

**Multi Year Tariff Order  
For 5<sup>th</sup> MYT Control Period (FY25-FY29)**

**for**

**Generation Business of Himachal Pradesh  
State Electricity Board Limited (HPSEBL)**



**Himachal Pradesh Electricity Regulatory  
Commission  
March, 2025**

**Before the Himachal Pradesh Electricity Regulatory Commission**  
**At Shimla**  
**Case No. 117/2024**

CORAM

**Sh. DEVENDRA KUMAR SHARMA**

**Sh. YASHWANT SINGH CHO GAL**

**Sh. SHASHI KANT JOSHI**

**In the matter of:**

Petition for ARR for fifth MYT Control Period (FY 2024-25 to FY 2028-29) for Generation Business of Himachal Pradesh State Electricity Board Limited (HPSEBL) under Section 62, 64 and 86 of the Electricity Act, 2003

And

**In the matter of:**

Himachal Pradesh State Electricity Board Limited (HPSEBL).....Petitioner

**ORDER**

Himachal Pradesh State Electricity Board Limited (hereinafter called 'HPSEBL' or 'The Board' or 'The Petitioner') has filed the present Petition for approval of its Aggregate Revenue Requirement (ARR) and determination of Tariff for its own generating stations for the fifth MYT Control Period (FY 2024-25 to FY 2028-29) under the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 as amended from time to time (hereinafter referred to as 'MYT Hydro Tariff Regulations, 2011') and under Sections 62, 64 read with the Section 86 of the Electricity Act, 2003. However, the Commission has approved the present Petition for approval of its Aggregate Revenue Requirement (ARR) and determination of Tariff for its own generating stations for the fifth MYT Control Period (FY 2024-25 to FY 2028-29) under the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024 (hereinafter referred to as 'MYT Hydro Tariff Regulations, 2024') and under Sections 62, 64 read with the Section 86 of the Electricity Act, 2003.

On scrutiny and examination of the Petition, several deficiencies were noted, and the Petitioner was asked to submit replies to the deficiencies. However, the Petitioner took significant time in responding to the clarifications and queries raised by the Commission. On several occasions, the information provided was either incomplete or did not address the query of the Commission adequately. Even post the written submissions,

clarifications were sought verbally from the Petitioner. The Commission has heard the Petitioner, interveners and representations of the stakeholders. The Commission has also held formal interactions with the officers of the HPSEBL and has considered the documents available on record.

The Commission conducted a public hearing on 20.11.2024 at Shimla, had interactions with the officers of HPSEBL and has considered the documents available on record in the following Tariff Order.

The Commission in this order has determined the ARR and fixed charge of each of the generating station owned by the HPSEBL (except for the HEPs for which generic levelized generation tariff is determined by the Commission separately) for each year of the fifth Control Period (FY 2024-25 to FY 2028-29), under the Multi Year Tariff (MYT) regime.

The Commission, in exercise of the powers vested in it under Section 62 of the Act, Orders that the approved Tariffs for the generating stations shall come into force with effect from 1<sup>st</sup> April, 2024 and would remain applicable during the Control period FY 2024-25 to FY 2028-29.

The Commission further directs the publication of the tariff in two leading newspapers, one in Hindi and the other in English, having wide circulation in the State within 7 days of the issuance of this Tariff Order. The publication shall include a general description of the tariff changes and its effect on the Consumers.

-Sd-

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**(SHASHI KANT JOSHI) (YASHWANT SINGH CHOGAL) (DEVENDRA KUMAR SHARMA)**  
**Member Member, Law Chairman**

**Shimla**

**Dated: 19<sup>th</sup> March, 2025**

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# 1. INTRODUCTION

## 1.1. Himachal Pradesh Electricity Regulatory Commission

1.1.1. The Himachal Pradesh electricity regulatory commission (hereinafter referred to as 'HPERC' or 'the Commission') constituted under the Electricity Regulatory Commission Act, 1998 came into being in December 2000 and started functioning with effect from 5<sup>th</sup> January, 2001. After the enactment of the Electricity Act, 2003 on 25<sup>th</sup> May, 2003, the HPERC has been functioning as statutory body with a quasi-judicial and legislative role.

## 1.2. Functions of HPERC

1.2.1. As per Section 86 of the Electricity Act, 2003, the State Commission shall discharge the following functions, namely

- a) Determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- c) facilitate intra-state transmission and wheeling of electricity;
- d) issue license to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- e) promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution license;
- f) adjudicate upon the disputes between the licensees, and generating companies and to refer any dispute for arbitration;
- g) levy fee for the purposes of this Act;
- h) specify State Grid Code consistent with the Indian Electricity Grid Code specified with regard to grid standards;
- i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- j) fix the trading margin in the intra-state trading of electricity, if considered, necessary; and



k) Discharge such other functions as may be assigned to it under this act.

1.2.2. The State Commission shall advise the State Government on all or any of the following matters, namely

- a) promotion of competition, efficiency and economy in activities of the electricity industry;
- b) promotion of investment in electricity industry;
- c) reorganization and restructuring of electricity industry in the State;
- d) Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by State Government.

### 1.3. Himachal Pradesh State Electricity Board Ltd. – Generation Function

1.3.1 The Himachal Pradesh State Electricity Board was constituted on 1<sup>st</sup> September, 1971 in accordance with the provisions of Electricity Supply Act (1948). It functioned as Distribution, Generation as well as Transmission licensee for the State of Himachal Pradesh up to 10<sup>th</sup> June, 2010, when the Government of Himachal Pradesh, in exercise of the power conferred to it, by Section 131 (2), 132, 133 and other applicable provisions of the Electricity Act 2003, vide the 'Himachal Pradesh Power Sector Reforms Transfer Scheme, 2010' entrusted the functions of generation, distribution and trading of electricity to Himachal Pradesh State Electricity Board Limited (HPSEBL). The HPSEBL at present is engaged in electricity generation, distribution and related activities in the State of Himachal Pradesh.

1.3.2 The generation function of the HPSEBL is responsible for generation and supply of electricity through its hydroelectric plants situated in different parts of the State of Himachal Pradesh, which also includes several difficult and sometimes inaccessible terrains.

### 1.4. Multi Year Tariff Framework

1.4.1. The Commission follows the principles of Multi Year Tariff (MYT) determination, in line with the provision of Section 61 of the Act.

1.4.2. The MYT framework is also designed to provide predictability and reduce regulatory risk. This can be achieved by approval of a detailed capital investment plan for the Petitioner, considering the expected plant expansions and other major capital works during the Control Period. The longer time span enables the Petitioner to propose its investment plan in detail, with the possible sources of financing and the corresponding capitalization schedule for each investment.

1.4.3. The Commission had specified the terms and conditions for the determination of tariff in the year 2004, based on the principles as laid down under Section 61 of the Electricity Act 2003.

1.4.4. Thereafter, the Commission notified the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations in the year 2011. The MYT regulations notified in the year 2011 were amended as HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) (First Amendment)

Regulations, 2011 on 30<sup>th</sup> July 2011, HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) (Second Amendment) Regulations, 2013 on 1<sup>st</sup> November, 2013 and HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) (Third Amendment) Regulations, 2018 on 22<sup>nd</sup> November, 2018.

- 1.4.5. Thereafter, the Commission notified the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024 on 5<sup>th</sup> June, 2024 for 5<sup>th</sup> MYT Control Period thereby, superseding the HPERC (Terms and Conditions of Hydro Generation Tariff) Regulations, 2011 and its subsequent amendments.
- 1.4.6. The Commission issued the Multi-Year Tariff (MYT) Order for HPSEBL- Generation function for the 1<sup>st</sup> Control period (FY 2008-09 to FY 2010-11) on 30.05.2008, MYT Order for 2<sup>nd</sup> Control Period (FY 2011-12 to FY 2013-14) on 19.07.2011, MYT Order for 3<sup>rd</sup> Control Period (FY 2014-15 to FY 2018-19) on 10.06.2014, MYT Order for 4<sup>th</sup> Control Period (FY 2019-20 to FY 2023-24) along with True-Up for 2<sup>nd</sup> Control Period (FY 2011-12 to FY 2013-14) on 11.11.2021 and Mid-Term Performance Review (MTR) Order for 4<sup>th</sup> Control Period (FY 2019-20 to FY 2023-24) along with True-Up for 3<sup>rd</sup> Control Period (FY 2014-15 to FY 2018-19) on 26.02.2024. The MYT period for generation tariff is aligned with MYT period for distribution tariff and therefore, next MYT Control Period shall be for 5 years (FY 2024-25 to FY 2028-29).

## 1.5. Filing of Tariff Petition for 5<sup>th</sup> MYT Control Period

- 1.5.1. The HPSEBL has filed the Application/Petition for hydro generation plants owned and operated by it, for approval of the Aggregate Revenue Requirement (ARR) and determination of Fixed Charges for the fifth Control Period (FY 2024-25 to FY 2028-29) on 06.04.2024 vide filing no. 154/2024.
- 1.5.2. The HPSEBL (Generation and Distribution wing) has total 28 hydro generation plants in operation. The Commission has fixed levelized tariff for 8 number of HEP's vide Order dated 15<sup>th</sup> January, 2014 in Petition No. 54/2013/2013-14/2967-84 at Rs 2.25/unit. For Ghanvi-II HEP (2 x 5 MW), the levelized tariff has been fixed as per the Commission's Order dated 28<sup>th</sup> September, 2022. Further, 2 No. of projects (Lingti and Billing) have been transferred to HPSEBL (Generation wing) by HIMURJA at a rate of Rs. 2.50 per unit & Average Power Purchase Cost (APPC) rate respectively and 3 No. of projects (Sach, Sural and Purthi) have been transferred to HPSEBL (Distribution wing) by HIMURJA at a rate of Rs. 2.95 per unit, as per the PPA signed with HIMURJA. Furthermore, Uhl-III HEP (100 MW) has been synchronized with the grid on 29.01.2025, with an interim tariff of Rs. 5.00 per unit approved as per the Tariff Order for the distribution business dated 15 March, 2024.
- 1.5.3. Accordingly, the Petitioner has filed for tariff determination of remaining 13 hydro generating plants for 5<sup>th</sup> MYT Control Period in this Petition.
- 1.5.4. Based on various observations/deficiencies pointed out by the Commission, the HPSEBL has submitted further details and clarifications. The Commission admitted the Petition submitted by the HPSEBL vide Interim Order dated 19.09.2024.

## 1.6. Interaction with the Petitioner

- 1.6.1 Since the submission of the Petition, there have been a series of interactions between the Petitioner and the Commission, both written and oral, wherein the Commission sought additional information/clarifications and justifications on various issues, critical for the analysis of the Petition.
- 1.6.2 Based on the detailed scrutiny of the Petition, further clarification/ information were sought by the Commission from time to time. The following submissions made by the Petitioner in response there to, have been taken on record:

**Table 1: Communication with the Petitioner**

Sl.	Letter from the Commission	Response from the Petitioner
1.	HPERC-F(1)-76/2024-290 dated 03.05.2024	Filing No. 159/2024 dated 29.05.2024
2.	HPERC-F(1)-76/2024-1109 dated 05.07.2024	Filing No. 159/2024 dated 23.08.2024

## 1.7. Public Hearings

- 1.7.1. The interim order, inter alia, included direction to the Petitioner to publish the application in an abridged form and manner as per the "disclosure format" attached with the Interim Order for the information of all the stakeholders in the State. As per the direction, the Petitioner published the public notice in the following newspapers.

**Table 2: List of Newspapers for publication of Stakeholders comments**

Sl.	Name of News Paper	Date of Publication
1.	"The Tribune" and "Divya Himachal"	22.09.2024
2.	"Hindustan Times" and "Punjab Kesari"	23.09.2024

- 1.7.2. The Commission published a notice inviting suggestions and objections from the public on the tariff Petition filed by the Petitioner in accordance with Section 64(3) of the Act which was published in the newspapers as mentioned in the table below:

**Table 3: List of Newspapers for Public Notice by Commission**

Sl.	Name of News Paper	Date of Publication
1.	Indian Express	27.09.2024
2.	Divya Himachal	27.09.2024

- 1.7.3. The stakeholders were requested to file their objections by 04th November, 2024. The HPSEBL was required to submit replies to the suggestions/ objections to the Commission by 11th November, 2024 with a copy to the objectors on which the objectors were required to submit rejoinder by 16th November, 2024.
- 1.7.4. The Commission decided to conduct a public hearing and, therefore, issued a public notice informing the public about the scheduled date of public hearing as 20th November, 2024. All the parties were also informed about the date, time and venue for presenting their case during the public hearing.

- 1.7.5. The Commission has undertaken detailed scrutiny of the submissions made by the Petitioner for the purpose of issuance of this Order.

## 2. SUMMARY OF THE ARR PETITION FOR THE 5<sup>TH</sup> CONTROL PERIOD

### 2.1. Introduction

2.1.1. This chapter summarizes the highlights of the Petition filed by the Petitioner for determination of the Aggregate Revenue Requirement (ARR) for the fifth MYT Control Period (FY 2024-25 to FY 2028-29).

### 2.2. Generation from own plants

2.2.1. The Petitioner has submitted details of energy generation from FY 2020 to FY 2023 as per the actual records and estimates of FY 2024 generation which are based on 10 months actual generation (Apr – Jan) and the rest 2 months' (Feb – Mar) projections on the basis of the average of the actual energy generation for these months in the last four years and the present trend.

2.2.2. The Petitioner has submitted that, GoHP has free power share of 12% in Ghanvi, Baner, Gaj, Larji, Ghanvi II and Khaulii HEPs. Hence, HPSEBL receives 88% of the overall generation from these plants.

2.2.3. Based on the above operational parameters, the actual generation filed by the Petitioner for the past four years and the revised estimates (RE) for FY 2023-24 of the net generation are given in the following table:

**Table 4: Past Years' Generation from FY 2020 to FY 2024, in MUs**

Sl. No.	Plant Name	Design Energy	FY20	FY21	FY22	FY23	FY24
			Actual				RE
1	Andhra	87.30	75.16	62.69	71.26	62.73	71.26
2	Baner	60.67	45.92	44.66	40.23	38.71	40.23
3	Bassi	346.83	330.93	304.40	318.23	307.04	318.23
4	Bhaba	464.70	585.35	474.19	642.58	628.67	537.755
5	Binwa	29.25	36.95	27.02	31.53	28.11	29.25
6	Chaba	7.67	4.69	4.80	5.67	4.57	5.67
7	Chamba	1.77	2.08	1.34	1.44	1.15	1.44
8	Gaj	38.31	53.14	48.47	40.72	37.75	38.31
9	Giri	289.55	224.88	164.71	227.57	231.27	231.27
10	Larji	586.85	671.05	616.21	580.22	611.13	231.32
11	Nogli	9.87	6.15	5.10	4.73	4.68	4.73
12	Rongtong	7.64	0.00	0.33	1.05	0.72	1.05
13	Rukti	6.34	3.27	3.92	4.59	3.74	4.59
14	Sal-II	12.52	0.00	0.00	0.00	0.00	0.00
15	Killar	1.16	0.00	0.00	0.00	0.00	0.30
16	Gumma	18.11	3.27	0.90	5.26	6.53	6.53
17	Ghanvi-I	93.34	100.08	89.56	98.90	85.83	98.90

Sl. No.	Plant Name	Design Energy	FY20	FY21	FY22	FY23	FY24
			Actual				
18	Ghanvi-II	52.27	44.72	41.96	46.49	40.97	46.49
19	Holi	17.52	0.00	2.82	7.40	5.69	7.40
20	Khauli	49.55	42.58	48.14	53.68	40.71	53.68
21	Thirot	28.83	0.00	1.86	6.91	8.58	8.58
22	Bhaba Augmentation	23.44	5.49	9.57	11.10	4.90	11.10
23	Ligthi		0.00	0.31	0.35	0.21	0.15
24	Billing		0.00	0.15	0.78	1.17	1.06
	<b>Total</b>		<b>2,235.70</b>	<b>1,953.10</b>	<b>2,200.71</b>	<b>2,154.84</b>	<b>1,749.305</b>

2.2.4. The Petitioner has also submitted the reasons for lower generation in respect of 13 nos. HEPs, for claiming a downward revision of design energy as under:

#### 1. Andhra Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Low River Discharge
2.	2018-19	Low River Discharge
3.	2019-20	Low River Discharge
4.	2020-21	Low River Discharge
5.	2021-22	Low River Discharge
6.	2022-23	Low River Discharge

#### 2. Baner Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Low River Discharge
2.	2018-19	Low River Discharge
3.	2019-20	Low River Discharge
4.	2020-21	Low River Discharge
5.	2021-22	Low River Discharge
6.	2022-23	Low River Discharge

#### 3. Bassi Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Due to Less Water Discharge from Shanan end
2.	2018-19	Due to Less Water Discharge from Shanan end in the month of June, July, Aug.& Sep. and Due to heavy flood in Uhal River in June & Sep.
3.	2019-20	Due to Less Water Discharge from Shanan end
4.	2020-21	Due to Less Water Discharge from Shanan end
5.	2021-22	Due to Less Water Discharge from Shanan end
6.	2022-23	Due to Less Water Discharge from Shanan end

#### 4. Bhaba Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	There is no shortfall as the Design Energy has been achieved successfully.
2.	2018-19	
3.	2019-20	

Sr. No.	FY	Reasons for Less Energy Generation
4.	2020-21	
5.	2021-22	
6.	2022-23	

#### 5. Binwa Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Low River Discharge
2.	2018-19	Low River Discharge
3.	2019-20	There is no shortfall as the Design Energy has been achieved successfully.
4.	2020-21	
5.	2021-22	
6.	2022-23	

#### 6. Chaba Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Low river discharge
2.	2018-19	Low river discharge
3.	2019-20	Due to heavy flood in Satluj river on dated 18.08.2019 to 09.10.2019
4.	2020-21	Low river discharge
5.	2021-22	Low river discharge
6.	2022-23	Due to heavy flood in Satluj river on dated 10.08.2022 to 06.10.2022.

