Order

on

True up for FY 2018-19,

Annual Performance Review for FY 2019-20

&

ARR for FY 2020-21

For

M/s Greenko Budhil Hydro Power Pvt. Ltd.

April 18, 2020

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.: 53 of 2019

In the Matter of:

Petition filed by M/s Greenko Budhil Hydro Power Pvt. Ltd. for true-up of AFC for FY 2018-19, Annual Performance Review for FY 2019-20 and Annual Fixed Charges for FY 2020-21 for Budhil Hydro Station.

In the Matter of:

M/s Greenko Budhil Hydro Power Pvt. Ltd.
Plot No. #1366, Road no. 45,
Jubliee 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)**
Shri M.K. Jain	**Member (Technical)**

Date of Order: April 18, 2020

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 Tariff) Regulations, 2011 for the first Control Period from FY 2013-14 to FY 2015-16 and Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Multi Year Tariff) Regulations, 2015 (hereinafter referred to as "UERC Tariff Regulations, 2015") for the second Control Period from FY 2016-17 to FY 2018-19 specifying therein terms, conditions and norms of operation for licensees, generating companies and SLDC. The Commission had issued the Tariff Order dated 30.11.2016 on approval of Business Plan and Multi Year Tariff for the Petitioner from 01.12.2015 to 31.03.2016 and for the second Control Period from FY 2016-17 to FY 2018-19. In accordance with the provisions of UERC Tariff Regulations, 2015, the Commission had carried out the Annual Performance Review (APR) for FY 2017-18 and FY 2018-19 vide its Tariff Orders dated 21.03.2018 and 27.02.2019.

Further, in accordance with the relevant provisions of the Act, the Commission had notified the 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 specifying therein terms, conditions and norms of operation for licensees, generating companies and SLDC. The Commission had issued the 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. As per the provisions of Regulation 12 of the UERC Tariff Regulations, 2018, M/s Greenko Budhil Hydro Power Pvt. Ltd. (hereinafter referred to as "M/s GBHPPL" or "the Petitioner" or "the Generator") filed the Petition (Petition No. 53 of 2019 and hereinafter referred to as "Petition"), giving details of its revised projections of Aggregate Revenue Requirement (ARR) for FY 2020-21, based on the true up for FY 2018-19 and APR for FY 2019-20 on 13.12.2019.

It was observed from the Petition filed by M/s GBHPPL that the Petition had certain infirmities/deficiencies which were informed to the Petitioner vide Commission's letter no. UERC/6/TF-568/2019-20/2019/1351 dated 16.12.2019 and the Petitioner was directed to rectify the said infirmities in the Petition and submit certain additional information necessary for admission of the Petition. M/s GBHPPL vide its reply dated 19.12.2019 removed the critical deficiencies. Based on the submission dated 19.12.2019 made by M/s GBHPPL, the Commission provisionally admitted the Petition for further processing subject to the condition that M/s GBHPPL 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.

This Order, accordingly, relates to the Petition filed by M/s GBHPPL for true up for FY 2018-19, APR for FY 2019-20 and revised ARR for FY 2020-21 and is based on the Petition as well as all the subsequent submissions made by M/s GBHPPL during the course of the proceedings and the relevant findings contained in the Tariff Order dated 27.02.2019.

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 ARR of M/s GBHPPL is recoverable from the beneficiary, i.e. UPCL. It is the endeavour of the Commission, to issue Tariff Orders for M/s GBHPPL concurrently with the issue of Order on retail tariffs for UPCL, so that UPCL is able to honour the payment liability towards generation charges of M/s GBHPPL. 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 Truing up for FY 2018-19
Chapter 3-	Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2019-20
Chapter 4-	Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on ARR for FY 2020-21

1 Background and Procedural History

M/s GBHPPL is a company incorporated under the Companies Act, 1956. M/s GBHPPL 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. The Petitioner had executed a Power Purchase Agreement (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 aforesaid hydroelectric power plant (hereinafter referred to as “Project” or “Plant”) to UPCL from 01.12.2015 to 31.03.2016 and second Control Period from FY 2016-17 to FY 2018-19. The Commission based on the information submitted by the Petitioner had approved a provisional tariff of Rs. 4.00 per unit to be recovered by the Petitioner from UPCL till determination of final tariff by the Commission.

Subsequently, the Commission vide its Order dated 30.11.2016 had approved the Business Plan and Multi Year Tariff for M/s GBHPPL 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, Human Resource Plan and Trajectory of the performance parameters and, in the approval of Multi Year Tariff (MYT), approved the Aggregate Revenue Requirement (ARR) 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 ARR 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 Business Plan and ARR for each year of the third Control Period from FY 2019-20 to FY 2021-22 vide its MYT Order dated 27.02.2019. In accordance with Regulation 12 of the UERC Tariff Regulations, 2015 and UERC Tariff Regulations, 2018, the Generating Company is required to file a Petition for Annual Performance Review by November 30 of every year. M/s GBHPPL, vide letter dated 30.11.2019 requested the Commission to grant time extension of 2 weeks, i.e. till 15.12.2019, for filing of the True up Petition in compliance with Regulation 12 of UERC Tariff Regulations, 2018. The Commission vide letter no. UERC/6/TF-568/2019-20/2019/1283 dated 03.12.2019 accepted the request of the Petitioner partly and granted the time extension till 10.12.2019 for filing of the Petition.

In compliance with the Regulations, M/s GBHPPL filed its Petition for Annual Performance Review for FY 2019-20 on 06.12.2019. Through the above Petition, M/s GBHPPL sought true up for FY 2018-19, APR for FY 2019-20 and ARR for FY 2020-21 based on the audited accounts for FY 2018-19. The Commission vide its letter no. UERC/6/TF/568/2019-20/2019/1351 dated 16.12.2019 informed the Petitioner that the Petition had certain deficiencies/data gaps and directed the Petitioner to rectify the said deficiencies in the Petition and it was required to submit certain additional information necessary for admission of the Petition. M/s GBHPPL vide its submission dated 19.12.2019 removed the critical deficiencies. Based on the submission dated 19.12.2019 made by M/s GBHPPL, the Commission provisionally admitted the Petition. This Order, accordingly, relates to the Petition filed by M/s GBHPPL for true up for FY 2018-19, APR for FY 2019-20 and revised ARR for FY 2020-21 and is based on the Petition as well as all the subsequent submissions made by M/s GBHPPL during the course of the proceedings and the relevant findings contained in the MYT Order dated 27.02.2019.

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 GBHPPL, the Commission sent the copy of the tariff proposals to UPCL vide letter no. UERC/6/TF-568/2019-20/2019/1403 dated 31.12.2019. However, the Commission has not received any objections/ suggestions/comments from UPCL in this regard till the date of Order. Further, the Petitioner raised certain objections on the methodology followed by SLDC for verification of the Declared Capacity of the plant. The Commission sent the copy of the said objections to SLDC for comments and the same has been dealt in the subsequent paragraphs of this Tariff Order.

The submissions made by M/s GBHPPL 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 Truing up for FY 2018-19

Regulation 12 of the UERC Tariff Regulations, 2015 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 2004 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 relating to its expenses and revenues for FY 2018-19 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 2018-19 alongwith the sharing of gains and losses.

2.1 Impact of Sharing of Gains and Losses on account of Controllable Factors for FY 2018-19

Regulation 14 of the UERC Tariff Regulations, 2015 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 Regulation 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 the impact of uncontrollable factors.

O&M expenses comprises of the major portion of AFC of M/s GBHPPL and are within the control of the Petitioner and, moreover, in accordance with UERC Tariff Regulations, 2015 these are controllable expenses. Similarly, in accordance with the applicable Tariff Regulations, the variation in working capital requirements is also a controllable factor. Hence, the sharing of gains and losses has been carried out for these expenses. 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.

