodology, the decapitalization value of old asset has been worked out as under.

(Rs. in lakh)

Asset	**Amount Allowed**	**Year Put to Use**	**Assumed Deletion**	**Year of De-cap**
Replacement of KBL make shaft seal cooling pump (KPD 50/20) and motor 18.5 KW	4.14	COD	2.94	2019-20
Replacement of Hydran for GSU transformer	11.00	COD	7.82	2019-20
Replacement of LA	0.89	COD	0.63	2019-20
Total			**11.39**	
Construction of Administrative Building	860.00	COD	582.08	2020-21
Replacement of loader cum excavator	40.00	COD	27.07	2020-21
Upgradation of Servers of SCADA System of Power House.	180.00	COD	121.83	2020-21
Total			**730.99**	

Replacement of Protection Relays for: Generator, Transformer (GSU), Bus-bar and Line.	30.00	COD	19.34	2021-22
Total			**19.34**	
Replacement of 220V and 48V Battery Banks for Power House	60.00	COD	36.83	2022-23
Total			**36.83**	
Construction of field hostel	500.00	COD	292.34	2023-24
Total			**292.34**	

Discharge of liabilities

71. The opening balance of liabilities, as on 1.4.2019, as per table under paragraph 14 above, is Rs.3155.78 lakh. The Petitioner has claimed discharge of liabilities of Rs. 460.08 lakh in 2019-20 and 10 lakh each for 2020-21, 2021-22, 2022-23 and 2023-24. It is observed that there is a mismatch between Form 9A and Form 16 (Liability Flow Statement), submitted by the petitioner. The discharge of Rs.142.65 lakh for 2019-20 has been disallowed due to the above mismatch. Hence, the discharge of liabilities corresponding to allowed capital assets has been considered. The Petitioner is directed to submit the reconciliation statement showing details of such liabilities as per balance sheet for the period 2019-24, duly certified by auditor and furnish the break-up of discharges included in the liabilities discharged against admitted items within the original scope of work and other than the original scope of work of the project, at the time of truing-up of tariff .

Additional capital expenditure allowed (Net) for the 2019-24 period

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

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Additional capital expenditure allowed (a)	383.60	1180.00	330.00	260.00	500.00

	2019-20	2020-21	2021-22	2022-23	2023-24
Less: De-capitalisation considered (b)	11.39	730.99	19.34	36.83	292.34
Discharge of liabilities (c)	317.43	10.00	10.00	10.00	10.00
Net additional capital expenditure allowed (c)=(a)-(b)+(c)	**689.64**	**459.01**	**320.66**	**233.17**	**217.66**

<u>Capital cost allowed for the period 2019-24</u>

73. Accordingly, the capital cost allowed for the period 2019-24 for the generating station, is as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	207304.72	207994.36	208453.37	208774.03	209007.20
Net Additional capital expenditure allowed during the year/ period	689.64	459.01	320.66	233.17	217.66
Closing Capital Cost	**207994.36**	**208453.37**	**208774.03**	**209007.20**	**209224.86**

<u>Debt-Equity Ratio</u>

74. 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."

75. In terms of the above regulations, the debt equity ratio in the admitted additional capital expenditure is 70:30, after adjustment of un-discharged liability.

Return on Equity

76. 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."

77. The Return on Equity (ROE) for the existing asset base and the additional capital expenditure allowed, in this order for asset/works within the original scope of work, has been calculated by grossing up the base ROE at MAT rate of 17.472% as submitted by the Petitioner. Further, based on the additional capital expenditure which are beyond the original scope and allowed in this order, ROE has been calculated considering the weighted average rate of interest claimed by the Petitioner. 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)	62191.42	62311.35	62419.06	62425.26	62435.21
Total addition due to Capitalization (B)	119.94	107.70	6.20	9.95	65.30
Closing Equity (C)=(A)+(B)	62311.35	62419.06	62425.26	62435.21	62500.50
Average Equity (D)=(A+C)/2	62251.39	62365.21	62422.16	62430.23	62467.85
Base rate (%) (E)	16.500%	16.500%	16.500%	16.500%	16.500%
Effective Tax rate (%) (F)	17.472%	17.472%	17.472%	17.472%	17.472%