#### 7. Buri Singh Chamba Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Target Achieved.
2.	2018-19	Low River Discharge
3.	2019-20	Target Achieved.
4.	2020-21	Low River Discharge
5.	2021-22	Low River Discharge
6.	2022-23	Low River Discharge

#### 8. Gaj Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	M/C No-1 damaged stator winding w.e.f. Feb/2016 to August/2017 & due to heavy flood trench weir chocked
2.	2018-19	target achieved
3.	2019-20	target achieved
4.	2020-21	target achieved
5.	2021-22	target achieved
6.	2022-23	Due to heavy flood & trench weir chocked (03.07.2022 & 01.08.2022)

#### 9. Giri Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Low River Discharge
2.	2018-19	Low River Discharge
3.	2019-20	Low River Discharge
4.	2020-21	Low River Discharge

Sr. No.	FY	Reasons for Less Energy Generation
5.	2021-22	Low River Discharge
6.	2022-23	Low River Discharge

### 10. Larji Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Design Energy achieved
2.	2018-19	Design Energy achieved
3.	2019-20	Design Energy achieved
4.	2020-21	Design Energy achieved
5.	2021-22	GT-2 under breakdown
6.	2022-23	Design Energy achieved

### 11. Nogli Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Flash flood in Nogli Khad intake damaged on dated 16.07.2017 to 12.09.2017 Flash flood in Nogli Khad intake damaged on dated 23.09.2017 to 15.11.2017
2.	2018-19	Flash flood in Nogli Khad intake damaged on dated 28.07.2018 to 18.09.2018 Flash flood in Nogli Khad intake damaged on dated 26.09.2018 to 16.10.2018
3.	2019-20	Flash flood in Nogli Khad intake damaged on dated 18.08.2019 to 29.09.2019
4.	2020-21	Spillway damaged on dated 09.01.2020 to 12.01.2020
5.	2021-22	Complete Shutdown on dated 19.11.2021 to 02.12.2021 repair of box channel.
6.	2022-23	Due to Heavy flood on dated 07.08.2022 to 09.08.2022/ Low River discharge.

### 12. Rongtong Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Due to flood at intake/ Non availability of grid.
2.	2018-19	Low River Discharge / Non availability of grid.
3.	2019-20	Low River Discharge / Non availability of grid.
4.	2020-21	Low River Discharge / Non availability of grid.
5.	2021-22	Low River Discharge / Non availability of grid.
6.	2022-23	Low River Discharge / Non availability of grid.

### 13. Rukti Power House

Sr. No.	FY	Reasons for Less Energy Generation
1.	2017-18	Low River Discharge / Non availability of grid.
2.	2018-19	Low River Discharge / Non availability of grid.
3.	2019-20	Low River Discharge / Non availability of grid.
4.	2020-21	Low River Discharge / Non availability of grid.
5.	2021-22	Low River Discharge / Non availability of grid.
6.	2022-23	Low River Discharge / Non availability of grid.



### 2.3. Generation Projections from Own Generation Stations for 5<sup>th</sup> MYT Control Period

2.3.1. The Petitioner has submitted that as per trends of generation for the last four to five years (more than this period in some of the projects), the generation up to Design Energy could not be achieved due to various reasons indicated above which were beyond the control of the HPSEBL.

2.3.2. The Petitioner has mentioned the sub-regulation (6) of Regulation 26 of HPERC (Terms and conditions for Determination of Hydro Generation Tariff) Regulations, 2011 as amended from time to time as under:

*(6) In case actual total energy generated by a hydro generating station during a year is less than the design energy for reasons beyond the control of the generating company, the following treatment shall be applied, on a rolling basis:*

*(a) in case the energy shortfall occurs within ten years from the date of commercial operation of a generating station, the ECR for the year following the year of energy shortfall shall be computed based on the formula specified in sub-regulation (5) of this Regulation with the modification that the DE for the year shall be considered as equal to the actual energy generated during the year of the shortfall, till the energy charge shortfall of the previous year has been made up, after which normal ECR shall be applicable;*

*(b) in case the energy shortfall occurs after ten years from the date of commercial operation of a generating station, the following shall apply: -*

*(i) Suppose the specified annual design energy for the station is DE MWh, and the actual energy generated during the concerned (first) and the following (second) financial years is A1 and A2 MWh respectively, A1 being less than DE. Then, the design energy to be considered in the formula in sub-regulation (5) of this regulation for calculating the ECR for the third financial year shall be moderated as  $(A1 + A2 - DE)$  MWh, subject to a maximum of DE MWh and a minimum of A1 MWh;*

*(ii) Actual energy generated (e.g., A1, A2) shall be arrived at by multiplying the net metered energy sent out from the station by  $100 / (100 - AUX)$ .*

2.3.3. The Petitioner has submitted that the actual generation is less than the design energy both for the first year A1 (FY 2021-22), for taking design energy to be considered in the formula in sub-regulation (5) for calculating the ECR for the third and subsequent financial years:

**Table 5: Restating of Design Energy for calculating ECR for 5<sup>th</sup> MYT Control Period as submitted by the Petitioner**

Sr. No.	Name of Project	Design Energy (MU)	FY 21-22 (A1)	FY 2022-23 (A2)	Moderation $A1+A2-DE$ as per Reg. 26(6)(b)(i)	Energy taken for calculation of ECR in sub-reg. (5) of reg. 26
1	Andhra	87.30	71.26	62.73	46.69	71.26
2	Baner	60.67	40.23	38.71	18.28	40.23

Sr. No.	Name of Project	Design Energy (MU)	FY 21-22 (A1)	FY 2022-23 (A2)	Moderation A1+A2-DE as per Reg. 26(6)(b)(i)	Energy taken for calculation of ECR in sub-reg. (5) of reg. 26
3	Bassi	346.83	318.23	307.04	278.44	318.23
4	Chaba	7.67	5.67	4.57	2.58	5.67
5	Chamba	1.77	1.44	1.15	0.82	1.44
6	Giri	289.55	227.57	231.27	169.29	231.27
7	Larji	586.85	580.22	611.13	604.50	231.32*
8	Nogli	9.87	4.73	4.68	-0.46	4.73
9	Rongtong	7.64	1.05	0.72	-5.87	1.05
10	Rukti	6.34	4.59	3.74	1.99	4.59

\* Actual Generation in FY 2023-24 due to flooding in July, 2023

2.3.4. The Petitioner has prayed to consider the energy projections for calculations of Energy Charge Rate (ECR) as per sub-regulation (5) of Regulation 26 of HPERC (Terms and Conditions of Determination of Hydro Generation Tariff) Regulations, 2011 as amended from time to time, as follows:

**Table 6: Projected Gross Annual Generation (MUs) in 5<sup>th</sup> MYT Control Period as submitted by the Petitioner**

Sr. No.	Plant Name	FY 25	FY 26	FY 27	FY 28	FY 29
1	Andhra	71.26	71.26	71.26	71.26	71.26
2	Baner	40.23	40.23	40.23	40.23	40.23
3	Bassi	318.23	318.23	318.23	318.23	318.23
4	Bhaba	464.70	464.7	464.70	464.70	464.70
5	Binwa	29.25	29.25	29.25	29.25	29.25
6	Chaba	5.67	5.67	5.67	5.67	5.67
7	Chamba	1.44	1.44	1.44	1.44	1.44
8	Gaj	38.31	38.31	38.31	38.31	38.31
9	Giri	231.27	231.27	231.27	231.27	231.27
10	Larji	231.32	586.85	586.85	586.85	586.85
11	Nogli	4.73	4.73	4.73	4.73	4.73
12	Rongtong	1.05	1.05	1.05	1.05	1.05
13	Rukti	4.59	4.59	4.59	4.59	4.59
14	Sal-II	0.00	0.00	0.00	0.00	0.00
15	Killar	0.30	0.30	0.30	0.30	0.30
16	Gumma	6.53	6.53	6.53	6.53	6.53
17	Ghanvi-I	98.90	98.90	98.90	98.90	98.90
18	Ghanvi-II	46.49	46.49	46.49	46.49	46.49
19	Holi	7.40	7.40	7.40	7.40	7.40
20	Khauli	53.68	53.68	53.68	53.68	53.68
21	Thirot	8.58	8.58	8.58	8.58	8.58
22	Bhaba Aug.	11.10	11.10	11.10	11.10	11.10
23	Ligthi	0.15	0.15	0.15	0.15	0.15

24	Billing	1.06	1.06	1.06	1.06	1.06
25	Uhl-III	289.48	385.97	385.97	385.97	385.97
	<b>Total</b>	<b>1,965.73</b>	<b>2,417.75</b>	<b>2,417.75</b>	<b>2,417.75</b>	<b>2,417.75</b>

## 2.4. Determination of Annual Fixed Charges

2.4.1. The Petitioner, for the purpose of determination of Annual Fixed Charge and the tariff for sale of electricity from the generating station, has considered the following elements as specified by the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011:

- a) Operation and Maintenance Expenses (O&M)
- b) Depreciation
- c) Interest on Loans
- d) Interest on Working Capital; and
- e) Return on Equity (ROE)

2.4.2. The Petitioner has further submitted that AFC for each of the own generating plants has been estimated based on the norms outlined in HPERC (Terms and Conditions for Determination of Hydro Generation supply Tariff), Regulations 2011 along with the respective Amendments thereon and the historical numbers.

2.4.3. The Petitioner has considered the following while calculating the AFC:

- a) The completed cost of projects has been taken as considered by the Commission as per the MYT order for FY 2014-15 to FY 2018-19 dated 10<sup>th</sup> June, 2014, True up for the 3<sup>rd</sup> Control Period (FY 2014-15 to FY 2018-19) done by HPERC vide order dated 26<sup>th</sup> February, 2024 and submission of provisional true up for FY 2019-20 to FY 2021-22 and revised estimates for FY 2022-23 & FY 2023-24. The GFA has been taken as per the true up for 3<sup>rd</sup> Control Period, but this is without prejudice to the rights of HPSEBL for filing review against the order passed by the Commission disallowing various controllable components of ARR for Generation Business including the Capital Works done during the 3<sup>rd</sup> Control period and capitalized during this period.
- b) The base year considered for projections of the 5<sup>th</sup> MYT Control Period is FY 2023-24.
- c) The ROE has been considered @ 15.50% on the equity base approved as per the Commission’s Hydro Generation Tariff Regulations, 2011 and subsequent amendments 1, 2 and 3 except for Larji HEP wherein pre - tax ROE @ 22.94% has been approved by Commission in the Tariff Order 2011.
- d) The O&M expenses have been escalated as per the methodology stated in the Tariff Regulations. The WPI and CPI considered for this purpose is the 3-year average which are 7.89% and 5.41% respectively, calculated as below:

**Table 7: Calculation of WPI and CPI Factors, as submitted by Petitioner**

Year	WPI	% increase WPI	CPI	% increase in CPI
2019-20	121.8		322.50	
2020-21	123.4	1.31%	338.69	5.03%
2021-22	139.4	12.97%	356.06	5.13%
2022-23	152.5	9.40%	377.62	6.06%
<b>3 Year Average Inflation</b>		<b>7.89%</b>		<b>5.41%</b>

- i. For projecting R&M cost, the historical R&M cost as a percentage of the historical GFA has been escalated by the WPI factor 7.89% for each year in line with the methodology adopted by the Commission during 4<sup>th</sup> MYT Control Period.
  - ii. The Petitioner has projected the employee cost by escalating the historical employee cost by the CPI factor 5.41%. The adjustment for the Revised estimate for FY 2023-24 has been done on the methodology adopted by the Commission during 4<sup>th</sup> MYT Control Period.
  - iii. For projecting A&G cost, the historical A&G has been escalated by the WPI factor 7.89% each year after revised estimate for FY 2023-24 in line with the methodology adopted during 4<sup>th</sup> MYT Control Period.
- e) To calculate the accumulated depreciation on the original GFA up to FY 2023-24, the Petitioner has considered the capitalized assets allowed by the Commission in the True up of 3<sup>rd</sup> Control Period along with the proposed capitalization for the 5<sup>th</sup> Control Period.
  - f) The GoHP has 12% share in the generation of power from plants Gaj, Baner, Ghanvi, Khaul, Ghanvi II and Larji. The Petitioner has reduced the same from total generation to arrive at the net saleable energy from these plants to recover the AFC.
  - g) The time duration for completion and capitalization of new Capex projects has been taken project wise and capitalization has been calculated accordingly by the Petitioner.
  - h) Due to the complexity in nature of loan utilization in the years FY 2011-12 to FY 2017-18, the overall audited Interest and Finance Charges for the Generation function of HPSEBL has been proportioned by the Petitioner across plants based on installed capacity.
  - i) As per the MYT Hydro Tariff Regulations, 2011 and its subsequent amendments, the Interest on Working Capital has been considered at 11.50% (SBI MCLR on 10<sup>th</sup> April, 2022 is 8.50% + 300 basis points) by the Petitioner.
  - j) **Pension Contributions:** - The Petitioner submitted that the Commission in the MYT Tariff order for 5<sup>th</sup> Control Period of Distribution Business dated

15.03.2024 (Table-244) has approved the following pension contribution for Generation and SI & Projects for FY 2024-25 to FY 2028-29:

**Table 8: Pension Contribution submitted by the Petitioner**

Particulars	FY 25	FY 26	FY 27	FY 28	FY 29
Terminal Liability towards Generation	18.79	20.11	21.51	23.02	24.63
Terminal Liability Towards Projects and S&I	2.87	3.07	3.28	3.51	3.76
<b>TOTAL</b>	<b>21.66</b>	<b>23.18</b>	<b>24.79</b>	<b>26.53</b>	<b>28.39</b>

The Petitioner has submitted that the above terminal liability / pension contribution approved by the Commission has been apportioned among 13 No. generating units proportionate to the ratio of the installed capacity of the projects for which project specific tariff is being filed for the FY 2024-25 to FY 2028-29.

## 2.5. Methodology adopted for allocation of Corporate Office and other common office O&M Costs

2.5.1. The Petitioner had submitted the Business Plan for FY 2019-20 to FY 2023-24 to the Commission with the details of methodology of allocation of the corporate office and other offices O&M.

2.5.2. As per the Petitioner, the Commission in the MYT order dated 11.11.2021 for the 4<sup>th</sup> Control Period has not allowed the common office O&M costs to be allocated as per the proposed methodology. The Commission in the MYT order at Clause No. 5.2.20 and 5.2.21 has recorded as under:

*"5.2.20. The Commission observed variation between the total plant-wise O&M cost submitted by the Petitioner and the amount of O&M towards generation business in the HPSEBL's Consolidate audited accounts. In response, the Petitioner Submitted that the corporate office and other common office costs have been allocated to the plants based on the capacity in addition to the amount of expense recorded towards generation business in the audited accounts of HPSEBL. The Commission observes that the Petitioner had already submitted these common office costs under audited account break-up for trueing-up of distribution business. Therefore, considering this additional corporate office and Common office costs towards generation business would result in double counting under the O&M head and the Commission has accordingly excluded such costs as part of the true-up for generation business.*

*5.2.21. Also, the Commission has already allowed common expenses such as terminal liabilities/ benefits put together in the ARR of the Distribution licensee which is being now claimed separately by the Petitioner. These amounts would result in double counting of the already approved common pool cost under the distribution business. Therefore, the Commission has excluded the same while comparing the O&M expenses for various plants."*

2.5.3. The Petitioner had filed the additional submission to the Petition during Mid-Term Review for 4<sup>th</sup> MYT Control Period of Generation Business to consider the employees cost, A&G, R&M and other costs towards S&I and Projects under

Generation Business which has been disallowed in the True-up of FY 2021-22 under the Distribution Business. The Commission vide Mid Term Review Order for 4<sup>th</sup> Control Period dated 26.02.2024 has observed as under:

*"6.3.20. It is observed that the Petitioner has claimed O&M expenditure towards BVPCL and S&I which are corresponding to projects which are not yet commissioned or projects under construction stage and cannot be part of operational plants of HPSEBL. The Petitioner has to consider it as part of expenditure of new projects whenever these costs are incurred or shall form as part of AFC/ Tariff for new projects, if applicable."*

2.5.4. The Petitioner had submitted that the Salary and other Costs for employees of S&I and Projects, including pension contribution to BVPCL, Projects and S&I employees were claimed in the True-up of distribution function for FY 2022-23. The Commission had not allowed these costs in True Up of FY 2022-23 under 4<sup>th</sup> MYT Control Period of Distribution Business. The Petitioner has prayed the Commission to consider these costs under Generation Business for the 5<sup>th</sup> MYT Control Period in order to avoid financial loss to HPSEBL, since these offices are part and parcel of HPSEBL. These offices are doing job for the existing & new projects and for the Distribution Business and such disallowance will result in financial crisis as the salaries to existing employees cannot be stopped and the offices, though rationalized, cannot be completely closed.

2.5.5. The Petitioner has proposed following employees cost in the 5<sup>th</sup> Control Period towards S&I and Projects division based on the disallowance in FY 2022-23 in distribution function, estimation for FY 2023-24 and 5<sup>th</sup> Control Period by applying the average CPI (IW):

**Table 9: Employees Cost of S&I and Projects, as submitted by Petitioner**

Particulars	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Employees Cost of S&I and Projects	18.47	19.47	20.52	21.63	22.8	24.04	25.34

2.5.6. The Petitioner also mentioned that the cost has been apportioned among the 13 projects proportionate to the installed capacity.

## 2.6. Annual Fixed Charges for Andhra HEP

2.6.1. Andhra HEP is a 16.95 MW (3 x 5.65 MW) project commissioned in the year 1987. It is a peaking storage project with surface power station and static excitation.

2.6.2. The Petitioner has considered the Opening GFA as approved by the Commission in the 4<sup>th</sup> MYT tariff order dated 11.11.2011, wherein Commission had approved a capital cost of Rs. 57.61 Cr. The Commission had considered 100% debt funding for the plant with no outstanding loans as on 31.03.2014 i.e., for true-up of 2<sup>nd</sup> Control Period.