2.1.1 Physical Parameters

2.1.1.1 NAPAF

As per the prevailing UERC Tariff Regulations, NAPAF is 85% for the hydro plant of the Petitioner. However, the Commission vide its Tariff Order dated 30.11.2016 had relaxed the relevant Regulations and allowed the recovery of AFC for FY 2015-16 through a single-part tariff and also fixed the NAPAF of 85% for the second Control Period from FY 2016-17 to FY 2018-19 in accordance with the Regulations. Relevant extract of the said Order is as follows:

"From the above and similar provisions specified in MYT Regulations, 2015 it is apparent that the 50% of

AFC is allowed to be recovered from energy charges and remaining 50% of AFC is to be recovered through 50% capacity charges. The Petitioner initiated supply of power w.e.f. December, 2015, i.e. during lean period of FY 2015-16, hence, it would not be appropriate to apply regulations for the recovery of AFC by way of energy charge and capacity charge since it would be difficult in achieving PAF equivalent to NAPAF while considering supply from Hydro Project during the lean period only. Accordingly, the Commission while relaxing the relevant regulations, allows recovery of AFC for FY 2015-16 through a single-part tariff, i.e. based on total AFC and saleable energy only. However, for the ensuing control period FY 2016-17 to FY 2018-19, recovery of AFC shall be carried out in accordance with the regulations based on the stipulated NAPAF of 85%."

Subsequently, a meeting was conducted on 07.07.2017 in the Commission's office on the request of the Petitioner to clarify the process of adjustment of tariff for FY 2016-17 in accordance with UERC Tariff Regulations, 2015 and difficulties faced by SLDC in verification of the declared capacity. It was agreed during the meeting that recovery of AFC may be done by the generator through a single-part tariff till 30.11.2016 due to the inability of the SLDC to validate the Declared Capacity because of non-availability of declared capacity prior to 30.11.2016 and through two-part tariff thereafter. The relevant extract of the minutes of meeting is as follows:

"With regard to UPCL's comment on Point 7 that deals with two part tariff, UPCL submitted that the total design energy considered for recovery of AFC, as per Tariff Order, is 246.52 MU but the generator has delivered 235.01 MU in FY 2016-17. The issue relevant in the matter was that prior to November, 2016 the generator was not declaring their capacity to UPCL. Infact SLDC also expressed its inability to validate the declared capacity prior to November, 2016. Hence, it was agreed during the meeting held on 07.07.2017 that recovery of fixed charges may be done by the generator by way of single part till 30.11.2016 due to inability of SLDC to validate the Declared Capacity because of non availability of declared capacity prior to 30.11.2016 and subsequently by two part tariff in accordance with the Regulations. Accordingly, as far as comments of UPCL, in the aforesaid matter, are concerned the Commission is of the view that the Regulations provides for recovery of tariff in two parts, i.e. through energy charges which are directly linked to the generation and capacity charges, which are linked with the plant availability. UPCL has referred that since the generator has delivered only 235 MU against the design energy of 246 MU, hence, the amount corresponding only to the same may be allowed to the generator. The same is against the Regulations and cannot be considered."

Accordingly, the Commission had relaxed the relevant Regulations for recovery of AFC through a single-part tariff till 30.11.2016. Subsequently, recovery of AFC was to be carried out in accordance with the Regulations based on the stipulated NAPAF of 85% for FY 2016-17.

Hence, the Commission is of the view that the NAPAF of 85% approved for the second Control Period in Tariff Order dated 30.11.2016 shall continue to be applicable without any change for FY 2018-19 also.

2.1.1.2 *Design Energy and Saleable Primary Energy*

The Commission in its Tariff Order dated 30.11.2016 on approval of Business Plan and Multi Year Tariff for the second Control Period from FY 2016-17 to FY 2018-19 had approved the Design Energy of 283.54 MUs in accordance with the MYT Regulations, 2015 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 and 229.71 MUs for the balance life of the project. The Commission decides to consider the design energy and saleable primary energy as considered in the Tariff Order dated 30.11.2016 for the project.

2.1.2 Financial Parameters

2.1.2.1 *Capital Cost*

Regulation 21 (2) of UERC Tariff Regulations, 2015 specifies as under:

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

a) The capital cost admitted by the Commission prior to 01.04.2016 duly trued up as on 01.04.2016;

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. 525.80 Crore as on 01.04.2018. The Commission, vide its Tariff Order dated 27.02.2019, had approved the Opening GFA and net additional capitalisation amounting to Rs. 518.77 Crore and Rs. 7.04 Crore respectively for FY 2017-

18 for the Petitioner's plant. Accordingly, the Commission has considered the approved closing capital cost, i.e. Rs. 525.81 Crore (Rs. 518.77 Crore *plus* Rs. 7.04 Crore) for FY 2017-18 as opening GFA for the purpose of truing up for FY 2018-19.

2.1.2.2 *Additional Capitalisation*

With regard to Additional Capitalisation for FY 2018-19, Regulation 22 of UERC Tariff Regulations, 2015 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) ..."

The Commission vide its Tariff Order dated 27.02.2019 had approved the additional capitalisation of Rs. 0.09 Crore for FY 2018-19. In the present Petition, the Petitioner has claimed additional capitalisation of Rs. 2.71 Crore for FY 2018-19 which reconciles with the audited annual accounts for FY 2018-19. Details of the same are given in the Table below:

Table 2.1: Details of Additional Capitalisation claimed for FY 2018-19 (Rs. Crore)

S. No.	Description	Amount	Justification
1	Purchase of Spider Excavator	2.64	The transmission towers are located at highly inaccessible and steep locations and it is extremely difficult for the conventional excavators to reach these locations and carry out required works speedily & effectively, hence, procuring one Spider Excavator with special/ versatile features for accessing and working in steep and difficult terrains was envisaged. This will be essential in cases of emergencies as well and shall be highly useful for carrying out preventive measures.
2	Construction of office room, pantry and toilet on 1st floor of control room at dam	0.03	The existing office accommodation with toilet and pantry that was made during construction is at 500 meters distance from main Dam structure and control room and was not in good condition. New accommodation was required near the Dam control room to facilitate the O&M by senior officers / staff sitting in office.
3	Computer and office equipment	0.04	Furniture and other office equipment for smooth functioning of the Budhil plant.
	Total	**2.71**	

With regard to the additional capitalisation incurred for FY 2018-19, the Petitioner submitted that it has claimed additional capitalisation under Regulation 22(2) of UERC Tariff Regulations, 2015. The Petitioner also submitted that the project has been in operation for about 8 year and requires strengthening of its civil structure and electrical equipments. 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 MYT Order dated 27.02.2019 had provisionally approved the projected additional capitalisation of Rs. 0.09 Crore for FY 2018-19 and directed the Petitioner to provide proper justification for the additional capitalisation in accordance with Regulation 22(2) of the UERC Tariff Regulations, 2015 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 2018-19. The relevant extract of the Tariff Order dated 27.02.2019 is as follows:

> *".... Further, the Petitioner has proposed the additional capitalisation of Rs. 6.08 Crore for FY 2018-19 and as per submissions of the Petitioner, Rs. 0.09 Crore has been capitalised in the books of accounts till September, 2018. Furthermore, the Petitioner has submitted Independent Agency report w.r.t 'Provisions of Spider Excavator at site', 'Provision of Workshop' and 'Site office building' in accordance with Regulation 22(2)(e) of UERC Tariff Regulations, 2018. However, the Petitioner has not submitted technical justification alongwith test results carried out by the independent agency for the work of 'Protection works at Dam downstream'. Moreover, the Petitioner has not submitted the DPR, purchase/work orders, bills/vouchers for the said works. Accordingly, the Commission in the current proceedings is provisionally considering the additional capitalisation as given in the provisional annual accounts for FY 2018-19 (upto 30.09.2018). However, during the truing up proceedings for FY 2018-19, same shall be reviewed by the Commission based on the submissions of the Petitioner justifying the additional capitalisation in accordance with Regulation 22(2) of the UERC Tariff Regulations, 2015 duly substantiated with the technical justification and 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 alongwith the purchase orders, bills/vouchers for the*

said works."