	2019-20	2020-21	2021-22	2022-23	2023-24
Effective ROE rate (%) (G)	19.993%	19.993%	19.993%	19.993%	19.993%
Return on Equity within the original scope of work (H)=(F)*(G)	**12445.92**	**12468.68**	**12480.06**	**12481.68**	**12489.20**
Addition due to additional capitalization beyond original scope of work					
Opening Equity (I)	0.00	86.96	116.96	206.96	266.96
Addition due to Capitalization beyond scope of work (J	86.96	30.00	90.00	60.00	0.00
Closing Equity (K)=(I)+(J)	86.96	116.96	206.96	266.96	266.96
Average Equity (L)=(I+K)/2	43.48	101.96	161.96	236.96	266.96
Rate of return for additional capitalization beyond original scope (i.e. weighted average rate of interest approved by the Commission) (%) (M)	8.8504%	8.8718%	8.9589%	8.9651%	8.8187%
Rate of ROE (N)=	10.724%	10.750%	10.856%	10.863%	10.686%
Return on equity for additional capitalization beyond original scope (O)=(L)*(N)	4.66	10.96	17.58	25.74	28.53
Total Return on Equity (P)=(H)+(O)	**12450.58**	**12479.64**	**12497.64**	**12507.42**	**12517.73**

<u>Interest on Loan</u>

78. 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."

79. 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.

80. Interest on loan has been computed as under:

i) The gross normative loan amounting to Rs. 145113.30 lakh as on 31.3.2019, as considered in the truing up section of this order has been considered as opening loan on 1.4.2019.

ii) Cumulative repayment amounting to Rs. 70929.12 lakh as on 31.3.2019, as considered the truing-up section of this order has been considered as on 1.4.2019.

iii)

iv) Accordingly, the net normative opening loan as on 1.4.2019 works out to Rs. 74184.19 lakh.

v) Addition to normative loan on account of additional capital expenditure approved above have been considered.

vi) The Petitioner has claimed interest on loan considering weighted average rate of interest (WAROI) of 8.8504% in 2019-20, 8.8718% in 2020-21, 8.9589% in 2021-22, 8.9651% in 2022-23 and 8.8187% in 2023-24. The same has been considered for tariff subject to truing up.

vii) Depreciation allowed has been considered as repayment of normative loan during the respective year of the 2014-19 tariff period. Further, repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff.

81. Interest on loan has been worked out as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	145113.30	145596.05	145917.36	146141.82	146305.04
Cumulative repayment of loan upto previous year	70929.12	81549.30	91898.60	102563.28	113232.12
Net Loan Opening	74184.19	64046.75	54018.76	43578.54	33072.92
Addition due to additional capital expenditure	482.75	321.31	224.46	163.22	152.36
Repayment of loan during the year	10624.37	10653.75	10673.70	10687.86	10699.40
Less: Repayment adjustment on account of de-capitalization	4.18	304.45	9.01	19.03	165.66
Net Repayment of loan during the year	10620.18	10349.30	10664.68	10668.84	10533.74
Net Loan Closing	64046.75	54018.76	43578.54	33072.92	22691.54
Average Loan	69115.47	59032.76	48798.65	38325.73	27882.23
Weighted Average Rate of Interest of loan	8.8504%	8.8718%	8.9589%	8.9651%	8.8187%
Interest on Loan	**6117.00**	**5237.28**	**4371.81**	**3435.92**	**2458.84**

Depreciation

82. 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."