2.6.3. The Commission after True up of 3<sup>rd</sup> Control Period in Order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 57.61 Cr. The Petitioner has proposed the GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 10: Andhra- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	57.61	0.03	0.53	0.64	0.37	0.37	<b>59.55</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	
<b>Net Addition to GFA</b>	<b>57.61</b>	<b>0.03</b>	<b>0.53</b>	<b>0.64</b>	<b>0.37</b>	<b>0.37</b>	<b>59.55</b>

2.6.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has proposed a net addition of Rs. 55 Cr. to the GFA through various electromechanical/civil and other works. The Scheme wise details submitted by the Petitioner is as follows:

**Table 11: Andhra- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs. Crores)	Schedule of Commissioning	Funding Agency / Remarks
1	RMU&LE works of Andhra PH	55	FY 28 to FY 29	PFC/REC

2.6.5. The capital expenditure and capitalization plan submitted by the Petitioner is as follows:

**Table 12: Andhra - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure				<b>35</b>	<b>20</b>	55
Capitalization for FY 2024-25	0	0	0	0	0	0
Capitalization for FY 2025-26		0	0	0	0	0
Capitalization for FY 2026-27			0	0	0	0
Capitalization for FY 2027-28				35	0	35
Capitalization for FY 2028-29					20	20
<b>Total Capitalization</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>20</b>	<b>55</b>

2.6.6. Accordingly, the Petitioner has calculated the Depreciation, which has been tabulated below. The proposed additions to the GFA have been separately calculated.

**Table 13: Andhra - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	59.18	59.55	59.55	59.55	59.55	94.55
Add: Additions	0.37	0.00	0.00	0.00	35.00	20.00
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>59.55</b>	<b>59.55</b>	<b>59.55</b>	<b>59.55</b>	<b>94.55</b>	<b>114.55</b>
Accumulated New GFA	1.94	1.94	1.94	1.94	36.94	56.94
<b>Depreciation</b>	<b>44.84</b>	<b>46.45</b>	<b>48.06</b>	<b>49.67</b>	<b>53.78</b>	<b>55.36</b>
Accumulated at the beginning of Year						
Add: Depreciation on Original GFA	1.10	1.10	1.10	3.60	-	-

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Add: Depreciation on additional Capitalisation	0.51	0.51	0.51	0.51	1.58	2.53
<b>Total Depreciation for the year</b>	<b>1.61</b>	<b>1.61</b>	<b>1.61</b>	<b>4.11</b>	<b>1.58</b>	<b>2.53</b>
<b>Accumulated at the end of the year</b>	<b>46.45</b>	<b>48.06</b>	<b>49.67</b>	<b>53.78</b>	<b>55.36</b>	<b>57.89</b>

2.6.7. The AFC submitted by the Petitioner for Andhra HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 14: Andhra - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	71.26	71.26	71.26	71.26	71.26	71.26
Total Auxiliary (MU)	0.71	0.71	0.71	0.71	0.71	0.71
Aux Consumption (%)	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation (MU)	70.55	70.55	70.55	70.55	70.55	70.55
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>70.55</b>	<b>70.55</b>	<b>70.55</b>	<b>70.55</b>	<b>70.55</b>	<b>70.55</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>12.49</b>	<b>13.90</b>	<b>14.84</b>	<b>15.75</b>	<b>16.70</b>	<b>17.72</b>
<i>R&amp;M Expenses</i>	2.74	2.94	3.27	3.53	3.81	4.11
<i>Employees Expenses</i>	9.18	10.00	10.54	11.11	11.71	12.35
<i>Pension Contributions</i>	0.47	0.86	0.92	0.99	1.06	1.13
<i>A&amp;G Expenses</i>	0.09	0.10	0.11	0.11	0.12	0.13
Depreciation (Rs. Cr)	1.61	1.61	1.61	4.11	1.58	2.53
Interest & Finance Charges (Rs. Cr)	0.90	0.00	0.00	0.00	1.28	3.20
Return on Equity (Rs. Cr)	0.11	0.07	0.07	0.07	1.70	2.63
Interest on Working Capital (Rs. Cr)	0.64	0.68	0.73	0.82	0.87	0.99
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>15.74</b>	<b>16.27</b>	<b>17.26</b>	<b>20.75</b>	<b>22.13</b>	<b>27.07</b>
Energy Charge Rate (Rs/KWh)	1.12	1.15	1.22	1.47	1.57	1.92
Capacity Charges (Rs. Cr)	7.87	8.13	8.62	10.37	11.07	13.54

## 2.7. Annual Fixed Charges for Baner

2.7.1. Baner HEP is a 12 MW (3 x 4 MW) project commissioned in the year 1996.

2.7.2. The Petitioner has submitted that the Commission had approved a capital cost of Rs. 55.67 Cr. as on 1.4.2014. The financing of the capital cost of Rs. 55.67 Cr. is through PFC, LIC and GoHP loan (Rs. 34.66 Cr.), short term loan (Rs. 6.01) along with GOHP equity of INR 15 Cr. on which an ROE@15.50% has been approved as per the applicable Regulations.



2.7.3. The Petitioner has further submitted that the Commission after True up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 55.55 Cr. The Petitioner has proposed the GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 15: Baner- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	55.55	0	0	0	0	0	<b>55.55</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	
<b>Net Addition to GFA</b>	<b>55.55</b>	0	0	0	0	0	<b>55.55</b>

2.7.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has proposed a net addition of Rs. 10.571 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details submitted by the Petitioner is as follows:

**Table 16: Baner- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning	Funding Agency / Remarks
1	Renovation & Modernization works of Baner PH	6.801	FY 25-29	PFC/REC
2	Minor Capital Works	3.77	FY 2024-25	Own Fund/REC/PFC
	<b>Total</b>	<b>10.571</b>		

2.7.5. The capital expenditure and capitalization plan has been given below:

**Table 17: Baner - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	<b>3.77</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1.801</b>	<b>10.571</b>
Capitalization for FY 2024-25	3.77					3.77
Capitalization for FY 2025-26		2				2
Capitalization for FY 2026-27			2			2
Capitalization for FY 2027-28				1		1
Capitalization for FY 2028-29					1.801	1.801
<b>Total Capitalization</b>	<b>3.77</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1.801</b>	<b>10.571</b>

2.7.6. Accordingly, the Petitioner has calculated the Depreciation, which has been tabulated below. The proposed additions to the GFA have been separately calculated.

**Table 18: Baner - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	55.55	55.55	59.32	61.32	63.32	64.32
Add: Additions	-	3.77	2.00	2.00	1.00	1.80
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>55.55</b>	<b>59.32</b>	<b>61.32</b>	<b>63.32</b>	<b>64.32</b>	<b>66.12</b>
Accumulated New GFA	-	3.77	5.77	7.77	8.77	10.57
<b>Depreciation</b>						
Accumulated at the beginning of Year	33.79	34.95	36.39	37.99	39.77	41.65
Add: Depreciation on Original GFA	1.16	1.16	1.16	1.16	1.16	1.16
Add: Depreciation on additional Capitalisation	0.00	0.28	0.44	0.62	0.72	0.92
<b>Total Depreciation for the year</b>	<b>1.16</b>	<b>1.44</b>	<b>1.60</b>	<b>1.78</b>	<b>1.88</b>	<b>2.08</b>
<b>Accumulated at the end of the year</b>	<b>34.95</b>	<b>36.39</b>	<b>37.99</b>	<b>39.77</b>	<b>41.65</b>	<b>43.73</b>

2.7.7. The AFC determined by Petitioner for Baner HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 19: Baner - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	40.23	40.23	40.23	40.23	40.23	40.23
Total Auxiliary (MU)	0.28	0.28	0.28	0.28	0.28	0.28
Aux Consumption (%)	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
Net Generation (MU)	39.95	39.95	39.95	39.95	39.95	39.95
Less: Free Power to GOHP (MU)	4.79	4.79	4.79	4.79	4.79	4.79
<b>Energy Available for Sale (MU)</b>	<b>35.16</b>	<b>35.16</b>	<b>35.16</b>	<b>35.16</b>	<b>35.16</b>	<b>35.16</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>7.15</b>	<b>8.38</b>	<b>8.88</b>	<b>9.40</b>	<b>9.96</b>	<b>10.55</b>
<i>R&amp;M Expenses</i>	0.84	0.90	0.97	1.04	1.13	1.21
<i>Employees Expenses</i>	5.65	6.53	6.89	7.26	7.65	8.07
<i>Pension Contributions</i>	0.34	0.61	0.65	0.70	0.75	0.80
<i>A&amp;G Expenses</i>	0.32	0.34	0.37	0.40	0.43	0.47
Depreciation (Rs. Cr)	1.16	1.44	1.60	1.78	1.88	2.08
Interest & Finance Charges (Rs. Cr)	0.00	0.08	0.19	0.24	0.24	0.23
Return on Equity (Rs. Cr)	2.45	2.50	2.59	2.69	2.73	2.82
Interest on Working Capital (Rs. Cr)	0.41	0.47	0.50	0.53	0.56	0.59
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>11.17</b>	<b>12.88</b>	<b>13.76</b>	<b>14.64</b>	<b>15.38</b>	<b>16.27</b>
Energy Charge Rate (Rs/KWh)	1.59	1.83	1.95	2.08	2.19	2.31
Capacity Charges (Rs. Cr)	5.58	6.44	6.87	7.32	7.69	8.14

## 2.8. Annual Fixed Charges for Bassi

- 2.8.1. Bassi HEP is a 60 MW (2 x 30 MW) project commissioned in the year 1970. It is a peaking, storage-based project with surface power station and rotating exciters.
- 2.8.2. The Commission, in the 4<sup>th</sup> MYT tariff order dated 11.11.2021, had approved a capital cost of Rs. 141.24 Cr. as on 01.04.2014. The Commission had considered 100% debt funding for the plant with no outstanding loans and also considered extended useful life of power house from 40 years to 60 years.
- 2.8.3. The Commission after True-up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 138.99 Cr. The Petitioner has proposed the GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 20: Bassi- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY24	Total
Additions to GFA	138.99	0.83	2.44	9.15	1.76	0.64	<b>153.8</b>
Deductions/Retirals to GFA	0.00						
Net Addition to GFA	138.99	0.83	2.44	9.15	1.76	0.64	<b>153.8</b>

- 2.8.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has proposed a net addition of Rs. 22.33 Cr. to the GFA through various works whose scheme wise details is as follows:

**Table 21: Bassi- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Up-gradation/Augmentation of 16MVA, 132/33KV Power Transformer to 132/33KV, 1*25/31.5 MVA Power Transformer of Bassi Power House under Bassi Power House Division, HPSEBL, Joginder Nagar (HP).	4.28	FY 25-29	REC/PFC
2	Up-gradation/Augmentation of 33/11 KV 2X2.5 MVA Power Transformer to 33/11 KV 2X 5 MVA Power Transformer at 33 KV Switchyard & 11 KV switchgear system of Bassi Power House	4.40	FY 25-29	REC/PFC
3	Upgradation of SCADA, special T&P, measuring equipment, spare air water cooler for generator, hydraulic system of Chaprot, LT switch gear, LT distribution panel for Bassi PH	3.50	FY 25-29	REC/PFC
4	Procurement of spare service seal, Maintenance seal & rotor ring 1 set each for Bassi Power House.	1.00	FY 25-29	REC/PFC
5	Providing wire crate for protection of dislodged land (due to heavy rainfall on 14.08.2023) along penstock near Anchor Block No.7 and removal of slips/ loose strata along the penstock under Bassi power House Division, HPSEBL, Joginder Nagar.	0.60	FY 25-29	REC/PFC/Own Source
6	Installation and commissioning of 02 Nos. 10KVA DG's set for operation of Intake and Penstock gates/gears operation in event of	0.20	FY 25-29	REC/PFC

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
	main supply failure (As directed by CBIP).			
7	Prov., & Laying of Emulsifier pipe line 200mm Dia along the penstock and construction of new water tank of 100000 Litre Capacity for Bassi Power House.	0.50	FY 25-29	REC/PFC
8	Procurement of 08.Nos. Nozzle feedback transducers for Bassi Power House.	0.20	FY 25-29	REC/PFC
9	Procurement of spare runner and TGB 01 Nos. each for Bassi Power House.	4.00	FY 25-29	REC/PFC
10	Renewal, providing, installation and commissioning of existing OPU system of Penstock intake gate at Chaprot reservoir.	0.40	FY 25-29	REC/PFC
11	Providing GI roofing, false ceiling in residential and non-residential buildings at Shanan of Bassi Power House.	0.35	FY 25-29	REC/PFC/Own Source
12	Recovery of haulage bay trolley line from Bassi to Chaprot reservoir by renewing the trolley line, and control system under Bassi Power House.	0.70	FY 25-29	REC/PFC/Own Source
13	Renewal of old existing water cooler by Design, manufacture & supply of 08 nos. air water cooler for generator of Bassi Power House.	0.65	FY 25-29	REC/PFC
14	Procurement of spare service seal, Maintenance seal & rotor ring 1 set each for Bassi Power House.	1.15	FY 25-29	REC/PFC
15	Renewal of old existing water cooler by Design, manufacture & supply of 04 nos. air water cooler for generator of Bassi Power House.	0.40	FY 25-29	REC/PFC
	<b>Total</b>	<b>22.33</b>		

Note – The Commission observed that the Petitioner has proposed duplicate Capex works of same nature on few Plants. In this regard, the Commission in its query had asked the Petitioner to review the list of proposed Capex works and remove the duplicity from the list. The Petitioner in its reply responded that these works are not duplicate but the works that appear again are another one of same nature but for other unit or the same work executed in a different year during FY 2025-29.

2.8.5. The capital expenditure and capitalization plan has been given below:

**Table 22: Bassi - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					Total
	FY 25	FY 26	FY 27	FY 28	FY 29	
Proposed Capital Expenditure	<b>3.85</b>	<b>16.28</b>	<b>2.20</b>	<b>0.00</b>	<b>0.00</b>	<b>22.33</b>
Capitalization for FY 2024-25	3.85					
Capitalization for FY 2025-26		16.28				
Capitalization for FY 2026-27			2.20			
Capitalization for FY 2027-28				0.00		
Capitalization for FY 2028-29					0.00	0.00
<b>Total Capitalization</b>	<b>3.85</b>	<b>16.28</b>	<b>2.20</b>	<b>0.00</b>	<b>0.00</b>	<b>22.33</b>

2.8.6. Accordingly, the GFA details along with the depreciation expense for the 5<sup>th</sup> Control Period are presented in the following table. The depreciation expenses for

the existing GFA and the proposed additions to the GFA have been separately calculated.

**Table 23: Bassi - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	153.16	153.80	157.65	173.93	176.13	176.13
Add: Additions	0.64	3.85	16.28	2.20	0.00	0.00
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>153.80</b>	<b>157.65</b>	<b>173.93</b>	<b>176.13</b>	<b>176.13</b>	<b>176.13</b>
Accumulated New GFA	14.81	18.66	34.94	37.14	37.14	37.14
<b>Depreciation</b>						
Accumulated at the beginning of Year	<b>66.03</b>	<b>71.15</b>	<b>76.47</b>	<b>82.69</b>	<b>89.03</b>	<b>95.37</b>
Add: Depreciation on Original GFA	4.33	4.33	4.33	4.33	4.33	4.33
Add: Depreciation on additional Capitalisation	0.79	0.99	1.89	2.01	2.01	2.01
<b>Total Depreciation for the year</b>	<b>5.12</b>	<b>5.32</b>	<b>6.22</b>	<b>6.34</b>	<b>6.34</b>	<b>6.34</b>
<b>Accumulated at the end of the year</b>	<b>71.15</b>	<b>76.47</b>	<b>82.69</b>	<b>89.03</b>	<b>95.37</b>	<b>101.71</b>

2.8.7. The AFC calculated for Bassi HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 24: Bassi - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	318.23	318.23	318.23	318.23	318.23	318.23
Total Auxiliary (MU)	2.23	2.23	2.23	2.23	2.23	2.23
Aux Consumption (%)	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
Net Generation (MU)	316.01	316.01	316.01	316.01	316.01	316.01
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>316.01</b>	<b>316.01</b>	<b>316.01</b>	<b>316.01</b>	<b>316.01</b>	<b>316.01</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>19.96</b>	<b>25.67</b>	<b>27.39</b>	<b>29.00</b>	<b>30.70</b>	<b>32.51</b>
R&M Expenses	2.00	2.14	2.53	2.73	2.95	3.18
Employees Expenses	15.93	19.97	21.05	22.19	23.39	24.65
Pension Contributions	1.84	3.36	3.59	3.84	4.11	4.40
A&G Expenses	0.18	0.20	0.22	0.23	0.25	0.27
Depreciation (Rs. Cr)	5.12	5.32	6.22	6.34	6.34	6.34
Interest & Finance Charges (Rs. Cr)	7.22	6.44	6.23	6.03	5.18	4.25
Return on Equity (Rs. Cr)	2.34	0.84	1.60	1.70	1.70	1.70
Interest on Working Capital (Rs. Cr)	1.22	1.45	1.56	1.63	1.70	1.76
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>35.86</b>	<b>39.72</b>	<b>43.00</b>	<b>44.70</b>	<b>45.62</b>	<b>46.56</b>
Energy Charge Rate (Rs/kWh)	0.57	0.63	0.68	0.71	0.72	0.74
Capacity Charges (Rs. Cr)	17.93	19.86	21.49	22.35	22.81	23.28

## 2.9. Annual Fixed Charges for SVP Bhaba

- 2.9.1. Bhaba HEP is a 120 MW (3 x 40 MW) project commissioned in the year 1989. It is a peaking, storage project with underground power station and static excitation.
- 2.9.2. The Commission, in the 2<sup>nd</sup> MYT True up order dated 11.11.2021 had considered a capital cost of Rs. 222.19 Cr. for tariff determination with 100% debt funding for the plant and no outstanding loans. Accordingly, the Petitioner had considered the opening GFA for FY 2011-12 as Rs 222.19 Cr.
- 2.9.3. The Commission after True-up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 275.13 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 25: SVP Bhaba- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	275.13	6.81	18.35	0.00	12.91	1.76	<b>314.96</b>
Deductions/Retirals to GFA	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Net Addition to GFA</b>	<b>275.13</b>	<b>6.81</b>	<b>18.35</b>	<b>0.00</b>	<b>12.91</b>	<b>1.76</b>	<b>314.96</b>