The Petitioner submitted the Purchase Orders/Work Orders, invoices raised by the vendor alongwith the report/MoM of the independent agency in support of the additional capitalisation incurred for FY 2018-19. The Commission has examined the findings and suggestions of the report/MoM submitted by the independent agency and observed that the works were essential for the smooth functioning and operations of the Petitioner's plant. The Commission has gone through the submissions made by Petitioner w.r.t. additional capitalisation for FY 2018-19 and finds it in accordance with Regulation 22(2) of UERC Tariff Regulations, 2015. Accordingly, the Commission approves the additional capitalisation of Rs. 2.71 Crore as claimed by the Petitioner for the purpose of truing up of FY 2018-19 after prudence check.

Based on the above discussion, details of the trued-up capital cost for FY 2018-19 is as follows:

Table 2.2: Approved Gross Fixed Assets for FY 2018-19 (Rs. 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	60.52	0.03	60.54
4.	Other Civil Works	226.10	0.00	226.10
5.	Hydraulic Mechanical Works	31.72	0.00	31.72
6.	Plant & Machinery	198.20	2.64	200.84
7.	Vehicles	0.32	0.00	0.32
8.	Furniture and Fixtures	0.24	0.00	0.24
9.	Office Equipment	0.61	0.01	0.62
10.	Computers	0.03	0.03	0.06
11.	Computer Software	0.01	0.00	0.01
	Total	**525.81**	**2.71**	**528.51**

2.1.2.3 *Capital Structure*

Regulation 24 of UERC Tariff Regulations, 2015 specifies as under:

"24. Debt-Equity Ratio

(1) For a project declared under commercial operation on or after 1.4.2016, 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 1.4.2016 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 1.4.2016, Debt: Equity Ratio shall be as approved by the Commission in the previous Order."

The Commission vide its MYT Order dated 27.02.2019 had approved a Debt-Equity Ratio of 70:30 as on 31.03.2018 which has been considered in the present Petition also. Further, as per the submissions of the Petitioner, entire capitalisation for FY 2018-19 has been done through equity/internal accruals only. Hence, 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 determination of tariff.

Accordingly, based on the above discussion, capital structure of Opening & Closing GFA and additional capitalisation for FY 2018-19 is as follows:

Table 2.3: Financing for capitalisation for FY 2018-19

Particular	Opening capital structure as on 01.04.2018		Approved addition during FY 2018-19		Closing capital structure as on 31.03.2019	
	(Rs. Crore)	%	(Rs. Crore)	%	(Rs. Crore)	%
Debt	368.06	70.00	1.89	70.00	369.95	70.00
Equity	157.75	30.00	0.81	30.00	158.56	30.00
Total	**525.81**	**100.00**	**2.71**	**100.00**	**528.51**	**100.00**

2.1.2.4 *Depreciation*

Regulation 28 of the UERC Tariff Regulations, 2015 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, 2015 for FY 2018-19. The Petitioner has claimed depreciation of Rs. 26.21 Crore for FY 2018-19.

It is pertinent to mention that the Commission in its Tariff Order dated 30.11.2016 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' in accordance with the Regulations and had worked out the depreciation accordingly. Accordingly, allowable depreciation works out to Rs. 26.50 Crore for FY 2018-19 based on the UERC Tariff Regulations, 2015.

Details of depreciation as approved in the Tariff Order, claimed by the Petitioner and trued up for FY 2018-19 is as follows:

Table 2.4: Depreciation for FY 2018-19 (Rs. Crore)

Particular	Approved in Tariff Order dated 21.03.2018	Claimed	Approved
Depreciation	26.46	26.21	26.50

2.1.2.5 *Return on Equity (RoE)*

Regulation 26 of the UERC Tariff Regulations, 2015 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. 26.03 Crore for FY 2018-19. As per the aforesaid Regulations, the Commission has allowed Return on Equity at the rate of 16.50% on the opening admissible normative equity of Rs. 157.75 Crore which works out to Rs. 26.03 Crore for FY 2018-19 in accordance with Regulation 26 of UERC Tariff Regulations, 2015. Details of the Return on Equity claimed and trued up for FY 2018-19 is as follows:

Table 2.5 : Return on Equity for FY 2018-19 (Rs. Crore)

Particular	Approved in Tariff Order dated 21.03.2018	Claimed	Approved
Return on Equity	26.08	26.03	26.03

2.1.2.6 *Interest on Loans*

Regulation 27 of the UERC Tariff Regulations, 2015 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 1.4.2016 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2016 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 submitted that for the purpose of the calculation of interest on loan, normative debt has been considered as 70% of additional capitalisation and, accordingly, it has claimed interest on normative loan as Rs. 23.71 Crore for FY 2018-19 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 closing net loan of Rs. 227.27 Crore for FY 2017-18 in its Tariff Order dated 21.03.2018. The same has been considered as normative net opening loan for FY 2018-19. Further, 70% of the additional capitalisation approved for FY 2018-19 has been considered as addition to normative loan which works out to Rs. 1.89 Crore and repayment has been considered equivalent to admissible depreciation, i.e. Rs. 26.50 Crore. Hence, interest on normative loan works out to Rs. 23.65 Crore considering the interest rate @ 11% p.a.

Furthermore, it has been observed from the submission of the Petitioner that the Petitioner has considered Rs. 0.28 Crore pertaining to 'Bank & Other charges' as a part of A&G expenses as per audited annual accounts for FY 2018-19. However, the Commission is of the view that such expenses are part of finance charges. Accordingly, the amount of Rs. 0.28 Crore pertaining to Bank Charges for FY 2018-19, actually incurred by the Petitioner as per the audited accounts, has been allowed by the Commission as part of the finance cost of FY 2018-19 on actual basis.

Based on the above, details of the interest claimed and allowed during the truing up for FY 2018-19 is given in the Table below:

Table 2.6: Interest on Normative Loan for FY 2018-19 (Rs. Crore)

Particular	Approved in Tariff Order 21.03.2018	Claimed by Petitioner	Approved
Interest on Normative Loan	23.63	23.71	23.93*

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

2.1.2.7 *Operation & Maintenance (O&M) Expenses*

2.1.2.7.1 *Truing up of O&M Expenses for FY 2018-19*

Regulation 48 of UERC Tariff Regulations, 2015 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

…

(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 2014-15, the operation and maintenance expenses for the base year of FY 2014-15 shall be fixed at 2.0% of the capital cost as admitted by the Commission 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 1.4.2016

…

(d) …

(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:

EFk = 0.55xWPIInflation + 0.45xCPIInflation

(f)…"

The Petitioner has claimed O&M expenses amounting to Rs. 15.77 Crore for FY 2018-19 which reconciles with the audited annual accounts for FY 2018-19. The Commission carried out the prudence check of the actual O&M expenses incurred by the Petitioner for FY 2018-19. The actual details of O&M expenses for FY 2018-19 are given in the Table below:

Table 2.7: Actual O&M expenses for FY 2018-19 (Rs. Crore)

S. No.	Particulars	Amount
1.	Repairs & Maintenance Expenses	4.98
2.	Employee Expenses	5.17
3.	Administrative & General Expenses	5.62
	Total	**15.77**

