**CENTRAL ELECTRICITY REGULATORY COMMISSION**
**NEW DELHI**

**Petition No. 641/GT/2020**

**Coram:**
**Shri Jishnu Barua, Chairperson**
**Shri Arun Goyal, Member**
**Shri Ramesh Babu V, Member**

**Date of Order: 15th July, 2024**

**IN THE MATTER OF:**

Petition for truing-up of tariff for the period from COD of the units (23.2.2017) till 31.3.2019 and for determination of tariff for the period 2019-24 in respect of Teesta-III Hydroelectric Project (1200 MW)

**AND**

**IN THE MATTER OF**

Teesta Urja Limited,
2nd Floor, Vijaya Building,
17, Barakhamba Road,
New Delhi-110001 **…. Petitioner**

**Vs**

1. PTC India Limited,
   15, Bhikaji Cama Place,
   New Delhi- 110066

2. Energy and Power Department,
   Government of Sikkim,
   Kazi Road, Gangtok- 737101

3. Punjab State Power Corporation Limited,
   The Mall, Patiala- 147001
   ,
4. Uttar Haryana Bijli Vitran Nigam Limited,
   Vidyut Sadan, Plot No. C16, Sector-6,
   Panchkula- 134109

5. Dakshin Haryana Bijli Vitran Nigam Limited,
   Vidyut Sadan, Vidyut Nagar,
   Hisar- 125005

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

7. Ajmer Vidyut Vitran Nigam Limited,
   Vidyut Bhawan, Panchsheel Nagar,
   Makarwali Road, Ajmer- 305004 Panaji, Goa

8. Jaipur Vidyut Vitran Nigam Limited,
   Vidyut Bhawan, Janpath,
   Jaipur- 302005

9. Jodhpur Vidyut Vitran Nigam Limited,
   New Power House, Industrial Area,
   Jodhpur-342003

10. Rajasthan Urja Vikas Nigam Limited,
    Vidyut Bhawan, Janpath,
    Jyoti Nagar, Jaipur- 302005

11. Uttar Pradesh Power Corporation Limited,
    Shakti Bhawan, 14, Ashok Marg,
    Lucknow- 226001 **……Respondents**

**Parties Present:**

Shri Vidhan Vyas, Advocate, TUL
Ms. Mayur Punjabi, Advocate, TUL
Ms. Swati Jindal, TUL
Ms. Priya Lama, TUL

## ORDER

This Petition has been filed by the Petitioner, Teesta Urja Limited, for truing-up of tariff of Teesta-III Hydroelectric Project (1200 MW) (in short, “the generating station”) for the period from 2014-19, in terms of Regulation 8(1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short, “the 2014 Tariff Regulations”) and for determination of tariff of the generating station for the period from 2019-24, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short “the 2019 Tariff Regulations”). The generating station with a total capacity of 1200 MW comprises six units of 200 MW each and the dates of commissioning of the units of the generating station are as under:

| | |
|---|---|
| Units- II, III & IV | 23.2.2017 |
| Units- I, V & VI (generating station) | 28.2.2017 |

2. The Petitioner had filed Petition No. 249/GT/2016, for the determination of the tariff of the generating station, from the actual COD of the units to 31.3.2019, and the Commission vide its order dated 9.1.2020, had approved the capital cost and the annual fixed charges of the generating station, for the period 2014-19, as under:

***Capital Cost allowed***

***(Rs. in lakh)***

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Opening capital cost | 551063.98 | 1184819.56 | 1237288.35 | 1275278.43 |
| Add: Addition during the year/ period | 0.00 | 52468.79 | 37990.08 | 58341.87 |
| **Closing capital cost** | **551063.98** | **1237288.35** | **1275278.43** | **1333620.30** |

***Annual Fixed Charges allowed***

***(Rs. in lakh)***

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Return on Equity | 256.22 | 3572.93 | 42275.79 | 43896.65 |
| Interest on Loan | 828.79 | 11632.70 | 129553.76 | 111335.66 |
| Depreciation | 698.83 | 9829.14 | 61842.90 | 64213.96 |
| Interest on Working Capital | 48.74 | 698.44 | 6951.30 | 6764.54 |
| O&M Expenses | 188.42 | 2919.16 | 35507.62 | 37865.33 |
| **Total** | **2021.01** | **28652.37** | **276131.37** | **264076.13** |

3. Aggrieved by the said order, the Petitioner had filed Petition No. 12/RP/2020, seeking a review of the Commission's order dated 9.1.2020 on the following issues:

*a) Error in the claimed additional capital expenditure amount indicated in para 86 of the order:*
*b) Error in the cut-off date considered:*
*c) Error in the closing capital cost amount: and*
*d) Error in the treatment of deprecation*

4. While the Commission, vide its interim order dated 10.7.2020, rectified the arithmetical/clerical errors, on the issues raised in paragraph 3(a) to (c) above, the Review Petition was admitted on the issue raised in paragraph 3(d) above. Thereafter, vide order dated 11.10.2021, the review of the order dated 9.1.2020 on the issue (d) above was allowed, and the Commission observed as under:

> *"13. It is noticed that the revision in the depreciable value of 100% allowed as above, shall not result in any revision of the tariff allowed vide impugned order dated 9.1.2020 in Petition No.249/GT/2016. However, the error in the depreciable value will be corrected as 100% (instead of 90% as allowed in the impugned order), at the time of truing up of tariff of the generating station, for which Petition No.641/GT/2020 filed by the Petitioner is pending before this Commission."*

## TRUING-UP OF TARIFF FOR THE PERIOD 2014-19

5. Clause (1) of Regulation 8 of the 2014 Tariff Regulations provides as under:

> ***"8. Truing up***
> *(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2019, as admitted by the Commission after prudence check at the time of truing up:*
>
> *Provided that the generating company or the transmission licensee, as the case may be, shall make an application for interim truing up of capital expenditure including additional capital expenditure in FY 2016-17."*

6. In terms of the above regulations, the Petitioner, *vide* affidavit dated 29.9.2020, has sought the truing up of tariff of the generating station for the period 2014-19. However, the Petitioner, vide its affidavit dated 13.4.2021, has revised the annual fixed charges on account of some calculation errors and has claimed the capital cost and annual fixed charges for the period 2014-19 as under:

***Capital Cost claimed***

***(Rs. in lakh)***

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Opening Capital cost | 558334.36 | 1198359.35 | 1245730.92 | 1287759.75 |
| Add: Addition | 40845.31 | 51.73 | 21049.04 | 6421.37 |
| Less: Decapitalization | 0.00 | 0.00 | 0.00 | 0.00 |
| Less: Reversal | 0.00 | 0.00 | 120.02 | 363.68 |

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Add: Discharges | 0.00 | 47319.84 | 21099.81 | 2955.32 |
| **Closing Capital Cost** | **599179.68** | **1245730.92** | **1287759.75** | **1296772.76** |
| Average Capital cost | 578757.02 | 1222045.14 | 1266745.34 | 1292266.26 |

***Annual Fixed Charges claimed***

***(Rs. in lakh)***

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Depreciation | 734.89 | 9931.00 | 63081.87 | 65243.17 |
| Interest on Loan | 864.15 | 11677.85 | 133646.82 | 112424.73 |
| Return on Equity | 276.33 | 3734.26 | 44151.90 | 45041.42 |
| Interest on Working Capital | 52.49 | 701.07 | 7058.66 | 6782.60 |
| O&M Expenses | 221.95 | 2840.97 | 34556.48 | 36851.03 |
| **Total** | **2149.81** | **28885.15** | **282495.72** | **266342.95** |

7. The Respondent Rajasthan Urja Vikas Nigam Ltd (RUVNL) (on behalf of the Rajasthan Discoms) and the Respondent Uttar Pradesh Power Corporation Limited (UPPCL) have filed their reply affidavits dated 15.2.2021 and 26.11.2021 respectively. The Petitioner has filed its rejoinder to the said replies, *vide* affidavits dated 29.6.2021 and 28.12.2021, respectively. The Petitioner has also furnished certain additional information, vide affidavits dated 13.4.2021 and 13.12.2021, after serving a copy on the Respondents. The Petition was heard through video conferencing on 19.5.2022 and the Commission, after hearing the parties, reserved its order in the matter. Since the order in the petition could not be issued prior to one Member of this Commission demitting office, the petition was re-listed on 31.1.2024. During the hearing, the learned counsel for the Petitioner submitted that since pleadings and arguments have been completed in the matter, the Commission may reserve its orders. None was present on behalf of the Respondents, despite notice. Accordingly, the order in the petition was reserved. However, the Petitioner was directed, vide letter dated 9.2.2024 to furnish certain additional information, and in response, the Petitioner has furnished the additional information, *vide* affidavit dated 3.4.2024. As the order in the petition could

not be issued prior to one Member of this Commission demitting office, the petition was re-listed on 29.5.2024. However, based on the submissions of the parties that the Commission may reserve its orders, as pleadings and arguments have been completed, the Commission reserved its order in the petition. Accordingly, based on the submissions of the parties and documents available on record and after a prudence check, we proceed with the truing-up of the tariff for the generating station for the period 2014-19, along with the determination of the tariff of the generating station, for the period 2019-24, as stated in the subsequent paragraphs.

## Capital Cost

8. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost, as determined by the Commission after prudence checks in accordance with this regulation, shall form the basis of the determination of tariff for existing and new projects. Clause (2) of Regulation 9 provides as under:

> *"9(2) The Capital Cost of a new project shall include the following:*
> *(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project.*
> *(b) Interest during construction and financing charges, on the loans*
>> *(i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or*
>> *(ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed.*
>
> *(c) Increase in cost in contract packages as approved by the Commission;*
> *(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;*
> *(e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;*
> *(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;"*

9. The Commission, vide its order dated 9.1.2020 in Petition No. 249/GT/2016, had approved the annual fixed charges of the generating station for the period from COD of the units to 2018-19, considering the capital cost of Rs.1184819.56 lakh (on a cash

basis). The Commission, in the said order, had also condoned the delay (time overrun) of 64 months incurred by the Petitioner during the construction of the plant, as under:

> *“61. Against the delay of 76 months condoned due to various reasons as above, Petitioner has claimed total time overrun of 64 months. As such, the Petitioner has been able to squeeze the construction schedule and bring down the effective delay to 64 months. In view of the above, we condone the time over run of 64 months in achieving the COD of the project.”*

10. Though the capital cost of the project, as on the COD of the units, had been approved vide order dated 9.1.2020, the Petitioner was directed to submit justification in respect of the IDC, IEDC, Financing charges, Notional IDC, Un-discharged liability and the Regulatory Deferral Account (RDA) claimed, which was directed to be taken up at the time of truing-up of tariff for the period 2014-19. Accordingly, the reconciliation and the justification submitted by the Petitioner are examined below:

**<u>Reconciliation of IDC and Penal Interest</u>**

11. In paragraph 65 of the order dated 9.1.2020, the Commission had observed that the Petitioner has not furnished the details of penal interest as reflected in the statements/documents available on record. Accordingly, based on the details of interest rates and other information submitted by the Petitioner, the IDC allowed in the said order (excluding notional IDC) is as under: -

***(Rs. in lakh)***

| **Details of IDC allowed in an order dated 9.1.2020 (excluding Notional IDC)** | **23.2.2017** | **28.2.2017** |
|---|---|---|
| Claimed | 543955.42 | 583723.47 |
| Allowed | 539677.59 | 580194.75 |

12. The Commission, in paragraph 66 of the order dated 9.1.2020, directed as under:

> *“66. The IDC allowed as above is however subject to truing-up. Accordingly, the Petitioner is directed to submit detailed calculation of IDC and the reconciliation thereof, with IDC as per Form-14, indicating the details of the period-wise penal interests charged by the lender, along with the documentary proof, duly certified by the Auditor, at the time of truing-up exercise.”*

13. In the present petition, the Petitioner, *vide* affidavit dated 29.9.2020, has submitted that the details of IDC had already been provided in an affidavit dated 19.3.2019 in Petition No. 249/GT/2016. The Commission, *vide* ROP dated 24.11.2021, had sought further clarification in respect of the computation of IDC, discharged and undischarged IDC, the rate of interest for IDC calculations, and the quarter-wise details of penal interest. In response, the Petitioner, *vide* affidavit dated 13.12.2021, has clarified that the computation of IDC and the details of discharged /undischarged IDC had already been submitted in Form-14 and Form-5B along with the petition. It has also submitted the details of Interest rates as levied by the Banks and Financial Institutions. In respect of the penal interest, the Petitioner has clarified that the quarter-wise data has not been maintained, and it has nothing more to furnish in this regard.

