# Order

## On

## Approval of Business Plan and Multi Year Tariff Petition

## For

## M/s Greenko Budhil Hydro Power Pvt. Ltd.

## For

## Fourth Control Period

## (FY 2022-23 to FY 2024-25)

**March 31, 2022**

**Uttarakhand Electricity Regulatory Commission**

**Vidyut Niyamak Bhawan, Near I.S.B.T., P.O. Majra**

**Dehradun – 248171**

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**Before**

# UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

**Petition No.: 02 of 2022**

**And**

**Petition No.:03 of 2022**

**In the Matter of:**

Petition filed by M/s Greenko Budhil Hydro Power Pvt. Ltd. for true-up of AFC for FY 2020-21, Annual Performance Review for FY 2021-22 and ARR for FY 2022-23, FY 2023-24 and FY 2024-25 for Budhil Hydro Station of Greenko Budhil Hydro Power Pvt. Ltd. under Section 62 and 84 of the Electricity Act, 2003 read with the relevant Regulations and guidelines of the Commission.

AND

Petition seeking approval of the Business Plan, under Sections 62 and 86(1)(a) of the Electricity Act, 2003, read with the Regulation 8 of UERC (Terms & Conditions for Determination of Multi Year Tariff) Regulations, 2021 and Regulation 40 of UERC (Conduct of Business) Regulations, 2014, for the Petitioner's 70 MW Budhil hydro-electric power project.

**In the Matter of:**

M/s Greenko Budhil Hydro Power Pvt. Ltd.
Plot No. #1366, Road no. 45,
Jubilee Hills, Hyderabad-500033 ...Petitioner

**AND**

**In the Matter of:**

Uttarakhand Power Corporation Ltd.
Urja Bhawan, Kanwali Road, Dehradun ...Respondent

**Coram**

**Shri D.P. Gairola** **Member (Law)/ Chairman (I/c)**

**Shri M.K. Jain** **Member (Technical)**

**Date of Order: March 31, 2022**

Section 64(1) read with Section 61 and 62 of the Electricity Act, 2003 (hereinafter referred to as "the Act") requires the Generating Companies and the Licensees to file an application for determination of tariff before the Appropriate Commission in such manner and along with such fee as may be specified by the Appropriate Commission through Regulations.

In accordance with the relevant provisions of the Act, the Commission had notified Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Multi Year Tariff) Regulations, 2018 (hereinafter referred to as "UERC Tariff Regulations, 2018") for the third Control Period from FY 2019-20 to FY 2021-22 and Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2021 (hereinafter referred to as "UERC Tariff Regulations, 2021") for the fourth Control Period from FY 2022-23 to FY 2024-25 specifying therein terms, conditions and norms of operation for licensees, generating companies and SLDC.

The Commission had issued the Order dated 27.02.2019 on approval of Business Plan and Multi Year Tariff for the third Control Period from FY 2019-20 to FY 2021-22. Subsequently, the Commission had carried out the Annual Performance Review (APR) for FY 2019-20 and FY 2020-21 vide its Order dated 18.04.2020 and Order dated 26.04.2021.

In compliance with the provisions of the Act and Regulation 8(1) and Regulation 10(1) of UERC Tariff Regulations, 2018 and UERC Tariff Regulations, 2021, M/s Greenko Budhil Hydro Power Pvt. Ltd. (hereinafter referred to as "M/s GBHPL" or "the Petitioner" or "the Generator") filed separate Petitions for approval of its Business Plan for the fourth Control Period from FY 2022-23 to FY 2024-25 (Petition No. 03 of 2022 hereinafter referred to as the "Business Plan Petition") and Multi Year Tariff Petition (Petition No. 02 of 2022 hereinafter referred to as the "MYT Petition") on 22.12.2021. The Petitioner, in its Business Plan Petition, has submitted the Capital Investment Plan, Financing Plan and trajectory of performance parameters for the fourth Control Period. Further, through the MYT Petition, the Petitioner has submitted the detailed calculations of its projected Aggregate Revenue Requirement for the fourth Control Period from FY 2022-23 to FY 2024-25 as per the UERC Tariff Regulations, 2021. Through the MYT Petition, the Petitioner has also requested for true up of FY 2020-21 based on the audited accounts alongwith the APR for FY 2021-22 in accordance with UERC Tariff Regulations, 2018.

The Business Plan Petition filed by the Petitioner had certain infirmities/deficiencies which were informed to the Petitioner vide Commission's letter no. UERC/6/TF-637/2021-22/2022/1015 dated 06.01.2022 and the Petitioner was directed to rectify the said infirmities in the Petition and submit certain additional information necessary for admission of the Business Plan Petition. The Petitioner vide its letter dated 12.01.2022 submitted the information sought by the Commission. Based on the submission dated 12.01.2022 made by the Petitioner, the Commission provisionally admitted the Business Plan Petition for further processing subject to the condition that the Petitioner shall furnish any further information/ clarifications as deemed necessary by the Commission during the processing of the Petition, failing which the Commission may proceed to dispose of the matter as it deems fit based on the information available with it.

The MYT Petition filed by the Petitioner had certain infirmities/deficiencies. The Commission, accordingly, vide its letter no. UERC/6/TF-632/2021-22/2022/1017 dated 06.01.2022 directed the Petitioner to rectify the said infirmities in the Petition and submit certain additional information necessary for admission of the Petition. The Petitioner vide its letter dated 12.01.2022 removed the critical deficiencies. Based on the submission made by M/s GBHPL, the Commission provisionally admitted the MYT Petition for further processing subject to the condition that M/s GBHPL shall furnish any further information/clarifications as deemed necessary by the Commission during the processing of the Petitions, as may be stipulated by the Commission, failing which the Commission may proceed to dispose of the matter as it deems fit based on the information available with it.

This Order, accordingly, relates to the Business Plan Petition and the MYT Petition filed by M/s GBHPL for approval of Business Plan and determination of Aggregate Revenue Requirement (ARR) and MYT for the fourth Control Period from FY 2022-23 to FY 2024-25 and Annual Performance Review for FY 2021-22 alongwith Truing up for FY 2020-21 and is based on the original as well as subsequent submission made by M/s GBHPL during the course of the proceedings and the relevant findings contained in the previous Tariff Orders issued by the Commission.

Tariff determination being the most vital function of the Commission, it has been the practice of the Commission to elaborate in detail the procedure and to explain the underlying principles in determination of tariffs. Accordingly, in the present Order also, in line with past practices, the Commission has tried to elaborate the procedure and principles followed by it in determining the ARR of the generator. The Aggregate Revenue Requirement of M/s GBHPL is recoverable from the beneficiary. It is the endeavour of the Commission, to issue Tariff Orders for M/s GBHPL concurrently with the issue of Order on retail tariffs for UPCL, so that UPCL is able to honour the payment liability towards the Annual Fixed Charges of M/s GBHPL. For the sake of convenience and clarity, this Order has further been divided into following Chapters:

Chapter 1 - Background and Procedural History.

Chapter 2 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Business Plan for fourth Control Period from FY 2022-23 to FY 2024-25.

Chapter 3 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Truing up for FY 2020-21.

Chapter 4 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2021-22.

Chapter 5 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on MYT for fourth Control Period.

# 1. Background and Procedural History

M/s GBHPL is a company incorporated under the Companies Act, 1956. M/s GBHPL is a generating company falling within the definition under sub-section 28 of Section 2 of the Act and has developed a 70 MW (2x35 MW) Hydro Electric power project (hereinafter referred to as the "Project"). The Petitioner had executed a PPA for 70 MW capacity with the distribution licensee, i.e. UPCL and had initiated scheduling of power w.e.f. 01.12.2015. The Petitioner had filed a Petition for determination of tariff for supply of power from its project to UPCL from 01.12.2015 to 31.03.2016 and for the second Control Period from FY 2016-17 to FY 2018-19.

Subsequently, the Commission vide its Tariff Order dated 30.11.2016 had approved the Business Plan and Multi Year Tariff for M/s GBHPL for contracted capacity from 01.12.2015 to 31.03.2016 and for the second Control Period from FY 2016-17 to FY 2018-19. The Commission, on the approval of the Business Plan, approved the Capital Expenditure Plan, Capitalisation Plan and Trajectory of the performance parameters and, in the approval of MYT, approved the Aggregate Revenue Requirement for each year of the second Control Period from FY 2016-17 to FY 2018-19. Subsequently, the Commission had carried out the true up of FY 2015-16 & FY 2016-17 and approved the Aggregate Revenue Requirement for FY 2018-19 vide Tariff Order dated 21.03.2018. Further, the Commission had carried out the true up of FY 2017-18 and approved the ARR for each year of the third Control Period from FY 2019-20 to FY 2021-22 vide Tariff Order dated 27.02.2019. Subsequently, the Commission vide Tariff Order dated 18.04.2020 had carried out the true-up of FY 2018-19 and approved the ARR for FY 2020-21. Thereafter, the Commission vide Tariff Order dated 26.04.2021 had carried out the true-up of FY 2019-20 alongwith with APR for FY 2020-21 and ARR for FY 2021-22.

In accordance with the provisions of the Act and Regulation 8(1) and Regulation 10(1) of UERC Tariff Regulations, 2021, the Generating Companies are required to submit a Business Plan Petition and MYT Petition for determination of Aggregate Revenue Requirement latest by November 30 for the ensuing year before the Commission. M/s GBHPL, vide letter dated 29.11.2021 requested the Commission to grant time extension of three weeks for filing of the True up Petition in compliance with the prevailing UERC Tariff Regulations. The Commission vide letter no. UERC/6/TF-632/2021-22/2021/679 dated 03.12.2021 accepted the request of the Petitioner partly and granted the time extension of 15 days for filing of the Petitions.

Subsequently, M/s GBHPL filed the Business Plan Petition and MYT Petition for determination of ARR/transmission tariff for the fourth Control Period from FY 2022-23 to FY 2024-25 alongwith the true up of expenses for FY 2020-21 based on the audited books of accounts on 22.12.2021. The Commission sought certain information from the Petitioner for the purpose of admittance of the Petition. M/s GBHPL submitted the required information vide its submissions dated 12.01.2022. Based on the submission made by M/s GBHPL, the Commission provisionally admitted the Business Plan Petition and MYT Petition. Further, in order to provide transparency to the process of tariff determination and give UPCL an opportunity to submit their objections/suggestions/comments on the proposals of M/s GBHPL, the Commission sent the copy of the tariff proposals to UPCL, however, the Commission has not received any objections/suggestions/comments from UPCL in this regard till the date of the Order. Meanwhile, based on the scrutiny of the Petition submitted by M/s GBHPL, the Commission had pointed out certain data gaps in the Business Plan Petition & MYT Petition and sought following additional information/clarifications from the Petitioner:

- Month wise Major shut down details for the fourth Control Period;
- Updated status of proposed works for FY 2021-22;
- Trial Balance for FY 2020-21 and upto September, 2021;
- Detailed breakup of Repair and Maintenance;
- Justification for lower generation than saleable energy.

The submissions made by M/s GBHPL in the Petition as well as additional submissions have been discussed by the Commission at appropriate places in the Order along with the Commission's views on the same.

# 2. Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Business Plan Petition for fourth Control Period from FY 2022-23 to FY 2024-25

## 2.1 Statutory Requirement

The Commission had notified UERC Tariff Regulations, 2018 on 14.09.2018 in accordance with the provisions of the Act. The above Regulations were applicable for determination of Tariff for the third Control Period from FY 2019-20 to FY 2021-22. Subsequently, the Commission notified UERC Tariff Regulations, 2021 on 02.10.2021 applicable for the fourth Control Period from FY 2022-23 to FY 2024-25.

## 2.2 Multi-year Framework

As regards the Multi Year Tariff Framework, Regulation 4 of UERC Tariff Regulations, 2021 specifies as follows:

***"4. Multi Year Framework***

*The Multiyear tariff framework shall be based on the following:-*

*a) Business plan submitted by the applicant for the entire control period for the approval of the Commission prior to the beginning of the control period;*

*b) Applicant's forecast of expected ARR for each year of the control period, based on reasonable assumptions and financial & operational principles/parameters laid down under these Regulations submitted alongwith the MYT petition for determination of Aggregate Revenue Requirement and Tariffs for first year of the control period;*

*c) Review of control period ending on 31.03.2022 shall also be taken up alongwith the ARR/Tariff petition for the first year of ensuing control period;*

*d) Trajectory for specific parameters as may be stipulated by the Commission based on submissions made by the Licensee, actual performance data of the Applicants and performance achieved by similarly placed utilities;*

*e) Annual review of performance shall be conducted vis-à-vis the approved forecast and categorization of variations in performance into controllable factors and uncontrollable factors;*

*f) Sharing of excess profit or loss due to controllable and uncontrollable factors as per provisions of these Regulations."*

## 2.3 Business Plan for the fourth Control Period

Regarding Business Plan, Regulation 8 of UERC Tariff Regulations, 2021 specifies as follows:

**"8. Business Plan**

*(1) An Applicant shall submit, under affidavit and as per the UERC Conduct of Business Regulations as amended from time to time, a Business Plan by November 30th, 2021, for the Control Period of three (3) financial years from April 1, 2022 to March 31, 2025;*

*a) The Business Plan for the Generating Company shall be for the entire control period and shall, interalia, contain:*

*(i) Capital investment plan, which shall include details of the investments planned by the Generating Company for existing stations alongwith its cost-benefit analysis, yearly phasing of capital expenditure alongwith the source of funding, financing plan and corresponding capitalisation schedule. This plan shall be commensurate with R&M schemes and proposed efficiency improvements for various plants of the company;*

*(ii) The capital investment plan shall show separately, on-going projects that will spill over into the years under review, and new projects (along with justification) that will commence in the years under review but may be completed within or beyond the tariff period;*

*(iii) The Generating Company shall submit plant-wise details of the capital structure and cost of financing (interest on debt and return on equity), after considering the existing market conditions, terms of the existing loan agreements, risks associated in generation business and creditworthiness;*

*(iv) Details related to major shut down of machines, if any;*

*(v) Trajectory of performance parameters*

*...*

*(2) The Applicant shall also submit the details in respect of its manpower planning for the Control Period as part of Business Plan.*

*(3) The Commission shall scrutinize and approve the business plan after following the due consultation process."*

In accordance with Regulation 8 of the UERC Tariff Regulations, 2021, M/s GBHPL submitted the Business Plan for the fourth Control Period from FY 2022-23 to FY 2024-25. M/s GBHPL in its Business Plan Petition and subsequent submissions has submitted the trajectory of Performance parameters, Capitalization Plan and Financing Plan for the fourth Control Period from FY 2022-23 to FY 2024-25. The Petitioner's submissions and the Commission's analysis on approval of Business Plan submitted by M/s GBHPL for the fourth Control Period are detailed below:

### 2.3.1 Proposed Additional Capitalisation

With regard to additional capitalisation, Regulation 22 of UERC Tariff Regulations, 2021 specifies as follows:

*"22. **Additional Capitalisation and De-capitalisation***

1) *The following capital expenditure within the original scope of work actually incurred or projected to be incurred 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;*
   b) *Works deferred for execution;*
   c) *Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 21(11);*
   d) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
   e) *On account of change in law.*

   *Provided that the details included in the original scope of work along with estimates of expenditure, deferred liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.*

2) *The capital expenditure of the following nature actually incurred 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 order or decree of a court;*
   b) *Change in law;*
   c) *Works deferred for execution within the original scope of work;*
   d) *Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
   e) *Any additional capital expenditure which has become necessary for efficient operation of generating station 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;*
   f) *In case of hydro generating stations, any additional expenditure which has become necessary on*

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

g) *Provided that additional capitalisation on this account would only be allowed if appropriate and adequate insurance cover was available at the time of occurrence of natural calamities referred to above;*

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

i) *In case of replacement of any asset/equipment (e.g. transformer, circuit breaker, C.T.,P.T. etc.) on account of non-performance/failure of the same, the following approach shall be adopted:*