The MTB's of FY 2018-19 was also examined to verify the claims of the Petitioner. The Petitioner has claimed an expense of Rs. 0.28 Crore under O&M expenses related to 'Bank & Other Charges' which has already been dealt under the head of 'Interest on Loans'. Further, the Petitioner has made a donation amounting to Rs. 0.16 Crore during FY 2018-19. 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 is again disallowed. Further, the Commission also observed that the Petitioner has incurred expenditure amounting to Rs. 0.31 Crore and Rs. 0.51 Crore under the head of 'Sponsorship events' and 'Advertisement expenses' respectively. In this regard, the Petitioner submitted that as part of Corporate Social Responsibility as well as the community development of the plant, various programmes are needed to be conducted in the nature of improving livelihood, sports, creating social & safety awareness and in context of the same, the Petitioner had sponsored certain physical sports and awareness programmes. In the matter, the Commission is of the view that expenses pertaining to CSR and community development of the plant are not necessary to be incurred for the successful running of the plant but are incurred to meet the statutory requirement under the Companies Act, 2013. Accordingly, such expenses are to be met out of profit and if such expenses are allowed in the ARR, it would indirectly mean that such expenses are being incurred by the consumers and not by the Petitioner. Hence, the same is disallowed.

Further, the Commission observed that employee expenses have increased significantly from Rs. 3.54 Crore for FY 2017-18 to Rs. 5.17 Crore for FY 2018-19. In this regard, the Petitioner submitted that the actual O&M expenses for FY 2018-19 have been incurred considering the optimized relevant man-power allocation working for the power plant as highlighted in the true-up Petition filed for FY 2017-18. In this regard, it is to be noted that the Commission vide its MYT Order dated 27.02.2019 had directed the Petitioner to provide a detailed methodology alongwith proper justification for allocation/apportionment of manpower related expenses in the next tariff proceedings alongwith supporting documents. However, no information regarding allocation of the manpower was submitted by the Petitioner. Subsequently, the Petitioner on the direction of the Commission submitted that initially there was no methodology followed for allocation of manpower and only employee expenses of the site were considered by the Petitioner for manpower related expenses. Thereafter, employee expenses have been rationalized for the plant. The Petitioner also submitted that the power from the plant is being delivered to the State of Uttarakhand under the cost-plus regime based on the tariff norms of the beneficiary State Regulatory Commission. Therefore, it involves regulatory and legal skillsets/resources for ensuring compliance of the regulatory norms as well as periodic submission of various data and Petitions as per the said tariff Regulations. Hence, as a part of the rationalization certain team members primarily involved in the overall management of Budhil plant have been additionally apportioned to Budhil manpower account.

During the scrutiny of the submission, the Commission observed that the Petitioner allocated employee cost of six number of employees to the Budhil Plant. For the purpose of in-depth analysis of the employee expenses, the Commission directed the Petitioner to submit employees' details w.r.t. designation and location alongwith joining details of the said six number of employees whose cost have been allocated to the Budhil Plant. From the submission of the Petitioner in the matter, the Commission observed that out of these six number of employees, three number of employees have already been working with the Greenko Group even prior to the acquisition of Budhil plant. Further, out of the remaining three employees, one employee was appointed as Advisor to advice the Greenko Group on Electricity Regulatory matter and on its power transmission business & guide the Group in expansion of business into Power Transmission, Distribution and Supply sectors. Similarly another person was recruited as Consultant by M/s Harsar Hydro Projects Pvt. Ltd., i.e. one of the subsidiary of Greenko Group. Accordingly, it can be concluded that these six number of employees whose expenses have been completely allocated to the Budhil Plant are involved in other projects of the group company as well. Accordingly, it would be injustice to load the entire employee cost of these six employees on the consumers of the State of

Uttarakhand when they are providing services to other projects of the Greenko group also. Therefore, the Commission is of the view to apportion the employee cost pertaining to these six employees based on the total operating capacity of the Greenko Group. The Petitioner is advised that allocation of indirect costs of the Group to the project should be based on some rationale and 100% of any indirect cost cannot be allocated to the project. Accordingly, the actual O&M expenses of the Petitioner for FY 2018-19 after carrying out the prudence check by the Commission works out to Rs. 13.08 Crore.

For the purpose of truing up of O&M expenses, the Commission has adopted the same methodology in the present Petition as adopted in previous Tariff Orders dated 30.11.2016, 21.03.2018 and 27.02.2019, accordingly, the escalation rates have been computed on the basis of actual CPI Inflation and WPI Inflation for FY 2018-19 which works out to 2.14% in accordance with Regulation 48(2)(e) of UERC Tariff Regulations, 2015. The Commission has escalated the O&M expenses approved for FY 2017-18, i.e. Rs. 13.61 Crore by the escalation factor to compute normative O&M expenses for FY 2018-19 which works out to Rs. 13.90 Crore. The detail of O&M expenses claimed and approved by the Commission is as follows:

Table 2.8: O&M expenses for FY 2018-19 (Rs. Crore)

Particular	Claimed	Actual after prudence check	Normative O&M expenses worked out
Normative O&M expenses	15.77	13.08	13.90

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, 2015 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, 2015. Accordingly, O&M expenses will have to be shared in the manner given in the Table below:

Table 2.9: O&M Expenses Approved After Sharing of Gains and Losses for FY 2018-19 (Rs. Crore)

Particulars	Actual after prudence check	Normative as per Regulations	Efficiency gain	Generator Share	Rebate in Tariff	O&M approved after sharing
	A	B	C=B-A	D=2/3xC	(E)=1/3xC	F= A+D
O&M Expenses	13.08	13.90	0.82	0.55	0.27	13.63

2.1.2.8 *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. The Petitioner also submitted that the Commission had computed surplus amount on truing up for FY 2017-18 amounting to Rs. 1.96 Crore which worked out to Rs. 2.39 Crore with carrying cost. The Petitioner requested the Commission to allow the implication of aforesaid carrying cost as part of working capital.

With respect to working capital and interest thereon for FY 2018-19, Regulation 33 of the UERC Tariff Regulations, 2015 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.

..."

2.1.2.9 One Month O&M Expenses

The Commission has trued up the annual O&M expense for FY 2018-19. 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.

2.1.2.10Maintenance Spares

The Commission has considered the maintenance spares in accordance with the prevailing UERC Tariff Regulations for FY 2018-19. The Commission has determined the plant wise maintenance spares requirement @ 15% of the trued up O&M Expenses for FY 2018-19.

2.1.2.11Receivables

UERC Tariff Regulations, 2015 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 2018-19.

With regard to the interest on working capital, Regulation 33 of UERC Tariff Regulations, 2015 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. Accordingly, the Commission has considered the prevailing State Bank Advance Rate (SBAR), i.e. 13.70% for computing the interest on working capital as on the date of filing of the ARR petition for FY 2018-19, i.e. 28.12.2017. Further, as far as consideration of implication of carrying cost is concerned, it is pertinent to mention that there is no provision of allowing implication of the carrying cost on the true-up impact as part of Working Capital. Hence, the same has not been considered for the purpose of computation of interest on working capital.

Based on the above discussion, the normative Interest on working Capital for FY 2018-19 as approved by the Commission is as shown in the Table below:

Table 2.10: Interest on working capital for FY 2018-19 (Rs. Crore)

Particular	Approved in Tariff Order 21.03.2018	Claimed	Normative IWC worked out
O&M Expenses	1.18	1.31	1.16
Maintenance spare	2.12	2.37	2.08
Receivables	15.48	14.79	14.55
Margin Money	0.00	3.69	0.00
Total	**18.77**	**18.47**	**17.80**
IWC	**2.57**	**2.55**	**2.44**
Carrying cost of surplus true-up amount for FY 2017-18 vide Order dated 27.02.2019	0.00	0.43	0.00
Total	**2.57**	**2.98**	**2.44**

Further, the UERC Tariff Regulations, 2015 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, 2015.