- 2.9.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has envisioned a net addition of Rs. 22.19 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details have been submitted by the Petitioner as follows:

**Table 26: SVP Bhaba- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Estimate for Design Engineering, manufacturing, supply, and installation of early warning system (EWS) and automatic weather station (AWS) for 120MW SVP (Bhaba)	4.00	FY 25-29	REC/PFC
2	Installation and commissioning of 220V Battery bank	0.75	FY 25-29	REC/PFC
3	Installation and commissioning of 48V Battery bank	0.15	FY 25-29	REC/PFC
4	Installation of Battery charger for 48V and 220V Battery bank	0.50	FY 25-29	REC/PFC
5	AMC of 220KV SF6 GIS Substation	1.75	FY 25-29	REC/PFC/Own Fund
6	Installation and commissioning of Line-1 Breaker CDS Card	0.10	FY 25-29	REC/PFC/Own Fund

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
7	Upgradation of Vibration monitoring system	0.25	FY 25-29	REC/PFC
8	AMC of SCADA system installed at 3x40MW Bhaba Powerhouse, AMC of control card installed in various control panels.	1.25	FY 25-29	REC/PFC
9	Installation of New of Brake Jack assembly in UNIT-II of 3x40MW SVP Bhaba Powerhouse	0.70	FY 25-29	REC/PFC
10	Installation of new Fresh air blower	0.40	FY 25-29	REC/PFC
11	Yearly AMC of Unit-1 by BHEL	0.35	FY 25-29	REC/PFC/Own Fund
12	Yearly AMC of Unit-2 by BHEL	0.40	FY 25-29	REC/PFC/Own Fund
13	Yearly AMC of Unit-3 by BHEL	0.45	FY 25-29	REC/PFC/Own Fund
14	Installation of New Air Conditioning Plant	0.36	FY 25-29	REC/PFC
15	Replacement of Unit-II MIV	0.50	FY 25-29	REC/PFC
16	Installation of 2 Nos. New VT Pumps of Make: Jyoti	0.50	FY 25-29	REC/PFC
17	Procurement of 1 No. 40 MW Pelton runner	4.00	FY 25-29	REC/PFC
18	Procurement of 1 No. 40 MW Pelton runner	4.00	FY 25-29	REC/PFC
19	Installation of 2 Nos. New VT Pumps of Make: Jyoti	0.50	FY 25-29	REC/PFC
20	Installation of 2 Nos. New VT Pumps of Make: Jyoti	0.50	FY 25-29	REC/PFC
21	Procurement of 2 Set 40 MW Nozzle linear	0.25	FY 25-29	REC/PFC/Own Fund
22	Procurement of 2 Set 40 MW Nozzle linear	0.27	FY 25-29	REC/PFC/Own Fund
23	Procurement of 2 Set 40 MW Nozzle linear	0.26	FY 25-29	REC/PFC/Own Fund
	<b>Total</b>	<b>22.19</b>		

Note – The Commission observed that the Petitioner has proposed duplicate Capex works of same nature on few Plants. In this regard, the Commission in its query had asked the Petitioner to review the list of proposed Capex works and remove the duplicity from the list. The Petitioner in its reply responded that these works are not duplicate but the works that appear again are another one of same nature but for other unit or the same work executed in a different year during FY 2025-29.

2.9.5. The capital expenditure and capitalization plan as submitted by Petitioner is given below:

**Table 27: SVP Bhaba – Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					Total
	FY 25	FY 26	FY 27	FY 28	FY 29	
Proposed Capital Expenditure	6.5	7.25	5.9	1.31	1.23	22.19
Capitalization for FY 2024-25	6.5					6.5
Capitalization for FY 2025-26		7.25				7.25
Capitalization for FY 2026-27			5.9			5.9
Capitalization for FY 2027-28				1.31		1.31
Capitalization for FY 2028-29					1.23	1.23
<b>Total Capitalization</b>	<b>6.5</b>	<b>7.25</b>	<b>5.9</b>	<b>1.31</b>	<b>1.23</b>	<b>22.19</b>

2.9.6. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been calculated separately by the Petitioner.

**Table 28: SVP Bhaba - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	313.2	314.96	321.46	328.71	334.61	335.92
Add: Additions	1.76	6.5	7.25	5.9	1.31	1.23
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>314.96</b>	<b>321.46</b>	<b>328.71</b>	<b>334.61</b>	<b>335.92</b>	<b>337.15</b>
Accumulated new GFA	115.86	122.36	129.61	135.51	136.82	138.05
<b>Depreciation</b>						
Accumulated at the beginning of Year	<b>225.57</b>	<b>241.29</b>	<b>258.18</b>	<b>276.7</b>	<b>296.99</b>	<b>317.87</b>
Add: Depreciation on Original GFA	4.42	4.42	4.42	4.42	4.42	4.42
Add: Depreciation on additional Capitalisation	11.3	12.47	14.1	15.87	16.46	17.56
<b>Total Depreciation for the year</b>	<b>15.72</b>	<b>16.89</b>	<b>18.52</b>	<b>20.29</b>	<b>20.88</b>	<b>21.98</b>
<b>Accumulated at the end of the year</b>	<b>241.29</b>	<b>258.18</b>	<b>276.7</b>	<b>296.99</b>	<b>317.87</b>	<b>339.85</b>

2.9.7. The AFC submitted by the Petitioner for SVP Bhaba HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period has been tabulated below:

**Table 29: SVP Bhaba - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	464.70	464.70	464.70	464.70	464.70	464.70
Total Auxiliary (MU)	5.58	5.58	5.58	5.58	5.58	5.58
Aux Consumption (%)	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%
Net Generation (MU)	459.12	459.12	459.12	459.12	459.12	459.12
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>459.12</b>	<b>459.12</b>	<b>459.12</b>	<b>459.12</b>	<b>459.12</b>	<b>459.12</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>33.15</b>	<b>43.38</b>	<b>46.45</b>	<b>49.21</b>	<b>52.13</b>	<b>55.24</b>
R&M Expenses	3.48	3.72	4.52	4.88	5.26	5.68
Employees Expenses	25.31	32.46	34.22	36.07	38.02	40.07
Pension Contributions	3.35	6.11	6.53	6.99	7.48	8.00
A&G Expenses	1.02	1.10	1.18	1.27	1.38	1.48
Depreciation (Rs. Cr)	15.72	16.89	18.52	20.29	20.88	21.98
Interest & Finance Charges (Rs. Cr)	11.79	11.39	11.05	10.61	9.81	8.73
Return on Equity (Rs. Cr)	4.51	5.61	5.95	6.22	6.28	6.34
Interest on Working Capital (Rs. Cr)	2.18	2.70	2.87	3.03	3.17	3.31
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>67.35</b>	<b>79.97</b>	<b>84.85</b>	<b>89.36</b>	<b>92.27</b>	<b>95.60</b>
Energy Charge Rate (Rs/kWh)	0.73	0.87	0.92	0.97	1.00	1.04



Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Capacity Charges (Rs. Cr)	33.68	39.98	42.41	44.68	46.14	47.80

## 2.10. Annual Fixed Charges for Binwa

2.10.1. Binwa HEP is a 6 MW (2 x 3 MW) project commissioned in the year 1984.

2.10.2. The Commission, in the MYT tariff order dated 11.11.2021, had approved a capital cost of Rs. 17.44 Cr. and had considered 100% debt funding for the plant with no outstanding loans.

2.10.3. The Commission after True-up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 16.47 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 30: Binwa- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	16.47	0.09	1.89	0.05	0.00	0.16	<b>18.66</b>
Deductions/Retirals to GFA	-						
Net Addition to GFA	<b>16.47</b>	0.09	1.89	0.05	0.00	0.16	<b>18.66</b>

2.10.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has envisioned a net addition of Rs. 25.97 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details have been submitted by the Petitioner as follows:

**Table 31: Binwa- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	RLA of Binwa PH	0.80	FY 25-29	REC/PFC
2	RM & LE works of Binwa PH	25.17	FY 25-29	REC/PFC
	<b>Total</b>	<b>25.97</b>		

2.10.5. The capital expenditure and capitalization plan submitted by the Petitioner is as follows:

**Table 32: Binwa - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	<b>0.40</b>	<b>0.40</b>	<b>10.00</b>	<b>10.00</b>	<b>5.17</b>	<b>25.97</b>
Capitalization for FY 2024-25	0.40					0.40
Capitalization for FY 2025-26		0.40				0.40
Capitalization for FY 2026-27			10.00			10.00
Capitalization for FY 2027-28				10.00		10.00
Capitalization for FY 2028-29					5.17	5.17

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
<b>Total Capitalization</b>	<b>0.40</b>	<b>0.40</b>	<b>10.00</b>	<b>10.00</b>	<b>5.17</b>	<b>25.97</b>

2.10.6. Accordingly, the Petitioner has calculated the Depreciation, which has been tabulated below. The proposed additions to the GFA have been calculated separately by the Petitioner.

**Table 33: Binwa - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	18.51	18.67	19.07	19.47	29.47	39.47
Add: Additions	0.16	0.40	0.40	10.00	10.00	5.17
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>18.67</b>	<b>19.07</b>	<b>19.47</b>	<b>29.47</b>	<b>39.47</b>	<b>44.64</b>
Accumulated New GFA	2.20	2.60	3.00	13.00	23.00	28.17
<b>Depreciation</b>						
Accumulated at the beginning of Year	16.01	16.95	16.97	17.01	17.55	18.62
Add: Depreciation on Original GFA	0.79	0.00	0.00	0.00	0.00	0.00
Add: Depreciation on additional Capitalisation	0.15	0.02	0.04	0.54	1.07	1.36
<b>Total Depreciation for the year</b>	<b>0.94</b>	<b>0.02</b>	<b>0.04</b>	<b>0.54</b>	<b>1.07</b>	<b>1.36</b>
Accumulated at the end of the year	16.95	16.97	17.01	17.55	18.62	19.98

2.10.7. The AFC submitted by the Petitioner for Binwa HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 34: Binwa - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	29.25	29.25	29.25	29.25	29.25	29.25
Total Auxiliary (MU)	0.20	0.20	0.20	0.20	0.20	0.20
Aux Consumption (%)	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
Net Generation (MU)	29.05	29.05	29.05	29.05	29.05	29.05
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>29.05</b>	<b>29.05</b>	<b>29.05</b>	<b>29.05</b>	<b>29.05</b>	<b>29.05</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>6.08</b>	<b>6.84</b>	<b>7.34</b>	<b>7.76</b>	<b>8.22</b>	<b>8.70</b>
R&M Expenses	0.74	0.79	0.96	1.03	1.11	1.20
Employees Expenses	5.09	5.65	5.96	6.28	6.62	6.98
Pension Contributions	0.17	0.31	0.33	0.35	0.37	0.40
A&G Expenses	0.08	0.08	0.09	0.10	0.11	0.12
Depreciation (Rs. Cr)	0.94	0.02	0.04	0.54	1.07	1.36
Interest & Finance Charges (Rs. Cr)	0.11	0.11	0.14	0.56	1.35	1.90

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Return on Equity (Rs. Cr)	0.24	0.11	0.13	0.60	1.06	1.30
Interest on Working Capital (Rs. Cr)	0.31	0.33	0.35	0.40	0.45	0.50
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>7.68</b>	<b>7.41</b>	<b>8.00</b>	<b>9.86</b>	<b>12.16</b>	<b>13.75</b>
Energy Charge Rate (Rs/kWh)	1.32	1.28	1.37	1.70	2.09	2.37
Capacity Charges (Rs. Cr)	3.84	3.71	3.99	4.93	6.08	6.88

## 2.11. Annual Fixed Charges for Chaba

2.11.1. Chaba HEP is a 1.75 MW (2 x 0.5 MW + 3 x 0.25 MW) project commissioned in the year 1913-14. It is a non-peaking run of the river project with surface water station and static excitation.

2.11.2. The Commission, in the MYT tariff order dated 11.11.2021, had approved a capital cost of Rs. 1.21 Cr. and had considered 100% debt funding for the plant with no outstanding loans. Since it is a 105-year-old plant, the initial cost of Rs. 1.21 Cr. has been completely depreciated.

2.11.3. The Commission after True up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 1.21 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 35: Chaba- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	1.21	0.00	0.05	0.87	0.00	0.00	<b>2.13</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	-
<b>Net Addition to GFA</b>	<b>1.21</b>	0.00	0.05	0.87	0.00	0.00	<b>2.13</b>

2.11.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 2.9 Cr to the GFA through various electromechanical/civil and other works. The scheme wise details for the same is as follows:

**Table 36: Chaba- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs. Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Procurement of Spare runner	0.25	FY 25-29	REC/PFC
2	Providing UCB cum GRMP for all units with Numerical relays	0.70	FY 25-29	REC/PFC
3	Providing AVR for all five units	0.60	FY 25-29	REC/PFC
4	Rewinding of Gen V and VI	0.45	FY 25-29	REC/PFC
5	Rewinding of Gen II, III	0.30	FY 25-29	REC/PFC
6	Replacement of Indoor VCBs	0.60	FY 25-29	REC/PFC
	<b>Total</b>	<b>2.90</b>		

2.11.5. The capital expenditure and capitalization plan as submitted by the Petitioner is as follows:

**Table 37: Chaba - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	0.95	0.60	0.45	0.30	0.60	2.90
Capitalization for FY 2024-25	0.95					0.95
Capitalization for FY 2025-26		0.60				0.60
Capitalization for FY 2026-27			0.45			0.45
Capitalization for FY 2027-28				0.30		0.30
Capitalization for FY 2028-29					0.60	0.60
<b>Total Capitalization</b>	<b>0.95</b>	<b>0.60</b>	<b>0.45</b>	<b>0.30</b>	<b>0.60</b>	<b>2.90</b>

2.11.6. Accordingly, the Petitioner has calculated the Depreciation, which has been tabulated below. The proposed additions to the GFA have been calculated separately by the Petitioner.

**Table 38: Chaba - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	2.13	2.13	3.08	3.68	4.13	4.43
Add: Additions	0.00	0.95	0.60	0.45	0.30	0.60
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>2.13</b>	<b>3.08</b>	<b>3.68</b>	<b>4.13</b>	<b>4.43</b>	<b>5.03</b>
Accumulated New GFA	0.92	1.87	2.47	2.92	3.22	3.82
<b>Depreciation</b>						
Accumulated at the beginning of Year	<b>2.64</b>	<b>2.74</b>	<b>2.89</b>	<b>3.08</b>	<b>3.29</b>	<b>3.51</b>
Add: Depreciation on Original GFA	0.00					
Add: Depreciation on additional Capitalisation	0.10	0.15	0.19	0.21	0.22	0.26
<b>Total Depreciation for the year</b>	<b>0.10</b>	<b>0.15</b>	<b>0.19</b>	<b>0.21</b>	<b>0.22</b>	<b>0.26</b>
Accumulated at the end of the year	2.74	2.89	3.08	3.29	3.51	3.77

2.11.7. The AFC submitted by the Petitioner for Chaba HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 39: Chaba - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	5.67	5.67	5.67	5.67	5.67	5.67
Total Auxiliary (MU)	0.06	0.06	0.06	0.06	0.06	0.06
Aux Consumption (%)	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation (MU)	5.62	5.62	5.62	5.62	5.62	5.62
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>5.62</b>	<b>5.62</b>	<b>5.62</b>	<b>5.62</b>	<b>5.62</b>	<b>5.62</b>

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
<b>O&amp;M expenses (Rs. Cr)</b>	<b>2.42</b>	<b>2.69</b>	<b>3.29</b>	<b>3.51</b>	<b>3.74</b>	<b>3.99</b>
R&M Expenses	0.88	0.93	1.44	1.55	1.68	1.81
Employees Expenses	1.47	1.63	1.72	1.81	1.91	2.01
Pension Contributions	0.05	0.09	0.10	0.10	0.11	0.12
A&G Expenses	0.03	0.03	0.04	0.04	0.04	0.05
Depreciation (Rs. Cr)	0.10	0.15	0.19	0.21	0.22	0.26
Interest & Finance Charges (Rs. Cr)	0.03	0.10	0.16	0.21	0.23	0.27
Return on Equity (Rs. Cr)	0.08	0.09	0.12	0.14	0.15	0.18
Interest on Working Capital (Rs. Cr)	0.12	0.13	0.16	0.18	0.19	0.20
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>2.75</b>	<b>3.15</b>	<b>3.92</b>	<b>4.23</b>	<b>4.53</b>	<b>4.89</b>
Energy Charge Rate (Rs/kWh)	2.45	2.81	3.48	3.77	4.03	4.36
Capacity Charges (Rs. Cr)	1.38	1.58	1.95	2.12	2.27	2.45

## 2.12. Annual Fixed Charges for BS-Chamba

- 2.12.1. BS-Chamba HEP is a 0.45 MW (3 x 0.15 MW) project commissioned in the years 1938, 1957 and 1985. It is a non-peaking run of the river project with surface power station and rotating exciters.
- 2.12.2. The Commission, in the MYT tariff order dated 11.11.2021, had approved a capital cost of Rs. 0.50 Cr. as on 01.04.2014 and had considered 100% debt funding for the plant with no outstanding loans.
- 2.12.3. The Commission after True-up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 0.50 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 40: BS Chamba- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	0.50	0.00	0.00	0.00	0.00	0.00	<b>0.50</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	
<b>Net Addition to GFA</b>	<b>0.50</b>	0.00	0.00	0.00	0.00	0.00	<b>0.50</b>

- 2.12.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 0.15 Cr. to the GFA through minor capital works. The scheme wise details for the same is as follows:

**Table 41: BS Chamba- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Minor Capital Works	0.15	FY 2024-25	REC/PFC/ Own Fund

2.12.5. The capital expenditure and capitalization plan as submitted by the Petitioner is as follows:

**Table 42: BS Chamba - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	0.15					0.15
Capitalization for FY 2024-25	0.15					0.15
Capitalization for FY 2025-26		0.00	0.00	0.00	0.00	0.00
Capitalization for FY 2026-27			0.00	0.00	0.00	0.00
Capitalization for FY 2027-28				0.00	0.00	0.00
Capitalization for FY 2028-29					0.00	0.00
<b>Total Capitalization</b>	<b>0.15</b>					<b>0.15</b>

2.12.6. The GFA details along with the depreciation expense for the 5<sup>th</sup> Control Period as submitted by the Petitioner are presented in the following table. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been separately calculated.