   (i) *In case of non-performance/failure of assets/equipment, it shall be sent to Store for assessment to check whether it is repairable or not at zero cost;*

   (ii) *In case the asset is repairable, then such asset/equipment shall not be retired from Books of Assets.*

   *Provided, proper tracking should be available for the material like location, asset number etc.*

   (iii) *In case the asset is not repairable, then following process shall be carried out:*

   - *The asset is retired from the Books of Assets, at depreciated value.*
   - *Transfer the failed assets/equipments from failed to scrap material.*
   - *Dismantle it into of scrap inventory like iron, brass etc.*
   - *Build up scrap inventory.*

   *Provided, exercise of dismantling of scrap inventory and build-up of scrap inventory shall be done simultaneously. Dismantled scrap value would be decided on the basis of last scrap sale value. Control Account (Dismantling) will be expense account. Difference of Control account, i.e. either profit or loss shall be booked accordingly.*

*(iv) In case a new asset/equipment is issued, then it will be issued at weighted average cost and capitalized respectively, and accordingly, new asset would be created and corresponding entries shall be done in the Books of Accounts.*

*3) In case of de-capitalisation of assets of a generating company or the distribution licensee or the transmission licensee or SLDC, 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.*

*4) Any addition/modification to the existing assets exceeding Rs. 2.50 Crore in case of distribution licensees and Rs. 5 Crore in case of generating companies/transmission licensees shall be taken up only after prior approval of the Commission. The investment approval applications covered under this sub-regulation are excluded from the application of proviso to Sub-regulation (2) of Regulation 10 of UERC (Conduct of Business) Regulations, 2014 in so far as the requirement of submission of documentary evidence with respect to the approval of BoD is concerned."*

The Petitioner has proposed the following additional capitalisation for the fourth Control Period from FY 2022-23 to FY 2024-25:

**Table 2.1: Proposed Additional Capitalisation for FY 2022-23 (Rs. in Crore)**

| S.No | Particulars | Amount |
|---|---|---|
| | **Plant & Machinery** | |
| 1 | Battery Bank 220 V, 800 Ah | 0.25 |
| 2 | Standby DG set, 600 KVA | 0.50 |
| 3 | Isolated bus bar duct from Generator-to-Generator breaker of both units | 2.50 |
| 4 | Hydraulic Oil Filtration Machine | 020 |
| 5 | Local Public Address (PA) System | 0.10 |
| 6 | Balancing Machine | 0.20 |
| | **Civil works & Hydro Mechanical works** | |
| 7 | Concrete road from Security check post to Steel Bridge at Power House | 0.40 |
| 8 | Construction of main Store near workshop at PH | 0.30 |
| 9 | Concreting in GOC of Desilting Chamber Gates and Silt Flushing gates | 0.35 |
| | **Furniture & Fixtures** | |
| 10 | Furniture for New Office Building | 0.20 |
| | **Vehicles** | |
| 11 | Emergency vehicle for DAM-Bolero Camper | 0.10 |
| | **Total for FY 2022-23** | **3.79** |

**Table 2.2: Proposed Additional Capitalisation for FY 2023-24 (Rs. in Crore)**

| S.No | Particulars | Total amount |
|---|---|---|
| | **Plant & Machinery** | |
| 1 | Supply, erection, testing & commissioning of Excitation panel with recommended spares for Unit 2 | 0.55 |
| 2 | New turbine governor for one unit | 1.50 |

| | | |
|---|---|---|
| | **Civil works & Hydro Mechanical works** | |
| 3 | Providing side cladding (Concrete Wall) downstream side in MIV Floor at PH | 0.25 |
| 4 | Providing canopy on Draft Tube Gate operating Hoist structures inside PH GOC | 0.05 |
| 5 | Providing canopy on Surge Shaft and Surge shaft Gate operating Hoist structures. | 0.30 |
| 6 | Providing canopy on Desilting Tank Gate operating Hoist structures inside at GOC of Desilting Chamber Gates and Silt Flushing gates | 0.05 |
| 7 | Invert and Side lining concrete of TRT | 0.50 |
| 8 | Construction of Permanent panel room for Panel of Surge shaft gate at PH | 0.05 |
| 9 | C/o of canopy over power Transformer at PH | 0.40 |
| | **Furniture & Fixtures** | |
| 10 | Bedding for Worker & Security Staff Accommodation | 0.20 |
| 11 | Bedding for New Executive Accommodation | 0.20 |
| | **Total for FY 2023-24** | **5.11** |

**Table 2.3: Proposed Additional Capitalisation for FY 2024-25 (Rs. in Crore)**

| S.No | Particulars | Total amount |
|---|---|---|
| | **Plant & Machinery** | |
| 1 | Air Dryer for HP compressor | 0.10 |
| 2 | Spare Seal Ring (Fixed & Movable) of MIV Seal - 2 set | 0.30 |
| 3 | Fabrication, Supply and Erection of New Lintel Seal 3 no's for Radial gate at DAM | 0.30 |
| 4 | Air Dryer for LP compressor | 0.10 |
| 5 | Retrofitting of Generator Transformer Protection Panel Main and Standby of Unit 1 | 0.25 |
| 6 | Replacement of 30 Ton hoist system (Winch and lifting beam) of Dam Gantry crane | 0.30 |
| | **Civil works & Hydro Mechanical works** | |
| 7 | Providing Permanent kota stone flooring at workshop | 0.10 |
| 8 | Supply and Erection of RIBS and backfilling with concrete at the Junction of Penstock Tunnel with MAT. | 0.30 |
| 9 | C/o Protection Wall for Pot Yard in front of GIS | 0.40 |
| 10 | Construction of Permanent panel room for Panel & OPU of radial gate at Dam | 0.15 |
| 11 | Construction of DG room for Standby DG at PH | 0.08 |
| 12 | Steel Lining of vertical shaft 2 nos of 18 m depth used for SFT gate 1 & 2 cavern | **0.30** |
| | **Total for FY 2024-25** | **2.93** |

The Commission has examined all the submissions made by the Petitioner pertaining to the proposed additional capitalisation for the fourth Control Period and observed that the works are in initial stage or PO/WO are yet to be awarded for the execution of proposed works. Further, in accordance with the above Regulation 22(4), the Petitioner is required to obtain prior approval of the Commission before incurring any capital expenditure exceeding Rs. 5 Crore for the plant. Accordingly, the Commission at this stage does not find prudent to approve any additional capitalisation for the fourth Control Period and additional capitalisation, if any, shall be considered on actual basis subject to prudence check on the basis of provisions of additional capitalisation and de-capitalisation in the prevailing UERC Tariff Regulations.

### 2.3.2 Human Resource Plan

The Petitioner vide it tariff forms submitted that 3 number of employees will be recruited during FY 2022-23 and no recruitment has been planned for FY 2023-24 and FY 2024-25. In the matter, the Commission directed the Petitioner to submit the details of existing employees and those proposed to be recruited. The details submitted by the Petitioner is as follows:

**Table 2.4: Recruitment plan for the fourth Control Period**

| Particulars | FY 2022-23 | FY 2023-24 | FY 2024-25 |
|---|---|---|---|
| Opening no. of employees | 105 | 107 | 107 |
| Recruitment during year | 2 | 0 | 0 |
| Retirement during year | 0 | 0 | 0 |
| Closing no. of employees | 107 | 107 | 107 |

The Commission approved the latest recruitment plan submitted by the Petitioner and the same will be considered for the purpose of determination of normative employee expenses for the fourth Control Period. However, the same will be reviewed at the time of truing up of respective year.

### 2.3.3 Financing Plan

The Petitioner submitted that the capital expenditure to be incurred in FY 2022-23, FY 2023-24 and FY 2024-25 are to be financed by way of equity/internal resources. As mentioned above, the Commission has not considered the additional capitalisation for the fourth Control Period. However, based on the actual admissible additional capitalisation and actual financing, truing up will be done for the purpose of determination of Tariff.

### 2.3.4 Major shutdown plan for the plant

#### 2.3.4.1 Maintenance Plan

The availability of a generating unit is dependent on the outages considered for the unit, both forced and planned. The well thought and planned maintenance program will result in the maximum equipment availability and optimization of maintenance costs. The forced outages are minimized by having a robust maintenance plan, the planned outages are necessary for the smooth functioning of the unit with improved reliability and availability. The Petitioner has submitted the proposed shutdown plan for the project during the control period as given in the Table below:

**Table 2.5 Month wise details of major shutdown of the Plant for the fourth Control Period**

| S. No. | Year | Particular | Start | End | Calendar Days |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1 | FY 2022-23 | Maintenance of Unit #1 and silt removal | 16.11.2022 | 30.12.2022 | 45 |
| 2 | | Annual maintenance of Unit #2 and silt removal | 02.01.2023 | 31.01.2023 | 30 |
| 3 | FY 2023-24 | Capital maintenance of Unit #2 and silt removal | 15.11.2023 | 29.12.2024 | 45 |
| 4 | | Annual maintenance of Unit #1 and silt removal | 02.01.2024 | 31.01.2024 | 30 |
| 5 | FY 2024-25 | Annual maintenance of Unit #1 and silt removal | 10.12.2024 | 30.12.2024 | 21 |
| 6 | | Capital maintenance of Unit #2 and silt removal | 02.01.2025 | 22.01.2025 | 21 |

### 2.3.5 Trajectory of Performance Parameters

#### 2.3.5.1 Design Energy, Auxiliary Energy Consumption and Saleable Primary Energy

The Petitioner in its Petition has projected energy generation from its 70 MW (2x35 MW) Hydro Electric power project for the fourth control period same as that approved for the third Control Period from FY 2019-20 to FY 2021-22.

In the matter, it is pertinent to mention that as per Implementation Agreement dated 22.11.2005, Budhil HEP shall supply 12% of power output for the first 12 years and 18% of the power output from the 13$^{th}$ year onwards to Himachal Pradesh. Further, the plant was put under commercial operation in May, 2012 and accordingly, the plant will complete 12 years in April, 2024 and, thereafter, free power supply from Budhil HEP to Himachal Pradesh will increase from 12% to 18% of power output. Accordingly, the Commission approves saleable primary energy of 246.52 MUs after deducting the normative auxiliary consumption of 1.20% and adjusting home State share, i.e. 12% for FY 2022-23 and FY 2023-24 and saleable energy for FY 2024-25 after adjusting home State share of 18% of 236.43 MUs, which shall be reviewed by the Commission at the time of truing up of the respective year of the fourth Control Period.

#### 2.3.5.2 Normative Annual Plant Availability Factor (NAPAF)

Regulation 47 of UERC Tariff Regulations, 2021 specifies as follows:

"(b) *For existing hydro generating stations:*

*The trajectory for NAPAF fixed by the Commission in case of existing hydro generating stations, in the preceding Control Period would continue to be applicable. However, the NAPAF of the stations undergone RMU would be adjusted accordingly, considering the impact of RMU."*

Further, the Petitioner has submitted that proposed additional capitalisation for the fourth Control Period shall enable it to maintain NAPAF as per UERC Tariff Regulations, 2021, i.e. 85%. Accordingly, the Commission is of the view that the NAPAF of 85% approved in the Tariff Order dated 27.02.2019 for the third Control Period shall continue to be applicable for the fourth Control Period without any change in accordance with the Regulations.

# 3. Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Truing up for FY 2020-21.

Regulation 12 of the UERC Tariff Regulations, 2018 specifies as follows:

***"12. Annual Performance Review***

*(1) Under the multi-year tariff framework, the performance of the Generating Company or Transmission and Distribution Licensees or SLDC, shall be subject to an Annual Performance Review.*

*(2) The Applicant shall under affidavit and as per the UERC Conduct of Business Regulations as amended from time to time, make an application for Annual Performance Review by November 30th of every year;*

*…*

*(3) The scope of the Annual Performance Review shall be a comparison of the performance of the Applicant with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise of following:*

*a) A comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year and truing up of expenses and revenue subject to prudence check including pass through of impact of uncontrollable factors;*

*b) Categorisation of variations in performance with reference to approved forecast into factors within the control of the applicant (controllable factors) and those caused by factors beyond the control of the applicant (un-controllable factors).*

*c) Revision of estimates for the ensuing financial year, if required, based on audited financial results for the previous financial year;*

*d) Computation of the sharing of gains and losses on account of controllable factors for the previous year"*

In its present filing, the Petitioner has submitted the data related to its expenses and revenues for FY 2020-21 for the contracted capacity of the generating station based on the audited accounts and has, accordingly, requested the Commission to carry out the truing up for FY 2020-21 as per UERC Tariff Regulations, 2018 alongwith the sharing of gains and losses.

## 3.1 Impact of Sharing of Gains and Losses on account of Controllable Factors for FY

**2020-21**

Regulation 14 of the UERC Tariff Regulations, 2018 specifies as follows:

***"14. Sharing of Gains and Losses on account of Controllable factors:***

*The approved aggregate gain and loss to the Applicant on account of controllable factors shall be dealt with in the following manner:*

*(a) 1/3rd of such gain or loss shall be passed on as a rebate or allowed to be recovered in tariffs over such period as may be specified in the Order of the Commission;*

*(b) The balance amount of such gain or loss may be utilized or absorbed by the Applicant."*

The above referred regulations requires a comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year and truing up of expenses and revenues subject to prudence check including pass through of impact of uncontrollable factors.

O&M expenses comprises of the major portion of AFC of M/s GBHPL and are within the control of the Petitioner and, moreover, in accordance with UERC Tariff Regulations, 2018 these are controllable expenses. Similarly, in accordance with applicable Tariff Regulations, the variation in working capital requirement is also a controllable factor. Hence, the sharing of gains and losses has been carried out for these expenses. However, the capital related expenses like interest on loans, depreciation etc. have been treated as uncontrollable and, hence, no sharing of losses or gains for the same has been carried out.

### 3.1.1 *Physical Parameters*

#### 3.1.1.1 NAPAF

The Commission vide its Order dated 28.12.2016 on approval of PPA for the Petitioner's plant approved the NAPAF, in accordance with Regulation 3(54) of the UERC Tariff Regulations, 2015, as follows:

*""Normative Availability" or "Target Availability" Or Normative Annual Plant Availability Factor (NAPAF) shall mean Eighty Five (85%) Availability of aggregate Contracted Capacity at the Delivery Point on Contract Year Basis. However, UPCL may vary the Availability Factor on monthly basis as required by UPCL but maintaining the NAPAF at 85% yearly basis."*

As per the prevailing UERC Tariff Regulations, NAPAF is 85% for the hydro plant of the Petitioner. Further, the Commission vide its Multi Year Tariff Order dated 27.02.2019 had also fixed the NAPAF of 85% for the third Control Period from FY 2019-20 to FY 2021-22 in accordance with the Regulations. Relevant extract of the said Order is as follows:

*"Further, the Petitioner has submitted that proposed additional capitalisation for the third Control Period shall enable it to maintain NAPAF as per UERC Tariff Regulations, 2018, i.e. 85%. Accordingly, the Commission is of the view that the NAPAF of 85% approved in the Tariff Order dated 30.10.2016 for second Control Period shall continue to be applicable for the third Control Period without any change in accordance with the Regulations."*

Hence, the Commission is of the view that the NAPAF of 85% approved for the Control Period in Multi Year Tariff Order dated 27.02.2019 shall continue to be applicable for FY 2020-21 without any change.

#### 3.1.1.2 *Design Energy and Saleable Primary Energy*

The Commission in its Tariff Order dated 27.02.2019 on approval of Business Plan and Multi Year Tariff for the third Control Period from FY 2019-20 to FY 2021-22 had approved the Design Energy of 283.54 MUs in accordance with the MYT Regulations, 2018 after making necessary adjustment for mandatory discharge of water. Further, the Commission, in accordance with the implementation agreement signed by the Petitioner with GoHP and normative auxiliary consumption @ 1.20% for the under-ground stations had approved the saleable energy for the project as 246.52 MUs for the first 12 years from CoD. The Commission decides to consider the design energy and saleable primary energy for FY 2020-21 as considered in the Tariff Order dated 27.02.2019.