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

Table 2.11: Interest on Working Capital for FY 2018-19 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	2.44	2.44	1.63	0.81	1.63

2.1.2.12 Non-Tariff Income

Regulation 46 of UERC Tariff Regulations, 2015 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 nil Non-Tariff Income for FY 2018-19. However, the Commission observed that there is a Non-Tariff Income of Rs. 8.22 Crore as per the audited accounts for FY 2018-19 which is inclusive of Rs. 5.85 Crore pertaining to Interest on fixed deposits, Rs. 2.31 Crore related to insurance claim received and Rs. 0.06 Crore of other non-operating income.

The Petitioner submitted that interest earning investments as reflected in the financial statements of the Petitioner for FY 2018-19 have been made from 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. The Petitioner also submitted that due to inadvertent error in the past years, i.e. from FY 2015-16 to FY 2017-18, the Petitioner did not claim the income earned out of the investments made from internal accruals, i.e. RoE to be allowed to be retained by it. Instead of distributing the RoE as dividend to shareholders, the Petitioner maintained the same with financial institutions as buffer for liquidity management. Accordingly, the Petitioner requested the Commission to allow it the same for the past years with the applicable normative carrying cost alongwith the truing up for FY 2018-19.

The Commission observed that the other income of Rs. 8.22 Crore is inclusive of interest on deposits amounting to Rs. 5.85 Crore as per audited books of accounts for FY 2018-19. The Commission examined the claim of the Petitioner and observed that during FY 2016-17, after the procurement of assets during FY 2015-16 and FY 2016-17, cumulative RoE upto 31.03.2017 was Rs. 19.33 Crore against the deposits of Rs. 46.33 Crore. In reply, the Petitioner submitted that comparison of the interest on investments is being done by the Commission based on the fixed deposits at the end of the respective year and that would not give an appropriate depiction when comparing with RoE since during the year there shall be maturity of many fixed deposits as well as many new fixed deposits shall be made during the year. Further, based on the prevalent highest interest rate during the year, interest amount has been calculated.

It is pertinent to mention that the RoE approved by the Commission for the respective years had been received by the Petitioner on monthly basis and the Petitioner failed to reconcile the amount received as RoE with the deposits made during the respective year. However, it cannot be denied that after the procurement of the assets in the respective year, RoE approved by the Commission is available with the Petitioner. Accordingly, the Commission has considered closing balance of the fixed deposits or cumulative RoE at the end of the respective year, whichever is lower, for the purpose of determination of interest on fixed deposits to be retained by the Petitioner. Further, as far as interest rate on fixed deposits is concerned, the Commission has worked out the weighted average rate of interest for the respective years based on the submission made by the Petitioner. Furthermore, the Petitioner has requested the Commission to allow the non-tariff income inadvertently deducted for FY 2015-16. In this regard, it is to be noted that FY 2015-16 is covered under the UERC Tariff Regulations, 2011 which specifies as follows w.r.t. Non-Tariff Income:

"47. Non Tariff Income

The amount of non-tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the Net Aggregate Revenue Requirement of the Generation Company.

Provided that the Generation 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) Income from sale of Ash/rejected coal;

e) Interest on delayed or deferred payment on bills;

f) Interest on advances to suppliers/contractors;

g) Rental from staff quarters;

h) Rental from contractors;

i) Income from hire charges from contactors and others;

j) Income from advertisements, etc.;

k) Any other non- tariff income."

It is explicitly clear from the aforesaid Regulation that there is no provision of excluding interest earned from investments made out of Return on Equity corresponding to the regulated business of the Generating Company from the Non-Tariff Income. Accordingly, the Petitioner is not entitled for any exclusion of interest income on fixed deposits from the non-tariff income for FY 2015-16. Further, as far as carrying cost on the interest income on deposits for the past years is concerned, it is worth mentioning that the burden of additional cost by way on interest cannot be levied on the consumer on account of lapse on the part of the Petitioner. Accordingly, the Petitioner shall not be entitled for any carrying cost on the allowable interest income on deposits made from the RoE for the past years, i.e. FY 2016-17 and FY 2017-18. Based on the above discussion, details of allowable interest on deposits to be excluded from the Non-Tariff Income are as follows:

Table 2.12: Interest on deposits allowed by the Commission from FY 2015-16 to FY 2018-19 (Rs. Crore)

Particulars		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
RoE	(A)	7.83	25.02	25.68	26.08
Assets Procured from Internal accruals	(B)	0.25	13.27	7.04	2.71
Remaining RoE	**(C)=(A)-(B)**	**7.58**	**11.75**	**18.64**	**23.37**
Cumulative RoE	(D)	7.58	19.33	37.97	61.34
Fixed Deposit	(E)	3.62	46.03	14.09	61.48
Interest on investment	(F)	0.81	1.99	1.59	5.85
Weighted rate of Interest	(G)		6.59%	4.69%	6.26%
Approved Interest on RoE	(H)=(G)*minimum of (D) and (E)	0.00	1.27	1.59	3.84

Accordingly, for the purpose of true up for FY 2018-19, the Commission considers the Non-Tariff Income of Rs. 4.38 Crore *(Rs. 8.22 Crore Less Rs. 3.84 Crore)* excluding interest earned from fixed deposits made out of RoE.

2.2 Aggregate Revenue Requirement for FY 2018-19

Based on the above analysis, the Commission has worked out the trued-up AFC for FY 2018-19. The summary of the same is as follows:

Table 2.13: Annual Fixed Charges for FY 2018-19 (Rs. Crore)

Particulars	Tariff Order dated 21.03.2018	Claimed	Allowable
Depreciation	26.24	26.21	26.50
Interest on Loan & Financial Cost	23.63	23.71	23.93
Return on Equity	26.08	26.03	26.03
O&M Expenses	14.12	15.77	13.63
Interest on Working Capital	2.57	2.98	1.63
Total	**92.86**	**94.70**	**91.71**
Less: Non-Tariff Income	0.77	0.00	4.38
Total	**92.09**	**94.70**	**87.33**

Accordingly, trued-up AFC for FY 2018-19 works out to Rs. 87.33 Crore after sharing of gain/loss on account of controllable factors. Recovery of AFC for FY 2018-19 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 2018-19, the Petitioner submitted that actual Plant Availability Factor during FY 2018-19 was 75.80% against the NAPAF of 85% because of certain uncontrollable factors like floods with high silt content in the month of September, 2019, heavy snow fall and shut down for GIS S/S repair at Chamera-III by NHPC in the month of January, 2020. The Petitioner requested the Commission that the true-up for FY 2018-19 may be done after taking into account aforementioned un-controllable factors and allow capacity charges considering Actual Plant Availability Factor as NAPAF for FY 2018-19.

With regard to considering actual Plant availability Factor equal to NAPAF, the Commission is of the view that 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 goal of MYT framework is to provide regulatory certainty and, therefore, dilution of norms is not prudent. The Commission has, therefore, not revised the NAPAF approved for the Budhil Plant. Instead, the Commission has restated the PAFY during the year for the purpose of recovery of fixed cost considering the actual operation period after adjusting the force majeure events mentioned by 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 75.80% to 76.95% for FY 2018-19 for recovery of Capacity Charges.