**Table 43: BS Chamba - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	0.50	0.50	0.65	0.65	0.65	0.65
Add: Additions	0.00	0.15	0.00	0.00	0.00	0.00
Less: Deductions/Retirals						
Closing GFA	<b>0.50</b>	<b>0.65</b>	<b>0.65</b>	<b>0.65</b>	<b>0.65</b>	<b>0.65</b>
Accumulated New GFA	0.00	0.15	0.15	0.15	0.15	0.15
<b>Depreciation</b>						
Accumulated at the beginning of Year	<b>0.41</b>	<b>0.42</b>	<b>0.44</b>	<b>0.45</b>	<b>0.46</b>	<b>0.47</b>
Add: Depreciation on Original GFA	0.01	0.01	0.00	0.00	0.00	0.00
Add: Depreciation on additional Capitalisation	0.00	0.01	0.01	0.01	0.01	0.01
<b>Total Depreciation for the year</b>	<b>0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
<b>Accumulated at the end of the year</b>	<b>0.42</b>	<b>0.44</b>	<b>0.45</b>	<b>0.46</b>	<b>0.47</b>	<b>0.48</b>

2.12.7. The AFC submitted by the Petitioner for BS-Chamba HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 44: BS Chamba - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	1.44	1.44	1.44	1.44	1.44	1.44
Total Auxiliary (MU)	0.01	0.01	0.01	0.01	0.01	0.01
Aux Consumption (%)	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Net Generation (MU)	1.42	1.42	1.42	1.42	1.42	1.42
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>1.42</b>	<b>1.42</b>	<b>1.42</b>	<b>1.42</b>	<b>1.42</b>	<b>1.42</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>0.38</b>	<b>0.44</b>	<b>0.47</b>	<b>0.51</b>	<b>0.55</b>	<b>0.59</b>
R&M Expenses	0.37	0.40	0.43	0.46	0.50	0.54
Employees Expenses	0.00	0.02	0.02	0.02	0.03	0.03
Pension Contributions	0.01	0.02	0.02	0.03	0.03	0.03
A&G Expenses	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation (Rs. Cr)	0.01	0.02	0.01	0.01	0.01	0.01
Interest & Finance Charges (Rs. Cr)	0.00	0.01	0.01	0.01	0.01	0.01
Return on Equity (Rs. Cr)	0.00	0.01	0.01	0.01	0.01	0.01
Interest on Working Capital (Rs. Cr)	0.02	0.02	0.02	0.02	0.03	0.03
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>0.41</b>	<b>0.50</b>	<b>0.52</b>	<b>0.56</b>	<b>0.60</b>	<b>0.64</b>
Energy Charge Rate (Rs/kWh)	1.44	1.75	1.76	1.96	2.11	2.26
Capacity Charges (Rs. Cr)	0.21	0.25	0.25	0.28	0.30	0.32

### 2.13. Annual Fixed Charges for Gaj

2.13.1. Gaj HEP is a 10.5 MW (3 x 3.5 MW) project commissioned in the year 1996.

2.13.2. The Commission, in the MYT tariff order dated 11.11.2021 had approved a capital cost of Rs. 60.58 Cr. for tariff determination. The sources of funding for the capital cost of Rs. 60.58 Cr were PFC, LIC and GoHP loan (Rs. 37.31 Cr.), Short term Loan by HPSEBL (Rs. 8.27 Cr.) along with GoHP equity of Rs. 15 Cr.

2.13.3. The Commission after True up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 30.32 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 45: Gaj- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	30.32	0.23	0.31	0.05	0.08	0.55	<b>31.54</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	-
Net Addition to GFA	<b>30.32</b>	0.23	0.31	0.05	0.08	0.55	<b>31.54</b>

2.13.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 10 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details submitted by the Petitioner is as follows:

**Table 46: Gaj- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Renovation & Modernization works of Baner PH	10.00	FY 26-27	REC/PFC

2.13.5. The capital expenditure and capitalization plan as submitted by Petitioner is as follows:

**Table 47: Gaj - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	<b>0.00</b>	<b>5.00</b>	<b>5.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.00</b>
Capitalization for FY 2024-25	0.00	0.00	0.00	0.00	0.00	0.00
Capitalization for FY 2025-26		5.00				5.00
Capitalization for FY 2026-27			5.00			5.00
Capitalization for FY 2027-28				0.00	0.00	0.00
Capitalization for FY 2028-29					0.00	0.00
<b>Total Capitalization</b>	<b>0.00</b>	<b>5.00</b>	<b>5.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.00</b>

2.13.6. The GFA details along with the depreciation expense for the 5<sup>th</sup> Control Period as submitted by the Petitioner are presented in the following table. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been separately calculated.

**Table 48: Gaj - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	30.99	31.54	31.54	36.54	41.54	41.54
Add: Additions	0.55	0.00	5.00	5.00	0.00	0.00
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>31.54</b>	<b>31.54</b>	<b>36.54</b>	<b>41.54</b>	<b>41.54</b>	<b>41.54</b>
Accumulated New GFA	1.22	1.22	6.22	11.22	11.22	11.22
<b>Depreciation</b>						
Accumulated at the beginning of Year	18.06	18.79	19.52	20.66	22.25	23.84
Add: Depreciation on Original GFA	0.64	0.64	0.64	0.64	0.64	0.64
Add: Depreciation on additional Capitalisation	0.09	0.09	0.50	0.95	0.95	0.95
<b>Total Depreciation for the year</b>	<b>0.73</b>	<b>0.73</b>	<b>1.14</b>	<b>1.59</b>	<b>1.59</b>	<b>1.59</b>
<b>Accumulated at the end of the year</b>	<b>18.79</b>	<b>19.52</b>	<b>20.66</b>	<b>22.25</b>	<b>23.84</b>	<b>25.43</b>

2.13.7. The AFC submitted by the Petitioner for Gaj HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:



**Table 49: Gaj - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	38.31	38.31	38.31	38.31	38.31	38.31
Total Auxiliary (MU)	0.38	0.38	0.38	0.38	0.38	0.38
Aux Consumption (%)	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation (MU)	37.93	37.93	37.93	37.93	37.93	37.93
Less: Free Power to GOHP (MU)	4.55	4.55	4.55	4.55	4.55	4.55
<b>Energy Available for Sale (MU)</b>	<b>33.38</b>	<b>33.38</b>	<b>33.38</b>	<b>33.38</b>	<b>33.38</b>	<b>33.38</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>6.83</b>	<b>7.97</b>	<b>8.47</b>	<b>8.97</b>	<b>9.51</b>	<b>10.07</b>
R&M Expenses	0.88	0.96	1.07	1.16	1.25	1.35
Employees Expenses	5.43	6.23	6.57	6.93	7.30	7.69
Pension Contributions	0.29	0.53	0.57	0.61	0.65	0.70
A&G Expenses	0.22	0.24	0.26	0.28	0.30	0.33
Depreciation (Rs. Cr)	0.73	0.73	1.14	1.59	1.59	1.59
Interest & Finance Charges (Rs. Cr)	0.03	0.07	0.25	0.61	0.76	0.71
Return on Equity (Rs. Cr)	2.51	2.36	2.59	2.82	2.82	2.82
Interest on Working Capital (Rs. Cr)	0.38	0.44	0.48	0.52	0.55	0.57
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>10.49</b>	<b>11.55</b>	<b>12.93</b>	<b>14.51</b>	<b>15.22</b>	<b>15.76</b>
Energy Charge Rate (Rs/kWh)	1.57	1.73	1.93	2.17	2.28	2.36
Capacity Charges (Rs. Cr)	5.24	5.78	6.45	7.26	7.61	7.88

## 2.14. Annual Fixed Charges for Giri

- 2.14.1. Giri HEP is a 60 MW (2 x 30 MW) project commissioned in the years 1978. It is a non-peaking run of the river project with surface power station and rotating exciters.
- 2.14.2. The Commission, in the MYT tariff order dated 11.11.2021, had approved a capital cost of Rs. 36.22 Cr. as on 01.04.2014. and had considered 100% debt funding for the plant with no outstanding loans.
- 2.14.3. The Commission after True up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 35.91 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 50: Giri- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	35.91	0.00	2.13	0.00	0.27	0.00	<b>38.31</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	
Net Addition to GFA	<b>35.91</b>	0.00	2.13	0.00	0.27	0.00	<b>38.31</b>

- 2.14.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 153 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details of the same is submitted as follows:

**Table 51: Giri- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	RMU&LE of Giri HEP	150	FY 28-29	REC/PFC
2	Capital works of machines of Giri HEP (against Minor capital)	1	FY 24-25	REC/PFC/Own Sources
3	RLA study of pen stock of Giri HEP	2	FY 24-25	REC/PFC
	<b>Total</b>	<b>153</b>		

2.14.5. The capital expenditure and capitalization plan submitted by the Petitioner is as follows:

**Table 52: Giri – Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	<b>3.00</b>	<b>25.00</b>	<b>25.00</b>	<b>25.00</b>	<b>75.00</b>	<b>153.00</b>
Capitalization for FY 2024-25	3.00					3.00
Capitalization for FY 2025-26		25.00		0.00	0.00	25.00
Capitalization for FY 2026-27			25.00	0.00	0.00	25.00
Capitalization for FY 2027-28				25.00		25.00
Capitalization for FY 2028-29					75.00	75.00
<b>Total Capitalization</b>	<b>3.00</b>	<b>25.00</b>	<b>25.00</b>	<b>25.00</b>	<b>75.00</b>	<b>153.00</b>

2.14.6. The GFA details along with the depreciation expense for the 5<sup>th</sup> Control Period as submitted by the Petitioner are presented in the following table. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been separately calculated.

**Table 53: Giri - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	38.31	38.31	41.31	66.31	91.31	116.31
Add: Additions	0.00	3.00	25.00	25.00	25.00	75.00
Less: Deductions/Retirals	0.00					
<b>Closing GFA</b>	<b>38.31</b>	<b>41.31</b>	<b>66.31</b>	<b>91.31</b>	<b>116.31</b>	<b>191.31</b>
Accumulated New GFA	2.40	5.40	30.40	55.40	80.40	155.40
<b>Depreciation</b>						
<b>Accumulated at the beginning of Year</b>	<b>30.14</b>	<b>30.28</b>	<b>30.60</b>	<b>32.11</b>	<b>34.88</b>	<b>38.97</b>
Add: Depreciation on Original GFA	0.00					
Add: Depreciation on additional Capitalisation	0.14	0.32	1.51	2.76	4.09	8.31
<b>Total Depreciation for the year</b>	<b>0.14</b>	<b>0.32</b>	<b>1.51</b>	<b>2.76</b>	<b>4.09</b>	<b>8.31</b>
Accumulated at the end of the year	30.28	30.60	32.11	34.88	38.97	47.28

2.14.7. The AFC submitted by the Petitioner for Giri HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 54: Giri - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	231.27	231.27	231.27	231.27	231.27	231.27
Total Auxiliary (MU)	2.31	2.31	2.31	2.31	2.31	2.31
Aux Consumption (%)	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation (MU)	228.96	228.96	228.96	228.96	228.96	228.96
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>228.96</b>	<b>228.96</b>	<b>228.96</b>	<b>228.96</b>	<b>228.96</b>	<b>228.96</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>29.68</b>	<b>35.57</b>	<b>38.45</b>	<b>40.86</b>	<b>43.44</b>	<b>46.19</b>
R&M Expenses	9.11	9.69	11.11	11.99	12.93	13.96
Employees Expenses	18.45	22.34	23.54	24.82	26.16	27.57
Pension Contributions	1.68	3.05	3.27	3.49	3.74	4.00
A&G Expenses	0.45	0.48	0.52	0.56	0.61	0.66
Depreciation (Rs. Cr)	0.14	0.32	1.51	2.76	4.09	8.31
Interest & Finance Charges (Rs. Cr)	0.29	0.37	1.42	3.23	4.82	7.75
Return on Equity (Rs. Cr)	3.59	0.25	1.41	2.58	3.74	7.23
Interest on Working Capital (Rs. Cr)	1.47	1.69	1.89	2.08	2.28	2.62
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>35.17</b>	<b>38.19</b>	<b>44.68</b>	<b>51.52</b>	<b>58.38</b>	<b>72.09</b>
Energy Charge Rate (Rs/kWh)	0.77	0.83	0.98	1.13	1.27	1.57
Capacity Charges (Rs. Cr)	17.59	19.10	22.33	25.76	29.19	36.05

## 2.15. Annual Fixed Charges for Larji

- 2.15.1. Larji HEP is a 126 MW (3 x 42 MW) project commissioned in the year 2006.
- 2.15.2. The Petitioner has considered the opening GFA for FY 2011-12 as Rs. 1,098.70 Cr. as approved by Commission in the second MYT Order.
- 2.15.3. The Commission vide order dated 07.07.2011 had approved Capital Cost of Larji HEP as Rs. 1,098.70 Cr. considering Rs. 155.57 Cr. through equity infusion and balance amount funded by way of debt. The Commission had considered a capital cost of Rs. 1,096.39 Cr. as on 01.04.2014.
- 2.15.4. The Commission after True-up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 1,085.6 Cr. The Petitioner has proposed the GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 55: Larji- Net GFA Additions till FY 2023-24 (INR Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	1085.60	0.00	1.34	0.00	1.29	30.00	<b>1118.23</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	
<b>Net Addition to GFA</b>	<b>1085.60</b>	0.00	1.34	0.00	1.29	30.00	<b>1118.23</b>

2.15.5. The Petitioner submitted that due to unprecedented flash flood during July, 2023, the power house got submerged, thus causing major damage to the power house and associated electromechanical and civil structures got damaged. In addition to this during the same season, the surge shaft was also obstructed by heavy boulders. The Petitioner took immediate steps for restoration of the power house. The scheme amounting to Rs. 185.87 Cr. has been submitted to HPERC and the Commission had sanctioned an amount of Rs. 35 Cr. under PSDF fund and approved Capital Expenditure for restoration of Larji HEP vide order dated 14.03.2024.

2.15.6. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 185.87 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details of the same has been submitted by the Petitioner as follows:

**Table 56: Larji- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Restoration of Larji HEP	185.87	FY 24-25	Rs. 35 Cr.: PSDF Balance through REC/PFC

2.15.7. The capital expenditure and capitalization plan submitted by the Petitioner is as follows:

**Table 57: Larji - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	155.87					155.87
Capitalization for FY 2024-25	155.87					155.87
Capitalization for FY 2025-26		0.00	0.00	0.00	0.00	0.00
Capitalization for FY 2026-27			0.00	0.00	0.00	0.00
Capitalization for FY 2027-28				0.00	0.00	0.00
Capitalization for FY 2028-29					0.00	0.00
<b>Total Capitalization</b>	<b>155.87</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>155.87</b>

2.15.8. The GFA details along with the depreciation expense for the 5<sup>th</sup> Control Period as submitted by the Petitioner are presented in the following table. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been separately calculated.

**Table 58: Larji - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	1,088.23	1,118.23	1,274.10	1,274.10	1,274.10	1,274.10
Add: Additions	30.00	155.87	0.00	0.00	0.00	0.00
Less: Deductions/Retirals	0.00					

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Closing GFA</b>	<b>1,118.23</b>	<b>1,274.10</b>	<b>1,274.10</b>	<b>1,274.10</b>	<b>1,274.10</b>	<b>1,274.10</b>
Accumulated New GFA	32.63	188.50	188.50	188.50	188.50	188.50
<b>Depreciation</b>						
<b>Accumulated at the beginning of Year</b>	<b>754.83</b>	<b>765.10</b>	<b>781.55</b>	<b>798.00</b>	<b>814.46</b>	<b>830.93</b>
Add: Depreciation on Original GFA	10.17	10.17	10.17	10.17	10.17	10.17
Add: Depreciation on additional Capitalisation	0.10	6.28	6.28	6.29	6.30	6.30
<b>Total Depreciation for the year</b>	<b>10.27</b>	<b>16.45</b>	<b>16.45</b>	<b>16.46</b>	<b>16.47</b>	<b>16.47</b>
<b>Accumulated at the end of the year</b>	<b>765.10</b>	<b>781.55</b>	<b>798.00</b>	<b>814.46</b>	<b>830.93</b>	<b>847.40</b>

2.15.9. The AFC submitted by the Petitioner for Larji HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 59: Larji - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	231.32	231.32	586.85	586.85	586.85	586.85
Total Auxiliary (MU)	2.78	2.78	7.04	7.04	7.04	7.04
Aux Consumption (%)	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%
Net Generation (MU)	228.54	228.54	579.81	579.81	579.81	579.81
Less: Free Power to GOHP (MU)	27.43	27.43	69.58	69.58	69.58	69.58
<b>Energy Available for Sale (MU)</b>	<b>201.12</b>	<b>201.12</b>	<b>510.23</b>	<b>510.23</b>	<b>510.23</b>	<b>510.23</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>29.80</b>	<b>40.46</b>	<b>43.17</b>	<b>45.82</b>	<b>48.66</b>	<b>51.67</b>
<i>R&amp;M Expenses</i>	6.35	6.94	7.71	8.32	8.97	9.68
<i>Employees Expenses</i>	19.00	26.10	27.51	29.00	30.57	32.22
<i>Pension Contributions</i>	3.52	6.41	6.86	7.34	7.85	8.40
<i>A&amp;G Expenses</i>	0.93	1.01	1.09	1.17	1.26	1.36
Depreciation (Rs. Cr)	10.27	16.45	16.45	16.46	16.47	16.47
Interest & Finance Charges (Rs. Cr)	2.73	5.54	10.73	10.02	9.32	8.62
Return on Equity (Rs. Cr)	24.83	40.55	40.55	40.55	40.55	40.55
Interest on Working Capital (Rs. Cr)	2.14	3.12	3.35	3.46	3.58	3.71
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>69.77</b>	<b>106.12</b>	<b>114.25</b>	<b>116.32</b>	<b>118.58</b>	<b>121.02</b>
Energy Charge Rate (Rs/kWh)	1.73	2.64	1.12	1.14	1.16	1.19
Capacity Charges (Rs. Cr)	34.88	53.06	57.11	58.16	59.29	60.51

## 2.16. Annual Fixed Charges for Nogli

2.16.1. Nogli HEP is a 2.5 MW (2 x 0.25 + 4 x 0.50 MW) project commissioned in the years 1963, 1970 and 1974. It is a non-peaking, run of the river project with surface power station and static excitation. The Commission, in the MYT tariff order dated 11.11.2021, had approved a capital cost of Rs. 11.81 Cr. for tariff determination and had considered 100% debt funding for the plant with no outstanding loans.