14. The Respondent UPPCL, vide affidavit dated 28.12.2021, has stated that the Petitioner has not furnished the details of the penal interest and that the details of IDC provided in Form 14 and Form 5B could not be reconciled and, therefore, require further clarification. It has further stated that on a debt of Rs.9610 crores for 5 days at 15%, the interest works to Rs.19.75 crores, and hence, the claim of IDC for Rs.39768.05 lakh (from 23.2.2017 to 27.2.2017) by the Petitioner is exceedingly high. In response, the Petitioner has clarified that the difference between the value of the IDC claimed in Form-14 and Form-5B is on account of the Notional IDC of Rs.492.68 lakh.

15. We have examined the matter. It is observed that the Petitioner has claimed IDC as claimed in Petition No. 249/GT/2016. However, as regards the penal interest, the Petitioner has not furnished any clarification. The IDC allowed in the order dated 9.1.2020 in Petition No. 249/GT/2016 was calculated based on the loan drawl details submitted by the Petitioner, and after due prudence check. In the absence of any

further justification submitted by the Petitioner with regard to the penal interest, we are not inclined to revise the IDC allowed vide order dated 9.1.2020.

**Financing Charges**

16. The details of the financing charges allowed in the order dated 9.1.2020 are as under:

***(Rs. in lakh)***

| **23.2.2017** | **28.2.2017** |
|---|---|
| 5570.62 | 5971.21 |

17. The Petitioner was directed, vide order dated 9.1.2020, to submit further clarification on the financing charges claimed, as under:

> *"68. It is observed that the claim for financing charges vide Form 9E and 5B is duly certified by the Auditor. The same has been allowed for the purpose of tariff, subject to submission of detailed item-wise calculation at the time of truing-up, duly certified by the Auditor."*

18. In response, the Petitioner has submitted the details of the item-wise financing charges, duly reconciling with Form 5B and Form-9E. Considering the details filed by the Petitioner, the financing charges claimed and allowed are tabulated below:

***(Rs. in lakh)***

| FC | **23.2.2017** | **28.2.2017** |
|---|---|---|
| Claimed | 5570.62 | 5971.21 |
| **Allowed** | **5570.62** | **5971.21** |

**Notional IDC**

19. The Petitioner has claimed a Notional IDC of Rs.492.68 lakh. The Commission, in its order dated 9.1.2020, had observed that as per the balance sheet as on 31.3.2007, 31.3.2008, and 31.3.2009, the equity position is less than 30% of the total capital. Accordingly, the Commission disallowed the Notional IDC and directed as under:

> *"69…………In view of this, we are not inclined to allow the normative IDC. However, the Petitioner is granted liberty to submit quarter-wise balance sheet, duly certified, in support of the claim for normative IDC, at the time of truing-up exercise."*

20. In response, the Petitioner has submitted that it has not prepared any quarterly balance sheets for the period Q2 2007-08, Q3 2007-08, Q4 2007-08, and Q1 2008-09, during which the equity infused was more than 30% of the total fund deployed. The Petitioner has also submitted the statement of calculations, duly certified by the Auditor, wherein the normative IDC has been calculated on the equity portion of more than 30% of the total funds as on 30.9.2007, 31.12.2007, 31.3.2008 and 30.6.2008. In accordance with the directions in order dated 9.1.2020 and ROP of the hearing dated 18.11.2021, the Petitioner has submitted the relevant information in Annexure to Form 5B (of the original petition) and in its reply furnished vide affidavit dated 13.12.2021, wherein the Petitioner has submitted the details of the cumulative capital infusion of debt and equity, i.e., monthly/quarterly during the construction period along with the computation of the notional IDC. It is further observed that the actual equity infused in Q3 and Q4 for 2007-08 and Q1 for 2008-09 is more than 30% of the total fund employed. Accordingly, we are inclined to allow the 'Notional IDC' of Rs.492.68 lakh as claimed by the Petitioner.

**Un-discharged liabilities**

21. The Commission *vide* its order dated 9.1.2020 had directed the Petitioner to submit the party-wise details of the undischarged liabilities, duly certified by the Auditor, as under:

> *"72………… The un-discharged liabilities considered as above shall be subject to truing-up, based on the details of the actual un-discharged liabilities for each year duly certified by the Auditor to be furnished by the Petitioner."*

22. In response, the Petitioner has submitted the party-wise details of the undischarged liability, duly certified by the Auditor, and has reconciled the same with the balance sheet. The Petitioner has claimed un-discharged liabilities of

Rs.71687.91 lakh and Rs.73188.89 lakh, as on 22.2.2017 and 27.2.2017 respectively, duly certified by the Auditor, in Form 5B, as against the undischarged liability of Rs.71940.00 lakh and Rs.73188.89 lakh, as approved *vide* order dated 9.1.2020, after due verification of the auditor's certificate.

23. We have examined the documents furnished by the Petitioner. It is observed that the reconciliation statement of the undischarged liability with the balance sheet, duly certified by the auditor, depicts the undischarged liability as Rs.71940.00 lakh and Rs.73188.89 lakh, as on the 22.2.2017 and 27.2.2017, respectively. Accordingly, the same has been considered for the purpose of the tariff as stated below:

***(Rs. in lakh)***

| | **23.2.2017 to 27.2.2017** | **28.2.2017 to 31.3.2017** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| Opening Un-Discharged Liability | 71940.00 | 73188.48 | 25955.42 | 48632.78 |
| Addition to liability during the period | 1248.48 | 86.78 | 44575.06 | 3978.62 |
| Reversal during the year | 0.00 | 0.00 | 797.89 | 147.82 |
| Discharges during the year | 0.00 | 47319.84 | 21099.81 | 2955.32 |
| Closing Undischarged Liability | 73188.48 | 25955.42 | 48632.78 | 49508.26 |

**Adjustment of other Income from IEDC**

24. The Commission, in its order dated 9.1.2020, while observing that the Petitioner had not adjusted the other income while claiming IEDC, directed the review of the same, at the time of truing-up of tariff, as under:

> *"73……The same has been deducted from the IEDC claimed by the Petitioner. However, the same shall be reviewed at the time of truing- up on the basis of reconciliation of the capital cost as per Form-5B with the gross block as per balance sheet to be filed by the Petitioner, duly certified by the Auditor, at the time of truing-up."*

25. The Petitioner, in this petition, has adjusted the other income, amounting to Rs.3718.38 lakh and Rs.3984.66 lakh as on 23.2.2017 and 28.2.2017, respectively. Further, the Petitioner has claimed the depreciation under IEDC amounting to Rs.8231.24 lakh as on 23.2.2017, and Rs.8820.60 lakh as on

28.2.2017, and the same has not been considered while allowing IEDC. Accordingly, the details of the IEDC allowed are as under:

***(Rs. in lakh)***

| | 23.2.2017 | 28.2.2017 |
|---|---|---|
| IEDC claimed | 71874.56 | 76009.51 |
| Less Other Income | 3718.38 | 3984.66 |
| Less Depreciation | 8231.24 | 8820.60 |
| **IEDC allowed** | **59924.94** | **63204.25** |

26. As per the submission of the Petitioner in the notes to Form 5B, the other income reported in Form 13C had been adjusted in 'Establishment Charges,' and the same has been considered while determining the capital cost as on the COD of the generating station. As regards the claim for Regulatory Deferral Account (RDA) amounting to Rs.9516.00 lakh in Form 5B, included under overheads and captured through the balance sheet, the Petitioner was directed vide order dated 9.1.2020 to submit the justification at the time of truing-up of tariff, as under:

> *"74. Further, on the basis of comparison of the capital cost as per Form- 5B with the balance sheet of the Petitioner Company, it is observed that the capital cost includes ₹9516 lakh on account of Regulatory Deferral Account (RDA) balance. In this regard, it is noticed that the Petitioner has neither furnished any detail pertaining to RDA nor discussed the same in the petition. Since no justification for inclusion of RDA in the claim is available in the petition, though forms part of Form-5B as evident from the comparison, we are not inclined to consider the same for the purpose of tariff at this stage. The Petitioner is however granted liberty to submit details of RDA at the time of truing-up exercise and the same shall be dealt with in accordance with law."*

27. The Petitioner has submitted a detailed note justifying the inclusion of RDA in the capital cost. It has been submitted that a portion of expenditure/overhead incurred towards the Project has been charged to Profit & Loss A/C in accordance with the applicable AS, which includes the administrative and other overheads indirectly attributable to the projects. It has also been submitted that the total of such expenditure accumulated from the beginning till the previous audited financial statements (2018-19) is approx. Rs.97.58 crore and the same is recognized as RDA/Assets in accordance with the provisions of IND AS-114 (Regulatory Deferral

Accounts) and Guidance Note on Accounting for Rate Regulated Activities as issued by ICAI. Accordingly, the Petitioner has stated that the following expenses have been charged to the P&L Account:

a) Certain percentage of General Administration and Overhead expenses.
b) Indirect expenses incurred towards Insurance premiums, Audit, Secretarial work, ROC fees, and other expenses.

28. The Petitioner has further submitted that as per the accounting policy, when an item of expenditure incurred during the period of construction of a project is recognized as an expense in the Statement of the Profit & Loss, it is not allowed to be capitalized as part of the cost of the relevant PPE in accordance with IND-AS, but is permitted to be recovered from the beneficiaries in future, through tariff, and the right to recover the same is recognized as 'Regulatory Deferral Account Balances' which are to be amortised over the period of 35 years. In conclusion, the Petitioner has submitted that since the Company has incurred some expenses and overheads for the Project which are indirectly attributable and could not be recognized as cost of the Assets in the Financial Statements, as per provisions of applicable AS, and booked as RDA as per the provisions of IND AS-114, and Guidance Note on Accounting of Rate Regulated Activities, issued by ICAI. According to the Petitioner, the expenses were incurred for the Project only, and it is an allowable expense in terms of the provisions of the 2014 Tariff Regulations as mentioned above. The Respondent RUVNL has submitted that since the year 2019-20 is already over, the actual values of GFA for the year are to be considered, and accordingly, the tariff for the subsequent period is required to be determined.