Further, with regards to the verification of the Declared Capacity by SLDC, the Petitioner submitted that instead of considering the Scheduled Capacity as Declared Capacity, SLDC considers the quantum of actual power injection to calculate the Declared Capacity of the day. The Petitioner further submitted that deviation between the Scheduled Capacity based on Declared Capacity and the actual injection is considered under the purview of DSM Regulations and any consequential UI charges are being paid by the Petitioner to NLDC which are not claimed by the Petitioner from UPCL. If provisional Declared Capacity being provided by SLDC is based on the actual injection by the Plant, the consequential DSM penalties/incentives should be allowed to be adjusted in tariff.

For the purpose of transparency in the matter, the Commission forwarded the issue raised by the Petitioner to SLDC for comments. In reply, SLDC submitted that Declared Capacity of the Petitioner's plant is verified on the basis of deriving DCi, i.e. Declared Capacity (in ex-bus MW) for each day of billing month after three hours average daily MWh generation till the installation of separate ABT compliant meters in both the Generator bays in the switchyard. The Petitioner vide its rejoinder submitted that the certified Declared Capacity by SLDC is not in line with the spirit of the DC clarified in the Commission's Order. The Petitioner requested the Commission to pass direction in the matter. The Commission noted the submissions of the Petitioner as well as SLDC in the matter. The Commission is of the view that this matter requires separate consideration and, accordingly, the Commission advises the Petitioner to file a separate Petition in the matter and the Commission will take appropriate view on the same after hearing the Petitioner, UPCL and SLDC.

Further, as discussed earlier, trued-up AFC for FY 2018-19 works out to Rs. 87.33 Crore after sharing of gain/loss on account of controllable factors against the actual recovered amount of Rs. 88.76 Crore by the Petitioner from UPCL under the two-part tariff. The Petitioner has supplied 263.48 MUs during FY 2018-19 which is more than the saleable energy of 246.52 MUs. Accordingly, there is a secondary energy of 16.96 MUs supplied during FY 2018-19. Accordingly, based on the above discussions, the summary of truing up for FY 2018-19 after considering the actual performance achieved in FY 2018-19 is shown in the Table below:

Table 2.14: Summary of net truing-up for FY 2018-19 (Rs. Crore)

AFC to be recovered from UPCL (Rs. in Crore)	Capacity Charges (Rs. in Crore)	NAPAF (%)	Actual PAFY (%)	Capacity Charges allowable (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
87.33	43.66	85%	76.95%	39.53	40.91	246.52	263.48	1.771	43.66	16.96	0.90	1.53	86.10	88.76	(2.66)

Thus, the Commission has computed the net surplus of Rs. 2.66 Crore for FY 2018-19 on the account of sharing of gains and losses and considering the actual performance parameters 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 2.15: Details of Surplus with Carrying Cost for FY 2018-19 (Rs. Crore)

Particulars	2018-19	2019-20
Opening (Surplus)/Gap	-	(2.85)
True Up Amount	(2.66)	-
Carrying Cost	(0.18)	(0.39)
Closing (Surplus)/Gap	(2.85)	(3.24)
Interest Rate	13.70%	13.70%

Accordingly, the surplus alongwith carrying cost works out to Rs. 3.24 Crore. Further, as discussed under the head of 'Non-Tariff Income', interest on deposits made out of Return on Equity for FY 2016-17 and FY 2017-18 are required to be adjusted in the current ARR. Accordingly, after adjusting the interest on deposits amounting to Rs. 2.86 Crore, the surplus available with the Petitioner works out to Rs. 0.37 Crore. **The Commission directs the Petitioner to refund the excess amount recovered, i.e. Rs. 0.37 Crore on account of Truing up for FY 2018-19 to UPCL in 12 equal monthly instalments commencing from April 2020 to March 2021.**

3 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2019-20

3.1 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. 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 MYT Order dated 27.02.2019, on approval of Business Plan and MYT Petition for the third Control Period from FY 2019-20 to FY 2021-22, had approved the AFC for the Control Period based on the approved capital cost as on 31.03.2018. The Petitioner, in its present Petition, has proposed revision of estimates for FY 2019-20 based on the audited accounts for FY 2018-19 and revised estimates for FY 2019-20.

The Petitioner has proposed the following additional capitalisation for FY 2019-20:

Table 3.1: Proposed Additional Capitalisation for FY 2019-20

A. Actual Capitalisation till 30.09.2019			
S.No.	**Particulars**	**Rs. in Crore**	**Remark**
1	Submersible Pump	0.07	Earlier centrifugal pumps were being used for power house 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 needs to be replaced. Submersible Pumps are more suitable from the above-mentioned point of view and, therefore, is being procured.
2	11/0.433kV 500kVA Auxiliary Transformer	0.08	The Auxiliary Transformer got damaged and had to be replaced. The amount is being claimed though insurance.
3	Hydraulic Brakes	0.12	The Hydraulic Breaker is an attachment to the Spider Excavator (the justification for which is given earlier). The Strata of excavation generally comprises Boulders and rocky strata, and at times it is not possible to use explosives for blasting for carrying out the excavation. At such places the Breaker is used to disintegrate the boulders and rocky strata. The muck/ debris is then collected for disposal by the Spider excavator.
Total Actual Capitalisation till 30.09.2019		**0.27**	
B. Projected capitalisation for the remaining period			
1	Construction of Hazard waste store at PH	0.03	Permanent hazard waste store is required. Observation of DoE Govt of HP and Audit team.
2	Construction of single room workers accommodation at PH	0.50	Power 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 are required to be retained and available near to Power house to avoid the generation loss. Till now there is no accommodation to workers near power plant.
3	Construction of permanent security check post at Dam & PH	0.05	The existing security check post at required locations is of temporary type and the same needs to be constructed permanently with safe structure.
4	Construction of canopy in front of Main Access Tunnel & Ventilation Tunnel	0.08	Budhil power plant is underground type of power house under hill footing. Rolling stones from hill top due to rains, snowfall and by the grazing animals or monkeys fall down. Persons coming outside from power house are not aware about this and chances are stones may fall on someone and cause injury. To avoid any incident/accident canopies are required in front of MAT & VT. Additionally rain water also enters inside power plant. After construction of canopy rain water will be channelized.
5	Establishment of site store inside PH	0.10	Inside power house when maintenance works are going on in late hours main store gets closed and locked. To keep the bare minimum spares inside power house to meet out emergencies and cut down the maintenance time, site store inside power house is required.
6	Slope Stabilisation & protection work	0.600	Up hill side, near power house MAT & VT which is access path was loose and in sliding zone. There are chances of sliding of the hill

	behind staff colony & near Power house		mass. The loose portion threatens the safety of employees and transformer equipment.
7	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.
8	Providing Permanent kotta stone flooring at MIV floor	0.10	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.
9	Thrust Collar for Unit # 1	3.00	Unit#1 is being operated at restricted load of 107% keeping in view the alignment problem and shim provided in GT coupling that is beyond permissible limits. Remark in the MoM with alignment experts is given by them that there might be problem in thrust collar and runner disc mating.
10	Supply, erection testing & commissioning of Battery charger, Battery bank & DCDB in PH and GIS	0.40	As per DoE of HP's observation, the standby battery bank & charger for Power House & GIS is required.
11	400sqmm cable for Unit #1 of the plant	0.20	No spare power cable is available
12	Supply, erection, testing & commissioning of Excitation panel with recommended spares	0.60	No spare is available for existing panel. So New panel is recommended with spares.
13	Protection work at Dharwala near Tower-58	0.25	Due to differential settlement the old tower got tilted and relocated to new location. Due to excavation and site development hill side protection work is required for the safety of new tower.
14	Shifting of conductor to increase ground clearance	0.04	To maintain the proper ground clearance, work is required to be done.
15	Civil foundation for workshop	0.41	The power plant is located in remote and tribal area of Himachal Pradesh and there is no well-equipped workshop near the 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.
16	Establish of steel structure shed for workshop	1.18	
17	Purchase of workshop machinery	1.32	
18	C/o of Office building at PH	1.68	The existing office building was made considering only construction purpose and of temporary nature. Every year repair works are done but existing structure is now damaged and beyond repairs. In view of 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.
19	Flooring of Service bay	0.01	
Total Projected capitalisation for the remaining period		**10.62**	
Total		**10.89**	

The Commission, in this Order, has carried out the Truing up for FY 2018-19 in accordance with the UERC Tariff Regulations, 2015. 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 Commission shall carry out the truing up of FY 2019-20 based on the audited accounts for that year and give effect on this account in the AFC of FY 2021-22 as discussed in the MYT Order dated 27.02.2019. The Commission, as discussed earlier, while carrying out the truing up has trued up the O&M expenses for FY 2018-19 based on the details of actual expenses submitted by the Petitioner. The Commission, under the provisions of Regulation 12(3) of the UERC Tariff Regulations, 2018, has revised the AFC for FY 2020-21.