83. Accordingly, the cumulative depreciation amounting to Rs. 70929.12 lakh as on 31.3.2019, has been considered for the purpose of tariff. The COD of the generating station is 4.7.2012. The project has not completed 12 years of commercial operation in 2019-24 tariff period. 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 33.25 years in line with the 2019 Tariff Regulations. Depreciation has been calculated by applying weighted average rate of depreciation (WAROD) for the period 2019-24 claimed by the Petitioner subject to truing-up. Accordingly, depreciation has been computed as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Average gross block (A)	207649.54	208223.87	208613.70	208890.62	209116.03
Land Value (B)	418.51	418.51	418.51	418.51	418.51
Depreciable Value (C=(A-B) *90%)	186507.93	187024.82	187375.67	187624.90	187827.77
Remaining Depreciable Value at the beginning of the year (D=C-Cum Dep at 'J' at the end of previous year)	115578.81	105475.52	95477.07	85061.62	74595.65
Rate of Depreciation (E)	5.116%	5.116%	5.116%	5.116%	5.116%
Balance useful Life (F)	33.25	32.25	31.25	30.25	29.25
Depreciation (G=A*E)	**10,624.37**	**10,653.75**	**10,673.70**	**10,687.86**	**10,699.40**
Cumulative Depreciation at the end of the year (H=E+ Cum Dep at 'J' at the end of previous year)	81553.48	92203.05	102572.29	113251.15	123931.52
Adjustment on account of decapitalization (I)	4.18	304.45	9.01	19.03	165.66
Cumulative Depreciation at the end of the year (J=H-I)	**81549.30**	**91898.60**	**102563.28**	**113232.12**	**123765.86**

Operation & Maintenance Expenses

84. 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***
Chamera III	9078.72	9511.46	9964.83	10439.81	10937.43

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

xxxxxx"

85. 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)	9078.72	9511.46	9964.83	10439.81	10937.43
Additional O&M expenses due to 7th Pay Commission wage revision- 3rd PRC applicable to CPSUs (B)	1084.91	1136.66	1190.88	1247.69	1307.20
Impact of Goods & Service Tax (C)	84.04	88.05	92.25	96.65	101.26
Security Expenses (D)	788.80	826.42	865.84	907.15	950.42
Total O&M Expenses claimed (A+B+C+D)	**11036.47**	**11562.59**	**12113.8**	**12691.3**	**13296.31**

86. The generating station is in operation for more than 3 years, as on 1.4.2019. As the normative O&M expenses claimed by the Petitioner is in terms of Regulation 35(2)(a) of the 2019 Tariff Regulations, the same is allowed.

<u>Additional O&M Expenses</u>

Impact of wage revision

87. The Petitioner has claimed additional O&M expenses on account of the impact of wage/ pay revision and GST 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)	1084.91	1136.66	1190.88	1247.69	1307.20
Impact of Goods & Service Tax (c)	84.04	88.05	92.25	96.65	101.26
Security Expenses (d)	788.80	826.42	865.84	907.15	950.42
Total O&M Expenses claimed (a+b+c+d)	**1957.75**	**2051.13**	**2148.97**	**2251.49**	**2358.88**

88. The Petitioner has claimed expenditure of Rs. 1084.91 lakh in 2019-20 as additional O&M expenses due pay revision of the Petitioners' staff, based on impact of pay revision of Petitioners' staff in 2018-19. In this regard, it is pertinent to mention that in Petition No. 237/MP/2019 filed by the Petitioner seeking recovery of the additional O&M expenses for the generating station due to impact of wage/ pay

revision for the period 2014-19, the Commission vide its order dated 30.12.2022 had allowed an amount of Rs. 1035 lakh as impact of wage revision in 2018-19. As such, the impact of wage revision in 2019-20 (after escalating @ 4.77% the above amount allowed in 2018-19) works out to Rs. 1084.91 lakh. Accordingly, the claim of the Petitioner for Rs 1084.91 lakh in 2019-20 is considered and is thereafter escalated @4.77% per annum during the relevant years of the 2019-24 tariff period and allowed as additional O&M expenses due to pay revision of the Petitioner's staff as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1084.91	1136.66	1190.88	1247.69	1307.20