29. We have examined the matter. As per IND AS-114, the provision of RDA balance enables accounting for the effects of rate regulation. The rate regulation

is a legal framework, for establishing the prices that a public utility or similar entity can charge to customers for regulated goods or services. Rate regulation can create a regulatory deferral account balance. A regulatory deferral account balance is an amount of expense or income that would not be recognized as an asset or liability because the amount is included or is expected to be included by a rate regulator in establishing the price(s) that an entity can charge to customers for rate-regulated goods or services. It is noticed that the Petitioner has booked the overheads in the P&L account to create RDA as a regular company practice. As per IND AS-114, the major objective of RDA is to defer the expense in the book of accounts, for which the revenue is deferred by the rate regulator. Such a practice is more prevalent in the Power distribution sector. Since the Commission has not deferred any revenue/expenditure that pertains to the Petitioner, the recovery of RDA is not applicable in the present case. Hence, we are not inclined to allow the RDA as claimed by the Petitioner.

**Initial Spares**

30. Regulation 13 (c) of the 2014 Tariff Regulations provides as under:

> *"13. Initial spares shall be capitalised as a percentage of the Plant and Machinery cost up to cut-off date, subject to following ceiling norms: (c) Hydro generating stations including pumped storage hydro generating station - 4.0%"*

31. The Petitioner, in Form 5(B), has claimed initial spares for Rs.3498.65 lakh and Plant & Equipment cost of Rs.125785.19 lakh, as on the COD of the generating station (28.2.2017). In terms of the above regulation, the permissible amount for initial spares works out to Rs.5031.41 lakh. Since the claim for initial spares is within the ceiling norms under the 2014 Tariff Regulations, the same has been considered and allowed, as detailed below:

*(Rs. in lakh)*

| P&M cost allowed as on 28.2.2017 (cash basis) | Initial spares claimed (cash basis) | Spares limit as per Regulations | Spares upper limit to be allowed | Spares allowed |
|---|---|---|---|---|
| 125785.19 | 3498.65 | 4.0% | 5031.41 | 3498.65 |

**<u>Capital cost as on COD</u>**

32. Based on the above, the capital cost allowed as on the COD of Units/Station, as under:

*(Rs. in lakh)*

| | As on COD of the units (23.2.2017) | As on COD of the station (28.02.2017) |
|---|---|---|
| Capital Cost excluding IDC, FC | 638337.92 | 681360.89 |
| Add: IDC allowed | **539677.59** | **580194.75** |
| Add: FC allowed | 5570.62 | **5971.21** |
| Add: Notional IDC allowed | **492.68** | **492.68** |
| Less: RDA | 9516.29 | 9516.29 |
| Less: Depreciation in IEDC | 8231.24 | 8820.60 |
| Less: Un-Discharged Liabilities | 71940.00 | 73188.89 |
| Capital Cost as on COD | 1094391.29 | 1176493.75 |
| Less: Difference on account of casting/ posting adjustment as submitted by Petitioner | 2.39 | 2.39 |
| **Final Capital Cost allowed on COD** | **1094388.90** | **1176491.36** |

**To give appropriate impact on tariff, total capital cost of Rs. 1094388.90 approved on first COD i.e., 23.02.2017 has been divided by 2 to arrive cost of 3 units out of total 6 units, remaining portion has been considered in the capitalization as on 28.2.2017 i.e. Station COD.*

33. Accordingly, the capital cost of Rs.1094388.90 lakh and Rs.1176491.36 lakh have been considered the opening capital cost as on the COD of the Units and the generating station, respectively.

**<u>Additional Capital Expenditure</u>**

34. Regulation 14 of the 2014 Tariff Regulations provides as under:

> *"14. Additional Capitalisation and De-capitalisation:*
> *(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*
> *(i) Undischarged liabilities recognized to be payable at a future date;*
> *(ii) Works deferred for execution;*
> *(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*

*(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and*
*(v) Change in law or compliance of any existing law:*

*Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.*

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

*(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
*(ii) Change in law or compliance of any existing law;*
*(iii) Deferred works relating to ash pond or ash handling system in the original scope of work; and*
*(iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.*

*(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*
*(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*
*(ii) Change in law or compliance of any existing law;*
*(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*
*(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*
*(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
*(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
*(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal /lignite-based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*
*(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;*
*(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication*

*equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and*
*(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialisation of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:*
*Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:*

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

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

*(4) In case of de-capitalisation 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-capitalisation 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-capitalisation takes place, duly taking into consideration the year in which it was capitalised."*

35. The projected additional capital expenditure allowed *vide* order dated 9.1.2020 in Petition No. 249/GT/2016 is summarized below:

***(Rs. in lakh)***

| | **23.2.2017 to 27.2.2017** | **28.2.2017 to 31.3.2017** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| Opening Capital cost | 551063.98 | 1184819.56 | 1237288.35 | 1275278.43 |
| Additional Capital Expenditure | 0.00 | 34.40 | 19679.17 | 13981.41 |
| De-Capitalization (-) | 0.00 | 113.36 | 0.00 | 0.00 |
| Discharge of Liabilities | 0.00 | 52547.75 | 18310.91 | 48194.22 |
| Net addition subject to a ceiling limit of Rs.1333733.66 lakh | 0.00 | 52468.79 | 37990.08 | 58341.87 |
| **Closing Capital Cost** | **551063.98** | **1237288.35** | **1275278.43** | **1333620.30** |

36. The net additional capitalization was allowed to the Petitioner considering the Designated Independent Agency (DIA) recommended ceiling capital cost of Rs.1350000.00 lakh. The Commission, in its order dated 9.1.2020, had allowed the additional capitalization to the Petitioner, by restricting the completion cost of the

Project to Rs.1333733.66 lakh, after adjusting the decapitalization in the DIA cost, as on the cut-off date i.e., 31.3.2020. A similar practice has been adopted in this order also. Accordingly, the additional capital expenditure available for consideration from the COD of the generating station and up to the cut-off date, for the balance works/ assets within the original scope of work of the Project is worked out as under:

***(Rs. in lakh)***

| | |
|---|---|
| Capital cost as claimed by Petitioner as on COD excluding Notional IDC (A) | 1197866.67 |
| Final capital cost excluding Notional IDC allowed as on COD (B) | 1175998.68 |
| Cost disallowed as on COD (C) | 21868.00 |
| DIA approved completion cost (D) | 1350000.00 |
| Ceiling limit of cost to be allowed up to cut off date (E)=(D)- (C) | 1328132.00 |
| Additional capitalization to be considered up to the cut-off date (F) = (E) – (B) | 152133.33 |

37. The total year-wise claim of the Petitioner for additional capital expenditure, under various heads, is as under:

***(Rs. in lakh)***

| | **23.2.2017 to 27.2.2017** | **28.2.2017 to 31.3.2017** | **2017-18** | **2018-19** | **Total** |
|---|---|---|---|---|---|
| Additional capital expenditure | 40845.31 | 51.73 | 21049.04 | 6421.37 | 68367.45 |
| Less: De-capitalization (-) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Less: Reversal during the year | 0.00 | 0.00 | 120.02 | 363.68 | 483.70 |
| Add: Discharge of liabilities | 0.00 | 47319.84 | 21099.81 | 2955.32 | 71374.97 |
| **Total** | **40845.31** | **47371.56** | **42268.87** | **9740.37** | **140226.12** |

38. The inter-unit additional capital expenditure of Rs.40845.31 lakh has already been included in the capital cost as on the COD of the generating station and hence, the same is not considered.

**<u>Period from 28.2.2017 to 31.3.2017</u>**

39. As against the ceiling limit of additional capital expenditure of Rs.52582.15 lakh, the Petitioner has claimed expenditure for Rs.47371.56 lakh, which includes an amount of Rs.51.73 lakh towards works deferred for execution, which is within the original scope of work and Rs.47319.84 lakh for discharges during the said period. The

Petitioner has claimed additional capital expenditure of Rs.51.73 lakh towards assets/works such as Roads & Bridges, Dam, Intake & De-Silting Chambers, Dam, Intake & De-Silt and HRT, TRT, Surge Shaft & Pressure shafts, Power plant, and Electro-Mechanical Plant & Equipment. Since the said expenditure was already allowed in principle and forms part of the assets/works that are within the original scope of work and are within the cut-off date, the claim of the Petitioner is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.

**Discharges during the year/period**

40. The Petitioner has claimed an amount of Rs.47319.84 lakh towards the discharge of liabilities and the same is allowed.

**2017-18**

41. The Petitioner has claimed additional capital expenditure of Rs.42028.83 lakh in 2017-18, as against the admitted cost of Rs.37990.08 lakh, which includes an amount of Rs.21049.04 lakh towards works deferred for execution and which is within the original scope of work and Rs.21099.81 lakh for discharges during the year/period and Rs.120.02 lakh towards reversal. The same are examined below:

**Additions during the year/period for works/assets under the original scope**

42. The additional capital expenditure of Rs.21049.04 lakh claimed under this head is towards assets/works such as Roads & Bridges, Dam, Intake & De-Silting Chambers, Dam, Intake & De-Silt and HRT, TRT, Surge Shaft & Pressure shafts, Power plant, Electro-Mechanical Plant & Equipment, and Building PHC. The Commission, in its order dated 9.1.2020, had allowed an expenditure of Rs.19679.17 lakh in this regard. Since the said expenditure has been allowed towards assets/works within the original scope of work and is within the cut-off date and the ceiling limit of

Rs.152133.33 lakh, the claim of the Petitioner is allowed under Regulation 14(1)(ii) of the 2014 Tariff Regulations.

**Discharges during the year/period**

43. The Petitioner has claimed an amount of Rs.21099.81 lakh towards the discharge of liabilities, and the same is allowed.

**Reversals during the year**

44. The Petitioner has claimed an amount of Rs.120.02 lakh towards the reversal of liability on a cash basis for 2017-18, which is established through Form 9Bi and Form 16. It is observed that the Petitioner has claimed the same under exclusion in Form 9Bi and decapitalization. On a specific query of the Commission regarding keeping reversal as de-capitalization in exclusion in Form 9Bi, the Petitioner has clarified that certain expenses were capitalized on a provisional basis, and some through recoveries, i.e., income tax refund and recovery from contractors have been received subsequently which were not expected to be recovered at the time of capitalization. It has been submitted that upon finalization of the said expenses and receipt of income tax refund and recovery from the contractor, an amount of Rs.1429 lakh has been decapitalized on an accrual basis. On perusal of Form 9Bi and the submissions of the Petitioner, it is noticed that on account of receipt of unexpected payments, the Petitioner has adjusted the said amount against the undischarged liability and has reversed/adjusted Rs.120.02 lakh for 2017-18 and Rs.363.68 lakh for 2018-19, on a cash basis, in the capital cost. Accordingly, the expenditure is allowed as liability reversal and is reduced from the capital cost.

**2018-19**

45. The Petitioner has claimed an additional capital expenditure of Rs. 9013.01 lakh in 2018-19, as against the admitted cost of Rs.58341.87 lakh, which includes

Rs.6421.37 lakh towards works deferred for execution and which is within the original scope of works, an amount of Rs.2955.32 lakh for discharges during the year/period and Rs.363.68 lakh towards reversal of liabilities.