The approach adopted by the Commission in the approval of each element of ARR for FY 2020-21 is elaborated in the subsequent paragraphs.

4 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on ARR for FY 2020-21

4.1 Physical Parameters

4.1.1 NAPAF

Regulation 47(1)(b) of UERC Tariff Regulations, 2018 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 FY 2019-20 in the MYT Order dated 27.02.2019 for the third Control Period shall continue to be applicable without any change for FY 2020-21 as well.

4.1.2 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 as approved for FY 2020-21 in the Tariff Order dated 27.02.2020 for the third Control Period.

Accordingly, the Commission approves the saleable primary energy after deducting the normative auxiliary consumption of 1.20% and adjusting home State share as 246.52 MU.

4.2 Financial Parameters

4.2.1 Opening GFA and Additional Capitalisation for FY 2020-21

The Commission has not allowed any capitalisation for FY 2019-20 as the same will be approved based on the prudence check at the time of truing up proceedings for FY 2019-20. Accordingly, opening capital cost for FY 2020-21 has been considered equivalent to the closing GFA for FY 2018-19.

Further, the Petitioner has claimed additional capitalisation amounting to Rs. 6.01 Crore. Detail of the same is as follows:

Table 4.1: Proposed Additional Capitalisation for FY 2020-21

S.No.	Particulars	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	1.2	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 thus avoiding generation loss.
5	Manufacturing of top & bottom cover	0.25	If top & bottom ring of both the generation units are required to be replaced in same year annual maintenance period, then after replacement dismantled top & bottom ring needs to be sent for refurbishment and it requires minimum three month & downtime of machine is increased. By purchasing the top & bottom covers, the shut-down downtime period for annual maintenance will be reduced.
6	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.
7	Installation of Floating boom mechanism for the trash big logs and others floating debris	0.05	During the rainy season, floating debris like trees, animals, dead bodies & trash is coming with water from the catchment area and gets stuck in front of inlet gates interrupting the inflow / water entering into the HRT. This may cause vacuum inside pressurized HRT. Floating booms will reduce damages to the HRT by stopping these debris upstream of main dam structure.
8	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.
9	Providing side cladding with CGI sheet both	0.15	It will make healthy environment as dust will not enter the powerhouse main cavern. Also, the aesthetic look of power

	side of MAT		plant cavern shall improve.
10	Protection work & site development back side GIS Building & Transformer yard	0.25	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.
11	Protection work near of Power House left bank of Ravi river	0.7	Due to flash floods, left bank area of Ravi river along residential accommodation and approach road got eroded and will be unusable and unsafe in near future. Protection work is necessary to avoid further damages and interruption in power generation due to damage to approach road or non-availability of accommodation at site.
			Moreover, staff quarters are located at the left side of Ravi river. So, further sliding and damages will endanger the residential building and staff in future.
12	Access road to Dam Site soling and concreting from security check post to dam top	0.25	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.
13	Construction of Permanent panel room in Gantry Operated Cavern at PH & Dam	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.
14	Construction of staff quarters (Executives residence) at PH	2	Presently situated Executive residence is located at the hill side and is under risk due to falling boulders from top hill. Shifting of the residence by reconstructing at a safer location is recommended. Moreover, power plant is located in remote location and tribal area of HP. During rains and snow seasons, roads often get closed and movement is very difficult. The Executive staff managing O&M activities needs to be placed near the power house to avoid the generation loss.
15	Construction of DG room at Dam site & PH	0.1	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.
16	Construction of Storeroom 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.
17	Construction of sound proof cabin inside PH	0.15	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.
18	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.
Total for FY 2020-21		**6.01**	

The Commission vide its MYT Order dated 27.02.2019 on approval of the Business Plan and Tariff Petition of the Petitioner for the third Control Period from FY 2019-20 to FY 2021-22, had decided to consider the additional capitalisation at the time of truing up of the respective years based on the audited accounts and as per the prevailing Regulations. Accordingly, the Commission at this stage does not find any reason to approve any additional capitalisation for FY 2020-21 and additional capitalisation, if any, shall be considered on actual basis based on the audited annual accounts subject to prudence check and based on the need for such capital works.

4.2.2 *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.

..."

Based on the discussion in the preceding Paras, capital cost worked out as on 31.03.2019, i.e. Rs. 528.51 Crore after considering the additional capitalisation approved for FY 2018-19 has been considered as opening capital cost for FY 2020-21, accordingly, the capital structure for FY 2018-19 has also been considered for FY 2020-21. Details of the capital structure for FY 2020-21 claimed by the Petitioner and approved by the Commission is as follows:

Table 4.2: Financing for capitalisation for FY 2020-21

Particular	Opening Capital Structure as on 01.04.2020				Addition during year				Closing Capital Structure as on 31.03.2021			
	Claimed		Approved		Claimed		Approved		Claimed		Approved	
	(Rs. Crore)	%	(Rs. Crore)	%	(Rs. Crore)	%	(Rs. Crore)	%	(Rs. Crore)	%	(Rs. Crore)	%
Debt	377.58	70.00	369.95	70.00	0.00	0.00	0.00	00.00	377.58	69.23	369.95	70.00
Equity	161.82	30.00	158.56	30.00	6.01	100.00	0.00	00.00	167.83	30.77	158.56	30.00
Total	**539.40**	**100.00**	**528.51**	**100.00**	**6.01**	**100.00**	**0.00**	**00.00**	**545.41**	**100.00**	**528.51**	**100.00**

As discussed above, the Commission has not considered any additional capitalisation as of now. However, based on the actual admissible additional capitalization and actual financing, truing up will be done for the purpose of determination of tariff based on the audited accounts for FY 2020-21 after prudence check.