2.16.2. The Commission after True up of 3rd Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 11.81 Cr. The Petitioner has proposed GFA for the 5th Control period after incorporating the Capital Assets Added/ to be added in the 4th Control Period as under:

**Table 60: Nogli- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	11.81	0.00	0.11	1.30	0.44	0.00	<b>13.66</b>
Deductions/Retirals to GFA	-						
<b>Net Addition to GFA</b>	<b>11.81</b>	0.00	0.11	1.30	0.44	0.00	<b>13.66</b>

2.16.3. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 1 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details of the same has been submitted by the Petitioner as follows:

**Table 61: Nogli- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Providing and Fixing of Numerical Relays in all Generator Panels	0.50	FY 25 to FY 29	REC/PFC
2	Providing PLC in all generator panels	0.50	FY 25 to FY 29	REC/PFC
	<b>Total</b>	<b>1.00</b>		

2.16.4. The capital expenditure and capitalization plan submitted by the Petitioner is as follows:

**Table 62: Nogli - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					Total
	FY 25	FY 26	FY 27	FY 28	FY 29	
Proposed Capital Expenditure	0.50	0.00	0.00	0.50	0.00	1.00
Capitalization for FY 2024-25	0.50					0.50
Capitalization for FY 2025-26		0.00				0.00
Capitalization for FY 2026-27			0.00			0.00
Capitalization for FY 2027-28				0.50		0.50
Capitalization for FY 2028-29					0.00	0.00
<b>Total Capitalization</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.50</b>	<b>0.00</b>	<b>1.00</b>

2.16.5. The GFA details along with the depreciation expense for the 5<sup>th</sup> Control Period as submitted by the Petitioner are presented in the following table. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been separately calculated.

**Table 63: Nogli - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	13.66	13.66	14.16	14.16	14.16	14.66
Add: Additions	0.00	0.50	0.00	0.00	0.50	0.00
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>13.66</b>	<b>14.16</b>	<b>14.16</b>	<b>14.16</b>	<b>14.66</b>	<b>14.66</b>
Accumulated New GFA	1.85	2.35	2.35	2.35	2.85	2.85
<b>Depreciation</b>						
Accumulated at the beginning of Year	<b>9.83</b>	<b>9.96</b>	<b>10.14</b>	<b>10.32</b>	<b>10.50</b>	<b>10.74</b>
Add: Depreciation on Original GFA	0.00					
Add: Depreciation on New GFA	0.13	0.18	0.18	0.18	0.24	0.24
<b>Total Depreciation for the year</b>	<b>0.13</b>	<b>0.18</b>	<b>0.18</b>	<b>0.18</b>	<b>0.24</b>	<b>0.24</b>
<b>Accumulated at the end of the year</b>	<b>9.96</b>	<b>10.14</b>	<b>10.32</b>	<b>10.50</b>	<b>10.74</b>	<b>10.98</b>

2.16.6. The AFC as submitted by Petitioner for Nogli HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 64: Nogli - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	4.73	4.73	4.73	4.73	4.73	4.73
Total Auxiliary (MU)	0.05	0.05	0.05	0.05	0.05	0.05
Aux Consumption (%)	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation (MU)	4.68	4.68	4.68	4.68	4.68	4.68
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>4.68</b>	<b>4.68</b>	<b>4.68</b>	<b>4.68</b>	<b>4.68</b>	<b>4.68</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>3.18</b>	<b>3.54</b>	<b>3.94</b>	<b>4.20</b>	<b>4.47</b>	<b>4.76</b>
<i>R&amp;M Expenses</i>	1.14	1.21	1.48	1.60	1.72	1.86
<i>Employees Expenses</i>	1.89	2.12	2.23	2.35	2.48	2.61
<i>Pension Contributions</i>	0.07	0.13	0.14	0.15	0.16	0.17
<i>A&amp;G Expenses</i>	0.08	0.09	0.10	0.10	0.11	0.12
Depreciation (Rs. Cr)	0.13	0.18	0.18	0.18	0.24	0.24
Interest & Finance Charges (Rs. Cr)	0.42	0.44	0.46	0.46	0.47	0.49
Return on Equity (Rs. Cr)	0.27	0.11	0.11	0.11	0.13	0.13
Interest & Finance Charges (Rs. Cr)	0.17	0.18	0.20	0.21	0.23	0.24
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>4.17</b>	<b>4.45</b>	<b>4.89</b>	<b>5.16</b>	<b>5.54</b>	<b>5.86</b>
Energy Charge Rate (Rs/kWh)	4.45	4.75	5.20	5.51	5.92	6.26
Capacity Charges (Rs. Cr)	2.09	2.23	2.44	2.58	2.77	2.93

## 2.17. Annual Fixed Charges for Rongtong

2.17.1. Rongtong HEP is a 2 MW (4x0.50MW) project commissioned in the year 1986-87. The Commission, in the MYT tariff order dated 11.11.2021, had approved capital cost of Rs. 16.39 Cr. as on 1.04.2014 and had considered 100% debt funding for the plant with no outstanding loans.

2.17.2. The Commission after True up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 16.39 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets Added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 65: Rongtong- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	16.39	0.58	0.36	0.00	0.00	0.00	<b>17.33</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	
<b>Net Addition to GFA</b>	<b>16.39</b>	0.58	0.36	0.00	0.00	0.00	<b>17.33</b>

2.17.3. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 2.55 Cr. to the GFA through various electromechanical/civil and other works. The scheme wise details of the same has been submitted by the Petitioner as follows:

**Table 66: Rongtong- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Overhauling/replacement of MIV of UNIT-I, II, III and IV.	0.35	FY 25 to FY 29	REC/PFC
2	Overhauling of LOS and Governor OPU of UNIT-I, II, III and IV.	0.35	FY 25 to FY 29	REC/PFC
3	Renovation of Mechanical parts of UNIT-1, UNIT-II (DE Housing, NDE Housing, Turbine Guide bearing and various mechanical parts.	0.30	FY 25 to FY 29	REC/PFC
4	Renovation of Mechanical parts of UNIT-III, UNIT- IV (DE Housing, NDE Housing, Turbine Guide bearing and various mechanical parts.	0.30	FY 25 to FY 29	REC/PFC
5	Installation of New AVR (Digital Excitation Control System) UNIT-1 and UNIT-2	0.25	FY 25 to FY 29	REC/PFC
6	Installation of New AVR (Digital Excitation Control System) UNIT-3 and UNIT-4	0.25	FY 25 to FY 29	REC/PFC
7	Procurement of 1 No. Dehydration plant	0.10	FY 25 to FY 29	REC/PFC
8	Procurement of 1 No. electrostatic cleaning plant	0.10	FY 25 to FY 29	REC/PFC
9	Renovation of EOT crane at Rontong Power house to remote control	0.15	FY 25 to FY 29	REC/PFC
10	Installation Sluice gate valve for UNIT-1 & UNIT-2	0.20	FY 25 to FY 29	REC/PFC
11	Installation Sluice gate valve for UNIT-3 & UNIT-4.	0.20	FY 25 to FY 29	REC/PFC
	<b>Total</b>	<b>2.55</b>		



2.17.4. The capital expenditure and capitalization plan submitted by the Petitioner is as follows:

**Table 67: Rongtong - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					
	FY 25	FY 26	FY 27	FY 28	FY 29	Total
Proposed Capital Expenditure	<b>0.90</b>	<b>0.70</b>	<b>0.50</b>	<b>0.25</b>	<b>0.20</b>	<b>2.55</b>
Capitalization for FY 2024-25	0.90					0.90
Capitalization for FY 2025-26		0.70				0.70
Capitalization for FY 2026-27			0.50			0.50
Capitalization for FY 2027-28				0.25		0.25
Capitalization for FY 2028-29					0.20	0.20
<b>Total Capitalization</b>	<b>0.90</b>	<b>0.70</b>	<b>0.50</b>	<b>0.25</b>	<b>0.20</b>	<b>2.55</b>

2.17.5. Accordingly, the GFA details along with the depreciation expense as submitted by Petitioner for the 5<sup>th</sup> Control Period are tabulated in the following table. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been separately calculated.

**Table 68: Rongtong - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	17.33	17.33	18.23	18.93	19.43	19.68
Add: Additions	0.00	0.90	0.70	0.50	0.25	0.20
Less: Deductions/Retirals	0.00					
<b>Closing GFA</b>	<b>17.33</b>	<b>18.23</b>	<b>18.93</b>	<b>19.43</b>	<b>19.68</b>	<b>19.88</b>
Accumulated New GFA	0.94	1.84	2.54	3.04	3.29	3.49
<b>Depreciation</b>						
Accumulated at the beginning of Year	<b>12.82</b>	<b>13.28</b>	<b>14.17</b>	<b>15.09</b>	<b>16.03</b>	<b>16.13</b>
Add: Depreciation on Original GFA	0.31	0.70	0.70	0.70	0.00	0.00
Add: Depreciation on additional Capitalisation	0.15	0.19	0.22	0.24	0.10	0.11
<b>Total Depreciation for the year</b>	<b>0.46</b>	<b>0.89</b>	<b>0.92</b>	<b>0.94</b>	<b>0.10</b>	<b>0.11</b>
Accumulated at the end of the year	13.28	14.17	15.09	16.03	16.13	16.24

2.17.6. The AFC as submitted by Petitioner for Rongtong HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 69: Rongtong - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	1.05	1.05	1.05	1.05	1.05	1.05
Total Auxiliary (MU)	0.01	0.01	0.01	0.01	0.01	0.01
Aux Consumption (%)	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
Net Generation (MU)	1.04	1.04	1.04	1.04	1.04	1.04

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>1.04</b>	<b>1.04</b>	<b>1.04</b>	<b>1.04</b>	<b>1.04</b>	<b>1.04</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>1.07</b>	<b>1.27</b>	<b>1.37</b>	<b>1.45</b>	<b>1.54</b>	<b>1.64</b>
<i>R&amp;M Expenses</i>	0.31	0.33	0.37	0.40	0.43	0.47
<i>Employees Expenses</i>	0.69	0.83	0.87	0.92	0.97	1.02
<i>Pension Contributions</i>	0.06	0.10	0.11	0.12	0.12	0.13
<i>A&amp;G Expenses</i>	0.01	0.01	0.01	0.01	0.02	0.02
Depreciation (Rs. Cr)	0.46	0.89	0.92	0.94	0.10	0.11
Interest & Finance Charges (Rs. Cr)	0.00	0.03	0.09	0.13	0.15	0.16
Return on Equity (Rs. Cr)	0.36	0.09	0.12	0.14	0.15	0.16
Interest on Working Capital (Rs. Cr)	0.07	0.08	0.09	0.09	0.08	0.09
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>1.96</b>	<b>2.36</b>	<b>2.58</b>	<b>2.76</b>	<b>2.03</b>	<b>2.15</b>
Energy Charge Rate (Rs/kWh)	9.41	11.32	12.31	13.24	9.74	10.35
Capacity Charges (Rs. Cr)	0.98	1.18	1.28	1.38	1.01	1.08

## 2.18. Annual Fixed Charges for Rukti

2.18.1. Rukti HEP is a 1.5 MW (3 x 0.50 MW) project commissioned in the year 1979 and 1980. It is a non-peaking plant run of the river and project with surface power station and static excitation.

2.18.2. The Commission, in the MYT tariff Order dated 11.11.2021, had approved a capital cost of Rs. 1.59 Cr. for tariff determination as on 01.04.2014 and had considered 100% debt funding for the plant with no outstanding loans.

2.18.3. The Commission after True up of 3<sup>rd</sup> Control Period in order dated 26.02.2024 had approved the closing GFA of the Project as Rs. 1.59 Cr. The Petitioner has proposed GFA for the 5<sup>th</sup> Control period after incorporating the Capital Assets added/ to be added in the 4<sup>th</sup> Control Period as under:

**Table 70: Rukti- Net GFA Additions till FY 2023-24 (Rs. Cr.), as submitted by Petitioner**

Particulars	Ending FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Total
Additions to GFA	1.59	0.11	0.00	0.00	0.00	0.00	<b>1.70</b>
Deductions/Retirals to GFA	-	-	-	-	-	-	
<b>Net Addition to GFA</b>	<b>1.59</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>

2.18.4. In the 5<sup>th</sup> MYT Control Period, the Petitioner has considered a net addition of Rs. 1.64 Cr. to the GFA through various works. The scheme wise details of the same has been submitted by the Petitioner as follows:

**Table 71: Rukti- Scheme wise details of Net GFA Additions (Rs. Cr.), as submitted by Petitioner**

S. No.	Particulars	Estimated Cost (Rs Crores)	Schedule of Commissioning / COD	Funding Agency / Remarks
1	Overhauling/general servicing of 4 Nos. Turbine OPU of all the Units in 4x375 KW Rukti Power House. All the filters need to be replacement, cleaning/ replacement of old O-rings of directional valve, moog valve.	0.35	FY 25 to FY 29	REC/PFC
2	Overhauling/general servicing of 4 Nos. MIV OPU of all the Units in 4x375 KW Rukti Power House. All the filters needs to be replacement, cleaning/ replacement of old O-rings of directional valve, moog valve.	0.10	FY 25 to FY 29	REC/PFC
3	Replacement of AVR system of Unit-1 and Unit No. 3.	0.12	FY 25 to FY 29	REC/PFC
4	Providing, fabrication and installation of 02 Nos. sluice gate valve for all four Units in Rukti power house.	0.30	FY 25 to FY 29	REC/PFC
5	Overhauling of 04 Nos. MIV in Rukti power house and replacement of MIV and By-pass seals to prevent the leakage.	0.25	FY 25 to FY 29	REC/PFC
6	Providing, fabrication and installation of 02 Nos. sluice gate valve for all four Units in Rukti power house.	0.30	FY 25 to FY 29	REC/PFC
7	Renovation of turbine unit link liver assembly of UNIT-1, II, III and IV	0.22	FY 25 to FY 29	REC/PFC
	<b>Total</b>	<b>1.64</b>		

Note – The Commission observed that the Petitioner has proposed duplicate Capex works of same nature on few Plants. In this regard, the Commission in its query had asked the Petitioner to review the list of proposed Capex works and remove the duplicity from the list. The Petitioner in its reply responded that these works are not duplicate but the works that appear again are another one of same nature but for other unit or the same work executed in a different year during FY 2025-29.

2.18.5. The capital expenditure and capitalization plan submitted by the Petitioner is as follows:

**Table 72: Rukti - Capex & Capitalization Plan for 5<sup>th</sup> Control Period (Rs. Cr.), as submitted by Petitioner**

Particular	Control Period					Total
	FY 25	FY 26	FY 27	FY 28	FY 29	
Proposed Capital Expenditure	<b>0.25</b>	<b>0.40</b>	<b>0.12</b>	<b>0.52</b>	<b>0.25</b>	<b>1.54</b>
Capitalization for FY 2024-25	0.25					0.25
Capitalization for FY 2025-26		0.40				0.40
Capitalization for FY 2026-27			0.12			0.12
Capitalization for FY 2027-28				0.52		0.52
Capitalization for FY 2028-29					0.25	0.25
<b>Total Capitalization</b>	<b>0.25</b>	<b>0.40</b>	<b>0.12</b>	<b>0.52</b>	<b>0.25</b>	<b>1.54</b>

2.18.6. Accordingly, the GFA details along with the depreciation expense, as submitted by Petitioner for the 5<sup>th</sup> Control Period are presented in the following table. The depreciation expenses for the existing GFA and the proposed additions to the GFA have been separately calculated as under.