**Additions during the year/period for works/assets within the original scope**

46. The additional capital expenditure of Rs.6421.37 lakh claimed under this head pertains to Roads & Bridges, Dam, Intake & De-Silting Chambers, Dam, Intake & De-Silt and HRT, TRT, Surge Shaft & Pressure shafts, Power plant, Electro-Mechanical Plant & Equipment, and Building PHC. The Commission, in its order dated 9.1.2020, had allowed Rs.19679.17 lakh towards assets/works of the original scope of work and is within the cut-off date and within the ceiling limit of Rs.152133.33 lakh. In view of this, the claim of the Petitioner is allowed under Regulation 14 (1)(ii) of the 2014 Tariff Regulations for the purpose of tariff.

**Discharges during the year/period**

47. The Petitioner has claimed an amount of Rs.2955.32 lakh towards the discharge of liabilities. Since the liability discharged pertains to work within the original scope of work as established through Form-16 and has been claimed within the cut-off date and is within the ceiling limit of Rs.152133.33 lakh, the same is allowed for the purpose of tariff.

**Reversals during the year**

48. The Petitioner has claimed an amount of Rs.363.68 lakh on a cash basis towards the reversal of liability for 2018-19 and the same is allowed, as discussed in para 44 above.

**Capital cost allowed for the period 2014-19**

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

*(Rs. in lakh)*

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Opening capital cost (a) | 547194.45* | 1176491.36* | 1223862.92 | 1265891.75 |
| Add: Additional capital expenditure | 0.00 | 51.73 | 21049.04 | 6421.37 |
| Less: De-capitalization (-) | 0.00 | 0.00 | 0.00 | 0.00 |
| Less: Reversal during the year | 0.00 | 0.00 | 120.02 | 363.68 |
| Add: Discharge of liabilities | 0.00 | 47319.84 | 21099.81 | 2955.32 |
| Net additional capital expenditure allowed during the year/ period (b) | 0.00 | 47371.56 | 42028.83 | 9013.01 |
| **Closing Capital Cost (a)+(b)** | **547194.45** | **1223862.92** | **1265891.75** | **1274904.76** |

**To give appropriate impact on tariff, total capital cost of Rs. 1094388.90 approved on first COD i.e., 23.02.2017 has been divided by 2 to arrive cost of 3 units out of total 6 units, remaining portion has been considered in the capitalization as on 28.2.2017 i.e. Station COD.*

## Debt Equity Ratio

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

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

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

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

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

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

*(2) The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*

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

*(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but*

*where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.*

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

51. It is noticed that the Petitioner, for calculating the Return on Equity (ROE) and Interest on Loan (IOL), has applied the debt-equity ratio as per Form-6, i.e., 78.876: 21.124 based on the equity and loan position, as on 2018-19. However, the Commission vide its order dated 9.1.2020 in Petition No. 249/GT/2016 had finalized the debt-equity ratio of 79.43: 20.57 as on 23.2.2017 and the debt-equity ratio of 79.61: 20.39 as on 28.2.2017, considering the capital expenditure incurred as per the balance sheet. The same has been considered in this order. Further, the debt-equity ratio of 78.88: 21.12 is considered for additional capitalization incurred by the Petitioner as per Form 10 (Financing of additional capitalization).

52. The opening and closing debt and equity are as under:

| | **As on 23.02.2017** | | **As on 28.02.2017** | | **Additional Capital Expenditure** | | **As on 31.3.2019** | |
|---|---|---|---|---|---|---|---|---|
| | **Amount** ***(Rs. in lakh)*** | **(in %)** | **Amount** ***(Rs. in lakh)*** | **(in %)** | **Amount** ***(Rs. in lakh)*** | **(in %)** | **Amount** ***(Rs. in lakh)*** | **(in %)** |
| Debt | 434636.55 | 79.43% | 936604.77 | 79.61% | 77624.56 | 78.88% | 1014229.33 | 79.55% |
| Equity | 112557.90 | 20.57% | 239886.59 | 20.39% | 20788.85 | 21.12% | 260675.44 | 20.45% |
| **Total** | **547194.45** | **100.00%** | **1176491.36** | **100.00%** | **98413.41** | **100.00%** | **1274904.77** | **100.00%** |

## Return on Equity

53. 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."*

54. 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."*

55. The Petitioner has submitted that the tax rate considered is 'nil' since the Petitioner has not paid any tax due to adjustable loss and depreciation. Accordingly, the rate of ROE considered is 16.50% for the period 2016-19. Hence, in terms of the above regulations, ROE has been computed as under:

***(Rs. in lakh)***

| | **23.2.2017 to 27.2.2017** | **28.2.2017 to 31.3.2017** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| Opening Equity (A) | 112557.90 | 239886.59 | 249893.36 | 258771.53 |
| Addition of Equity due to additional capital expenditure (B) | 0.00 | 10006.77 | 8878.17 | 1903.91 |
| Normative Equity- Closing (C) =(A) + (B) | 112557.90 | 249893.36 | 258771.53 | 260675.44 |
| Average Equity (D)=(A+B)/2 | 112557.90 | 244889.97 | 254332.44 | 259723.48 |
| Base Rate (%) (E) | 16.500% | 16.500% | 16.500% | 16.500% |
| Effective Tax Rate (%) (F) | 0.000% | 0.000% | 0.000% | 0.000% |
| Effective ROE Rate (%) (G) | 16.500% | 16.500% | 16.500% | 16.500% |
| **Return on Equity (H)= (D)*(G)** | **254.41** | **3542.52** | **41964.85** | **42854.37** |

## Interest on Loan

56. 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."*

57. Interest on loan is worked out as under:

(a) The opening gross normative loan as on the COD of each unit, has been arrived at in accordance with Regulation 26 of the 2014 Tariff Regulations.

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

(c) The repayment for the years of the period 2016-19 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.

(e) The Petitioner has claimed the Weighted Average Rate of Interest (WAROI) as 13.82%, 13.82%, 13.57% and 11.89% for the period 23.2.2017 to 28.2.2017, 28.2.2017 to 31.3.2017, 2017-18 and 2018-19 respectively. It is observed that the WAROI claimed by the Petitioner, is not in line with the Bank Statement/ Documents submitted by the Petitioner. The penal interest reflected in the FI/ Bank loan statement has been excluded for the purpose of computation. Accordingly, WAROI has been determined on the basis of FI/Bank Loan statement available for the period from COD till 31.3.2019.

58. Accordingly, interest on the loan is computed as under:

***(Rs. in lakh)***

| | **23.2.2017 to 27.2.2017** | **28.2.2017 to 31.3.2017** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| Opening Normative Loan (A) | 434636.55 | 936604.77 | 973969.57 | 1007120.22 |
| Cumulative Repayment (B) | 0.00 | 410.24 | 6168.93 | 73605.79 |
| **Net Loan Opening (C)= (A)- (B)** | **434636.55** | **936194.53** | **967800.64** | **933514.43** |

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Additional Capitalization (D) | 0.00 | 40.80 | 16602.64 | 5064.92 |
| Less: Decapitalization (E) | 0.00 | 0.00 | 0.00 | 0.00 |
| Less: Reversal (F) | 0.00 | 0.00 | 94.67 | 286.86 |
| Discharge of Liability (G) | 0.00 | 37323.99 | 16642.68 | 2331.04 |
| Net Repayment (H) | 410.24 | 5758.69 | 67436.87 | 63962.84 |
| **Closing Loan (I) = (C) +(D)-(E)-(F)+(G)-(H)** | **434226.31** | **967800.64** | **933514.43** | **876660.70** |
| Average Loan (J)= ((C) +(I))/2 | 434431.43 | 951997.58 | 950657.54 | 905087.56 |
| Rate of Interest (K) | 13.177% | 13.295% | 12.701% | 11.396% |
| **Interest on Loan (L) = (J)*(K)** | **784.20** | **11096.67** | **120747.71** | **103142.11** |

## Depreciation

59. 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."*

60. The Petitioner has claimed the depreciable value as 100% for the purpose of calculating depreciation, and the same was allowed vide order dated 11.10.2021 in Petition No. 12/RP/2020 (as stated in para 4 above). This has been considered. The Weighted Average Rate of Depreciation (WAROD) has been considered as per submissions of the Petitioner in Form-11. Accordingly, depreciation has been worked out and allowed as under:

***(Rs. in lakh)***

| | **23.2.2017 to 27.2.2017** | **28.2.2017 to 31.3.2017** | **2017-18** | **2018-19** |
|---|---|---|---|---|
| Opening Gross block (A) | 547194.45 | 1176491.36 | 1223862.92 | 1265891.75 |
| Net Additional capital expenditure during 2014-19 (B) | 0.00 | 47,371.56 | 42,028.83 | 9,013.01 |
| Closing gross block (C=A+B) | **547194.45** | **1223862.92** | **1265891.75** | **1274904.76** |
| Average gross block (D)=(A+C)/2 | 547194.45 | 1200177.14 | 1244877.34 | 1270398.26 |
| Depreciable Value (E=(D) *100%)) | 547194.45 | 1200177.14 | 1244877.34 | 1270398.26 |
| Remaining Depreciable Value at the beginning of the year (F=E-Cum Dep at 'J' at the end of previous year) | 547194.45 | 1199766.90 | 1238708.41 | 1196792.46 |
| Balance useful Life at the beginning of the period/year (G) | 35.00 | 35.00 | 34.91 | 33.91 |
| Depreciation Rate (H) | 5.47% | 5.47% | 5.42% | 5.03% |
| **Depreciation during the period (I=D*H*(No. of days during the period/No. of days during the year)** | **410.24** | **5758.69** | **67436.87** | **63962.84** |

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Cumulative Depreciation at the end of the year (J=I+ Cum Dep at 'J' at the end of previous year) | 410.24 | 6168.93 | 73605.79 | 137568.63 |

**Operation & Maintenance Expenses**

61. Regulation 29 (3) (d) of the 2014 Tariff Regulations provides as under:

*"29 (3)a. xxxxx*
*b. xxxxx*
*c. xxxx*
*d. In case of the hydro generating stations declared under commercial operation on or after 1.4.2014, operation and maintenance expenses shall be fixed at 4% and 2.50% of the original project cost (excluding cost of rehabilitation & resettlement works) for first year of commercial operation for stations less than 200 MW projects and for stations more than 200 MW respectively and shall be subject to annual escalation of 6.64% per annum for the subsequent years.''*

62. The Petitioner has claimed O&M expenses for the period 2014-19 as under:

***(Rs. in lakh)***

| | 2016-17 | | 2017-18 | 2018-19 |
|---|---|---|---|---|
| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | | |
| | Units-2, 3 & 4 | Units -1 to 6 | | |
| O&M Expenses (Annualized) | 16202.40 | 32404.80 | 34556.48 | 36851.03 |
| O&M Expenses (pro-rata) | 221.95 | 2840.97 | 34556.48 | 36851.03 |

63. The O&M expenses allowed vide order dated 9.1.2020 in Petition No. 249/GT/2016 were based on the ceiling limit of the capital cost of Rs.1333620.30 lakh allowed up to 31.3.2019 as under:

***(Rs. in lakh)***

| 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|
| 188.42 | 2919.16 | 35507.62 | 37865.33 |