### 3.1.2 Financial Parameters

#### 3.1.2.1 Capital Cost

Regulation 21 (2) of UERC Tariff Regulations, 2018 specifies as under:

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

a) *The capital cost admitted by the Commission prior to 01.04.2019 duly trued up as on 01.04.2019;*

b) *Additional capitalisation and de-capitalisation for the respective year of tariff as determined in accordance with Regulation 22; and*

c) *Expenditure on account of renovation and modernisation as admitted by this Commission in* *accordance with Regulations 23."*

The Petitioner has claimed Opening GFA amounting to Rs. 531.63 Crore as on 01.04.2020. The Commission, vide its Tariff Order dated 26.04.2021, had approved the Opening GFA and net additional capitalisation amounting to Rs. 528.51 Crore and Rs. 0.20 Crore respectively for FY 2019-20 for the Petitioner's plant. Accordingly, the Commission has considered the approved closing capital cost, i.e. Rs. 528.71 Crore (Rs. 528.51 Crore plus Rs. 0.20 Crore) for FY 2019-20 as opening GFA for the purpose of truing up for FY 2020-21.

**3.1.2.2** ***Additional Capitalisation***

Regulation 22 of UERC Tariff Regulations, 2018 specifies as under:

*"(1) The following capital expenditure within the original scope of work actually incurred or projected to be incurred 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;*

*b. Works deferred for execution;*

*c. Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 21(11);*

*d. Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*

*e. On account of change in law.*

*Provided that the details included in the original scope of work along with estimates of expenditure, deferred liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.*

*(2) The capital expenditure of the following nature actually incurred 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 order or decree of a court;*

*b. Change in law;*

*c. Works deferred for execution within the original scope of work;*

*d. Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*

*e. Any additional capital expenditure which has become necessary for efficient operation of generating station 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;*

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

*Provided that additional capitalisation on this account would only be allowed if appropriate and adequate insurance cover was available at the time of occurrence of natural calamities referred to above;*

*g. xxx*

*h. xxx*

(3) ...”

In the present Petition, the Petitioner has claimed additional capitalisation of Rs. 4.44 Crore for FY 2020-21 which reconciles with the audited annual accounts for FY 2020-21. Details of the same are given in the Table below:

**Table 3.1 Additional Capitalisation claimed for FY 2020-21 (Rs. in Crore)**

| S. No. | Description | Amount | Justification |
|---|---|---|---|
| 1 | Construction of Hazard waste store at Powerhouse | 0.03 | Permanent hazard waste store is required. This was raised as an observation of DoE Govt of HP and Audit. |
| 2 | Construction of canopy in front of Main Access Tunnel & Ventilation Tunnel | 0.06 | Budhil HEP is underground type of powerhouse under hill footing. Rolling stones from hilltop due to rains, snowfall and by the grazing animals or monkeys are falling. Persons coming outside from powerhouse are not aware about this and chances are falling of stones on someone and injury. To avoid any incident/accident canopies are required in front of MAT & VT. |

| | | | |
|---|---|---|---|
| 3 | Establishment of site store inside Powerhouse | 0.10 | Inside powerhouse when maintenance works are going on in late hours main store get closed and locked. To keep the bear minimum spares inside powerhouse to meet out emergencies and cut down the maintenance time site store inside powerhouse is required. |
| 4 | Civil foundation for workshop | 0.38 | The power plant is in remote and tribal area of Himachal Pradesh and there is no well-equipped workshop near to power plant. For every small machining works, modification and repairs we have to go to Pathankot, Jalandhar and Ludhiana which takes long time and plant for very small works remain under shutdown. To cut-down /minimize the back-down time and make plant available for generation mechanical workshop is required at plant. |
| 5 | Laying PCC for workshop floor with soling | 0.03 | |
| 6 | Establishment of steel structure shed for workshop | 1.14 | |
| 7 | Flooring of Service Bay | 0.01 | The existing flooring is not dust proof as per the requirements. Lot of dust is entering in main Machines and control Panels. To make the dust free environment permanent flooring is required. |
| 8 | Construction of Permanent panel room in Gantry Operated Cavern at Dam | 0.03 | Existing panels are kept either in temporary CGI sheets sheds or in open. Due to underground structure, excess humidity/moisture is prevalent in the surrounding area. To maintain healthy environment and protection of electrical and hydraulic operated panels and equipment, permanent room is required. |
| 9 | Construction of protection wall for safety of Tower 2 | 0.53 | Tilt was observed in the Tower after heavy rainfall of Feb 2019. If tower fails to withstand the soil erosion underneath, entire PWD road will be blocked, generation targets may get hampered and the tower will also become a possible threat to the public and property. |
| 10 | 400sqmm cable for Unit #1 of the plant | 0.23 | No spare power cable is available. |
| 11 | Supply, erection, testing & commissioning of Battery charger, Battery bank & DCDB in PH and GIS | 0.42 | Only one set of Battery Bank (850Ah) had been installed in Powerhouse and the same gave supply to control panels, protection tripping and emergency lights. Since no other alternate source of battery bank was available, failure of this battery bank would lead to failure in battery back-up to equipment mentioned above and black-out of the plant. Same would be applicable for battery bank (200Ah) battery bank installed in GIS. In view of above, DOE during their site visit suggested to install stand by D.C. Battery bank with charger for main Power Plant and GIS. |
| 12 | Purchase of workshop machinery | 0.51 | The power plant is located in remote and tribal area of Himachal Pradesh and there is no well-equipped workshop near to power plant. For every small machining works, modification and repairs we have to go to Pathankot, Jalandhar and Ludhiana which takes long time and plant for very small works remain under shutdown. To cut-down /minimize the back-down time and make plant available for generation mechanical workshop is required at plant. |
| 13 | Double girder EOT crane | 0.29 | |
| 14 | Vertical Turning Lathe | 0.54 | |
| 15 | GPS (Global Positioning system time server) | 0.07 | The GPS system is for measuring precise time of all the meters, protection relays and SCADA to make the time synchronisation on GPS based master clock. This ensures that all the devices show the same time. During fault tripping, the timing of actual events and tripping did not match and showed different times. To rectify the time discrepancies, we have installed this new GPS. After |

| | | | |
|---|---|---|---|
| | | | installation, all the events and logs in SCADA system is showing same time as per GPS timing. |
| 16 | Submersible pump | 0.05 | Earlier centrifugal pumps were being used for powerhouse drainage water dewatering. The centrifugal pumps required priming from the bottom with foot valves. They undergo more wear and tear and power consumption is also higher compared to the submersible pumps. The existing Centrifugal pumps are aged and need to be replaced. Submersible Pumps are more suitable from the above-mentioned points of view and therefore is being procured. |
| 17 | Furniture | 0.003 | - |
| **Total** | | **4.44** | |

With regard to the additional capitalisation incurred for FY 2020-21, the Petitioner submitted that it has claimed additional capitalisation under Regulation 22(2) of UERC Tariff Regulations, 2018. The Petitioner also submitted that the project has been in operation for about 10 year and requires strengthening of its civil structure and electrical equipment. The plant is being exposed to geological stresses and, accordingly, needs to be strengthened at regular intervals. The Petitioner also submitted that in order to ensure the efficiency, safety and continuous operation of the plant, the additional capitalisation was required to be incurred.

It is pertinent to mention that the Commission vide its Tariff Order dated 26.04.2021 had not approved any projected additional capitalisation for FY 2020-21 as at that time works were in initial stage or PO/WO were yet to be awarded for the execution of proposed works. Accordingly, the Commission had directed the Petitioner to provide proper justification for the additional capitalisation in accordance with Regulation 22(2) of the UERC Tariff Regulations, 2018 duly substantiated with the technical justification and supported by the documentary evidence carried out by an independent agency at the time of truing up for FY 2020-21.

The Petitioner submitted Purchase Orders/Work Orders, invoices raised by the vendor alongwith the report of the independent agency in support of the additional capitalisation incurred for FY 2020-21. The Commission has gone through all the submissions made by the Petitioner w.r.t. additional capitalisation for FY 2020-21. The Commission also examined the findings and suggestions of the report submitted by the independent agency for the purpose of allowance of additional capitalisation and finds it in accordance with Regulation 22(2) of UERC Tariff Regulations, 2018. The Commission approves the additional capitalisation of Rs. 4.44 Crore as claimed by the Petitioner for the purpose of truing up of FY 2020-21 after prudence check.

Accordingly, based on the above discussions, the details of the trued-up capital cost for FY

2020-21 is as follows:

**Table 3.2: Approved Gross Fixed Assets (Rs. on Crore)**

| S. No. | Particular | Opening GFA | Addition | Closing GFA |
|---|---|---|---|---|
| 1 | Freehold Land | 0.87 | 0.00 | 0.87 |
| 2 | Leasehold Land | 7.18 | 0.00 | 7.18 |
| 3 | Buildings | 60.54 | 2.33 | 62.87 |
| 4 | Other Civil Works | 226.10 | 0.00 | 226.10 |
| 5 | Hydraulic Mechanical Works | 31.72 | 0.00 | 31.72 |
| 6 | Plant & Machinery | 201.02 | 2.11 | 203.13 |
| 7 | Vehicles | 0.32 | 0.00 | 0.32 |
| 8 | Furniture and Fixtures | 0.26 | 0.00 | 0.26 |
| 9 | Office Equipment | 0.62 | 0.00 | 0.62 |
| 10 | Computers | 0.06 | 0.00 | 0.06 |
| 11 | Computer Software | 0.01 | 0.00 | 0.01 |
| | **Total** | **528.71** | **4.44** | **533.15** |

### 3.1.2.3 *Capital Structure*

Regulation 24 of UERC Tariff Regulations, 2018 specifies as under:

*"24. Debt-Equity Ratio*

*(1) For a project declared under commercial operation on or after 1.4.2019, debt-equity ratio shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as normative loan. Where actual equity employed is less than 30%, the actual equity would be used for determination of Return on Equity in tariff computations.*

*...*

*...*

*(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 service in the matter specified in Regulation 22 and 23 of these Regulations.*

*(6) In case of Generating Company, Transmission Licensee, Distribution Licensee, or SLDC where investments have been made prior to 1.4.2019, Debt: Equity Ratio shall be as approved by the Commission in the previous Orders."*

The Commission vide its Tariff Order dated 26.04.2021 had approved Debt-Equity Ratio of 70:30 as on 31.03.2020 which has been considered in the present Petition also. Further, as per the submissions of the Petitioner, entire capitalisation for FY 2020-21 has been done through equity/internal accruals only. In accordance with the aforesaid Regulations, the amount of equity for the purpose of tariff determination has been limited to 30% and equity in excess of 30% has been considered as normative loan for the purpose of additional capitalisation.

Accordingly, based on the above discussion, capital structure as on 01.04.2020 and additional capitalisation for FY 2020-21, is as follows:

**Table 3.3: Financing for capitalisation**

| Particular | Opening Capital structure as on 01.04.2020 | | During FY 2020-21 Approved | | Closing capital structure as on 31.03.2021 | |
|---|---|---|---|---|---|---|
| | (Rs. in Crore) | % | (Rs. in Crore) | % | (Rs. in Crore) | % |
| Debt | 370.08 | 70.00 | 3.11 | 70.00 | 373.19 | 70.00 |
| Equity | 158.62 | 30.00 | 1.33 | 30.00 | 159.96 | 30.00 |
| **Total** | **528.71** | **100.00** | **4.44** | **100.00** | **533.15** | **100.00** |

### 3.1.2.4 Depreciation

Regulation 28 of the UERC Tariff Regulations, 2018 specifies as follows:

*"28. Depreciation*

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

*Provided that depreciation shall not be allowed on assets funded through Consumer Contribution and Capital Subsidies/Grants.*

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

*...*

*(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix - II to these Regulations.*

*..."*

The Petitioner submitted that the depreciation has been charged at the rates specified by the Commission in UERC Tariff Regulations, 2018 for FY 2020-21. The Petitioner has claimed depreciation of Rs. 26.55 Crore for FY 2020-21.

As mentioned in the Tariff Order dated 30.11.2016, the Commission had considered additional capitalisation pertaining to Foundation work, grouting, works for De-silting chamber, Head Race Tunnel, Road to dam etc. under the head of 'Other civil works' and had worked out depreciation accordingly. In the present Petition, the Commission has followed the same methodology. Accordingly, allowable depreciation works out to Rs. 26.68 Crore for FY 2020-21 based on the prevailing UERC Tariff Regulations.

Details of the depreciation as approved in Tariff Order, claimed by the Petitioner and trued up for FY 2020-21 is as follows:

**Table 3.4: Depreciation approved for FY 2020-21 (Rs. in Crore)**

| Particular | Approved in Tariff Order dated 18.04.2020 | Claimed | Approved |
|---|---|---|---|
| Depreciation | 26.57 | 26.55 | 26.68 |

#### 3.1.2.5 *Return on Equity (RoE)*

Regulation 26 of the UERC Tariff Regulations, 2018 specifies as follows:

*"26. Return on Equity*

*(1) Return on equity shall be computed on the equity base determined in accordance with Regulation 24.*

*Provided that, Return on Equity shall be allowed on account of allowed equity capital for the assets put to use at the commencement of each financial year.*

*(2) Return on equity shall be computed on at the base rate of 15.50% for thermal generating stations, transmission licensee, SLDC and run of the river hydro generating station and at the base rate of 16.50% for the storage type hydro generating stations and run of river generating station with pondage and distribution licensee on a post-tax basis."*

The Petitioner has claimed Return on Equity amounting to Rs. 26.32 Crore for FY 2020-21 on average equity for FY 2020-21. As per the aforesaid regulation, the Commission has allowed Return on Equity at the rate of 16.50% on the opening admissible normative equity of Rs. 158.62 Crore which works out to Rs. 26.17 Crore for FY 2020-21 in accordance with Regulation 26 of UERC Tariff Regulations, 2018. Details of the Return on Equity claimed and trued up for FY 2020-21 is as follows:

**Table 3.5 : Return on Equity approved for FY 2020-21 (Rs. in Crore)**

| Particular | Approved in Tariff Order dated 18.04.2020 | Claimed | Approved |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Return on Equity | 26.16 | 26.32 | 26.17 |

### 3.1.2.6 *Interest on Loans*

Regulation 27 of the UERC Tariff Regulations, 2018 specifies as follows:

*"27. Interest and finance charges on loan capital and on Security Deposit*

*(1) The loans arrived at in the manner indicated in Regulation 24 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 year of the Control Period shall be deemed to be equal to the depreciation allowed for that year*

*...*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio of the previous year after providing appropriate accounting adjustment for interest capitalised:*

*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 or the distribution system or SLDC does not have actual loan, then the weighted average rate of interest of the generating company or the Transmission Licensee or the Distribution Licensee or SLDC 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.*

*…"*

The Petitioner submitted that for the purpose of calculation of interest on loan, normative debt has been considered as 70% of additional capitalisation and, accordingly, it has claimed interest on normative loan of Rs. 18.18 Crore for FY 2020-21 for the purpose of truing up based on the weighted average rate of interest of 11% p.a., i.e. interest rate of Non-Convertible debentures.

The Commission had approved the normative net closing loan of Rs. 176.22 Crore for FY 2019-20 in its Tariff Order dated 26.04.2021. The same has been considered as normative net opening loan for FY 2020-21. Further, 70% of the additional capitalisation approved for FY 2020-21 has been considered as addition to normative loan which works out to Rs. 3.11 Crore and repayment has been considered equivalent to admissible depreciation, i.e. Rs. 26.68 Crore. Hence, interest on normative loan works out to Rs. 18.09 Crore on average normative loan amounting to Rs. 164.43 Crore considering the interest rate @ 11% p.a.