<u>Goods & Service Tax</u>

89. The Respondent BRPL, has submitted that the Petitioner is seeking the grant of GST without further examination whether the amount provided in the norm-based tariff is adequate or not and thus, any proposal which has a bearing on the norms can be accepted, only if the Petitioner, proves that the norms are inadequate to meet the additional expenditure on account of GST. Further, the Respondent has pointed out that, details provided by the Petitioner would show that the GST has been claimed by the Petitioner under the Security Services and the operational services. In response the Petitioner submitted that, subsequent to applicability of GST w.e.f. 1.7.2017 (in the State of J&K w.e.f. 8.7.2017), there has been additional impact on account of GST on the O&M Expenses which were fixed by the commission for the tariff period 2014-19. The Petitioner submitted that, since this is an additional expenditure on account of change in Law i.e., introduction of GST, the Petitioner was unable to meet this expenditure from already allowed O&M expenses.

90. We have considered the matter. The Petitioner has claimed impact of GST for the period 2019-24 on the basis of the actual impact of GST in 2018-19. The Petitioner has submitted the total GST amount of Rs. 123.49 lakh for the period from 1.7.2017 to 31.3.2019, based on the actual audited accounts for 21 months (Rs. 43.28 lakh in 2017-18 and Rs.80.22 lakh in 2018-19). On scrutiny of the details, it is noticed that the claim of Petitioner also includes impact of GST on security expenses, which is summarized below:

(Rs in lakh)

Sl. No.	Year	Security Services	Operational Services	Total
1	2017-18	12.97	30.30	43.28
2	2018-19 (till Dec.18)	14.15	45.83	59.99
3	2018-19 (1.1.19 to 31.03.19)	4.49	15.74	20.23
	Total	**31.62**	**91.87**	**123.49**

91. As per Regulation 35(2)(d) of the 2019 Tariff Regulations, Security expenses shall be allowed separately, after prudence check. Hence, excluding the security service expenses of Rs 31.62 lakh (as above), the amount of Rs 91.87 lakh, as shown in the table above, for the period from 1.7.2017 to 31.3.2019, has been normalized and an amount of Rs. 55.00 lakh has been worked out for 2019-20 (after escalating the GST amount of Rs.52.50 lakh pertaining to operational services for 2018-19 by 4.77%). For the remaining period of 2020-24, GST impact has been worked out by escalating the GST base value of Rs.55.00 lakh as on 2019-20 by 4.77% for each year, as per note under Regulation 35(2)(a) of the 2019 Tariff Regulations as given below:

(Rs. in lakh)

Period	2019-20	2020-21	2021-22	2022-23	2023-24
Impact of Goods & Service Tax	55.00	57.63	60.38	63.26	66.27

Capital Spares

92. As regards capital spares, the Petitioner has submitted that same will be claimed at the time of truing-up of tariff for the period 2019-24 based on the actual expenses incurred. In view of this, capital spares, has not been considered in this order.

Security Expenses

93. 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."*

94. The projected security expenses claimed by the Petitioner for the generating station is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
778.80	826.42	865.84	907.15	950.42

95. The Petitioner has claimed actual security expenses of Rs. 752.89 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, above, for the period 2019-24. The Petitioner is however, directed to submit the actual security expenses incurred, duly audited, at the time of truing up of tariff.

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

(Rs. in lakh)

Allowed	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses (a)	9078.72	9511.46	9964.83	10439.81	10937.43
Additional O&M expenses due to 7th Pay Commission wage Revision- 3rd PRC applicable to CPSUs (b)	1084.91	1136.66	1190.88	1247.69	1307.20
GST (c)	55.00	57.63	60.38	63.26	66.27
Security Expenses (d)	778.80	826.42	865.84	907.15	950.42
Total additional O&M Expenses (e=a+b+c+d)	10997.43	11532.17	12081.93	12657.91	13261.32

Interest on Working Capital

97. 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"*

98. 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."*

Working Capital for Receivables

99. The Receivable component of working capital has been worked out based on 45 days of fixed cost as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
5054.22	5026.57	4986.33	4946.13	4890.45

Working Capital for Maintenance Spares

100. 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
1649.62	1729.83	1812.29	1898.69	1989.20