64. The Petitioner has claimed O&M expenses for the period 2016-19 in terms of Regulation 29(3)(d) of the 2014 Tariff Regulations. The Petitioner has claimed an amount of Rs.1751.41 lakh towards Rehabilitation & Resettlement (R&R) cost in Form 5B up to 27.2.2017. However, in response to the Commission's directions with regard to the R&R expenditure, the Petitioner, vide affidavit dated 13.12.2021, has submitted the R&R cost of Rs.1931.51 lakh as on 31.3.2019, and the same has been considered

for the calculation of the admissible O&M expenses. Further, based on the capital cost allowed as on the cut-off date, i.e., Rs.1277092.27 lakh in this order, the admissible O&M expenses are worked out and allowed as under:

***(Rs. in lakh)***

| 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|
| 218.35 | 2794.87 | 33995.79 | 36253.11 |

**Interest on Working Capital**

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

*"28. Interest on Working Capital: (1) The working capital shall cover*

*(c) Hydro generating station including pumped storage Hydro Electric generating Station and transmission system including communication system:*

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

*(ii) Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and*

*(iii) Operation and maintenance expenses for one month."*

***Working Capital for Receivables***

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

***(Rs. in lakh)***

| 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|
| 285.03 | 3963.93 | 45156.77 | 42114.30 |

***Working Capital for Maintenance Spares***

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

***(Rs. in lakh)***

| 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|
| 32.75 | 419.23 | 5099.37 | 5437.97 |

## ***Working Capital for O&M Expenses***

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

***(Rs. in lakh)***

| 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|
| 18.20 | 232.91 | 2832.98 | 3021.09 |

## ***Rate of Interest on Working Capital***

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

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

70. Accordingly, interest on working capital is worked out and allowed as under:

***(Rs. in lakh)***

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Working capital for O&M Expenses (one month of O&M Expenses) | 18.20 | 232.91 | 2832.98 | 3021.09 |
| Working capital for Maintenance Spares (15% of operation and maintenance expense) | 32.75 | 419.23 | 5099.37 | 5437.97 |
| Working capital for Receivables (two months of fixed cost) | 285.03 | 3963.93 | 45156.77 | 42114.30 |
| **Total working capital** | **335.98** | **4616.07** | **53089.12** | **50573.36** |
| Rate of Working Capital (%) | 12.800% | 12.800% | 12.800% | 12.800% |
| **Interest on Working Capital** | **43.01** | **590.86** | **6795.41** | **6473.39** |

## **Annual Fixed Charges for the period 2014-19**

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

***(Rs. in lakh)***

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Depreciation | 410.24 | 5758.69 | 67436.87 | 63962.84 |
| Interest on Loan | 784.20 | 11096.67 | 120747.71 | 103142.11 |
| Return on Equity | 254.41 | 3542.52 | 41964.85 | 42854.37 |
| O&M Expenses | 218.35 | 2794.87 | 33995.79 | 36253.11 |
| Interest on Working Capital | 43.01 | 590.86 | 6795.41 | 6473.39 |
| **Total** | **1710.20** | **23783.60** | **270940.62** | **252685.82** |

## Normative Annual Plant Availability Factor (NAPAF)

72. The NAPAF of 85% was allowed to the generating station vide order dated 9.1.2020 in Petition No. 249/GT/2016. The Petitioner, in the present petition, has claimed NAPAF of 85% for the generating station. Accordingly, the same has been considered and allowed.

## Auxiliary Energy Consumption

73. As per Regulation 8(6) of the 2014 Tariff Regulations, and subsequent amendment thereof, the financial gains on account of actual auxiliary energy consumption, being less than the normative auxiliary energy consumption, is to be shared in the ratio of 60:40 between the generating station and the beneficiaries. The Petitioner has submitted that in line with the first amendment to the 2014 Tariff Regulations (in 2015), the financial gains on account of Auxiliary Energy Consumption have been shared with all the beneficiaries. Accordingly, the same is in order and allowed.

## Design Energy

74. The Commission in its order dated 9.1.2020 in Petition No. 249/GT/2016, had allowed the CEA approved annual Design Energy (DE) of 5213.82 MUs for the period 2016-19 for the generating station. Accordingly, the DE of 5213.82 MUs, as claimed by the Petitioner, has been allowed, as per the month-wise details:

| Month | | Design Energy (MUs) |
|---|---|---|
| **April** | I | 84.42 |
| | II | 109.91 |
| | III | 89.42 |
| **May** | I | 93.92 |
| | II | 115.75 |
| | III | 130.55 |
| **June** | I | 196.25 |
| | II | 273.60 |

| Month | | Design Energy (MUs) |
|---|---|---|
| | III | 273.60 |
| **July** | I | 273.60 |
| | II | 273.60 |
| | III | 300.96 |
| **August** | I | 273.60 |
| | II | 273.60 |
| | III | 267.75 |
| **September** | I | 273.60 |
| | II | 241.33 |
| | III | 204.49 |
| **October** | I | 173.48 |
| | II | 165.30 |
| | III | 166.68 |
| **November** | I | 101.45 |
| | II | 82.46 |
| | III | 71.48 |
| **December** | I | 65.77 |
| | II | 57.83 |
| | III | 65.68 |
| **January** | I | 57.51 |
| | II | 52.58 |
| | III | 55.44 |
| **February** | I | 51.65 |
| | II | 49.17 |
| | III | 42.62 |
| **March** | I | 54.58 |
| | II | 62.76 |
| | III | 87.43 |
| | **Total** | **5213.82** |

## Summary

75. The annual fixed charges allowed *vide* order dated 9.1.2020 in Petition No. 249/ GT/2016 and the annual fixed charges allowed in this order (after truing-up) for the period 2014-19 for the generating station are summarized below:

***(Rs in lakh)***

| | 23.2.2017 to 27.2.2017 | 28.2.2017 to 31.3.2017 | 2017-18 | 2018-19 |
|---|---|---|---|---|
| Annual Fixed Charges claimed | 2149.81 | 28885.15 | 282495.72 | 266342.95 |

| | | | | |
|---|---|---|---|---|
| Annual Fixed Charges allowed *vide* order dated 9.1.2020 in Petition No. 249/GT/2016 | 2021.01 | 28652.37 | 276131.37 | 264076.13 |
| **Annual Fixed Charges allowed in this order** | **1710.20** | **23783.60** | **270940.62** | **252685.82** |

76. The difference between the annual fixed charges recovered by the Petitioner in terms of the order dated 9.1.2020 in Petition No. 249/GT/2016 and the annual fixed charges determined by this order shall be adjusted in terms of the provisions of Regulation 8(13) of the 2014 Tariff Regulations.

## DETERMINATION OF TARIFF FOR THE PERIOD 2019-24

77. The Petitioner, in this petition, has also sought the determination of the tariff of the generating station for the period 2019-24, in terms of the provisions of the 2019 Tariff Regulations. The Petitioner, vide its affidavit dated 13.4.2021, has claimed the annual fixed charges for the period 2019-24 as under:

***Annual Fixed Charges claimed***

***(Rs in lakh)***

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| Depreciation | 65154.89 | 65516.23 | 66596.65 | 68353.83 | 69175.68 |
| Interest on Loan | 105176.46 | 97797.41 | 91419.14 | 86147.56 | 79536.80 |
| Return on Equity | 45230.65 | 45367.37 | 45691.32 | 46788.01 | 47351.62 |
| Interest on Working Capital | 4924.19 | 4911.44 | 4920.59 | 4972.31 | 4985.90 |
| O&M Expenses | 38608.82 | 40450.46 | 42379.95 | 44401.47 | 46519.42 |
| **Total** | **259095.02** | **254042.90** | **251007.66** | **250663.19** | **247569.42** |

## Capital Cost

78. Clause (1) of Regulation 19 of the 2019 Tariff Regulations provides that the capital cost, as determined by the Commission after prudence checks 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…."*

79. The Petitioner *vide* Form-1i of the petition has claimed the capital cost as under:

***(Rs in lakh)***

| | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|
| Opening Capital Cost | 1296772.76 | 1298617.75 | 1304617.75 | 1328721.31 | 1361061.81 |
| Add: Addition during the year / period | 1845.00 | 0.00 | 14103.56 | 0.00 | 0.00 |
| Less: Decapitalisation during the year / period | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Less: Reversal during the year / period | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Add: Discharges during the year / period | 0.00 | 6000.00 | 10000.00 | 32340.50 | 0.00 |
| **Closing Capital Cost** | **1298617.75** | **1304617.75** | **1328721.31** | **1361061.81** | **1361061.81** |
| Average Capital Cost | 1297695.26 | 1301617.75 | 1316669.53 | 1344891.56 | 1361061.81 |

80. As stated, the Commission in this order, has allowed the closing capital cost of Rs.1274904.76 lakh, as on 31.3.2019. Accordingly, in terms of Regulation 19 of the 2019 Tariff Regulations, the capital cost of Rs.1274904.76 lakh as on 31.3.2019, has been considered the opening capital cost as on 1.4.2019, for determining tariff.

**<u>Additional Capital Expenditure for the period 2019-24</u>**

81. Regulation 24(1) of the 2019 Tariff Regulations provides as under:

*24. Additional Capitalization within the original scope and upto the cut-off date*

*(1) The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope*

*of work, after the date of commercial operation and up to the cut off date may be admitted by the Commission, subject to prudence check:*

*(a) Undischarged liabilities recognized to be payable at a future date.*

*(b) Works deferred for execution.*

*(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations.*

*(d) 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*

*(e) Change in law or compliance of any existing law; and*

*(f) Force Majeure events:*

*Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.*

*(2) The generating company or the transmission licensee, as the case may shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution*

82. 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.*

83. Regulation 26 of the 2019 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.*

84. Clause (2) of Regulation 9 of the 2019 Tariff Regulations provides that the application for the 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 period 2019-24 along with the truing-up for the period 2014-19 in accordance with the 2014 Tariff Regulations. The

Petitioner *vide* affidavit dated 3.4.2024 has claimed the following additional capital expenditure for the period 2019-24:

***(Rs. in lakh)***

| 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | Regulations |
|---|---|---|---|---|---|
| 2187.51 | 1991.34 | 6989.14 | 3058.91 | 0.00 | 25(1) |
| 465.46 | 484.03 | 7414.79 | 339.79 | 0.00 | 26(1) |
| **2652.97** | **2475.37** | **14403.93** | **3398.70** | **0.00** | |

85. The Petitioner has submitted that the projected additional capital expenditure has been claimed under various provisions of Regulation 25 and Regulation 26 of the 2019 Tariff Regulations, wherein some of the admitted capital works have been spilled over from the period 2016-19. The Petitioner, *vide* affidavit dated 3.4.2024, has revised its claim for the additional capital expenditure for the period 2019-24. Based on this, the additional capital expenditure claimed by the Petitioner is examined below:

**<u>Claims under Regulation 25(1) of the 2019 Tariff Regulations</u>**

**<u>2019-20</u>**

86. The Petitioner has claimed the projected additional capital expenditure of Rs.2187.51 lakh in 2019-20 including an amount of Rs.772.12 lakh as discharges of liability and IDC of Rs.266.00 lakh under Regulation 25(1) of the 2019 Tariff Regulations towards the release of payment and discharge of liabilities, which are within the original scope in respect to Roads & Bridges, Dam, Intake & De-Silting Chambers, HRT, TRT, Surge Shaft & Pressure shafts, Power plant, Electro-Mechanical Plant & Equipment and Building PHC. The Petitioner, in its justification, has submitted that since the additional capitalization claimed is within the original scope and the same corresponds to the discharge of liabilities within the original scope of work and pertains to works that were already admitted by order dated 9.1.2020, the same may be allowed.