**Table 73: Rukti - GFA & Depreciation for 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Opening GFA	1.70	1.70	1.95	2.35	2.47	2.99
Add: Additions	0.00	0.25	0.40	0.12	0.52	0.25
Less: Deductions/Retirals						
<b>Closing GFA</b>	<b>1.70</b>	<b>1.95</b>	<b>2.35</b>	<b>2.47</b>	<b>2.99</b>	<b>3.24</b>
Accumulated New GFA	0.11	0.36	0.76	0.88	1.40	1.65
<b>Depreciation</b>						
Accumulated at the beginning of Year	1.44	1.44	1.45	1.48	1.52	1.60
Add: Depreciation on Original GFA	-	-	-	-	-	-
Add: Depreciation on additional Capitalisation	-	0.01	0.03	0.04	0.08	0.10
<b>Total Depreciation for the year</b>	<b>-</b>	<b>0.01</b>	<b>0.03</b>	<b>0.04</b>	<b>0.08</b>	<b>0.10</b>
Accumulated at the end of the year	1.44	1.45	1.48	1.52	1.60	1.70

2.18.7. The AFC calculated by the Petitioner for Rukti HEP, excluding the impact of True-Up of 4<sup>th</sup> MYT Control Period is as follows:

**Table 74: Rukti - AFC for the 5<sup>th</sup> MYT Control Period (Rs. Cr.), as submitted by Petitioner**

Particulars	RE	5 <sup>th</sup> Control Period (Projected)				
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Gross Generation (MU)	4.59	4.59	4.59	4.59	4.59	4.59
Total Auxiliary (MU)	0.05	0.05	0.05	0.05	0.05	0.05
Aux Consumption (%)	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation (MU)	4.55	4.55	4.55	4.55	4.55	4.55
Less: Free Power to GOHP (MU)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Energy Available for Sale (MU)</b>	<b>4.55</b>	<b>4.55</b>	<b>4.55</b>	<b>4.55</b>	<b>4.55</b>	<b>4.55</b>
<b>O&amp;M expenses (Rs. Cr)</b>	<b>0.91</b>	<b>1.06</b>	<b>1.15</b>	<b>1.22</b>	<b>1.30</b>	<b>1.38</b>
R&M Expenses	0.26	0.28	0.32	0.35	0.37	0.40
Employees Expenses	0.60	0.70	0.74	0.78	0.82	0.87
Pension Contributions	0.04	0.08	0.08	0.09	0.09	0.10
A&G Expenses	0.01	0.01	0.01	0.01	0.01	0.01
Depreciation (Rs. Cr)	0.00	0.01	0.03	0.04	0.08	0.10
Interest & Finance Charges (Rs. Cr)	0.01	0.03	0.06	0.08	0.10	0.12
Return on Equity (Rs. Cr)	0.42	0.02	0.04	0.04	0.06	0.08
Interest on Working Capital (Rs. Cr)	0.05	0.05	0.06	0.06	0.07	0.07
Other Cost (Rs. Cr)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Annual Fixed Charges (Rs. Cr)</b>	<b>1.39</b>	<b>1.17</b>	<b>1.33</b>	<b>1.44</b>	<b>1.61</b>	<b>1.75</b>
Energy Charge Rate (Rs/kWh)	1.52	1.29	1.44	1.58	1.77	1.92
Capacity Charges (Rs. Cr)	0.69	0.59	0.66	0.72	0.80	0.87

## 2.19. Tariff for Uhl-III

- 2.19.1. Uhl-III HEP is a 100 MW (3 x 33.33 MW) project and the Petitioner in its additional submission to the Petition has submitted that the Uhl-III HEP has been synchronized with the grid on 29.01.2025 and has started power generation. Further, the Petitioner has mentioned that the Commission had approved an interim tariff of Rs 4.50/kWh in the previous Tariff Order for Distribution Business.
- 2.19.2. In addition, the Petitioner submitted that they are in the process for compiling the accounts for the Plant and shall submit a detailed Petition for Capital Cost and determination of AFC and Tariff at the earliest.
- 2.19.3. Therefore, the Petitioner has requested the Commission to allow the interim tariff of Rs. 9.50/kWh till the determination of project specific tariff to avoid carrying cost and additional impact during the 5<sup>th</sup> Control period.

### **3. OBJECTION FILED AND ISSUES RAISED BY CONSUMERS DURING PUBLIC HEARING**

- 3.1.1. The interested parties/stakeholders were asked to file their objections and suggestions on the Petition by 04<sup>th</sup> November, 2024. However, no comments and suggestions were received from any stakeholder including consumers/ consumer associations and general public by the given due date.
- 3.1.2. A Public Hearing was held on 20<sup>th</sup> November, 2024 11:00 AM where none of the stakeholders appeared to make any objections or provide any comments/ suggestions.

## 4. ANALYSIS OF AGGREGATE REVENUE REQUIREMENT FOR 5<sup>TH</sup> CONTROL PERIOD

### 4.1. Background

- 4.1.1. This Chapter covers analysis on the proposed plant wise ARR for each year of the Fifth Control Period (FY 2024-25 to FY 2028-29) including Depreciation, O&M expenses, Interest and Finance Charges and Working Capital Requirement, etc.
- 4.1.2. The Petitioner in its Multi Year Tariff Petition for the Fifth Control Period has submitted the Projection of Annual Revenue Requirement of the Fifth Control Period based on the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 as amended from time to time.
- 4.1.3. The Commission has published the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024 (MYT Hydro Tariff Regulations, 2024) for the 5<sup>th</sup> Control Period after the filing of the current Petition. Accordingly, the Commission has done the projection of Annual Revenue Requirement of the 5<sup>th</sup> Control Period based on this said HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024.
- 4.1.4. The HPSEBL (Generation Wing) has 24 hydro generation plants. For Uhl-III, the Petitioner has not filed submission for tariff determination for 5<sup>th</sup> Control Period, stating that the HPSEBL is compiling the accounts for this Plant and shall submit a detailed Petition for its Capital Cost determination later. For Ghanvi-II, the Petitioner had filed a separate Petition for approval of capital cost and determination of tariff. Accordingly, the Commission has approved project specific levelized tariff for Ghanvi-II HEP as per Order dated 28.09.2022. Further, the Commission has approved levelized tariff for 8 SHPs (Killar, Sal-II, Gumma, Ghanvi, holi, Khauli, Bhaba Augmentation and Thiro) vide its order HPERC/Petition No. 54/2013/2013-14/2967-84 dated 15<sup>th</sup> January, 2014. Also, 5 No. of projects have been transferred to HPSEBL by HIMURJA, out which only 2 No. of projects are being operated by Generation wing of HPSEBL, namely, Lingti HEP (2X200 kW) and Billing HEP (2X200 kW), as per the rates as decided in the PPA with HIMURJA. Therefore, these plants have not been considered in this Order for tariff determination.
- 4.1.5. Accordingly, the Commission has determined tariffs for 5<sup>th</sup> Control Period, for the following 13 plants in this order:

**Table 75: HPSEBL plants for which 5<sup>th</sup> Control Period tariffs are determined in this order for the 5<sup>th</sup> control period.**

Sl.	Plant Name	Commissioning Year	Units	Installed Capacity (MW)
1	Chaba	1913-14	2 x 0.5 + 3 x 0.25	1.75
2	Chamba	1938, 57, 85	3 x 0.15 MW	0.45
3	Nogli	1963, 69, 78	2 x 0.25 + 4 x 0.50 MW	2.50
4	Bassi	1970, 71, 81	4 x 15.00 MW	60.00

Sl.	Plant Name	Commissioning Year	Units	Installed Capacity (MW)
5	Giri	1978	2 x 30.00 MW	60.00
6	Rukti	1979, 80	3 x 0.50 MW	1.50
7	Binwa	1984	2 x 3.00 MW	6.00
8	Rong Tong	1986-87, 97	4 x 0.50 MW	2.00
9	Andhra	1987	3 x 5.65 MW	16.95
10	Bhaba	1989	3 x 40.00 MW	120.00
11	Gaj	1996	3 x 3.50 MW	10.50
12	Baner	1996	3 x 4.00 MW	12.00
13	Larji	2006	3 x 42.00 MW	126.00

## 4.2. Commission's Approach

- 4.2.1. The Commission has analysed the MYT Petition submitted by the Petitioner for approval of the ARR and determination of Generation Tariff for the Fifth Control Period (FY 2024-25 to FY 2028-29). This Chapter covers analysis on the proposed plant wise ARR for each year of the Fifth Control Period including Depreciation, O&M expenses, Interest and Finance Charges, Return on Equity and Working Capital Requirement, etc.
- 4.2.2. The Commission has sought several clarifications on various issues based on the scrutiny of the Petition and additional information submitted by the Petitioner. The Commission has considered all information submitted by the Petitioner as part of the Tariff Petition including responses to various queries.
- 4.2.3. The Commission, for the determination of Annual Fixed Charges for the individual plants has relied on the information available in Commission's records, information submitted by the Petitioner during the tariff determination process and additional information submitted during the course of various correspondence held with the Petitioner during processing of current tariff Petition.

### Additional Capitalisation

- 4.2.4. The Regulations 26, 27, 28 and 29 of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024 covers the Additional Capitalisation. The relevant excerpt of these Regulations has been reproduced as under:

**'26. Additional Capitalisation within the original scope and upto the cut-off date.**

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

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 25 of these Regulations;*



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

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

*(f) For uninterrupted and timely development of Hydro projects, expenditure incurred towards developing local infrastructure in the vicinity of the power plant not exceeding Rs. 10 lakh/MW shall be considered as part of the Capital cost, and in case the same work is covered under budgetary support provided by the Government of India, the funding of such works shall be adjusted on receipt of such funds:*

*Provided that such funds shall be allowed only if the funds are spent through Indian Governmental Instrumentality; and*

*(g) Force Majeure events:*

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

*26.2 The hydro generating company shall submit the details of works asset-wise/work-wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.*

## **27. Additional Capitalisation within the original scope and after the cut-off date.**

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

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

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

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

*(d) Force Majeure events;*

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

*(f) Any additional capital expenditure which has become necessary for efficient operation:*

*Provided that the approval of additional capital expenditure for efficient operation shall be subject to submission of report on impact assessment done by any reputed third-party technical expert/agency on the benefits realised from previous investments under this head in the last five years.*

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

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

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

### **28. Additional Capitalisation beyond the original scope.**

28.1 The capital expenditure, in respect of existing hydro electric project, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:-

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

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

(c) Force Majeure events;

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

(e) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;

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

(g) Any additional expenditure on items such as relays, control and instrumentation, computer system, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, communication equipment, emergency restoration system, replacement of damaged equipment not covered by insurance an any other expenditure which has become necessary for successful and efficient operation of hydro electric plant:

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets, etc., bought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. April 01, 2024:

*Provided further that if any expenditure has been claimed under Renovation and Modernisation or repairs and maintenance under (O&M) expenses, same expenditure cannot be claimed under this Regulation.*

*28.2 Any claim of additional capitalisation less than Rs. 20 lakhs shall not be considered under Sub-regulation 28.1 of this Regulation and shall be met through normative O&M expenses.*

*28.3 In case of de-capitalisation of assets, the original cost of such asset as on the date of decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalized:*

*Provided that in cases where an asset forming part of a scheme is decapitalised and wherein the historical value of such asset is not available, the value of de-capitalisation shall be computed by de-escalating the value of the new asset by 5% per year until the year of capitalisation of the old asset subject to a minimum of 10% of the replacement cost of the asset.*

## **29. Additional Capitalisation on account of Renovation and Modernisation.**

*29.1 The hydro generating company intending to undertake renovation and modernization (R&M) of the hydro power plant or element thereof for the purpose of extension of life beyond the originally recognised useful life for the purpose of tariff, shall file a petition before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, and any other information considered to be relevant by the hydro generating company:*

*Provided that the hydro generating company intending to undertake renovation and modernization(R&M) shall be required to obtain the consent of the beneficiaries for such renovation and modernization(R&M) and submit the same along with the petition.*

*29.2 Where the hydro generating company, makes an application for approval of its proposal for renovation and modernization (R&M), approval may be granted after due consideration of reasonableness of the proposed cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost benefit analysis, expected duration of life extension, consent of the beneficiaries or long term customers, if obtained, and such other factors as may be considered relevant by the Commission.*

*29.3 After completion of the renovation and modernization (R&M), the hydro generating company shall file a petition for determination of tariff. Expenditure incurred or projected to be incurred and admitted by the*

*Commission after prudence check, and after deducting the accumulated depreciation already recovered from the admitted project cost, shall form the basis for determination of tariff.'*

- 4.2.5. In its petition, the Petitioner has proposed additional capital expenditure and capitalization for various plants during the 5<sup>th</sup> Control Period which is beyond the cut-off date and original scope of work.
- 4.2.6. On initial scrutiny of the proposed plant-wise capital expenditure, the Commission observed that proposal was not supported by adequate details and documents i.e., DPR, board approval, etc. The Commission sought information with respect to the proposed capital expenditure and supporting documents in its deficiency letters. In response, the Petitioner has submitted the required details for some of the projects. For the remaining hydro plants, the Petitioner submitted that the scheme/ DPR for the works are being prepared and shall be submitted separately along with its sanction/approval.
- 4.2.7. After scrutiny of the response and information provided by the Petitioner, the Commission observes that for all those works against which documentary evidence has been provided and are of capital nature, the Commission has approved those works. For all the minor capital works, the Commission is of the view that they are of operational nature and should have been part of R&M expense. Therefore, the Commission has not approved works related to minor capital works. The relevant portion of the Regulation 28 of the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024 regarding minor works has been reproduced below for reference.

**"28. Additional Capitalisation beyond the original scope.**

*28.1 The capital expenditure, in respect of existing hydro electric project, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:-*

...

*(g) Any additional expenditure on items such as relays, control and instrumentation, computer system, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, communication equipment, emergency restoration system, replacement of damaged equipment not covered by insurance an any other expenditure which has become necessary for successful and efficient operation of hydro electric plant:*

***Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets, etc., bought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. April 01, 2024:"***

4.2.8. In addition, for the plants for which the Petitioner has claimed for RLA (Residual Life Assessment) study, the Commission is of the opinion that these costs are incidental in nature and would be approved along with the RMU&LE works. For all the capex works which the Commission has approved, it has considered the values as per the documentary evidence provided, which for some cases are different from the claimed values by the Petitioner.

4.2.9. The Commission has analyzed the proposal submitted by the Petitioner for additional capitalization of the hydro plants in detail. The Plant specific observations with respect to additional capitalization/ de-capitalization for the 5<sup>th</sup> Control Period, are as follows:

- **Baner HEP:** The Petitioner has stated that the proposed additional capital expenditure is towards Renovation & Modernization (R&M) works amounting to Rs. 6.801 Cr and Minor Capital works amounting to Rs. 3.77 Cr. Against the additional capital expenditure towards R&M works of Rs. 6.801 Cr, the Petitioner has submitted the DPR and its Cost Benefit Analysis. As per the analysis of the DPR for R&M works, the Commission understands that even though Baner HEP has been in operation for only 27 years, but due to non-availability of spares, the R&M work for this Power house has been proposed. The Commission has analysed that the works against R&M are of capex nature, the details of which are provided below:
  - a) Main Inlet Valve (MIV): It is proposed to carry out capital maintenance of MIVs of all the three units along with replacement of metals and rubber seals. All auxiliary system having position feedbacks and instrumentation for maintaining the system compatible to SCADA is to be included.
  - b) Turbine: Instrumentations to be replaced for better control and monitoring of nozzle and deflector position and to make the system compatible to SCADA.
  - c) Brake Jet and Control Water Valve: The instrumentations to be provided for making the system compatible with SCADA and to include brake jet operation automatically in the machine stop operating sequence.
  - d) Governor: It is proposed that the existing governor to be replaced with latest microprocessor based digital governor compatible with proposed SCADA system for better control.
  - e) Over Speed Device: The mechanical over speed device of latest technology to be provided for better reliability.
  - f) Excitation System: It is recommended to replace the existing AVR with digital type voltage regulator and associated accessories.
  - g) Control, Monitoring and Protection System: The SCADA is proposed to be replaced in order to have the optimum automation of power plant. Considering the protection requirement of modern power plant, compatibility issues, integration, protocol related issues of relays, detailed fault analysis, requirement of load dispatch centre. It is proposed to completely replace the existing protection system including

all other panels (not having numeric relays) with latest microprocessor based digital panels.

- h) Control and Power Cables: As the scheme envisages new Unit Control Board (UCB), SCADA, therefore, complete instrumentation cables are proposed to be replaced.
- i) Generator Transformers and Station Transformers: It is recommended to carry out the capital maintenance of GT no. 1 from M&T Sundernagar. Further, it is recommended to provide electrical interlocking between the incoming supplies along with complete replacement of LT panels.
- j) 33 kV Switchyard Equipment: Replacement of existing isolators except IPP bays is recommended.
- k) Electric Overhead Travelling Crane: It is proposed that the overhauling of the crane shall be carried out by replacing gear oil, seals and electronic sensing components.

Therefore, the Commission has provisionally approved the additional capital expenditure cost claimed towards Renovation & Modernization works amounting to Rs. 6.801 Cr. for the Baner HEP. Further, against Minor Capital works of Rs. 3.77 Cr, the Petitioner has submitted Administrative Approval and Expenditure Sanction accorded by Chief Engineer (Generation) and details of the contractor. However, the Commission has not approved this cost against Minor Capital works under Additional Capital Expenditure as the same should be part of operational expenditure, as detailed out in para 4.2.7. However, in case the Petitioner during truing up is able to establish that these works proposed under minor capital works are to be considered under Additional Capital Expenditure as per the HPERC Regulations, the Commission will consider the same after doing required prudence check.

- **Bassi HEP:** The Petitioner has proposed additional capital expenditure under various works from which the Commission has approved the below works for which the Petitioner has submitted the supporting documents like scheme/DPR/Cost Abstracts for the works, the details of which are provided below:

- a) Up-gradation/Augmentation of 16 MVA, 132/33KV Power Transformer to 132/33KV, 1\*25/31.5 MVA Power Transformer of Bassi Power House under Bassi Power House Division, HPSEBL, Joginder Nagar (HP):

The Petitioner has submitted the Cost Abstract for this particular scheme. From the review of this document, the Commission understands that the Cost of 132/33 kV, 1\*25/31.5 MVA Power Transformer along with necessary approvals has been proposed at Rs. 2.50 Cr. and procurement of miscellaneous allied accessories i.e., including foundation work, Nut & bolt, etc. is proposed at Rs. 5 Lakhs. Along with the taxes, Departmental Charges (DC) and Interest During Construction (IDC), the total cost of this scheme has been proposed at Rs. 4.43 Cr. In addition, the cost towards dismantling 132/33 kV 16 MVA Transformer has been subtracted to arrive at claimed cost of Rs. 4.28 Cr. for this scheme. The Commission is of the opinion that the works against this scheme are of capex nature and therefore, has provisionally approved

the additional capital expenditure amounting to Rs. 4.28 Cr subject to prudence check during truing up.