Further, it has been observed from the submission of the Petitioner that the Petitioner has considered Rs. 0.17 Crore pertaining to 'Bank & Other charges' under the head of Corporate expenses in A&G expenses. The Commission is of the view that such expenses are part of finance charges on loan capital. Accordingly, the amount of Rs. 0.17 Crore pertaining to Bank Charges for FY 2020-21, actually incurred by the Petitioner as per the audited accounts, has been allowed by the Commission as a part of the finance cost of FY 2020-21 on actual basis.

Based on the above, details of the interest claimed and allowed during the truing up for FY 2020-21 is given in the Table below:

**Table 3.6: Interest on Normative Loan for FY 2020-21 (Rs. in Crore)**

| Particular | Approved in Tariff Order dated 18.04.2020 | Claimed by Petitioner | Approved |
|---|---|---|---|
| Interest on Normative Loan | 17.91 | 18.18 | 18.26* |

**inclusive of bank charges actually incurred as per audited accounts.*

### 3.1.2.7 *Operation & Maintenance (O&M) Expenses*

***Truing up of O&M Expenses for FY 2020-21***

Regulations 48 of UERC Tariff Regulations, 2018 specifies as follows:

***"48 Operation and Maintenance Expenses***

*...*

***(2) For Hydro Generating Stations***

*(a)* ***For Generating Stations in operation for more than five years preceding the Base Year***

*The operation and maintenance expenses for the first year of the control period will be approved by the Commission taking in to account the actual O&M expenses for last five years till base year, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, subject to prudence check and any other factors considered appropriate by the Commission.*

*(b)* ***For Generating Stations in operation for less than 5 years preceding the base year:***

*In case of the hydro electric generating stations, which have not been in existence for a period of five years preceding the base year, i.e. FY 2017-18, the operation and maintenance expenses for the base year of FY 2017-18 shall be fixed at 4% and 2.5% of the actual capital cost (excluding cost of* *rehabilitation & resettlement works) as admitted by the Commission, for stations less than 200 MW projects and for stations more than 200 MW respectively, for the first year of operation and shall be escalated from the subsequent year in accordance with the escalation principles specified in clause (e) below.*

*(c)* ***For Generating Stations declared under commercial operation on or after 1.4.2019.***

*In case of new hydro electric generating stations, i.e. the hydro electric generating stations declared under commercial operation on or after 1.4.2019, the base operation and maintenance expenses for the year of commissioning shall be fixed at 4% and 2.5% of the actual capital cost (excluding cost of rehabilitation & resettlement works) as admitted by the Commission, for stations less than 200 MW projects and for stations more than 200 MW respectively and shall be escalated from the subsequent year in accordance with the escalation principles specified in clause (e) below.*

*(d) Post determination of base O&M Expenses for the base year, i.e. FY 2017-18, the O&M expenses for the nth year and also for the year immediately preceding the Control Period, i.e. 2018-19 shall be approved based on the formula given below:-*

*O&Mn = R&Mn + EMPn + A&Gn*

*Where –*

*O&Mn – Operation and Maintenance expenses for the nth year;*

*EMPn – Employee Costs for the nth year;*

*R&Mn – Repair and Maintenance Costs for the nth year;*

*A&Gn – Administrative and General Costs for the nth year;*

*The above components shall be computed in the manner specified below:*

*EMPn = (EMPn-1) x (1+Gn) x (1+CPIinflation)*

*R&Mn = K x (GFA n-1 ) x (1+WPIinflation) and*

*A&Gn = (A&Gn-1) x (1+WPIinflation)+ Provision*

*Where -*

*EMPn-1 – Employee Costs for the (n-1)th year;*

*A&G n-1 – Administrative and General Costs for the (n-1)th year;*

*Provision: Cost for initiatives or other one-time expenses as proposed by the Generating Company and approved by the Commission after prudence check.*

*'K' is a constant to be specified by the Commission %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on Generating Company's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;*

*Provided that for the projects whose Renovation and Modernisation has been carried out, the R&M expenses for the nth year shall not exceed 4% of the capital cost admitted by the Commission.*

*CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;*

*WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;*

*GFAn-1 – Gross Fixed Asset of the Generating Company for the n-1th year;*

*Gn is a growth factor for the nth year and it can be greater than or less than zero based on the actual performance. Value of Gn shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on Generating Company's filings, benchmarking and any other factor that the Commission feels appropriate*

*Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.*

*Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.*

*(e) O&M expenses determined in sub-Regulation 2(b) & 2(c) above, shall be escalated for subsequent years to arrive at the O&M expenses for the control period by applying the Escalation factor (EFk) for a particular year (Kth year) which shall be calculated using the following formula:*

$$EF_k = 0.55xWPI_{Inflation} + 0.45xCPI_{Inflation}$$

*(f) In ,m case of multi-purpose hydroelectric stations, with irrigation, flood control and power components, the O&M expenses chargeable to power component of the station only shall be considered for determination of tariff."*

The Petitioner has claimed O&M expenses amounting to Rs. 21.39 Crore inclusive of proportionate manpower expenses and common administrative expenses incurred at headquarter amounting to Rs. 1.69 Crore for FY 2020-21. The Commission observed that the Petitioner has calculated the O&M expenses pertaining to indirect manpower deployed at headquarter and administrative expenses in accordance with UERC Tariff Regulation, 2021 for FY 2020-21 by escalating the same with CPI or WPI inflation. In the matter, it is pertinent to mention that FY 2020-21 falls under third Control Period and, therefore, O&M expenses for the third Control Period shall be worked out in accordance with the provision of UERC Tariff Regulations, 2018.

The Commission carried out the prudence check of the actual O&M expenses incurred by the Petitioner for FY 2020-21 in accordance with the UERC Tariff Regulations, 2018. The actual details of O&M expenses for FY 2020-21 are given in the Table below:

**Table 3.7: Actual O&M expenses for FY 2020-21**

| S. No. | Particulars | Rs. in Crore |
|---|---|---|
| 1. | Repairs & Maintenance Expenses | 4.70 |
| 2. | Employee Expenses (inclusive of proportionate manpower of headquarter amounting to Rs. 1.25 Crore) | 10.05 |
| 3. | Administrative & General Expenses (inclusive of proportionate administrative expenses of headquarter amounting to Rs. 0.44 Crore) | 6.64 |
| | **Total** | **21.39** |

With regard to admissible O&M expenses for FY 2020-21, the Commission analysed audited annual accounts alongwith the Trial Balance for FY 2020-21. The Commission observed that the O&M claimed by the Petitioner are inclusive of Rs. 2.17 Crore pertaining to Donation and Rs. 0.04 Crore under the head of advertisement as a part of A&G expenses as per audited annual accounts for FY 2020-21. With regard to advertising expenses, the Petitioner submitted that the said expenses have been incurred for availing Project Site Photography services and accounted as advertisement expenses. These were incurred to showcase Greenko group's capabilities at various events and investor meets organised by Government and other industry bodies like CII, FICCI etc., to help the Investor community and Potential beneficiaries understand its execution and operating capabilities. With regard to Donation and advertisement expenses, the Commission is of the view that the same cannot be allowed to be passed on to the consumers of the State. Any such activity by the Petitioner must be carried out by its own resources as it would be claiming tax deductions on the same. Hence, the same are disallowed.

Further, with regard to employee expenses, the Commission has followed the same methodology as followed by the Commission in Tariff Order dated 26.04.2021. The relevant extract of the said Order is as follows:

*"The Commission does not find any reason to allocate entire employee cost of aforesaid six employees working at the headquarter of the Petitioner when they are involved in other business operations of the group company as was evident from their offer letters. In the matter, the Commission is of the view that it would be appropriate to apportion the indirect manpower cost deployed at headquarter level on the basis of operating capacity handled by Greenko group. Accordingly, the Commission directed the Petitioner to submit the manpower cost of the employees deployed at the headquarter level. The Petitioner vide email dated 12.04.2021 submitted the requisite details. In the Present Petition, the Commission has reworked the employee expenses allowed for FY 2018-19 and allowed the incremental cost on account of apportionment of indirect manpower cost deployed at headquarter level alongwith the O&M cost worked out for FY 2019-20. The actual O&M expenses of the Petitioner after carrying out the prudence check by the Commission works out to Rs. 17.03 Crore."*

Accordingly, actual employee expenses of Rs. 6.56 Crore for FY 2020-21 has been considered after considering proportionate manpower expenses at headquarter level on the basis of operating capacity handled by Greenko group and adjusting salaries of six number of employees allocated to Budhil HEP by the Petitioner. Further, the Petitioner has requested the Commission to allow apportioned administrative expenses incurred at headquarter on the basis of operating capacity of the Greenko group as administration at headquarter is also engaged in Budhil HEP work. The Commission accepts the request of the Petitioner and observed that the administrative expenses incurred at headquarter amounted to Rs. 23.19 Crore and, accordingly, proportionate administrative expenses towards Budhil HEP works out to Rs. 0.38 Crore for FY 2020-21.

For the purpose of truing up of O&M expenses, the Commission has adopted the same methodology in the present Petition as adopted in the previous Tariff Orders dated 27.02.2019, Order dated 18.04.2020 and Order dated 26.04.2021 for determination of normative O&M expenses. Accordingly, the escalation rates have been computed on the basis of actual CPI Inflation and WPI Inflation for FY 2020-21 which works out to 4.04% in accordance with Regulation 48(2)(e) of UERC Tariff Regulations, 2018. The Commission has escalated the O&M expenses approved for FY 2019-20, i.e. Rs. 14.39 Crore by the escalation factor to compute normative O&M expenses for FY 2020-21 which works out to Rs. 14.97 Crore. The detail of O&M expenses claimed and approved by the Commission is as follows:

**Table 3.8: O&M expenses for FY 2020-21 (Rs. Crore)**

| Particular | Claimed | Actual after prudence check | Normative O&M expenses worked out |
|---|---|---|---|
| Normative O&M expenses | 21.39 | 15.45 | 14.97 |

O&M expenses have been considered as controllable factor and are subject to sharing of gains and losses. Further, as the Commission has applied UERC Tariff Regulations, 2018 for the purpose of computation of normative O&M expenses, sharing of gain/loss on account of controllable factors needs to be done as per UERC Tariff Regulations, 2018. Accordingly, O&M expenses will have to be shared in the manner given in the Table below:

**Table 3.9: O&M Expenses Approved After Sharing of Gains and Losses for FY 2020-21 (Rs. Crore)**

| Particulars | Actual after prudence check | Normative as per Regulations | Efficiency loss | Generator Share | Recovery through Tariff | O&M approved after sharing |
|---|---|---|---|---|---|---|
| | A | B | C=B-A | D=2/3xC | (E)=1/3xC | F= A+D |
| O&M Expenses | 15.45 | 14.97 | (0.48) | (0.32) | (0.16) | 15.13 |

### 3.1.2.8 *Interest on Working Capital*

The Petitioner has submitted that it has availed interest free loans from Group Company to meet out the requirement of working capital and no actual expenditure has been incurred towards interest on working capital. With respect to working capital and interest thereon, Regulation 33 of the UERC Tariff Regulations, 2018 specifies as under:

"33. ***Interest on Working Capital***

*Rate of interest on working capital shall be on normative basis and shall be equal to the State Bank Advance Rate (SBAR) of State Bank of India as on the date on which the application for determination of tariff is made.*

*(1) Generation:*

*...*

*b) In case of hydro power generating stations, working capital shall cover:*

*(i) Operation and maintenance expenses for one month;*

*(ii) Maintenance spares @ 15% of operation and maintenance expenses; and*

*(iii) Receivables equivalent to two months of annual fixed charges.*

*..."*

#### *3.1.2.8.1 One Month O&M Expenses*

The Commission has trued up the annual O&M expense for FY 2020-21. Based on the approved O&M expenses, one month's trued up O&M expenses have been worked out for determining the working capital requirement.

#### *3.1.2.8.2 Maintenance Spares*

The Commission has considered the maintenance spares in accordance with the prevailing UERC Tariff Regulations for FY 2020-21. The Commission has determined the plant wise maintenance spares requirement @ 15% of the trued-up O&M Expenses for FY 2020-21.

#### *3.1.2.8.3 Receivables*

UERC Tariff Regulations, 2018 envisage receivables equivalent to two months of annual fixed charges as an allowable component of working capital. Aggregate Revenue Requirement (AFC) includes O&M expenses, depreciation, interest on loan, return on equity and interest on working capital. The Commission has considered the receivables for two months based on the trued up AFC for FY 2020-21.

As regards the interest on working capital, Regulation 33 of UERC Tariff Regulations, 2018 specifies rate of interest on working capital to be taken equal to the State Bank Advance Rate (SBAR) of State Bank of India as on the date on which the application for determination of tariff is made. The Commission has considered the prevailing State Bank Advance Rate (SBAR) of State Bank of India, i.e. 12.20% for computing the Interest on Working Capital.

Accordingly, the normative Interest on working Capital for FY 2020-21 as approved by the Commission is as shown in the Table below:

**Table 3.10: Interest on working capital approved by the Commission for FY 2020-21 (Rs. in Crore)**

| Particular | Approved in Tariff Order dated 18.04.2020 | Claimed | Approved |
|---|---|---|---|
| O&M Expenses | 1.24 | 1.78 | 1.25 |
| Maintenance spare | 2.23 | 3.21 | 2.25 |
| Receivables | 14.66 | 14.34 | 14.45 |
| **Total** | **18.13** | **19.33** | **17.94** |
| **IWC** | **2.48** | **2.65** | **2.19** |

Further, the UERC Tariff Regulations, 2018 specify for sharing of gains/losses due to controllable factors and as per Tariff Regulations, variation in working capital requirements is a controllable factor. Further, as mentioned above, as the Petitioner has availed interest free loan for working capital, actual interest on working capital has been considered nil. Accordingly, entire interest on working capital worked out as per Regulations is a gain and the Commission has shared the gain in accordance with the provisions of UERC Tariff Regulations, 2018.

The interest on working capital after sharing the gains is as given in Table below:

**Table 3.11: Interest on Working Capital for FY 2020-21 after Sharing of Gains (Rs. Crore)**

| Particulars | Actual | Normative as Trued up | Efficiency gain/loss | Generator Share | Rebate in Tariff | IWC approved after sharing |
|---|---|---|---|---|---|---|
| | A | B | C=B-A | D=2/3xC | E=1/3xC | F=A+D |
| IWC | 0.00 | 2.19 | 2.19 | 1.46 | 0.73 | 1.46 |

### 3.1.2.9 *Non Tariff Income*

Regulation 46 of UERC Tariff Regulations, 2018 specifies as follows:

*"**46. Non Tariff Income***

*The amount of non-tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Charges in determining the Net Annual Fixed Charges of the Generating Company.*

*Provided that the Generating Company shall submit full details of its forecast of non tariff income to the Commission in such form as may be stipulated by the Commission from time to time.*

*The indicative list of various heads to be considered for non tariff income shall be as under:*

*a) Income from rent of land or buildings;*

*b) Income from sale of scrap;*

*c) Income from statutory investments;*

*d) Interest on delayed or deferred payment on bills;*

*e) Interest on advances to suppliers/contractors;*

*f) Rental from staff quarters;*

*g) Rental from contractors;*

*h) Income from hire charges from contactors and others;*

*i) Income from advertisements, etc.;*

*j) Any other non- tariff income.*

*Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated business of the Generating Company shall not be included in Non-Tariff Income."*

The Petitioner has claimed Rs. 0.95 Crore as Non-Tariff Income for FY 2020-21. However, the Commission observed that there is a Non-Tariff Income of Rs. 2.70 Crore as per the audited accounts for FY 2020-21 which is inclusive of Rs. 1.70 Crore pertaining to Interest on fixed deposits, Rs. 0.995 Crore related to insurance claim received and Rs. 0.0024 Crore towards other non-operating income.

The Petitioner submitted that interest earning investments as reflected in the financial statements of the Petitioner for FY 2020-21 have been made out of the retained earnings of the entity. The Petitioner further submitted that it did not distribute any dividend to its shareholders. Hence, the non-tariff income on account of investments made from the retained earnings may be allowed to be retained by the Petitioner.