87. It is noticed that the Petitioner has claimed the additional expenditure under Regulation 25(1) of the 2019 Tariff Regulations, which deals with the expenditure incurred after the cut-off date. The Petitioner has submitted that the additional capital expenditure claimed under Regulation 25(1) of the 2019 Tariff Regulations as per Form 9A for the period from 2019-20 to 2022-23 includes the expenditure for assets/works which form part of the original scope of works and have been admitted by the Commission during the period 2014-19 *vide* order dated 9.1.2020 and fall within the scope of Regulation 25(1) of the 2019 Tariff Regulations. Since the cut-off date for the generating station is 31.3.2020, the expenditure claimed is being considered and dealt with under Regulation 24(1)(b) of the 2019 Tariff Regulations. It is observed that the expenditure claimed by the Petitioner is covered within the original scope of work and has already been admitted by the Commission during the period 2016-19. Accordingly, we allow the claim of the Petitioner based on the actual expenditure incurred.

**<u>2020-21</u>**

88. The Petitioner has claimed the projected additional capital expenditure of Rs.1991.34 lakh, including Rs.1938.14 lakh as discharges of liability under Regulation 25(1) of the 2019 Tariff Regulations. The Petitioner has furnished that the amount claimed is towards the release of payment and discharge of liabilities, which are within the original scope with respect to Roads & Bridges, Dam, Intake & De-Silting Chambers, HRT, TRT, Surge Shaft & Pressure shafts, Power plant, Electro-Mechanical Plant & Equipment, and Building PHC. It is noticed that the Petitioner has claimed the additional expenditure under Regulation 25(1) of the 2019 Tariff Regulations, which deals with the expenditure incurred after the cut-off date. However, the Petitioner has submitted that the additional capital expenditure claimed under Regulation 25(1) of the 2019 Tariff Regulations as per Form 9A for the period from

2019-20 to 2022-23 includes expenditure for assets/works that form part of the original scope of works and have been admitted by the Commission during the period 2014-19 *vide* order dated 9.1.2020 and are within the scope of Regulation 25(1) of the 2019 Tariff Regulations. Accordingly, we allow the claim of the Petitioner for Rs.1991.34 lakh against the deferred works, based on the actual expenditure incurred.

**2021-22**

89. The Petitioner has claimed the projected additional capital expenditure of Rs.6989.14 lakh in 2021-22, including an amount of Rs.1311.69 lakh as discharge of liability, including an IDC of Rs. 555.00 lakh for building PHC. The Petitioner has claimed these works on account of Roads & Bridges, Dam, Intake & De-Silting Chambers, HRT, TRT, Surge Shaft & Pressure shafts, Power plant, Electro-Mechanical Plant & Equipment, and Building PHC. It is noticed that the Petitioner has claimed the additional expenditure under Regulation 25(1) of the 2019 Tariff Regulations, which deals with the expenditure incurred after the cut-off date. However, the Petitioner has submitted that the additional capital expenditure claimed under Regulation 25(1) of the 2019 Tariff Regulations as per Form 9A for the period from 2019-20 to 2022-23 includes expenditure for assets/works that form part of the original scope of works and have been admitted during the period 2014-19 by this Commission vide order dated 9.1.2020 and are within the scope of Regulation 25(1) of the 2019 Tariff Regulations. Accordingly, we allow the claim of the Petitioner for Rs.6989.14 lakh against the deferred works, based on the actual expenditure incurred.

**2022-23**

90. The Petitioner has claimed the projected additional capital expenditure of Rs.3058.91 lakh in 2022-23, including an amount of Rs.1128.27 lakh as the discharge of liabilities and IDC of Rs. 629 lakhs for building PHC. The Petitioner has claimed

these works on account of Roads & Bridges, Dam, Intake & De-Silting Chambers, HRT, TRT, Surge Shaft & Pressure shafts, Power plant, Electro-Mechanical Plant & Equipment, and Building PHC. It is noticed that the Petitioner has claimed the additional expenditure under Regulation 25(1) of the 2019 Tariff Regulations, which deals with the expenditure incurred after the cut-off date. With regard to the deferred works, the Petitioner had not submitted any justification. However, the Petitioner has submitted that the additional capital expenditure claimed under Regulation 25(1) of the 2019 Tariff Regulations as per Form 9A for the period from 2019-20 to 2022-23 includes expenditure for assets/works that form part of the original scope of works and have been admitted during the period 2014-19 by this Commission *vide* order dated 9.1.2020. The claims of the Petitioner are within the scope of Regulation 25(1) of the 2019 Tariff Regulations. Accordingly, we allow the claim of the Petitioner for Rs.3058.91 lakh against the deferred works, based on the actual expenditure incurred.

**Claims under Regulation 26(1)**

**Additional capital expenditure not within the original scope of work and after the cut-off date**

***(Rs. in lakh)***

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 |
|---|---|---|---|---|
| Plant and Equipment | 465.46 | 52.04 | 7082.90 | 258.76 |
| Workshop structure | - | 51.06 | 93.06 | - |
| Workshop equipment | - | 380.93 | 120.45 | - |
| Building Others | - | - | 118.38 | 81.03 |
| **Total** | **465.46** | **484.03** | **7414.79** | **339.79** |

91. The Petitioner has claimed the additional capital expenditure of Rs. 8585.69 lakh in 2019-20, 2020-21, and 2022-23 towards Plant and Machinery, Workshop Structure, Workshop Equipment and Building. With regards to the cost towards Plant and Machinery, the Petitioner has claimed the procurement of six (6) new runners, along with a nozzle deflector, under Regulation 26(1) of the 2019 Tariff Regulations, as a force majeure expenditure covered within the original scope of work. In justification for

the same, the Petitioner has submitted a detailed note stating that on account of climate change and high silt levels in the river during the monsoon season, the runners are experiencing higher silt load than envisaged during the design stage. It has also been submitted that the changed climatic conditions have led to higher design discharges, resulting in increased generation on account of higher water availability during high flow season. The Petitioner has stated that to harness the increased flow, the machines must be run at 10% overload on a continuous basis during high flow season, which has resulted in excessive damage to the underwater parts, like runners and nozzles, of the turbine. The Petitioner has also stated that the slit level has increased with a variation of 1350% in comparison to the originally estimated level. It has also been submitted that high silt levels have impacted the whole scenario of the reservoir operations and running of the turbines. Referring to its submissions made in the main Petition, the Petitioner has stated that it has suffered severe erosion in the coating of the runner, along with some cracks and holes in the runner bucket during peak season. The Petitioner has added that originally two (2) spare runners were envisaged to ensure the uninterrupted plant operation, which is not sufficient considering the present scenario. Accordingly, the Petitioner has submitted that it has claimed the said expenditure for the said asset/item, which may be allowed.

92. The submissions have been examined. It is noticed that the above additional capital expenditure claimed by the Petitioner under Regulation 26(1) of the 2019 Tariff Regulations is towards the procurement of spares beyond the cut-off date. In this regard, it is to be mentioned that Regulation 35 (2) (d) of the 2019 Tariff Regulations provides that the capital spares for hydro generating stations shall be allowed separately as additional O&M expenses, on a consumption basis, after providing the details of year-wise actual capital spares consumed at the time of truing-up with

appropriate justification. Accordingly, the capitalization of the capital spares as claimed by the Petitioner beyond the cut-off date is **not allowed**.

93. Further, the Petitioner has claimed the additional capital expenditure for Workshop structure and equipment amounting to Rs. 645.50 lakh in 2020-21 and 2021-22. The Petitioner, in justification, has furnished that it is also setting up a workshop for the repair and hard coating of runners at the site. It has stated that a similar workshop has also been set up by SJVNL at their 1500 MW Nathpa Jhakri HEP. The Petitioner has also submitted that the silt conditions being experienced now at Teesta III Plant are similar to the ones being experienced by the Nathpa Jhakri Plant, and this workshop is being set up to cater to the excessive repair requirement of the underwater parts which also includes mid-season repairs. The Petitioner has submitted that the requirement of additional runners, a new nozzle deflector assembly, and the hard coating workshop was necessitated due to the changed climatic conditions in the reservoir, which have resulted in higher discharges and higher silt in the reservoir, causing excessive damage to the runners and is therefore a force majeure event. Accordingly, the Petitioner has stated that all the expenditures form part of the additional capitalization claimed.

94. We have examined the submissions of the Petitioner. The Petitioner, in its support of the claim, has submitted that a similar workshop has also been set up by SJVNL at their 1500 MW Nathpa Jhakri HEP, and the Commission has approved the same. In this regard, it is to be mentioned that on account of high silt conditions, the Commission, vide order dated 20.6.2014 in Petition No.168/GT/2013, had allowed 82% NAPAF for Nathpa Jhakri HEP for the period 2009-14. However, with the procurement of additional spares and development of in-house techniques like spray

hard coating of underwater parts, the cost of which had been allowed by the Commission, Naptha Jhakri HEP of SJVNL was able to achieve NAPAF of more than 90% during the latter half of the tariff period 2009-14. Based on this, the NAPAF of 90% was considered for Naptha Jhakri HEP for the tariff period 2014-19. However, it is noticed that the Petitioner in the instant petition has not submitted such details regarding the availability of the plant and assessment of improvement in PAF after capitalization of the asset/work claimed, if any. Further, we are of the view that such claims shall be backed by a Cost-benefit analysis. In view of the above findings, we are **not inclined to allow** expenditure on account of Workshop structure and Equipment at this stage. However, the Petitioner is at liberty to claim the same at the time of the truing-up of the tariff by submission of the Cost-benefit analysis and the improvement in the availability of the plant due to the proposed additional capital expenditure.

95. As regards the building expenses claimed by the Petitioner for Rs. 81.03 lahks in 2022-23, it is observed that the Petitioner has not furnished any information on the same, and, therefore, the claim of the Petitioner on this count is **not allowed**. However, the Petitioner is at liberty to claim the same at the time of the truing-up of tariff, based on proper documentary evidence.