4.3 Revised ARR for FY 2020-21

4.3.1 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 has claimed depreciation for FY 2020-21 of Rs. 26.92 Crore. The Commission has worked out the depreciation of Rs. 26.57 Crore against the admissible opening GFA of Rs. 528.51 Crore for FY 2020-21. The detail of the depreciation claimed and approved for FY 2020-21 is as follows:

Table 4.3: Depreciation for FY 2020-21 (Rs. Crore)

Particular	Approved in MYT Order dated 27.02.2019	Claimed	Approved
Depreciation	26.44	26.92	26.57

4.3.2 *Return on Equity*

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 of Rs. 26.70 Crore corresponding to the equity amount of Rs. 161.82 Crore based on projected capital cost as on 01.04.2020. As discussed earlier, the additional capitalisation will be approved based on the actual expenditures at the time of truing up. Accordingly, the Commission has worked out the Return on Equity based on the opening equity of FY 2020-21. Details of the Return on Equity claimed and approved for FY 2020-21 is as follows:

Table 4.4: RoE for FY 2020-21 (Rs. Crore)

Particular	Approved in MYT Order dated 27.02.2019	Claimed	Approved
Return on Equity	26.03	26.70	26.16

4.3.3 *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, 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. 19.04 Crore at the interest rate of 11.00% p.a. on the Non-Convertible Debentures for FY 2020-21. The Commission has considered the closing net normative loan of Rs. 202.66 Crore for FY 2018-19 as opening net normative loan for FY 2019-20. Further, considering the repayment equivalent to depreciation, i.e. Rs. 26.57 Crore for FY 2019-20, the closing net normative loan works out to Rs. 176.08 Crore for FY 2019-20 which has been considered as opening normative loan for FY 2020-21 and depreciation of Rs. 26.57 Crore approved for FY 2020-21 has been considered as repayment of normative loan as per applicable UERC Tariff Regulations, 2018. Further, rate of interest on Nov-Convertible Debentures, i.e. 11.00% p.a. has been considered for FY 2020-21. Accordingly, the Commission approves interest on loan of Rs. 17.91 Crore for FY 2020-21. Details of the interest claimed and allowed for FY 2020-21 is given in the Table below:

Table 4.5: Interest on Normative Loan for FY 2020-21 (Rs. Crore)

Particular	Approved in MYT Order dated 27.02.2019	Claimed	Approved
Gross Opening Normative Loan	368.12	377.58	369.95
Cumulative Repayment	193.66	193.13	193.86
Net Opening Normative Loan	174.46	184.44	176.08
Additional Capitalisation	0.00	4.21	0.00
Normative Repayment of loan	26.44	26.92	26.57
Net Closing Normative Loan	148.03	161.73	149.51
Average Normative Loan	161.24	173.09	162.80
Rate of Interest	11.00%	11.00%	11.00%
Normative Interest	**17.74**	**19.04**	**17.91**

4.3.4 *Operation and Maintenance expenses*

With regards to Operation and Maintenance expenses, Regulation 48(2) of the 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 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."

As per Regulation 48(2)(a) of UERC Tariff Regulations, 2018 if the hydro generating power plan is in operation for more than five years preceding the base year, i.e. FY 2017-18, 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. Further, in case the hydro generating plant is in existence for a period of less than five years preceding the base year, i.e. FY 2017-18, the O&M expenses for the base year shall be fixed at 4% of actual capital cost excluding cost of rehabilitation & resettlement works for the stations less than 200 MW capacity as per Regulations 48(2)(b) of UERC Tariff Regulations, 2018. In the present case, the Budhil hydro power plant was put under commercial operation in May, 2012, however, Budhil Hydro Power Plant came under the jurisdiction of this Commission only from 01.12.2015. Accordingly, in the absence of sufficient regulated information for five years, Regulation 48(2)(a) of UERC Tariff Regulations, 2018 cannot be applied. Further, it can also not be denied that the said plant was put under commercial operation in May, 2012 and has successfully completed its 5 years of operation in FY 2017-18. Therefore, Regulation 48(2)(b) also cannot be applied to determine the normative O&M expenses for the third Control Period.

Accordingly, in the absence of any specific provision in UERC Tariff Regulations, 2018 to deal with the aforesaid scenario, the Commission is of the view to escalate the approved normative O&M expenses for FY 2018-19 in accordance with Regulation 48(2)(e) of UERC Tariff Regulations to calculate the normative O&M expenses for FY 2020-21. Accordingly, as discussed in Para 2.1.2.7 of this Order, the normative O&M expenses for FY 2018-19 has been escalated with escalation factor of 3.37% to work out the normative O&M expenses for FY 2019-20 and the same has been further escalated to determine the O&M expenses for FY 2020-21 as shown in the Table below:

Table 4.6: O&M expenses approved by the Commission for FY 2020-21 (Rs. Crore)

Particular	Approved in MYT Order dated 27.02.2019	Claimed	Approved
O&M expense	14.50	17.81	14.85

4.3.5 *Interest on Working Capital*

The Petitioner has submitted that the interest on working capital for FY 2020-21 has been proposed in accordance with Regulation 33 of UERC Tariff Regulations, 2018.

Regulation 33 of UERC Tariff Regulations, 2018 specifies as follows:

"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.

...

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 further submitted that it has considered the rate of interest on working capital equal to SBI PLR of 13.70% which is in accordance with the Regulations. Accordingly, the applicable Rate, i.e. 13.70% has been considered for the purpose of computation of interest on working capital. The Commission has determined the interest on working capital for FY 2020-21 in accordance with the aforesaid Regulations and is as discussed below.

4.3.5.1 One Month O&M Expenses

Based on the approved O&M expenses, one month's O&M expenses have been worked out for determining the working capital requirement.

4.3.5.2 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 maintenance spares requirement @ 15% of normative O&M expenses worked out for FY 2020-21.

4.3.5.3 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 AFC for FY 2020-21.

Based on the above, the total working capital requirement of the Petitioner for FY 2020-21 works out to Rs. 18.13 Crore. As discussed above, the Commission has considered the rate of interest on working capital as 13.70% equal to State Bank Advance Rate (SBAR) as on the date of filing of the present Petition and, accordingly, the interest on working capital works out to Rs. 2.48 Crore for FY 2020-21. The interest on working capital approved by the Commission for FY 2020-21 is as shown in the Table below:

Table 4.7: Interest on working capital for FY 2020-21 (Rs. Crore)

Particular	Approved in MYT Order dated 27.02.2019	Claimed	Approved
O&M Expenses	1.21	1.48	1.24
Maintenance spare	2.17	2.67	2.23
Receivables	14.53	14.89	14.66
Margin Money	0.00	3.69	0.00
Total	**17.91**	**19.05**	**18.13**
IWC	**2.46**	**2.61**	**2.48**

4.3.6 *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 not projected any Non-Tariff Income for FY 2020-21. The Commission has also considered the non-tariff income as nil for FY 2020-21. However, the same shall be reviewed at the time of truing up subject to prudence check.

4.3.7 *Annual Fixed Charges, Capacity Charge and Energy Charge Rate (ECR) for FY 2020-21*

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 FY 2020-21. Regulation 50 of UERC Tariff Regulations, 2018 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 FY 2020-21 as claimed and approved by the Commission is shown in the Table below:

Table 4.8: Annual Fixed Charges approved by the Commission for FY 2020-21 (Rs. Crore)

Annual Fixed Charges	Approved in MYT Order dated 27.02.2019	Claimed	Approved
Depreciation	26.44	26.92	26.57
Interest on Loan	17.74	19.04	17.91
Return on Equity	26.03	26.70	26.16
O&M Expenses	14.50	17.81	14.85
Interest on Working Capital	2.46	2.61	2.48
Total	**87.17**	**93.07**	**87.98**
Less: Non Tariff Income	0.00	0.00	0.00
Net AFC	**87.17**	**93.07**	**87.98**

The summary of Capacity Charge and Energy Charge Rate (ECR) for the Petitioner's project for FY 2020-21 is as given in the Table below:

Table 4.9: Capacity Charge and Energy Charge Rate approved by the Commission for FY 2020-21

Particular	Amount
Net AFC (Rs. Crore)	87.98
Saleable Energy (MU)	246.52
Capacity Charges (Rs. Crore) (50% of AFC)	43.99
Energy Charges (Rs./kWh) (50% of AFC)	1.784

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 Primary Energy (DE-(100-Auxiliory Consumption)-FS).

(M.K. Jain)
Member (Technical)

(D.P. Gairola)
Member (Law)