As mentioned above, other income of Rs. 2.70 Crore is inclusive of interest on deposits amounting to Rs. 1.70 Crore as per audited books of accounts for FY 2020-21. The Commission analysed the investment details submitted by the Petitioner and RoE approved by the Commission for respective years. The Commission observed that the Petitioner had claimed that post CoD the capitalization have been funded entirely through internal resources and also that it is investing its funds on rolling basis based on surplus funds available with it. Accordingly, the Commission worked out the average investment amounting to Rs. 52.79 Crore made by the Petitioner in FY 2020-21 which is less than the average RoE available with the Petitioner for FY 2020-21 after adjusting expenditure incurred for procurement of assets and payments towards CSR and advertisements. Accordingly, the Commission allows the interest on fixed deposits made out of RoE amounting to Rs. 1.70 Crore.

Accordingly, for the purpose of true up for FY 2020-21, the Commission considers the Non-Tariff Income of Rs. 1.00 Crore *(Rs. 0.995 Crore and Rs. 0.0024 Crore)* excluding actual interest earned from fixed deposits made out of RoE.

### 3.1.2.10 *Aggregate Revenue Requirement for FY 2020-21*

Based on the above analysis, the Commission has worked out the trued up AFC for FY 2020-21. The summary of the same is as follows:

**Table 3.12: Annual Fixed Charges for FY 2020-21 approved by the Commission (Rs. in Crore)**

| Particulars | Tariff Order dated 20.04.2020 | Claimed | Allowable |
|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Depreciation | | 26.57 | 26.55 | 26.68 |
| Interest on Loan & Financial Cost | | 17.91 | 18.18 | 18.26 |
| Return on Equity | | 26.16 | 26.32 | 26.17 |
| O&M Expenses | | 14.85 | 21.39 | 15.13 |
| Interest on Working Capital | | 2.48 | 2.65 | 1.46 |
| Less: Non-Tariff Income | | 0.00 | 0.95 | 1.00 |
| **Total** | | **87.98** | **94.14** | **86.70** |

Accordingly, trued-up AFC for FY 2020-21 works out to Rs. 86.70 Crore after sharing of gain/loss on account of controllable factors. Recovery of AFC for FY 2020-21 has been envisaged through two-part tariff, i.e. through Capacity Charges linked with NAPAF & PAFM and Energy Charges linked with generation.

With regard to the recovery of Capacity Charges for FY 2020-21, the Petitioner submitted that actual Plant Availability Factor during FY 2020-21 was 83.43% which is lower than the NAPAF of 85% due to extended maintenance as leakage was observed from both MIV units which required urgent rectification. Further, PGCIL had also requested for shutdown for few days to shift a portion of the conductor of 220 kV D/C line between Chamba and Chamera-III to newly erected tower. The Petitioner submitted that the PAF for FY 2020-21 shall be 87.59% if the Scheduled Capacity is considered as Declared Capacity and requested the Commission to carry out the true-up of FY 2020-21 considering NAPAF for the year.

With regard to considering NAPAF, it is pertinent to mention that any variation to performance parameters shall be a controllable factor. Further, norms specified by the Commission vide its Regulations are an outcome of detailed deliberation with the stakeholders and is determined after following a due procedure. Therefore, reviewing the norms dilutes the very sanctity of the Regulations and due procedures followed for determination of the same. Further, one of the most important goals of MYT framework is to provide regulatory certainty and, therefore, dilution of norms is not prudent.

The Commission has gone through the correspondence done by the Petitioner with PGCIL regarding shutdown due to shifting of conductors of 220 kV D/C line between Chamba and Chamera-III and is of the opinion that the same was beyond the control of the Petitioner and hence, uncontrollable. However, as far as leakage in both MIV is concerned, the Commission is of the view that such leakage is within control of the Petitioner and should have been proper taken care of during annual maintenance.

Based on the above discussion, the Commission has restated the PAFY during the year for the purpose of recovery of fixed cost considering the actual operation period after adjusting uncontrollable events that are beyond the control of the Petitioner after prudence check. For the period, during which the plant was operating for the whole month without any force majeure event, the Commission has considered the actual PAF approved by SLDC and in the months wherein the plant was shut down due to any event beyond the control of the Petitioner, the Commission has restated the PAFM by excluding those events. Accordingly, the Commission has restated the actual PAFY of 83.43% to 84.39% for FY 2020-21 for recovery of Capacity Charges.

Further, as discussed earlier, trued-up AFC for FY 2020-21 works out to Rs. 86.70 Crore after sharing of gain/loss on account of controllable factors against the actual recovered amount of Rs. 85.97 Crore by the Petitioner from UPCL under the two-part tariff. The Petitioner has supplied 240.32 MUs during FY 2020-21 which is less than the saleable energy of 246.52 MUs. Accordingly, based on the above discussions, the summary of truing up for FY 2020-21 after considering the actual performance achieved in FY 2020-21 is shown in the Table below:

**Table 3.13: Summary of net truing-up for FY 2020-21 (Rs. Crore)**

| AFC to be recovered from UPCL (Rs. in Crore) | Capacity Charges (Rs. in Crore) | NAPAF (%) | Actual PAFY (%) | Capacity Charges allowableh (Rs. in Crore) | Capacity Charges after sharing | Saleable Energy (MU) | Actual Energy Considered (MU) | Per unit rate approved (Rs./kWh) | Allowable Energy Charge (Rs. in Crore) | Secondary Energy (MU) | Sec. Energy Rate (Rs./kWh) | Total Sec Energy charges (Rs. in Crore) | Total allowable (EC+CC) (Rs. in Crore) | Total Recovered from UPCL (Rs. in Crore) | Turing-up impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 86.70 | 43.35 | 85% | 84.39% | 43.04 | 43.25 | 246.52 | 240.32 | 1.758 | 42.26 | 0.00 | 0.00 | 0.00 | 85.41 | 85.97 | (0.561) |

Thus, the Commission has computed the net surplus of Rs. 0.561 Crore for FY 2020-21 on the account of sharing of gains and losses and considering the actual performance parameters and the same is to be refunded to UPCL. Based on the above, the total amount refundable to UPCL by the Petitioner alongwith the carrying cost is as summarised in the Table given below:

**Table 3.14: Details of Surplus with Carrying Cost for FY 2020-21 (Rs. Crore)**

| Particulars | FY 2020-21 | FY 2021-22 |
|---|---|---|

| | | |
|---|---|---|
| Opening (Surplus)/Gap | - | (0.595) |
| True Up Amount | (0.561) | - |
| Carrying Cost | (0.034) | (0.073) |
| Closing (Surplus)/Gap | (0.595) | (0.668) |
| Interest Rate | 12.20% | 12.20% |

Accordingly, the surplus alongwith carrying cost works out to Rs. 0.668 Crore. **The Commission directs the Petitioner to refund the excess amount recovered on account of truing up for FY 2020-21 in 12 equal monthly instalments commencing from April 2022 to March 2023.**

# 4. Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2021-22

## 4.1 Annual Performance Review

The Commission, vide its MYT Order dated 27.02.2019, approved the Tariff for the third Control Period, i.e. FY 2019-20 to FY 2021-22 for the Petitioner's plant. Subsequently, the Commission vide Tariff Order dated 26.04.2021 approved the ARR for FY 2021-22. Regulation 12(3) of the UERC Tariff Regulations, 2018 stipulates that under the MYT framework, the performance of the generating company shall be subject to Annual Performance Review.

Regulation 12(3) of the UERC Tariff Regulations, 2018 specifies as under:

*"The scope of Annual Performance Review shall be a comparison of the performance of the Applicant with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise the following:-*

*a) A comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year and truing up of expenses and revenue subject to prudence check including pass through of impact of uncontrollable factors;*

*b) Categorisation of variations in performance with reference to approved forecast into factors within the control of the applicant (controllable factor) and those caused by factors beyond the control of the applicant (un-controllable factors);*

*c) Revision of estimates for the ensuing financial year, if required, based on audited financial results for the previous financial year;*

*d) Computation of sharing of gains and losses on account of controllable factors for the previous year."*

The Commission vide its Tariff Order dated 26.04.2021, had approved the AFC for FY 2021-22 based on the approved capital cost as on 31.03.2020. The Petitioner, in its present Petition, has proposed revision of estimates for FY 2021-22 based on the audited accounts for FY 2020-21 and revised estimates for FY 2021-22.

The Petitioner has proposed the following additional capitalisation for FY 2021-22:

**Table 4.1: Proposed Additional Capitalisation for FY 2021-22**

| S. No. | Particular | Rs. (in Crore) | Remark |
|---|---|---|---|
| 1. | Supply, erection testing & commissioning of Generator protection panel (Unit 2) | 0.25 | Unit # 2 is running with single protection and there is no redundancy. The measure will help in reducing generation loss in case of failure of main protection panel. |
| 2. | Supply, erection, testing & commissioning of Line protection panel | 0.15 | Presently the Line is with single protection and there is no redundancy. The measure will help mitigate generation loss in case of failure of main protection panel. |
| 3. | Supply, erection testing & commissioning of Bus bar protection panel | 0.15 | Presently the bus-bar is with single protection and there is no redundancy. The measure will help mitigate generation loss in case of failure of main protection panel. |
| 4. | Manufacturing of new spare one runner | 1.20 | There is only one spare runner supplied by OEM with original scope of supply. Since the project is commissioned for about seven years back & wear out runner required replacement. If both the runner required are to be replaced in same year annual maintenance period then after replacement, dismantled runner need to be sent for refurbishment and it shall require minimum three month of machine downtime. By purchasing the new spare runner, the shut-down downtime period for annual maintenance will be reduced and thus avoiding generation loss. |
| 5. | Air duct for cable tunnel | 0.08 | Cables are heating up when machines are overloaded. The length of cable tunnel is more than 100m & heat dissipated have no proper ventilation system & fresh air suction & hot air exhaust provision. To maintain the cables operating temperature and to mitigate potential cable failure due to over-heating, proper ventilation is required. |
| 6. | Replacement of existing drainage pipe from drainage to service way | 0.05 | The existing drainage pipes have been in service for more than ten years and thus these old pipes are rusted and worn out. Replacement will help ensure seamless drainage and thus avoid water overflow in the plant operation area which is essential for plant operation. |
| 7. | Protection work & site development back side GIS Building & Transformer yard | 0.45 | Due to flash floods, left bank area of Ravi river along GIS building and Transformer yard got eroded and will become unsafe in near future. To avoid further damages and interruption in power generation due to damage to GIS building and Transformer yard, this measure is required. |

**Table 4.1: Proposed Additional Capitalisation for FY 2021-22**

| S. No. | Particular | Rs. (in Crore) | Remark |
|---|---|---|---|
| 8. | Access road to Dam Site soling and concreting from security check post to dam top | 0.36 | There is no alternative road and this single road gets damaged/blocked in rains. Material transportation and manpower movement during rainy and winter seasons gets hampered which hampers the annual maintenance activities during lean season and O&M activities during peak season. As a permanent solution, protection work and black toping with proper soiling and bearing/PCC road is required. |
| 9. | Construction of Permanent panel room in Gantry Operated Cavern at PH | 0.12 | Existing panels are kept either in temporary CGI sheets sheds or in open. Due to underground structure, excess humidity/moisture is prevalent in the surrounding area. To maintain healthy environment and protection of electrical and hydraulic operated panels and equipment, permanent room is required. |
| 10. | Construction of Store room at Dam site | 0.08 | There is no store for key equipments at the Dam site. The material is kept in the GOC which is not safe. To ensure the security and availability of critical tools and spares during maintenance, store is a necessity. |
| 11. | Construction of sound proof cabin inside PH | 0.07 | Currently, there is no office inside power house to keep the critical drawings and documents of the plant equipments. During O&M activities, discussion and meetings are required to be done along with key team members at site using the key drawings and contracts. The sound proof cabin inside power house shall help provide the safe room for critical documents as well as ambient environment for O&M discussion. |
| 12. | Construction of fire wall inside Ventilation Tunnel for fire control | 0.03 | There is no fire wall in Ventilation Tunnel due to which HVAC system is not fully effective. Moreover, in case of fire inside the power plant, fresh air may enter through cross ventilation system and help the fire thus increasing the damage caused. |
| 13. | Construction of DG room at Dam site & PH | 0.10 | Presently DG sets are either kept in open or in the temporary CGI sheet sheds. This increases the risk of environmental damage to the DG set as well as risk of damage due to being hit by rocks/ boulders. Permanent DG room to keep DG set and operating panel/distribution panel is required. |
| 14. | Construction of permanent security check post at Dam & PH | 0.13 | The existing security check post at required locations is of temporary type needs to be constructed permanent and safe structure. |

**Table 4.1: Proposed Additional Capitalisation for FY 2021-22**

| S. No. | Particular | Rs. (in Crore) | Remark |
|---|---|---|---|
| 15. | Slope Stabilisation & protection work behind staff colony & near Power house | 0.60 | Uphill side, near power house MAT & VT which is access path was loose and sliding zone. There are chances of sliding the hill mass. The loose portion threatens the safety of employess and transformer equipment. |
| 16. | Providing Permanent kotta stone flooring at MIV floor | 0.01 | The existing flooring is not dust proof as per the requirements. Lot of dust is entering in main Machines and control Panels. To make the dust free environment in Power Plant permanent flooring is required. Additionally, leakage seepage water is stagnating on floor. |
| 17. | Cladding work with pre-painted CGI sheets in PH | 0.06 | There is enough space from column to column at service bay floor that can be used for storage of small spares and consumables. Cladding will be done with proper opening arrangement and racks. In addition to this aesthetic look of power plant cavern shall improve. |
| 18. | C/o of Office building at PH | 1.68 | The existing office building was made considering only construction purpose and temporary nature. Every year repair works are done but existing structure is now got damaged beyond repairs. In view this and permanent long time requirement of office, proposal for new office building was prepared. Proposed new office building is in safer zone (On hard rock and above the highest flood level of river Ravi) near GIS building. Before taking quote from vendor on our request he visited site and found the site suitable for proposed structure. The same vendor constructed adjoining GMR, Hydro Project Township and office building. |

**Table 4.1: Proposed Additional Capitalisation for FY 2021-22**

| S. No. | Particular | Rs. (in Crore) | Remark |
|---|---|---|---|
| 19. | Generator rotor pole, Insulating box & Orientation & control valves | 0.33 | In previous years, problems with rotor pole jumper removal have been faced. The Magnetic poles for generators at Budhil plant has no spares. The rotor poles are four types and now we are purchasing 2 types of poles (part nos. S441-02-002 & S441-02-003) along with copper jumpers and its accessories. The Part Nos S441-02-001 & S441-02-004 shall be procured in future. Generator magnetic poles are site specific and are available with generator OEMs only. Hence, the generator poles are being procured from OEM Dong Feng Electric Corporation (DEC).<br>The insulation boxes are used for fixing of generator poles enabling a vibration free running of the unit. The Orientation and control valves are used for oil flow of LGB and UGB. |
| 20. | Supply erection & testing of separate water operated OPU for MIV seals | 0.20 | There is a common OPU for maintenance and work seal, bypass & MIV operation. Seals are pressurised oil operated seals & water is mixing with oil & contaminating the main surge tank oil. The contaminated oil is troubling bypass & MIV operation and required continue oil filtration/ treatment due to which not only Auxiliaries power consumption is increased but the quality of oil & life of dehydration/ filtration machine is deteriorating. It is proposed to provide either separate OPU for existing oil operated MIV seals or necessary modification for water operated seals with new OPU. The water enters into the hydraulic oil pipe line and get mixed up with oil which results in impurities in oil content so as the dropping the pressure in OPU. Because of this the solenoid valves couldn't close the MIV seal during MIV Operation. During emergency shutdown, machine goes to over speed and results into more vibrations and increase in bearing temperatures. The work shall help ensure that the solenoid valves can easily close the MIV seal during MIV Operation for smooth operation of the power plant. Also, during emergency shutdown, machine speed remains in control and does not lead to more vibrations and increase in bearing temperatures. |