**Discharge of Liabilities**

96. The Petitioner has claimed the following discharge of liabilities:

***(Rs. in lakh)***

| 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|
| 772.12 | 1939.91 | 1443.29 | 1128.27 | 0.00 |

97. The un-discharged liabilities corresponding to the assets/works allowed have been considered with their respective discharges made by the Petitioner on prudence check. Accordingly, the discharge of liabilities is allowed as under:

*(Rs. In lakh)*

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 |
|---|---|---|---|---|
| Opening un-discharged liability | 49508.26 | 49460.79 | 47581.80 | 46058.13 |
| Addition to liability during the period | 1997.99 | 58.00 | 509.09 | 2013.41 |
| Reversals during the year | 1338.03 | 176.54 | 589.46 | 2724.60 |
| Discharges during the year | 772.12 | 1938.14 | 1311.69 | 1128.27 |
| Closing Undischarged liability | 49396.11 | 47404.11 | 46189.73 | 44218.68 |

**Additional Capital Expenditure (net) allowed for the period 2019-24**

98. Based on the 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) | 1415.39 | 53.19 | 6048.76 | 1930.64 | 0.00 |
| Discharge of Liabilities (b) | 772.12 | 1938.14 | 1311.69 | 1128.27 | 0.00 |
| **Net Additional Capital expenditure allowed (c)=(a)+(b)** | **2187.51** | **1991.33** | **7360.45** | **3058.91** | **0.00** |

**Capital Cost allowed for the period 2019-24**

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

*(Rs in lakh)*

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| Opening Capital Cost | 1274904.76 | 1277092.27 | 1279083.60 | 1286444.05 | 1289502.96 |
| Additional Capital expenditure (cash basis) allowed during the year/ period | 2187.51 | 1991.33 | 7360.45 | 3058.91 | 0.00 |
| **Closing Capital Cost** | **1277092.27** | **1279083.60** | **1286444.05** | **1289502.96** | **1289502.96** |

**Debt-Equity Ratio**

100. 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."*

101. The debt-equity ratio, as approved for 2018-19, has been considered for the period 2019-24 as under:

| | **As on 1.4.2019** | | **Additional Capitalization** | | **As on 31.3.2024** | |
|---|---|---|---|---|---|---|
| | **Amount (Rs in lakh)** | **(in %)** | **Amount (Rs in lakh)** | **(in %)** | **Amount (Rs in lakh)** | **(in %)** |
| Debt | 1014229.33 | 79.55% | 11514.48 | 78.88% | 1025743.81 | 79.55% |
| Equity | 260675.44 | 20.45% | 3083.72 | 21.12% | 263759.16 | 20.45% |
| **Total** | **1274904.77** | **100.00%** | **14598.20** | **100.00%** | **1289502.97** | **100.00%** |

## Return on Equity

102. 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 ₹ 1,000 Crore;*

*(b) Estimated Advance Tax for the year on above is ₹ 240 Crore;*

*(c) Effective Tax Rate for the year 2019-20 = ₹ 240 Crore/₹ 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."*

103. The Petitioner has not considered any tax while calculating the ROE and the same is considered for the purpose of tariff. Accordingly, ROE is worked out as under:

***(Rs in lakh)***

| | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|
| Normative Equity- Opening (A) | 260675.44 | 261137.53 | 261558.17 | 263113.00 | 263759.16 |
| Addition of Equity due to additional capital expenditure (B) | 462.09 | 420.65 | 1554.82 | 646.16 | 0.00 |
| Normative Equity – Closing (C=A+B) | 261137.53 | 261558.17 | 263113.00 | 263759.16 | 263759.16 |
| Average Normative Equity D=(A+C)/2 | 260906.48 | 261347.85 | 262335.58 | 263436.08 | 263759.16 |
| Return on Equity (Base Rate) (E) | 16.500% | 16.500% | 16.500% | 16.500% | 16.500% |
| Effective Tax Rate (F) | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| Rate of Return on Equity (Pre-tax) (G) = (E)/(1-F) | 16.500% | 16.500% | 16.500% | 16.500% | 16.500% |
| **Return on Equity (Pre-tax) - (annualized) (H) =(D)x(G)** | **43049.57** | **43122.40** | **43285.37** | **43466.95** | **43520.26** |

## Interest on loan

104. 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-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 changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.”*

105. Interest on loan has been computed as under:

i) The gross normative loan amounting to Rs. 1014229.33 lakh, as on 31.3.2019, as considered in this order, has been considered as the opening gross normative loan, as on 1.4.2019.

ii) Cumulative repayment amounting to Rs.137568.63 lakh as on 31.3.2019, as considered in this order, has been considered, as on 1.4.2019;

iii) Accordingly, the net normative opening loan as on 1.4.2019, works out to Rs.876660.70 lakh.

iv) Addition to the normative loan on account of the admitted additional capital expenditure above has been considered.

v) The Petitioner has submitted that it has undergone loan restructuring, which has no implication on the WAROI of the plant. The Petitioner has carried out structure takeout/ refinancing of its outstanding long-term loan of Rs.9595.68 crore, as on 30.9.2019 in 2019-20, resulting in the extension of loan repayment tenure, from 11.25 years to 27.25 years w.e.f. 30.9.2019, with a one-year moratorium period. Under refinancing, the quarterly repayments have been structured in accordance with the generation pattern, based on the hydrology/ design energy of the Project. Though, the interest rate remains the same, as existing prior to the refinancing of loan, the interest burden has increased on the Petitioner, on an year-on-year basis, due to the structured principal repayments. Accordingly, there is no saving to on account of such refinancing, and no additional burden, on the long-term beneficiaries, considering that the weighted average rate of interest (WAROI) of the loan portfolio remains the same, as it stood prior to the refinancing, and the same rate is considered for the purpose of computation of the 'normative loan'. Since the loan restructuring has not impacted the loan portfolio, in terms of the correction of the WAROI, and has only impacted the repayment tenure, WAROI is considered as per the WAROI for 2018-19, in this order i.e.11.396%.

vi) Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2019-24.

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

***(Rs in lakh)***

| | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|
| Opening Normative Loan (A) | 1014229.33 | 1015954.75 | 1017525.43 | 1023331.06 | 1025743.80 |
| Cumulative Repayment (B) | 137568.63 | 201634.17 | 265966.04 | 330847.75 | 396308.73 |
| Net Loan Opening (C)= (A)-(B) | 876660.70 | 814320.58 | 751559.39 | 692483.31 | 629435.07 |
| Additional Capitalization (D) | 1725.42 | 1570.68 | 5805.63 | 2412.74 | 0.00 |
| Repayment during the year (E) | 64065.54 | 64331.87 | 64881.71 | 65460.98 | 65538.72 |
| Closing Loan (F) = (C) +(D)-(E) | 814320.58 | 751559.39 | 692483.31 | 629435.07 | 563896.36 |
| Average Loan (G)= ((C) +(F))/2 | 845490.64 | 782939.99 | 722021.35 | 660959.19 | 596665.71 |
| Rate of Interest (H) | 11.396% | 11.396% | 11.396% | 11.396% | 11.396% |
| **Interest on Loan (I) = (G)*(H)** | **96350.55** | **89222.39** | **82280.22** | **75321.69** | **67994.92** |

## Depreciation

107. 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."*

108. The COD of the generating station is 28.2.2017. Therefore, the generating station has not completed 12 years of operation, as on 1.4.2019. Hence, the weighted average rate of depreciation (WAROD) of 5.02%, 5.03%, 5.06%,5.08% and 5.08% for

the years 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24 respectively, as claimed by the Petitioner, has been considered. 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 in line with the 2019 Tariff Regulations. Accordingly, depreciation has been computed as under:

***(Rs in lakh)***

| | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|
| Opening Gross block (A) | 1274904.76 | 1277092.27 | 1279083.60 | 1286444.05 | 1289502.96 |
| Net Additional capital expenditure during 2019-24 (B) | 2187.51 | 1991.33 | 7360.45 | 3058.91 | 0.00 |
| Closing gross block (C=A+B) | 1277092.27 | 1279083.60 | 1286444.05 | 1289502.96 | 1289502.96 |
| Average gross block (D)=(A+C)/2 | 1275998.52 | 1278087.94 | 1282763.83 | 1287973.51 | 1289502.96 |
| Land Value (E) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Depreciable Value (F=(D-E)*100%) | 1275998.52 | 1278087.94 | 1282763.83 | 1287973.51 | 1289502.96 |
| Remaining Depreciable Value at the beginning of the year (G=F-Cum Dep at 'K' at the end of previous year) | 1138429.89 | 1076453.77 | 1016797.79 | 957125.76 | 893194.23 |
| Balance useful Life at the beginning of the year (H) | 37.91 | 36.91 | 35.91 | 34.91 | 33.91 |
| Depreciation rate (I) | 5.02% | 5.03% | 5.06% | 5.08% | 5.08% |
| **Depreciation (J=D*I)** | **64065.54** | **64331.87** | **64881.71** | **65460.98** | **65538.72** |
| Cumulative Depreciation at the end of the year (K=J+ Cum Dep at 'K' at the end of previous year) | 201634.17 | 265966.04 | 330847.75 | 396308.73 | 461847.45 |

**Operation & Maintenance Expenses**

109. Regulation 35(2)(c) of the 2019 Tariff Regulations provides as under:

> *"(c) In case of hydro generating stations which have not completed a period of three years as on 1.4.2019, operation and maintenance expenses for 2019-20 shall be worked out by applying escalation rate of 4.77% on the applicable operation and maintenance expenses as on 31.3.2019. The operation and maintenance expenses for subsequent years of the tariff period shall be worked out by applying escalation rate of 4.77% per annum."*

110. The Petitioner has claimed the following normative O&M expenses in terms of the above regulations:

***(Rs in lakh)***

| 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|
| 38608.82 | 40450.46 | 42379.95 | 44401.47 | 46519.42 |

111. As the generating station has not completed a period of three years as on 1.4.2019, the O&M expenses approved for the year 2018-19, have been escalated at the rate of 4.77% and allowed as under:

***(Rs in lakh)***

| 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|
| 37982.38 | 39794.14 | 41692.32 | 43681.04 | 45764.63 |

**<u>Interest on Working Capital</u>**

112. 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"*

113. 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."*

***<u>Working Capital for Receivables</u>***

114. 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 |
|---|---|---|---|---|
| 30265.95 | 29694.58 | 29122.89 | 28603.26 | 27965.88 |

***Working Capital for Maintenance Spares***

115. 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 |
|---|---|---|---|---|
| 5697.36 | 5969.12 | 6253.85 | 6552.16 | 6864.69 |

***Working capital for O&M Expenses***

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

(Rs in lakh)

| 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|
| 3165.20 | 3316.18 | 3474.36 | 3640.09 | 3813.72 |

***Rate of Interest on Working Capital***

117. In line with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital is considered as 12.05% (i.e., 1 year SBI MCLR of 8.55% as on 01.04.2019 + 350 bps) for the year 2019-20, 11.25% (i.e., 1 year SBI MCLR of 7.75% as on 01.04.2020 + 350 bps) for the year 2020-21,10.50% (i.e., 1 year SBI MCLR of 7.00% as on 01.04.2021 + 350 bps) for the year 2021-22, 10.50% (i.e., 1 year SBI MCLR of 7.00% as on 01.04.2022+ 350 bps) for the period 2022-23 and 12.00% (i.e., 1 year SBI MCLR of 8.50% as on 01.04.2023 + 350 bps) for the period 2023-24). Accordingly, Interest on working capital has been computed as under:

(Rs in lakh)

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| Working capital for O&M expenses (one month) | 3165.20 | 3316.18 | 3474.36 | 3640.09 | 3813.72 |
| Working capital for Maintenance Spares | 5697.36 | 5969.12 | 6253.85 | 6552.16 | 6864.69 |
| Working capital for Receivables | 30265.95 | 29694.58 | 29122.89 | 28603.26 | 27965.88 |
| Total Working capital | **39128.50** | **38979.88** | **38851.10** | **38795.50** | **38644.30** |
| Rate of interest (%) | 12.05% | 11.25% | 10.50% | 10.50% | 12.00% |

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| **Interest on Working capital** | **4714.98** | **4385.24** | **4079.37** | **4073.53** | **4637.32** |

## Annual Fixed Charges approved for the period 2019-24

118. Based on the above, the annual fixed charges approved for the generating station for the period 2019-24 are summarized below:

***(Rs in lakh)***

| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---|---|---|---|---|
| Depreciation | 64065.54 | 64331.87 | 64881.71 | 65460.98 | 65538.72 |
| Interest on loan | 96350.55 | 89222.39 | 82280.22 | 75321.69 | 67994.92 |
| Return on Equity | 43049.57 | 43122.40 | 43285.37 | 43466.95 | 43520.26 |
| Interest on Working capital | 4714.98 | 4385.24 | 4079.37 | 4073.53 | 4637.32 |
| O&M Expenses | 37982.38 | 39794.14 | 41692.32 | 43681.04 | 45764.63 |
| **Total** | **246163.02** | **240856.03** | **236218.99** | **232004.19** | **227455.84** |

*Note: (1) All figures are on annualized basis. (2) All figures under each head have been rounded. The figure in total column in each year is also rounded. As such the sum of individual items may not be equal to the arithmetic total of the column.*

## Normative Annual Plant Availability Factor (NAPAF)

119. The Petitioner has claimed NAPAF of 85% in terms of Regulation 50(A)(c)(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 (%)*** |
|---|---|---|---|
| *Teesta III* | *Pondage* | *6x200* | *85%* |

120. The NAPAF of 85% in terms of Regulation 50(A)(4) of the 2019 Tariff Regulations is allowed to the generating station.