Working capital for O&M Expenses

101. O&M expenses for one month for the purpose of working capital are worked out and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
916.45	961.01	1006.83	1054.83	1105.11

Rate of Interest on Working Capital

102. 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 ,1.4.2021 and 1.4.2022, for the subsequent financial years. Accordingly, the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25% ,2021-22 is 10.50%, 2022-23 is 10.50% 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, 1-year SBI

MCLR of 7.00% as on 1.4.2021 + 350 basis points and 1-year SBI MCLR of 7.00% as on 1.4.2022 + 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)	916.45	961.01	1006.83	1054.83	1105.11
Working capital for Maintenance Spares	1649.62	1729.83	1812.29	1898.69	1989.20
Working capital for Receivables	5054.22	5026.57	4986.33	4946.13	4890.45
Total Working capital	**7620.28**	**7717.41**	**7805.44**	**7899.64**	**7984.76**
Rate of interest (%)	12.05%	11.25%	10.50%	10.50%	10.50%
Interest on Working capital for	**918.24**	**868.21**	**819.57**	**829.46**	**838.40**

Annual Fixed Charges for the period 2019-24

103. 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	10624.37	10653.75	10673.70	10687.86	10699.40
Interest on loan	6117.00	5237.28	4371.81	3435.92	2458.84
Return on Equity	12450.58	12479.64	12497.64	12507.42	12517.73
Interest on Working capital	918.24	868.21	819.57	829.46	838.40
O&M Expenses	9078.72	9511.46	9964.83	10439.81	10937.43
Additional O&M expenses	1918.71	2020.71	2117.10	2218.10	2323.89
Total	**41107.63**	**40771.05**	**40444.64**	**40118.57**	**39775.69**

Normative Annual Plant Availability Factor (NAPAF)

104. The Petitioner has claimed NAPAF of 87% in terms of Regulation 50(A)(4) of the 2019 Tariff Regulations.

> *50. Norms of Operation for Hydro Generating Stations: The norms of operation as given hereunder shall apply to hydro generating station:*
> *(A) Normative Annual Plant Availability Factor (NAPAF): (1) The following normative annual plant availability factor (NAPAF) shall apply to hydro generating station:*
> (a) Storage and Pondage type plants with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of up to 8%, and where plant availability not affected by silt: 90%.

(b) In case of storage and pondage type plants with head variation between full reservoir level and minimum draw down level is more than 8% and when plant availability is not affected by silt, the month wise peaking capability as provided by the project authorities in the DPR (approved by CEA or the State Government) shall form basis of fixation of NAPAF.
(c) Pondage type plants where plant availability is significantly affected by silt: 85%. Run-of-river generating stations: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant.

Station	*Type of Plant*	*Plant Capacity No. of Units x MW*	*NAPAF (%)*
Chamera-III	*Pondage*	*3X77*	*87%*

105. Accordingly, in terms of the above regulations, NAPAF of 87% is allowed.

<u>Design Energy (DE)</u>

106. The Commission in its order dated 29.1.2020 in Petition No.321/GT/2018 has approved the annual Design Energy (DE) of 1108.17 million units for the period 2014-19 in respect of this generating station. This DE has been considered for this generating station for the period 2014-19, as per month-wise details as under:

Month	**Design Energy (MUs)**
Apr	80.54
May	155.31
Jun	154.47
July	161.89
Aug	163.27
Sept	119.78
Oct	78.89
Nov	52.85
Dec	38.05
Jan	30.69
Feb	24.75
Mar	47.78
Total	**1108.27**

107. Accordingly, the DE of 1108.17 MUs has been considered and allowed.

<u>Application Fee and Publication Expenses</u>

108. 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.

109. 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 2019 Tariff Regulations.

110. Accordingly, the annual fixed charges claimed and those allowed for the period 2019-24 is summarized below:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Annual Fixed Charges Claimed	40825.22	40915.12	40641.31	40248.01	39852.32
Annual Fixed Charges Allowed	40328.83	39944.63	39578.80	39211.42	38825.27

111. Petition No. 642/GT/2020 is disposed of in terms of the above.

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