**Table 4.1: Proposed Additional Capitalisation for FY 2021-22**

| S. No. | Particular | Rs. (in Crore) | Remark |
|---|---|---|---|
| 21. | Establishment of dam SCADA system & interfacing with Budhil PH with main SCADA | 1.30 | The operation of Dam gate is operated manually & its status is not visible in Dam & Power House control room. Moreover, in case of emergency the operator has to operate gates in local manual mode. When the dam gates are operating manually, there can be human error in controlling the water levels in flood season. The SCADA system will avoid the human errors and in case of emergency gates can operate from remote. The SCADA system shall remove the human error in controlling the water level in the dam and thus obviate any damage to the plant dam site. |
| 22. | New turbine governor for unit-I & II | 1.00 | No spare is available in market for the old version currently installed at the plant units. It is recommended to replace it with new updated version. The current governor is malfunctioning during operation which incurs generation loss. The governor was supplied by OEM of China. The new governor shall ensure smooth operation of the plant turbines. This shall ensure reduced O&M issues and generation loss of the plant. |
| 23. | 400sqmm cable for Unit-2 | 0.32 | Budhil Project has an under-ground powerhouse, and the plant generating units has been operating for a long-time now. Currently, 7 runs per phase of 11 KV XLPE cables (300 meters per run per phase) are laid. Due to over-heating of cable or any damages, we require to maintain spare cable to restore the units immediately. |
| 24. | LGB Cooler | 0.12 | Currently, there is no spares available for the current LGB cooler. The capex shall help ensure critical equipment availability for smooth operation of the power plant. |
| 25. | 5T Fork lifter/Mini loader | 0.10<br>2.00 | Required for shifting the heavy mechanical spare parts from GOC to service bay. The non-availability of the 5T fork lifter causes time delay, inconvenience as well as risk of breakage while frequent requirement of movement of goods at plant site. Thus, the equipment shall not only help in reducing O&M time but also reduce risk of breakage of heavy material during transfer at site. |

**Table 4.1: Proposed Additional Capitalisation for FY 2021-22**

| S. No. | Particular | Rs. (in Crore) | Remark |
|---|---|---|---|
| 26. | Dam down stream scouring | | When the flood waters were released through the Dam of Budhil HEP, the condition on the down-stream of the Dam appeared precarious. It is noticed that the energy dissipation structure on the downstream of the Budhil Dam ends abruptly, without matching with the river bed. In view the apprehended threats to the safety/ stability of the Dam it is felt very much essential to execute appropriate protection works at the d/s Toe of the Dam viz. Protection Apron in the river bed, concrete cladding on the slopes of the banks, rock bolting, special groutings for the consolidation of the strata on the river bed & slopes. |
| 27. | Providing side cladding work with CGI sheet at Turbine & Generator floor | 0.10 | There is enough space from column to column at Turbine and Generator floor that can be used for storage of small spares and consumables. Cladding will be done with proper opening arrangement and racks. In addition to this aesthetic look of power plant cavern shall improve. |
| 28. | Permanent staff accommodation at dam site | 0.40 | Dam site of the plant is located in remote location and tribal area of HP. In rains and snow seasons, roads often get closed and movement is very difficult. The staff associated with O&M activities is required to be retained and available near to Dam to avoid the generation loss.<br>Considering the land-slides and frequent road blockages during winter and rainy season accessibility to dam gets difficult for dam employees. Hence, arranging accommodation to the employees at dam is necessary for smooth operation. |
| 29. | Black toping/ concrete work dam apporach road zero RD to security check post L-300mts | 0.30 | The road is getting damaged and it is difficult for material transportation and man power movement during rainy season and winter season which hampers the annual maintenance activities during lean season and O&M activities during peak season. Also, there is no alternative road and this single road with rains gets damaged/blocked. For permanent solution protection work and black toping with proper soling and bearing/PCC road is required. |

**Table 4.1: Proposed Additional Capitalisation for FY 2021-22**

| S. No. | Particular | Rs. (in Crore) | Remark |
|---|---|---|---|
| 30. | MAT Treatment Work | 0.63 | Cracks have developed in the MAT top resulting in water leakages & seepages from hill top through the rocks. Due to cracks and aging, the rocks are falling frequently inside the MAT at various locations endangering the access path through MAT to Powerhouse. Employees passing through the MAT from powerhouse are not safe anymore as there are chances of stones falling and causing serious injury. To avoid any fatal situation, effective treatment of MAT top needs to be done properly for the safety of the employees deployed at Powerhouse. |
| **Total** | | **12.28** | |

The Commission, in this Order, has carried out the Truing up for FY 2020-21 in accordance with the UERC Tariff Regulations, 2018. In accordance with Regulation 12(3) of the UERC Tariff Regulations, 2018 the scope of annual performance review is limited to the revision of estimates for the ensuing year, if required, based on the audited financial results for the previous year and does not provide for the revision of estimates for the current year and give effect on this account in the estimates of the ensuing year.

The Petitioner was directed to submit the actual capitalisation till December 2021 against the proposed additional capitalisation for FY 2021-22. In reply, the Petitioner submitted that works only amounting to Rs. 0.60 Crore have been capitalised. Accordingly, the Commission is of the view that the same shall be allowed at the time of truing-up of FY 2021-22 based on the actual expenditure and after carrying out prudence check of the same and give effect on this account in the AFC of FY 2023-24.

The Petitioner has submitted that the proposed additional capitalisation for FY 2021-22 shall be financed by way of equity/internal resources. However, as discussed in the above para, the Commission has not considered any additional capitalisation for FY 2021-22.

With regard to O&M expenses for FY 2021-22, the Petitioner submitted that the O&M expenses for FY 2021-22 has been worked out based on Regulation 48(2)(d) of UERC Tariff Regulations, 2021 which specifies as follows:

*"**48. Operation and Maintenance Expenses***

*The operation and maintenance expenses shall be as follows, namely:*

*(1) xxx*

*(2) For Hydro Generating Station*

a. *xxx*
b. *xxx*
c. *xxx*
d. *Post determination of base O&M Expenses for the base year, i.e. FY 2020-21, the O&M expenses for the nth year and also for the year immediately preceding the Control Period, i.e. 2021-22 shall be approved based on the formula given below:-*

*O&Mn = R&Mn + EMPn + A&Gn*

*Where –*

- *O&Mn – Operation and Maintenance expenses for the nth year;*
- *EMPn – Employee Costs for the nth year;*
- *R&Mn – Repair and Maintenance Costs for the nth year;*
- *A&Gn – Administrative and General Costs for the nth year;*

*The above components shall be computed in the manner specified below:*

*EMPn = (EMPn-1) x (1+Gn) x (1+CPIinflation)*

*R&Mn = K x (GFA n-1 ) x (1+WPIinflation) and*

*A&Gn = (A&Gn-1) x (1+WPIinflation)+ Provision*

*Where -*

- *EMPn-1 – Employee Costs for the (n-1)th year;*
- *A&G n-1 – Administrative and General Costs for the (n-1)th year;*
- *Provision: Cost for initiatives or other one-time expenses as proposed by the Generating Company and approved by the Commission after prudence check.*
- *'K' is a constant to be specified by the Commission %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on Generating Company's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor*

*considered appropriate by the Commission;*

*Provided that for the projects whose Renovation and Modernisation has been carried out, the R&M expenses for the nth year shall not exceed 4% of the capital cost admitted by the Commission.*

- *CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;*
- *WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;*
- *GFAn-1 – Gross Fixed Asset of the Generating Company for the n-1th year;*
- *Gn is a growth factor for the nth year and it can be greater than or less than zero based on the actual performance. Value of Gn shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on Generating Company's filings, benchmarking and any other factor that the Commission feels appropriate."*

In the matter, it is pertinent to mention that the Commission has already specified the methodology for determination of normative O&M expenses for the third Control Period from FY 2019-20 to FY 2021-22 and the same shall be appliable for FY 2021-22 without any change. As far as applicability of methodology specified in UERC Tariff Regulations, 2021 is concerned, it is pertinent to mention that as per Regulation 1(3) of UERC Tariff Regulations, 2021, these regulations shall be applicable for determination of tariff in all cases covered under said regulations from FY 2022-23 to FY 2024-25. Further, O&M expenses for the immediately preceding financial year, i.e. FY 2021-22 having base year as FY 2020-21 shall be worked out based on the formula specified under Regulation 48(2)(d) of UERC Tariff Regulations, 2021 to provide a trajectory for the control period.

The Commission advises the Petitioner to strive to incur expenditure prudently and do not attempt to incur wasteful expenditure. Further, the Commission directs the Petitioner to plan and execute its expenses relating to operation and maintenance of plant in an optimum manner and provide a detailed methodology alongwith proper justification for allocation/apportionment of manpower related expenses in the next tariff proceedings alongwith supporting documents. Further, computation of normative O&M expenses and sharing of the same based on the actual O&M expenses incurred shall be done in accordance with the prevailing UERC Tariff Regulations at the time of truing up for FY 2021-22.

# 5. Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on MYT for the fourth Control Period

With regard to Multi Year Tariff, Regulation 10 of UERC Tariff Regulations, 2021 specifies as follows:

*"10. MYT Petition for the Control Period*

*(1) xxx*

*(2) xxx*

*(3) xxx*

*(4) After examining the application, the Commission shall either-*

*a) Pass an order approving the forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges for the Control Period, subject to such modifications and conditions as it may specify in the said Order; or*

*b) Reject the application for reasons to be recorded in writing.*

*Provided that the applicant shall be given a reasonable opportunity of being heard before rejecting his application.*

*(5) In its MYT Order, the Commission shall specify the variables included in the Aggregate Revenue Requirement and expected revenue from tariff and charges of the applicant that shall be reviewed by the Commission as part of the Annual Performance Review;*

*Provided that such variables shall be limited to the major items of cost and revenue forecast of the applicant that in the Commission's opinion could have a material impact on the cost of supply of electricity to consumers in the State over the Control Period:*

*Provided further that the variables, as may be stipulated by the Commission under Regulations below, shall form part of the Annual Performance Review, unless exempted by the Commission from such review in its Order."*

Accordingly, in accordance with the aforesaid Regulations, the Commission, based on the financial and physical parameters, has approved the Annual Fixed Charges for each year of the fourth Control Period from FY 2022-23 to FY 2024-25 based on the approved capital cost for the respective year.

## 5.1 Physical Parameters

### 5.1.1 *NAPAF*

Regulation 47(1)(b) of UERC Tariff Regulations, 2021 specifies as under:

*"(b) For existing hydro generating stations:*

*The trajectory for NAPAF fixed by the Commission in case of existing hydro generating stations, in the preceding Control Period would continue to be applicable. However, the NAPAF of the stations undergone RMU would be adjusted accordingly, considering the impact of RMU."*

Accordingly, the Commission is of the view that the NAPAF of 85% approved for the third Control Period in the Tariff Order dated 27.02.2019 shall continue to be applicable for the fourth Control Period without any change.

### 5.1.2 *Design Energy, Auxiliary Energy Consumption and Saleable Primary Energy*

The Petitioner in its Petition has projected energy generation from its 70 MW (2x35 MW) Hydro Electric power project in line with the energy generation approved by the Commission in its Tariff Order dated 27.02.2019 for the third Control Period.

In the matter, as discussed under Chapter-2, the plant will complete 12 years in April, 2024 and, thereafter, free power supply from Budhil HEP to Himachal Pradesh will increase from 12% to 18%. Accordingly, the Commission approves saleable primary energy of 246.52 MUs after deducting the normative auxiliary consumption of 1.20% and adjusting home State share, i.e. 12% for FY 2022-23 and FY 2023-24. The saleable primary energy for FY 2024-25 will be 236.43 MUs after deducting the normative auxiliary consumption of 1.20% and adjusting home State share of 18%. The same shall be reviewed by the Commission at the time of truing up of the respective year of the fourth Control Period.

## 5.2 Financial Parameters

### 5.2.1 *Opening GFA and Additional Capitalisation for the fourth Control Period*

The Petitioner has claimed the additional capitalization amounting to Rs. 6.23 Crore, Rs. 6.10 Crore and Rs. 2.93 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively. In the matter, as discussed under the chapter of Business Plant for the fourth Control Period, the Commission has decided to consider the additional capitalisation at the time of truing up of the respective years based on the audited accounts and as per prevailing Regulations as amended from time to time. Accordingly, proposed additional capitalisation for the fourth Control Period has been considered as nil, however, the same shall be reviewed at the time of truing up of the respective year.

In the present Petition, the Petitioner has claimed additional capitalisation of Rs. 12.28 Crore for FY 2021-22. However, as discussed earlier in this Order, the Commission shall approve the additional capitalisation on actual basis at the time of truing of respective year. Therefore, GFA approved as on 31.03.2021 has been considered as opening GFA for FY 2022-23. Accordingly, GFA worked out as on 31.03.2021, i.e. Rs. 533.15 Crore after considering the additional capitalisation approved for FY 2020-21, has been considered as opening GFA for FY 2022-23. Further, the same shall be reviewed at the time of truing up of the respective financial year of the fourth Control Period based on the audited annual accounts.

### 5.2.2 *Capital Structure*

The Petitioner submitted that the capital expenditure to be incurred in FY 2022-23, FY 2023-24 and FY 2024-25 are to be financed by equity/internal sources. As mentioned above, the Commission has not considered the additional capitalisation for the fourth Control Period. However, based on the actual admissible additional capitalization and actual financing, truing up will be done for the purpose of determination of Tariff.

### 5.2.3 *Depreciation*

Regulation 28 of the UERC Tariff Regulations, 2021 specifies as follows:

***"28. Depreciation***

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

*Provided that depreciation shall not be allowed on assets funded through Consumer Contribution and Capital Subsidies/Grants.*

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

*...*

*(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in*

*Appendix - II to these Regulations.*

*...."*

The Petitioner has claimed depreciation for FY 2022-23, FY 2023-24 and FY 2024-25 based on the opening GFA and projected additional capitalisation for the respective financial year of the fourth Control Period. As mentioned earlier, the Commission has not considered the proposed additional capitalisation for the fourth Control Period and the same, if any, shall be approved at the time of truing up of the respective financial year after prudence check. Accordingly, the Commission has determined the depreciation based on the admissible GFA for the fourth Control Period. Details of the depreciation claimed and approved for the fourth Control Period is as follows:

**Table 5.1: Depreciation approved by the Commission for the third control period from FY 2022-23 to FY 2024-25 (Rs. in Crore)**

| Particulars | FY 2022-23 | | FY 2023-24 | | FY 2021-22 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approved |
| Depreciation | 27.46 | 26.77 | 27.79 | 26.77 | 28.03 | 26.77 |

### 5.2.4 *Return on Equity*

Regulation 26 of the UERC Tariff Regulations, 2021 specifies as follows:

***"26. Return on Equity***

*(1) Return on equity shall be computed on the equity base determined in accordance with Regulation 24.*

*Provided that, Return on Equity shall be allowed on account of allowed equity capital for the assets put to use at the commencement of each financial year.*

*Provided further that, if the generating stations/licensees are able to demonstrate the actual date of asset being put to use and capitalized in its accounts of each asset for the purposes of business carried on by it through documentary evidence, including but not limited to 'asset put to use certificate', 'audited accounts' etc., then in such cases, after due satisfaction of the Commission, the RoE shall be allowed on pro-rata basis after considering additional capitalization done during the year out of the equity capital.*

*(2) Return on equity shall be computed on at the base rate of 15.50% for thermal generating stations,*

*transmission licensee, SLDC and run of the river hydro generating station and at the base rate of 16.50% for the storage type hydro generating stations and run of river generating station with pondage and distribution licensee on a post-tax basis.*

*..."*"

The Petitioner has claimed return on equity of Rs. 27.30 Crore, Rs. 27.61 Crore and Rs. 27.83 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively considering the proposed additional capitalisation for the fourth Control Period. As discussed earlier, the additional capitalisation will be approved based on the actual expenditure at the time of truing up of the respective year. Accordingly, the Commission has worked out the Return on Equity based on the opening equity of the respective financial year of the third Control Period. Further, as the proviso to the Regulations provides that if the generating station is able to demonstrate the actual date of asset being put to use and capitalised in its accounts of each asset for the purpose of business carried on by it through documentary evidence, then RoE shall be allowed in pro-data basis considering additional capitalization done during the year. Details of the Return on Equity claimed and approved is as follows:

**Table 5.2: Return on Equity approved by the Commission for FY 2022-23 to FY 2024-25**

**(Rs. in Crore)**

| Particular | FY 2022-23 | | FY 2023-24 | | FY 2021-22 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approved |
| Return on Equity | 27.30 | 26.39 | 27.61 | 26.39 | 27.83 | 26.39 |

### 5.2.5 *Interest on Loans*

Regulation 27 of the UERC Tariff Regulations, 2021 specifies as follows:

*"**27. Interest and finance charges on loan capital and on Security Deposit***

*(1) The loans arrived at in the manner indicated in Regulation 24 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2022 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2022 from the gross normative loan.*

*(3) The repayment for each year of the Control Period shall be deemed to be equal to the depreciation allowed for that year…*

*...*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the*

*actual loan portfolio of the previous year after providing appropriate accounting adjustment for interest capitalised:*

*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 or the distribution system or SLDC, 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 or the Distribution Licensee or SLDC 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.*

*…"*

The Petitioner has claimed interest on normative loan of Rs. 13.68 Crore, Rs. 11.11 Crore and Rs. 8.39 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively considering the normative debt equivalent to 70% of the proposed additional capitalisation for the respective year of the fourth Control Period. Further, repayment has been considered equivalent to depreciation claimed by the Petitioner. Furthermore, the Petitioner has considered the interest rate of 11% p.a. of the non-convertible debentures.