## Design Energy (DE)

121. The Commission, in this order for the period 2014-19, has considered the CEA-approved annual Design Energy (DE) of 5213.82 MUs for this generating station. Accordingly, the same has been allowed to the generating station for the period 2019-24, as per the month-wise details, as under:

| Month | | Design Energy (MUs) |
|---|---|---|
| April | I | 84.42 |
| | II | 109.91 |
| | III | 89.42 |
| May | I | 93.92 |
| | II | 115.75 |
| | III | 130.55 |
| June | I | 196.25 |
| | II | 273.60 |
| | III | 273.60 |
| July | I | 273.60 |
| | II | 273.60 |
| | III | 300.96 |
| August | I | 273.60 |
| | II | 273.60 |
| | III | 267.75 |
| September | I | 273.60 |
| | II | 241.33 |
| | III | 204.49 |
| October | I | 173.48 |
| | II | 165.30 |
| | III | 166.68 |
| November | I | 101.45 |
| | II | 82.46 |
| | III | 71.48 |
| December | I | 65.77 |
| | II | 57.83 |
| | III | 65.68 |
| January | I | 57.51 |
| | II | 52.58 |
| | III | 55.44 |
| February | I | 51.65 |
| | II | 49.17 |
| | III | 42.62 |
| March | I | 54.58 |
| | II | 62.76 |

| Month | | Design Energy (MUs) |
|---|---|---|
| | III | 87.43 |
| Total | | **5213.82** |

**Application Fee and Publication Expenses**

122. 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 Regulation 70(1) of the 2019 Tariff Regulations, the Petitioner shall be entitled to the reimbursement of filing fees and publication expenses in connection with the present petition directly from the beneficiaries on a pro-rata basis.

123. 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 to recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.

**Annual Lease paid to the Sikkim Government**

124. The Petitioner has prayed to allow the annual lease amount being paid by it, pursuant to the lease agreements executed with the Sikkim Power Development Corporation and the Energy & Power Department of Sikkim, or as revised by the Government of Sikkim, if any, over and above the O&M expenses. It is noticed that the Petitioner has neither claimed such charges nor has submitted any details regarding the same. Hence, the submissions of the Petitioner on this issue will be considered as and when claimed by the Petitioner.

## Environment Cess

125. The Petitioner has submitted that in terms of Article 3.22 of the Implementation Agreement dated 18.7.2005 entered into with the Government of Sikkim, the State Government is mandated to impose Environment Cess @ one paise per unit of the electricity sold, which may be allowed, as and when the demand is raised by the State Government. The Petitioner has accordingly prayed to allow the same as and when incurred. In view of the submissions, the Petitioner is granted liberty to approach the Commission along with the relevant details of the demand raised by the State Government including the payments made by the Petitioner, for consideration of the Commission, in accordance with law.

## GST and Other taxes

126. The Petitioner has sought the recovery of applicable GST/ any taxes and duties, including cess etc., imposed by any statutory / Govt./ municipal authorities, if any, be recovered from the beneficiaries separately as and when paid. Since the Petitioner has not made any claim with regard to the taxes/duties paid, the prayer has not been considered at this stage. However, liberty is granted to the Petitioner to claim the same at the time of truing-up of tariff.

## Summary

127. The annual fixed charges claimed and allowed for the period 2019-24 are summarized below:

***(Rs in lakh)***

| **Annual Fixed Charges** | **2019-20** | **2020-21** | **2021-22** | **2022-23** | **2023-24** |
|---|---|---|---|---|---|
| Claimed | 259095.02 | 254042.90 | 251007.66 | 250663.19 | 247569.42 |
| **Allowed** | **246163.02** | **240856.03** | **236218.99** | **232004.19** | **227455.84** |

128. Petition No. 641/GT/2020 is disposed of in terms of the above.

| | | |
|---|---|---|
| ***Sd/-*** | ***Sd/-*** | ***Sd/-*** |
| **(Ramesh Babu V)** | **(Arun Goyal)** | **(Jishnu Barua)** |
| **Member** | **Member** | **Chairperson** |

## Annexure-1

## WAROD for 2014-19 period

| Sl. no. | Name of the Assets | Gross Block as on 23.02.2017 | Gross Block Upto 28.02.2017 | Total Gross Block as on 31.03.2017 | Total Gross Block as on 31.03.2018 | Total Gross Block as on 31.03.2019 | Depreciation Rates as per CERC's Depreciation Rate Schedule | Depreciation 16-17 | Depreciation 17-18 | Depreciation 18-19 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Land | - | - | - | - | - | 0.00% | - | - | - |
| 1 | Free-hold land | - | - | - | - | - | 0.00% | - | - | - |
| 2 | Lease land | 4857.71 | 4857.71 | 4857.71 | 4857.71 | 4857.71 | 3.34% | 16.45 | 162.25 | 162.25 |
| 3 | Building | - | - | - | - | - | 3.34% | - | - | - |
| 4 | Roads & Bridges | 15262.81 | 15262.81 | 15262.81 | 15467.87 | 15464.72 | 3.34% | 51.68 | 513.20 | 516.57 |
| 5 | Other Roads and Bridges | 9691.39 | 9686.32 | 9686.32 | 9686.32 | 9686.32 | 3.34% | 32.80 | 323.52 | 323.52 |
| 6 | Temporary Building & Structures | 5510.54 | 5510.54 | 5510.54 | 5510.54 | 5510.54 | 100.00% | 558.60 | 4951.94 | - |
| 7 | Dam, Intake & De-Silting Chambers | 417720.59 | 417720.59 | 417822.15 | 447080.51 | 452594.39 | 5.28% | 2236.05 | 22833.43 | 23751.42 |
| 8 | HRT, TRT, Surge Shaft & Pressure shafts | 416654.31 | 416654.31 | 416654.31 | 433158.14 | 434739.10 | 5.28% | 2230.07 | 22435.05 | 22912.49 |
| 9 | Power plant | 110941.06 | 110941.06 | 110978.02 | 116694.43 | 117636.67 | 3.34% | 375.68 | 3802.13 | 3913.33 |
| 10 | Electro-Mechanical Plant & Equipment | 205852.15 | 288554.24 | 288554.24 | 296501.28 | 297654.77 | 5.28% | 1544.44 | 15445.47 | 15685.72 |
| 11 | Right to Use- Forest Land | 1865.14 | 1865.14 | 1865.14 | 1864.95 | 1864.57 | 3.34% | 6.31 | 62.29 | 62.28 |
| 12 | Building-PHC | - | - | - | 4988.70 | 5776.04 | 3.34% | - | 83.31 | 179.77 |
| | **TOTAL** | **1188355.71** | **1271052.73** | **1271191.23** | **1335810.45** | **1345784.81** | | **7052.08** | **70612.59** | **67507.35** |
| | **Weighted Average Rate of Depreciation (%)** | | | | | | | **5.47%** | **5.42%** | **5.03%** |

## WAROD for 2019-24 period

| S. No. | Name of the Assets | Gross Block as on 31.03.2019 | Total Gross Block as on 31-03-2020 | Gross Block as on 31-03-2022 | Depreciation Rates as per CERC's Depreciation Rate Schedule | Depreciation 19-20 | Depreciation 20-21 | Depreciation 21-22 | Depreciation 22-23 | Depreciation 23-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Land | | | | | | | | | |
| 1 | Free-hold land | - | - | - | | | | | | |
| **2** | **Lease land** | 4857.71 | 4857.71 | 4857.71 | 3.34% | 162.25 | 162.25 | 162.25 | 162.25 | 162.25 |
| 3 | Building | - | - | - | 3.34% | - | - | - | - | - |
| 4 | Roads & Bridges | 15464.72 | 15600.06 | 15600.06 | 3.34% | 515.10 | 521.04 | 521.04 | 521.04 | 521.04 |
| 5 | Other Roads and Bridges | 9686.32 | 9686.32 | 9686.32 | 3.34% | 323.52 | 323.52 | 323.52 | 323.52 | 323.52 |
| 6 | Temporary Building & Structures | 5510.54 | 5510.54 | 5510.54 | 100.00% | - | - | - | - | - |
| 7 | Dam, Intake & De-Silting Chambers | 452594.39 | 452515.14 | 453265.14 | 5.28% | 23835.12 | 23892.80 | 23912.60 | 23932.40 | 23932.40 |
| 8 | HRT, TRT, Surge Shaft & Pressure shafts | 434739.10 | 434654.53 | 434654.53 | 5.28% | 22892.95 | 22949.76 | 22949.76 | 22949.76 | 22949.76 |
| 9 | Power plant | 117636.67 | 117612.02 | 117612.02 | 3.34% | 3918.54 | 3928.24 | 3928.24 | 3928.24 | 3928.24 |
| 10 | Electro-Mechanical Plant & Equipment | 297654.77 | 297658.17 | 306658.17 | 5.28% | 15673.79 | 15716.35 | 15953.95 | 16191.55 | 16191.55 |
| 11 | Right to Use- Forest Land | 1864.57 | 1864.57 | 1864.57 | 3.34% | 62.10 | 62.28 | 62.28 | 62.28 | 62.28 |
| 12 | Building-PHC | 5776.04 | 6503.01 | 9440.57 | 3.34% | 203.01 | 217.20 | 266.26 | 315.31 | 315.31 |
| 14 | Non-EPC works | - | - | 1416.00 | 3.34% | - | - | 23.65 | 47.29 | 47.29 |
| | **TOTAL** | **1345784.81** | **1346462.05** | **1360565.61** | | **67586.38** | **67773.44** | **68103.55** | **68433.65** | **68433.65** |
| | **Weighted Average Rate of Depreciation (%)** | | | | | **5.02%** | **5.03%** | **5.06%** | **5.08%** | **5.08%** |