The Commission has considered the closing net normative loan of Rs. 152.65 Crore for FY 2020-21 as opening normative loan for FY 2021-22 and depreciation of Rs. 26.77 Crore approved for FY 2021-22 as repayment of normative loan as per applicable UERC Tariff Regulations, 2018. Repayment of loan has been considered equivalent to the depreciation of the respective year of the fourth Control Period in accordance with the provisions of UERC Tariff Regulations 2021. Further, rate of interest of Nov-Convertible Debentures, i.e. 11% p.a. has been considered for each year of the fourth Control Period for the purpose of computation of interest on normative loan. Accordingly, the Commission approves interest on loan of Rs. 12.37 Crore, Rs. 9.43 Crore and Rs. 6.48 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively. Details of the interest claimed and allowed for the Fourth Control Period is given in the Table below:

**Table 5.3: Interest on Loan approved by the Commission for the Fourth Control Period from FY 2022-23 to FY 2024-25 (Rs. Crore)**

| Particulars | FY 2022-23 | | FY 2023-24 | | FY 2021-22 | |
|---|---|---|---|---|---|---|
| | Claimed | Allowable | Claimed | Allowable | Claimed | Allowable |
| **Normative Interest** | **13.68** | **12.37** | **11.11** | **9.43** | **8.39** | **6.48** |

### 5.2.6 *Operation and Maintenance expenses*

With regard to Operation and Maintenance expenses, Regulation 48(2) of the UERC Tariff Regulations, 2021 specifies as follows:

***"48 Operation and Maintenance Expenses***

***...***

***(2) For Hydro Generating Stations***

***(a) For Generating Stations in operation for more than five years preceding the Base Year***

*The operation and maintenance expenses for the first year of the control period will be approved by the Commission taking in to account the actual O&M expenses for last five years till base year, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, subject to prudence check and any other factors considered appropriate by the Commission.*

***(b) For Generating Stations in operation for less than 5 years preceding the base year:***

*In case of the hydro electric generating stations, which have not been in existence for a period of five years preceding the base year, i.e. FY 2020-21, the operation and maintenance expenses for the base year of FY 2020-21 shall be fixed at 4% and 2.5% of the actual capital cost (excluding cost of rehabilitation & resettlement works) as admitted by the Commission, for stations less than 200 MW projects and for stations more than 200 MW respectively, for the first year of operation and shall be escalated from the subsequent year in accordance with the escalation principles specified in clause (e) below.*

***(c) For Generating Stations declared under commercial operation on or after 1.4.2022.***

*…*

***(d)*** *Post determination of base O&M Expenses for the base year, i.e. FY 2020-21, the O&M expenses for the nth year and also for the year immediately preceding the Control Period, i.e. 2021-22 shall be approved based on the formula given below:-*

*O&Mn = R&Mn + EMPn + A&Gn*

*Where –*

- *O&Mn – Operation and Maintenance expenses for the nth year;*
- *EMPn – Employee Costs for the nth year;*
- *R&Mn – Repair and Maintenance Costs for the nth year;*
- *A&Gn – Administrative and General Costs for the nth year;*

  *The above components shall be computed in the manner specified below:*

  *EMPn = (EMPn-1) x (1+Gn) x (1+CPIinflation)*

  *R&Mn = K x (GFA n-1 ) x (1+WPIinflation) and*

  *A&Gn = (A&Gn-1) x (1+WPIinflation)+ Provision*

*Where -*

- *EMPn-1 – Employee Costs for the (n-1)th year;*
- *A&G n-1 – Administrative and General Costs for the (n-1)th year;*
- *Provision: Cost for initiatives or other one-time expenses as proposed by the Generating Company and approved by the Commission after prudence check.*
- *'K' is a constant to be specified by the Commission %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on Generating Company's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;*

  *Provided that for the projects whose Renovation and Modernisation has been carried out, the R&M expenses for the nth year shall not exceed 4% of the capital cost admitted by the Commission.*

- *CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;*
- *WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;*
- *GFAn-1 – Gross Fixed Asset of the Generating Company for the n-1th year;*
- *Gn is a growth factor for the nth year and it can be greater than or less than zero based on the*

*actual performance. Value of Gn shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on Generating Company's filings, benchmarking and any other factor that the Commission feels appropriate*

*Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.*

*Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.*

***(e)*** *…*

***(f)*** *…"*

As per Regulation 48(2)(a) read with Regulation 48(2)(d) of UERC Tariff Regulations, 2021, if the hydro generating power plant is in operation for more than five years preceding the base year, i.e. FY 2020-21, normative O&M expenses for the first year of the control period will be approved by the Commission taking into account the actual O&M expenses for last five years till base year based on the formula specified for determination of normative O&M expenses for the fourth Control Period. In the present case, the Budhil hydro power plant came under the jurisdiction of this Commission from 01.12.2015 and the plant has completed its five years of operation in the regulatory regime. Therefore, normative O&M for the said Plant shall be determined in accordance with the provisions of Regulation 48(2)(d) of UREC Tariff Regulations, 2021 for the fourth Control Period from FY 2022-23 to FY 2024-25.

The O&M expenses includes Employee expenses, R&M expenses and A&G expenses. In accordance with Regulation 48(2)(d) of the UERC Tariff Regulations, 2021, the O&M expenses for the first year of the Control Period shall be determined by the Commission taking into account actual O&M expenses of the previous years and any other factors considered appropriate by the Commission. The submissions of the Petitioner and the Commission's analysis on the O&M expenses for the fourth Control Period from FY 2022-23 to FY 2024-25 is detailed below.

#### 5.2.6.1 Employee expenses

The Commission has approved the actual employee expenses of Rs. 6.56 Crore inclusive of proportionate indirect manpower expenses of headquarter amounting to Rs. 0.79 Crore based on the operating capacity handled by the Greenko group for FY 2020-21 in this Order.

The Petitioner submitted that the actual employee expenses for the first six months of FY 2021-22 are Rs. 3.63 Crore. The Petitioner, in its Petition, has proposed the employee expenses for FY 2021-22 as Rs. 9.83 Crore including apportioned indirect manpower deployed at headquarter amounting to Rs. 1.17 Crore. The Petitioner submitted that the employee expenses for the fourth Control Period from FY 2022-23 to FY 2024-25 has been calculated by escalating actual employee expenses for FY 2020-21 with Growth factor (Gn) and CPI indexation of respective year. Further, the Petitioner submitted that it has considered Gn equal to 8% for each year starting from FY 2021-22 to FY 2024-25. Further, the Petitioner has determined the normative manpower cost of headquarter by applying the same methodology adopted for determining the normative employee expenses for Budhil HEP and apportioned the worked out indirect manpower cost at Headquarter based on the operating capacity of Greenko group to Budhil HEP. Accordingly, the Petitioner has proposed the employee expenses inclusive of proportionate indirect manpower at headquarter level amounting to Rs. 12.87 Crore, 14.73 Crore and Rs. 16.86 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

The UERC Tariff Regulations, 2021 stipulates that the normative O&M expenses for the fourth Control Period has to be approved based on the actual O&M expenses for last five years till base year. The Commission observed from the audited annual accounts of the last five years that the employee expenses have increased from Rs. 3.41 Crore in FY 2016-17 to 8.08 Crore in FY 2019-20. Details are as follows:

**Table 5.4: Employee Expenses for Budhil HEP**

| Year | Amount (Rs. In Crore) | % Increase |
|---|---|---|
| FY 2016-17 | 3.41 | - |
| FY 2017-18 | 3.54 | 3.81% |
| FY 2018-19 | 5.17 | 46.05% |
| FY 2019-20 | 8.05 | 55.71% |
| FY 2020-21 | 8.80 | 9.32% |

The Commission analysed the employee expenses for the last five years and observed that there is no linear trend on year-to-year basis. The main reason for increase in employee costs is due to the allocation of the salaries of six number of employees who are working at the headquarter of Budhil HEP. However, the Commission did not find it prudent to allow entire employees cost of six employees working at the headquarter of the Petitioner Company when they were involved in other business operations of the group company. In the matter, the Commission in its Tariff Order dated 26.04.2021 had decided to apportion the indirect manpower cost deployed at the headquarter on the basis of operating capacity handled by Greenko group.

In view of the above, the Commission does not find it prudent to approve the normative employee expenses for the fourth Control Period based on the average actual employee expenses for FY 2016-17 to FY 2020-21 due to abrupt increase.

Regulation 103(2) of the UERC Tariff Regulations, 2021 stipulates as under:

*"Nothing in these Regulations shall bar the Commission from adopting in conformity with provisions of the Act, a procedure which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or a class of matters, deems it just or expedient for deciding such matter or class of matters."*

In view of the special circumstances of the case, the Commission has considered the actual approved employee expenses, i.e. Rs. 5.77 Crore (excluding apportionment of indirect manpower expenses at headquarter of the Petitioner on operating capacity basis) for FY 2020-21 as the opening gross employee expenses for FY 2021-22.

The Petitioner has considered Gn of 8% for FY 2021-22 and fourth Control Period from FY 2022-23 to FY 2024-25. In the matter, the Commission directed the Petitioner to submit the details of proposed recruitment and retirement for FY 2021-22 and fourth Control Period. In reply the Petitioner submitted that except for FY 2022-23, there is no planning of new recruitment for rest of the fourth Control Period. In this regard the Commission also advises the Petitioner to refrain from fresh recruitments as the plant has been in operation for past 10 years and hence, its operations have stabilised with requisite manpower operating the project. Any further recruitment should only be to fill the vacancy in the existing manpower of the project which may arise due to attrition or other factors. The Gn for FY 2022-23 works out to 1.90% against the claim of 8%. Accordingly, the Commission has considered the Gn of 1.90% for FY 2022-23 and nil for FY 2023-24 & FY 2024-25. The opening gross employee expenses for FY 2021-22 have been adjusted for the Gn factor approved for FY 2021-22, i.e. nil and escalated with CPI Inflation of 6.00% for FY 2021-22. The gross employee expenses so arrived have been considered as the gross employee expenses ($EMP_{n-1}$) for FY 2022-23. From FY 2022-23 onwards, the Commission has computed the normative employee expenses in accordance with the Regulation 62(3) considering the Gn factor approved for the corresponding year and the CPI inflation of 6.00%.

The Commission shall consider the actual Gn and capitalisation rate for each year of the fourth

Control Period at the time of truing up of respective year. Further, indirect manpower cost deployed at headquarter will be allowed on actual basis considering the operating capacity handled by Greenko group for the respective year. The normative employee expenses approved for the fourth Control Period from FY 2022-23 to FY 204-25 is as shown in the Table below:

**Table 5.5: Employee expenses approved by the Commission for the fourth Control Period from FY 2022-23 to FY 2024-25 (Rs. Crore)**

| Particulars | FY 2022-23 | | FY 2023-24 | | FY 2024-25 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approved |
| EMPn-1 | 10.07 | 6.11 | 11.53 | 6.60 | 13.20 | 7.00 |
| Gn | 8.00% | 1.90% | 8.00% | 0.00% | 8.00% | 0.00% |
| CPI inflation | 6.00% | 6.00% | 6.00% | 6.00% | 6.00% | 6.00% |
| **EMPn=(EMPn-1) x (1+Gn)x(1+CPIinflation)** | **11.53** | **6.60** | **13.20** | **7.00** | **15.11** | **7.42** |
| Capitalisation rate | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Less: Employee expenses capitalised | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apportioned indirect manpower cost at headquarter | 1.71 | - | 1.53 | - | 1.75 | - |
| **Net Employee expenses** | **12.87** | **6.60** | **14.73** | **7.00** | **16.86** | **7.42** |

#### 5.2.6.2 *R&M expenses*

The Commission has approved the actual R&M expenses of Rs. 4.70 Crore for FY 2020-21 after prudence check. Further, the Petitioner submitted that the actual R&M expenses for the first six months of FY 2021-22 were Rs. 1.22 Crore. The Petitioner has proposed the R&M expenses for FY 2021-22 as Rs. 3.90 Crore.

The Petitioner submitted that the R&M expenses for the fourth Control Period from FY 2022-23 to FY 2024-25 have been proposed as per the UERC Tariff Regulations, 2021. The Petitioner has considered the K factor of 0.99%, 0.95% and 0.97% for FY 2022-23, FY 2023-24 and FY 2024-25 respectively based on the average percentage of R&M expenses to GFA of immediately preceding three respective years. Further, the Petitioner has considered the WPI inflation of 2.42% considering the average increase in the Wholesale Price Index (WPI) for FY 2018-19 to FY 2020-21. Accordingly, the Petitioner has proposed the R&M expenses of Rs. 5.55 Crore, Rs. 5.38 Crore and Rs. 5.57 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively after considering proposed additional capitalisation for respective year.

The Commission has determined the R&M expenses for the fourth Control Period from FY 2022-23 to FY 2024-25 in accordance with UERC Tariff Regulations, 2021. With regard to 'K factor', it is pertinent to mention that as per provisions of Regulation 48(2)(d) of UERC Tariff Regulations, 2021

'K' is a constant to be specified in percentage. Accordingly, the Commission has computed the percentage of actual approved R&M expenses over approved opening GFA for each year from FY 2018-19 to FY 2020-21. Thereafter, the Commission has considered the average of such percentages as K factor which works out to 0.98%. The Commission has considered the opening GFA for each year of the fourth Control Period from FY 2022-23 to FY 2024-25. The Commission has considered the WPI inflation of 2.42% which is the average increase in the Wholesale Price Index (WPI) for FY 2021-22. The R&M expenses for the respective year of fourth Control Period shall be trued up based on the actual approved opening GFA for respective year.

The R&M expenses approved by the Commission for the fourth Control Period from FY 2022-23 to FY 2024-25 is as shown in the Table below:

**Table 5.6: R&M expenses approved by the Commission for the fourth Control Period from FY 2022-23 to FY 2024-25 (Rs. Crore)**

| Particulars | FY 2022-23 | | FY 2023-24 | | FY 2024-25 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approved |
| K | 0.99% | 0.98% | 0.95% | 0.98% | 0.97% | 0.98% |
| GFAn-1 | 548.40 | 533.15 | 554.63 | 533.15 | 560.73 | 533.15 |
| WPI inflation | 2.42% | 2.42% | 2.42% | 2.42% | 2.42% | 2.42% |
| **R&Mn = K x (GFAn-1) x (1+WPI inflation)** | **5.55** | **5.37** | **5.38** | **5.37** | **5.57** | **5.37** |

### 5.2.6.3 *A&G expenses*

The Commission has approved the A&G expenses of Rs. 4.19 Crore for FY 2020-21 in this Order which is inclusive of apportioned administrative expenses amounting to Rs. 0.38 Crore incurred at headquarter. The Petitioner submitted that the actual A&G expenses for the first six months of FY 2021-22 was Rs. 2.11 Crore. The Petitioner, in its Petition, has proposed the A&G expenses for FY 2021-22 as Rs. 5.65 Crore inclusive of proportionate administrative expenses of the headquarter.

The Petitioner submitted that the A&G expenses for FY 2021-22 has been determined by applying WPI inflation rate for FY 2021-22 on the actual A&G expenses for FY 2020-21 amounting to Rs. 6.20 Crore. Accordingly, the estimated A&G expenses for FY 2021-22 has been considered as '$A\&G_{n-1}$'. The '$A\&G_{n-1}$' has been escalated by WPI inflation of 2.42% to arrive at gross A&G expenses for FY 2022-23 and onwards by the Petitioner. Further, the Petitioner has claimed apportioned normative A&G expenses at headquarter level for fourth Control Period by applying the provisions of UERC Tariff Regulations, 2021. Accordingly, the Petitioner has proposed the A&G expenses of Rs.

6.88 Crore, Rs. 7.05 Crore and Rs. 7.22 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

The UERC Tariff Regulations, 2021 stipulates that the normative O&M expenses for the fourth Control Period is to be approved taking into account the actual O&M expenses for FY 2016-17 to FY 2020-21. The Commission observed that the A&G expenses charged to Profit and loss statement of preceding five years till base year, i.e. FY 2020-21 are inclusive of disallowed expenses such as CSR, Donations, Sponsorships and advertisement expenses. Further, the Commission observed that the Petitioner has claimed the normative A&G expenses for the fourth Control Period based on the actual A&G expenses incurred for FY 2020-21, i.e. Rs. 6.20 Crore which are inclusive of disallowed expenses of Rs. 2.17 Crore pertaining to Donation/CSR and Rs. 0.04 Crore towards advertisement expenses and Bank Charges which are allowed to the Petitioner on actual basis along with interest on loan of respective year.

The Commission has considered the normative A&G expenses for FY 2021-22 based on the approved average A&G expenses from FY 2016-17 to FY 2020-21 (excluding apportioned administrative expenses incurred at headquarter) and escalated it with the WPI inflation rate of 2.99% and 2.96% for FY 2019-20 and FY 2020-21 respectively after excluding petition filing fee of respective year which will be allowed on actual basis and disallowed expenses towards CSR, Donations, Sponsorship/advertisement. Accordingly, the gross A&G expenses so arrived have been considered as the gross A&G expenses ($A\&G_{n-1}$) for FY 2021-22. Further, A&Gn for FY 2021-22 has been computed considering WPI inflation indexation of 2.42%. From FY 2022-23 to FY 2024-25, the Commission has computed the normative A&G expenses in accordance with the Regulation 62(3) considering the WPI inflation of 2.42%. Further, the Commission has considered the petition filing fee based on the ARR/MYT Petition to be filed by the Petition in each year of fourth Control Period and the same shall be considered on actual basis at the time of truing up of respective year of fourth Control Period. Further, as far as administrative expenses incurred at headquarters is concerned, the Commission has adopted the same approach as adopted for employee expenses. The apportioned A&G expenses incurred at headquarter shall be allowed to the Petitioner on actual basis taking into account the operating capacity handled by Greenko Group.

The normative A&G expenses approved by the Commission for the fourth Control Period from FY 2022-23 to FY 2024-25 is as shown in the Table below:

**Table 5.7: A&G expenses approved by the Commission for the fourth Control Period from FY 2022-23 to FY 2024-25 (Rs. Crore)**

| Particulars | FY 2022-23 | | FY 2023-24 | | FY 2024-25 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approved |
| A&Gn-1 | 6.35 | 4.47 | 6.50 | 4.58 | 6.66 | 4.69 |
| WPI inflation | 2.42% | 2.42% | 2.42% | 2.42% | 2.42% | 2.42% |
| Provision | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **A&Gn=A&Gn-1 x (1+WPI inflation) + Provision** | **6.50** | **4.58** | **6.66** | **4.69** | **6.82** | **4.80** |
| Capitalisation rate | - | - | - | - | - | - |
| Capitalised A&G expenses | - | - | - | - | - | - |
| **Net A&G expenses** | **6.50** | **4.58** | **6.66** | **4.69** | **6.82** | **4.80** |
| License Fee | - | 0.05 | - | 0.05 | - | 0.11 |
| **Apportioned administrative expenses at headquarter** | **0.38** | **-** | **0.39** | **-** | **0.39** | **-** |
| **Total A&G expenses** | **6.88** | **4.63** | **7.05** | **4.74** | **7.22** | **4.91** |

#### 5.2.6.4 *O&M expenses*

The O&M expenses approved by the Commission for the fourth Control Period from FY 2022-23 to FY 2024-25 is as shown in the Table below:

**Table 5.8: O&M expenses approved by the Commission for the fourth Control Period from FY 2022-23 to FY 2024-24 (Rs. Crore)**

| Particulars | FY 2022-23 | | FY 2023-24 | | FY 2024-25 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approved |
| Employee expenses | 12.87 | 6.60 | 14.73 | 7.00 | 16.86 | 7.42 |
| R&M expenses | 5.55 | 5.37 | 5.38 | 5.37 | 5.57 | 5.37 |
| A&G expenses | 6.88 | 4.63 | 7.05 | 4.74 | 7.22 | 4.91 |
| **Total O&M expenses** | **25.30** | **16.60** | **27.16** | **17.11** | **29.65** | **17.70** |

The Commission would like to advise the Petitioner to exercise proper caution and prudence while incurring the O&M expenses as the same are controllable in nature. The Petitioner should ensure to restrict the actual O&M expenses within the norms allowed by the Commission.

### 5.2.7 *Interest on Working Capital*

The Petitioner has submitted that the interest on working capital for the third Control Period has been proposed in accordance with Regulation 33 of UERC Tariff Regulations, 2021.

Regulation 33 of UERC Tariff Regulations, 2021 specifies as follows:

*"Rate of interest on working capital shall be on normative basis and shall be equal to the weighted average of 'one year Marginal Cost of Funds based Lending Rate (MCLR)' as declared by the State Bank of India from time to time for the financial year in which the application for determination of tariff is made plus 350 basis points*

*...*

*In case of hydro power generating stations and transmission system and SLDC, the working capital shall cover:*

*(i) Operation and maintenance expenses for one month*

*(ii) Maintenance spares @ 15% of operation and maintenance expenses*

*(iii) Receivables equivalent to two months of the Aggregate Revenue Requirement"*

The Petitioner has submitted that it has considered the rate of interest on working capital equal to SBI MCLR of 7% plus 350 basis points. The Commission has determined the interest on working capital for the fourth Control Period from FY 2022-23 to FY 2024-25 in accordance with the aforesaid Regulations and is as discussed below:

#### 5.2.7.1 *One Month O&M Expenses*

The Commission has approved the annual O&M expense for each year of the third Control Period. Based on the approved O&M expenses, one month's O&M expenses have been worked out for determining the working capital requirement.

#### 5.2.7.2 *Maintenance Spares*

The Commission has considered the maintenance spares in accordance with the prevailing UERC Tariff Regulations for the third Control Period. The Commission has determined the plant wise maintenance spares requirement @ 15% of normative O&M Expenses worked out for respective year of the fourth Control Period.

#### 5.2.7.3 *Receivables*

UERC Tariff Regulations, 2021 envisage receivables equivalent to two months of annual fixed charges as an allowable component of working capital. Aggregate Revenue Requirement (AFC) includes O&M expenses, depreciation, interest on loan, return on equity and interest on working capital. The Commission has considered the receivables for two months based on the AFC for the respective year of the third Control Period.

Based on the above, the total working capital requirement of the Petitioner for FY 2022-23, FY 2023-24 and FY 2024-25 works out to Rs. 17.88 Crore, Rs. 17.58 Crore and Rs. 17.33 Crore respectively. The Commission, has considered the rate of interest on working capital as 10.50% as claimed by the Petitioner equal to the rate considered for FY 2020-21. However, the same shall be considered in accordance with the prevailing regulations at the time of truing up of respective financial year.

Based on the above discussion, the interest on working capital works out to Rs. 2.18 Crore, Rs. 2.14 Crore and Rs. 2.11 Crore for FY 2022-23, FY 2023-24 and FY 2024-25 respectively. The interest on working capital approved by the Commission for the fourth Control Period is as shown in the Table below:

**Table 5.9: Interest on working capital claimed and approved by the Commission for the fourth Control Period (Rs. C**

| Particulars | FY 2022-23 | | FY 2023-24 | | FY 2024-25 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approv |
| O&M Expenses | 2.11 | 1.38 | 2.26 | 1.43 | 2.47 | |
| Maintenance spare | 3.79 | 2.49 | 4.07 | 2.57 | 4.45 | |
| Receivables | 13.92 | 14.00 | 13.84 | 13.59 | 14.07 | 1 |
| **Total** | **19.83** | **17.88** | **20.18** | **17.58** | **20.99** | **1** |
| Rate of Interest | 10.50% | 10.50% | 10.50% | 10.50% | 10.50% | 10 |
| **IWC** | **2.08** | **1.88** | **2.12** | **1.85** | **2.20** | |

### 5.2.8 *Non-Tariff Income*

Regulation 46 of UERC Tariff Regulations, 2021 specifies as follows:

*"46. Non Tariff Income*

*The amount of non-tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Charges in determining the Net Annual Fixed Charges of the Generating Company.*

*Provided that the Generating Company shall submit full details of its forecast of non tariff income to the Commission in such form as may be stipulated by the Commission from time to time.*

*The indicative list of various heads to be considered for non tariff income shall be as under:*

*a) Income from rent of land or buildings;*

*b) Income from sale of scrap;*

*c) Income from statutory investments;*

*d) Interest on delayed or deferred payment on bills;*

*e) Interest on advances to suppliers/contractors;*

*f) Rental from staff quarters;*

*g) Rental from contractors;*

*h) Income from hire charges from contactors and others;*

*i) Income from advertisements, etc.;*

*j) Any other non- tariff income.*

*Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated business of the Generating Company shall not be included in Non-Tariff Income."*

The Petitioner has not projected any non-tariff income for the fourth Control Period. Accordingly, the Commission has also not considered any non-tariff income. However, the same is subject to correction during the truing up proceedings.

### 5.2.9 *Annual Fixed Charges, Capacity Charge and Energy Charge Rate (ECR) for FY 2022-23, FY 2023-24 and FY 2024-25*

Based on the above analysis for all the heads of expenses of AFC, the Commission has approved the Annual Fixed Charges (AFC) of the Petitioner for the fourth Control Period attributable to its beneficiary.

Regulation 50 of UERC Tariff Regulations, 2021 specifies as follows:

*"50. Computation and Payment of Capacity Charges and Energy Charges for Hydro Generating Stations*

*(1) The Annual Fixed Charges of Hydro Generating Station shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis under capacity charge (inclusive of incentive) and Energy Charge, which shall be payable by the beneficiaries in proportion to their respective percentage share/allocation in the saleable capacity of the generating station, i.e. in the capacity excluding the free power to the home State.*

*(2) The capacity charge (inclusive of incentive) payable to a hydro generating station for a calendar month shall be:*

*AFC x 0.5 x NDM / NDY x (PAFM / NAPAF) (in Rupees)*

*Where,*

*AFC = Annual fixed cost specified for the year, in Rupees.*

*NAPAF = Normative plant availability factor in percentage*

*NDM = Number of days in the month*

*NDY = Number of days in the year*

*PAFM = Plant availability factor achieved during the month, in Percentage*

*(3) The PAFM shall be computed in accordance with the following formula:*

$PAFM = 10000\ x \sum_{i=1}^{N} DCi/\{N\ x\ IC\ x\ (100 - Aux)\}\%$

*Where,*

*AUX = Normative auxiliary energy consumption in percentage*

*DCi = Declared capacity (in ex-bus MW) for the ith day of the month which the station can deliver for at least three (3) hours, as certified by the Uttarakhand State Load Despatch Centre after the day is over.*

*IC = Installed capacity (in MW) of the complete generating station*

*N = Number of days in the month*

*(4) The Energy Charge shall be payable by every beneficiary for the total energy supplied to the beneficiary, during the calendar month, on ex-power plant basis, at the computed Energy Charge rate. Total Energy Charge payable to the Generating Company for a month shall be:*

*(Energy Charge Rate in Rs. / kWh) x {Energy supplied (ex-bus)} for the month in kWh} x (100-FEHS)/100*

*(5) Energy Charge Rate (ECR) in Rupees per kWh on ex-power plant basis, for a Hydro Generating Station, shall be determined up to three decimal places based on the following formula, subject to the provisions of sub-Regulation (7):*

*ECR = AFC x 0.5 x 10 / {DE x (100 – AUX) x (100 –FEHS)}*

*Where,*

*DE = Annual Design Energy specified for the hydro generating station, in MWh,.*

*FEHS = Free Energy for home State, in percent, as applicable"*

In accordance with the above Regulations, the Annual Fixed Charge (AFC), for the fourth

Control Period as claimed and approved by the Commission is shown in the Table below:

**Table 5.10: Annual Fixed Charges approved by the Commission for FY 2022-23 to FY 2024-25**
**(Rs. in Crore)**

| Annual Fixed Charges | FY 2022-23 | | FY 2023-24 | | FY 2024-25 | |
|---|---|---|---|---|---|---|
| | Claimed | Approved | Claimed | Approved | Claimed | Approved |
| Depreciation | 27.46 | 26.77 | 27.79 | 26.77 | 28.03 | 26.77 |
| Interest on Loan | 13.68 | 12.37 | 11.11 | 9.43 | 8.39 | 6.48 |
| Return on Equity | 27.30 | 26.39 | 27.61 | 26.39 | 27.83 | 26.39 |
| O&M Expenses | 25.30 | 16.60 | 27.16 | 17.11 | 29.65 | 17.70 |
| Interest on Working Capital | 2.08 | 1.88 | 2.12 | 1.85 | 2.20 | 1.82 |
| *Less:* Non-Tariff Income | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Net Annual Fixed Charges** | **95.81** | **84.02** | **95.78** | **81.55** | **96.10** | **79.17** |

The summary of Capacity Charge and Energy Charge Rate (ECR) for the Petitioner's project for the fourth Control Period from FY 2022-23 to FY 2024-25 is as given in the Table below:

**Table 5.11: Capacity Charge and Energy Charge Rate approved by the Commission for the fourth Control Period**

| Particular | FY 2022-23 | FY 2023-24 | FY 2024-25 |
|---|---|---|---|
| Net AFC (Rs. Crore) | 84.02 | 81.55 | 79.17 |
| Saleable Energy (MU) | 246.52 | 246.52 | 236.43 |
| Capacity Charges (Rs. Crore) (50% of AFC) | 42.01 | 40.78 | 39.59 |
| Energy Charges (Rs./kWh) (50% of AFC) | 1.704 | 1.654 | 1.674 |

In accordance with the provisions of the Regulations, the secondary energy rate shall be equal to the rate derived based on the saleable energy subject to a cap of 90 paise per unit and shall be applicable when actual saleable energy exceeds the Saleable Energy (DE-(100-Auxiliary Consumption)-FS).

**(M.K. Jain)**
**Member (Technical)**

**(D.P. Gairola)**
**Member (Law)/ Chairman (I/c)**