- b) Up-gradation/Augmentation of 33/11 KV 2X2.5 MVA Power Transformer to 33/11 KV 2X 5 MVA Power Transformer at 33 KV Switchyard & 11 KV switchgear system of Bassi Power House:

The Petitioner has submitted the Cost Abstracts for this particular scheme. From the review of this document, the Commission understands that the cost of 33 kV switchyard equipment is proposed at Rs. 2.80 Cr. In addition, the cost towards materials and hardware fittings is proposed at Rs. 26.66 Lakhs. Further, the cost towards 11 kV Switchgear Air Insulated Panel is proposed at Rs. 1.69 Cr. Also, the cost towards civil works is proposed at Rs. 2.08 Lakhs. In addition, the cost towards dismantling of 2X2.5 MVA 33/11 KV Transformer, 33 kV CT and other accessories at Rs. 8.10 Lakhs has been subtracted to arrive at claimed cost of Rs. 4.40 Cr. for this scheme. The Commission is of the opinion that the works against this scheme are of capex nature and therefore, has provisionally approved the additional capital expenditure amounting to Rs. 4.40 Cr subject to prudence check during truing up.

- c) Scheme for up-gradation of SCADA, Procurement of special T&P measuring equipment, spare air water cooler for generator, LT switch gear and LT distribution panel of 66 MW Bassi Power House:

From the review of the DPR submitted by the Petitioner, the Commission has analysed that the estimated cost for this scheme is at Rs. 2.62 Cr with an execution period of 24 months. In addition, the Petitioner has also submitted the Cost Benefit Analysis for this scheme. The scope of different works to be executed under this scheme are detailed out as below:

- (i) Work No. 1: Supply, Installation, Testing & Commissioning of window's upgradation for existing UCB & Governor Controllers (Software upgradation) along with new HMI's & Control Room of SCADA work stations. The time period for executing this work is proposed within 7 months from the placement of confirmed order. The cost estimated for this work is 75 Lakhs excluding taxes. The cost estimated for this work is also substantiated with the budgetary offer from M/s Andritz Hydro Pvt. Ltd.
- (ii) Work No. 2: Procurement of recommended special T&P measuring equipment. The time period for executing this work is proposed within 3 months from the date of supply order. The cost estimated for this work is 34.48 Lakhs excluding taxes.
- (iii) Work No. 3: Design, manufacturing and supply of spare air cooler for Generators. The time period for executing this work is proposed within 7 months from the date of supply order. The cost estimated for this work is 24.60 Lakhs excluding taxes. The cost estimated for this work is also substantiated with the budgetary offer from M/s Andritz Hydro Pvt. Ltd.

(iv) Work No. 4: Supply, installation, testing and commissioning of LT switchgear and distribution panel in 2nd Control Room. The time period for executing this work is proposed within 7 months from the placement of confirmed order. The cost estimated for this work is 35.66 Lakhs excluding taxes. In addition to the above, the credit due to dismantled material of work No. 4, has been worked out at 1.17 Lakhs. The cost estimated for this work is also substantiated with the budgetary offer from M/s GE Control for LT switchgear.

(v) Further, the Departmental Charges (DC) and Interest During Construction (IDC) has been worked out at 22.92 Lakhs and 31.56 Lakhs respectively.

Accordingly, the Commission has analysed that the works against this above mentioned scheme are of capex nature and therefore, has provisionally approved the additional capital expenditure amounting to Rs. 2.62 Cr. against the claimed cost of Rs. 3.50 Cr. by the Petitioner, subject to prudence check during truing up..

d) The Petitioner has also provided the Administrative Approval and Expenditure Sanction for the work "Providing wire crate for protection of dislodged land (due to heavy rainfall on 14.08.2023) along penstock near Anchor Block No.7 and removal of slips/ loose strata along the penstock under Bassi power House Division, HPSEBL, Joginder Nagar" amounting to Rs. 0.53 Cr. The Commission does not feel appropriate to approve cost under this head as the same should form part of annual operational expenditure being allowed by the Commission.

For all other works, the Commission has not approved any amount as documentary evidence against these pending works were not submitted by the Petitioner.

- **Binwa HEP:** The Petitioner has submitted the copy of scheme for Residual Life Assessment (RLA) of Binwa Power House and mentioned that the scheme/DPR for RMU&LE (Renovation, Modernization, Uprating & Life Extension) works shall be finalized on the basis of the RLA study of Binwa Power house. The Commission notes that the Binwa HEP (2\*3 MW = 6 MW) was commissioned in the year 1984 and has completed its useful life of 40 years. The Commission understands that as the RLA study for those plants are necessary whose useful life have been completed and only upon the result of the RLA study, it could be understood whether the plant has to undergo RMU&LE works or not. Therefore, the Commission gives In-Principle approval of RLA scheme, provided the Petitioner selects the expert agency based on the competitive bidding guidelines. In addition, the Commission is of the view that the RLA work is an incidental cost of RMU&LE work and therefore, the cost towards RLA study would be approved along with the RMU&LE work when capitalised. Accordingly, the Commission has not approved any cost towards RLA study and RMU&LE work for 5<sup>th</sup> Control Period for Binwa HEP. However, the same may be considered by the Commission during truing up based on the approval to be accorded by the



Commission for RMU&LE scheme of the Petitioner after doing the RLA studies from an expert agency.

- **Gaj HEP:** The Petitioner has stated that the proposed additional capital expenditure is towards Renovation & Modernization works of the power house amounting to Rs. 10 Cr. The Petitioner has submitted documentary proofs for Renovation & Modernization works and Procurement of Runners amounting to Rs. 4.75 Cr and Rs. 2.00 Cr respectively. Against the additional capital expenditure towards R&M works of Rs. 4.75 Cr, the Petitioner has submitted the DPR with an execution period of 24 months. In addition, the Petitioner has also submitted the Cost Benefit Analysis for this scheme. To substantiate the amount towards R&M works of Rs. 4.75 Cr, the Petitioner has also submitted the budgetary offer from M/s Adlite Electricals, M/s Dexter India, M/s TPES, M/s HydroTech Engineers, and M/s Avon Enterprises. As per the analysis of the DPR for R&M works, the Commission understands that even though Gaj HEP has been in operation for 27 years, but due to non-availability of spares, the R&M work for this Power house has been proposed. The Commission has analysed that the works against R&M are of capex nature, the details of which are provided below:
  - a) Main Inlet Valve (MIV): It is proposed to carry out capital maintenance of MIVs of all the three units along with replacement of metals and rubber seals. All auxiliary system having position feedbacks and instrumentation for maintaining the system compatible to SCADA is to be included.
  - b) Turbine: It is proposed to procure two number runners for the Gaj power house. Instrumentations to be replaced for better control and monitoring of nozzle and deflector position and to make the system compatible to SCADA.
  - c) Brake Jet and Control Water Valve: The instrumentations to be provided for making the system compatible with SCADA and to include brake jet operation automatically in the machine stop operating sequence.
  - d) Over Speed Device: The mechanical over speed device of latest technology to be provided for better reliability.
  - e) Control, Monitoring and Protection System: The SCADA is proposed to be replaced in order to have the optimum automation of power plant. Considering the protection requirement of modern power plant, compatibility issues, integration, protocol related issues of relays, detailed fault analysis, requirement of load dispatch centre, it is proposed to completely replace the existing protection system including all other panels (not having numeric relays) with latest microprocessor based digital panels.
  - f) Control and Power Cables: As the scheme envisages new Unit Control Board (UCB), SCADA, therefore, complete instrumentation cables are proposed to be replaced.
  - g) Generator Transformers and Station Transformers: It is recommended to carry out the capital maintenance of GTs and Station Transformer.

Further, it is recommended to provide electrical interlocking between the incoming supplies along with complete replacement of LT panels.

- h) 33 kV Switchyard Equipment: Replacement of existing isolators for Dharamshala and Suri and Circuit Breaker for Dharamshala feeder is recommended.
- i) DC System: It is proposed to replace the battery charger.
- j) Electric Overhead Travelling Crane: It is proposed that the overhauling of the crane shall be carried out by replacing gear oil, seals and electronic sensing components.

Therefore, the Commission has approved the additional capital expenditure cost towards Renovation & Modernization works amounting to Rs. 4.75 Cr. for the Gaj HEP.

Further, Against the cost towards procurement of Runners amounting to Rs. 2.00 Cr, the Petitioner has submitted the Cost Abstract along with its Cost Benefit Analysis. To substantiate the amount towards procurement of Runners of Rs. 2.00 Cr, the Petitioner has also submitted the budgetary offer from M/s Andritz Hydro Pvt. Ltd. Based on the analysis of the documentary proof submitted, the Commission is of the view that the procurement of Runners is necessary as per the requirement as mentioned in the DPR for R&M works. Also, the cost against the procurement of runners was not part of the DPR for R&M works of Rs. 4.75 Cr. Therefore, the Commission has approved the additional capital expenditure cost towards procurement of Runners amounting to Rs. 2.00 Cr. for the Gaj HEP.

- **Giri HEP:** The Petitioner has proposed capital expenditure in 5th Control Period for RMU&LE work, Capital works of machines of Giri HEP (against Minor capital), and RLA study of pen stock of Giri HEP. As per the Petitioner's submission, it is observed that the scheme/ DPR for the works to be carried out for "RMU&LE work" and "Capital works of machines of Giri HEP (against Minor capital)" are under preparation and scheme for RMU&LE of Giri HEP shall be finalized on the basis of report of RLA study. Therefore, the Commission has not approved the "RMU&LE work" and "Capital works of machines of Giri HEP (against Minor capital)" in absence of supporting documents. Further, the Commission notes that the Giri HEP (2\*30 MW = 60 MW) was commissioned in the year 1978 and has completed its useful life of 40 years. The Commission understands that as the RLA study for those plants is necessary whose useful life have been completed and only upon the result of the RLA study, it could be understood whether the plant is required to undergo RMU&LE works or not. Therefore, the Commission gives In-Principle approval of RLA scheme, provided the Petitioner selects the expert agency based on the competitive bidding guidelines. In addition, the Commission is of the view that the RLA work is an incidental cost of RMU&LE work and therefore, the cost towards RLA study would be approved along with the RMU&LE work when capitalised. Accordingly, the Commission has not approved any cost towards RLA study for 5th Control Period for Giri HEP. However, the same may be considered by the Commission during truing up based on the approval to be accorded by the Commission for

RMU&LE scheme of the Petitioner after doing the RLA studies from an expert agency.

In addition, the Commission in its MYT Order for 4<sup>th</sup> Control Period dated 11.11.2021 had provisionally capitalized Rs. 69.90 Cr. in FY23 and remaining Rs. 69.90 Cr. in FY24 - one in each year for the two units of plant for which RMU&LE scheme is being implemented. As the Petitioner has proposed capital expenditure in 5<sup>th</sup> Control Period for RMU&LE work again, the Commission is of the view that the work towards RMU&LE approved in FY23 & FY24 has not been capitalised in respective years. Therefore, the Commission has de-capitalised the provisionally capitalized amount towards RMU&LE works in FY23 & FY24 as per last MYT Order for 4<sup>th</sup> Control Period, subject to review, at the time of true-up of 4<sup>th</sup> Control Period.

- Larji HEP:** The Petitioner has submitted that due to unprecedented flash flood during July, 2023, the Larji Power House got submerged, thus, causing major damage to the power house and associated Electromechanical and civil structures . In addition to this, during the same season, the surge shaft was also obstructed by heavy boulders. Therefore, the Petitioner has proposed capital expenditure towards "Restoration of Larji HEP" scheme amounting to Rs. 185.87 Cr. It is observed that an In-principle approval was provided by the Commission for restoration works of Larji HEP via order dated 14.03.2024 in the Petition No. 113/2023 for Rs. 185.87 Cr. The detail of funding of Rs. 185.87 Cr. approved is loan from PFC Ltd. amounting to Rs. 148.70 Cr, State Power Sector Development Funds Grant of Rs. 35 Cr accorded vide HPERC letter dated 30.12.2023 and Board's share of Rs. 2.17 Cr. From the entire scheme amount of Rs. 185.87 Cr., the Petitioner has submitted the additional capital expenditure for FY 2023-24 amounting to Rs. 30 Cr. and the rest Rs. 155.87 Cr. for FY 2024-25. Therefore, the Commission has considered an amount of Rs. 155.87 Cr towards "Restoration of Larji HEP" scheme along with the capitalisation of Rs. 30 Cr. in FY 2023-24.

In reply to a query, the HPSEBL has submitted that de-capitalization of Rs. 1.97 Cr. and Rs. 2.98 Cr. has been proposed during FY 2024-25 and FY 2025-26 respectively for the 5<sup>th</sup> Control Period. The Commission has considered this de-capitalization while calculating the GFA for the project and the amount of the decapitalization has been adjusted in the opening GFA and accumulated depreciation for the respective years.

- 4.2.10. Further, in absence of the documentary proofs and justification for proposed additional capital expenditure, the Commission has disallowed the same for various HEPs during 5<sup>th</sup> Control Period and directs the Petitioner to seek fresh approval of the Commission post finalization of the DPRs and approval of the same from the Board. The plant-wise capital expenditure proposed by the Petitioner and approved by the Commission for 5<sup>th</sup> Control Period are given in the table below:

**Table 76: Plant wise Capital Expenditure in Rs. Cr. – proposed and approved**

Name of station	Proposed					Approved				
	FY25	FY26	FY27	FY28	FY29	FY25	FY26	FY27	FY28	FY29
Andhra	0.00	0.00	0.00	35.00	20.00	0.00	0.00	0.00	0.00	0.00
Baner	3.77	2.00	2.00	1.00	1.80	0.00	2.00	2.00	1.00	1.80
Bassi	3.85	16.28	2.20	0.00	0.00	1.95	8.24	1.11	0.00	0.00
Bhaba	6.50	7.25	5.90	1.31	1.23	0.00	0.00	0.00	0.00	0.00
Binwa	0.40	0.40	10.00	10.00	5.17	0.40	0.40	0.00	0.00	0.00
Chaba	0.95	0.60	0.45	0.30	0.60	0.00	0.00	0.00	0.00	0.00
Chamba	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gaj	0.00	5.00	5.00	0.00	0.00	0.00	3.38	3.38	0.00	0.00
Giri	3.00	25.00	25.00	25.00	75.00	2.00	0.00	0.00	0.00	0.00
Larji	155.87	0.00	0.00	0.00	0.00	153.90	-2.98	0.00	0.00	0.00
Nogli	0.50	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00
Rong Tong	0.90	0.70	0.50	0.25	0.20	0.00	0.00	0.00	0.00	0.00
Rukti	0.25	0.40	0.12	0.52	0.25	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>176.14</b>	<b>57.63</b>	<b>51.17</b>	<b>73.88</b>	<b>104.25</b>	<b>158.25</b>	<b>11.03</b>	<b>6.49</b>	<b>1.00</b>	<b>1.80</b>

4.2.11. Based on the above discussions, the Commission has considered additional capitalization for various plants as follows:

**Table 77: Plant wise Capitalization in Rs. Cr. – proposed and approved**

Name of station	Proposed					Approved				
	FY25	FY26	FY27	FY28	FY29	FY25	FY26	FY27	FY28	FY29
Andhra	0.00	0.00	0.00	35.00	20.00	0.00	0.00	0.00	0.00	0.00
Baner	3.77	2.00	2.00	1.00	1.80	0.00	0.00	0.00	0.00	6.80
Bassi	3.85	16.28	2.20	0.00	0.00	0.00	0.00	11.30	0.00	0.00
Bhaba	6.50	7.25	5.90	1.31	1.23	0.00	0.00	0.00	0.00	0.00
Binwa	0.40	0.40	10.00	10.00	5.17	0.00	0.00	0.00	0.00	0.00
Chaba	0.95	0.60	0.45	0.30	0.60	0.00	0.00	0.00	0.00	0.00
Chamba	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gaj	0.00	5.00	5.00	0.00	0.00	0.00	0.00	6.75	0.00	0.00
Giri	3.00	25.00	25.00	25.00	75.00	0.00	0.00	0.00	0.00	0.00
Larji	155.87	0.00	0.00	0.00	0.00	153.90	-2.98	0.00	0.00	0.00
Nogli	0.50	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00
Rong Tong	0.90	0.70	0.50	0.25	0.20	0.00	0.00	0.00	0.00	0.00
Rukti	0.25	0.40	0.12	0.52	0.25	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>176.14</b>	<b>57.63</b>	<b>51.17</b>	<b>73.88</b>	<b>104.25</b>	<b>153.90</b>	<b>-2.98</b>	<b>18.05</b>	<b>0.00</b>	<b>6.80</b>

4.2.12. The plants for which additional capital expenditure is not approved, the Petitioner is directed to submit a separate Petition including details such as DPR, Board approval along with other supporting documents for the proposed additional capital expenditure.

## Project Funding

- 4.2.13. For Baner HEP, from the analysis of the scheme document submitted, the Commission could not find the mode of financing for the work related to R&M of Baner Power House. However, the Commission has approved 100% debt funding for additional capitalisation approved, as claimed by the Petitioner, subject to review at the time of True-up based on actual capitalisation and means of actual financing for the respective years.
- 4.2.14. For Bassi HEP, based on the analysis of the scheme documents, DPRs and Administrative Approvals for the schemes under sanction, the Commission has approved 100% debt funding for the additional capitalisation approved from M/s PFC/REC, as also claimed by the Petitioner, subject to review at the time of True-up based on actual capitalisation and means of actual financing for the respective years.
- 4.2.15. For Gaj HEP, based on the analysis of the DPR for the work related to R&M of Gaj Power House, the Commission has approved 100% debt funding for additional capitalisation approved from M/s PFC/REC, as also claimed by the Petitioner, subject to review at the time of True-up based on actual capitalisation and means of actual financing for the respective years.
- 4.2.16. For Larji HEP, the Commission has approved the funding as per the In-principle approval provided by the Commission for restoration works of Larji HEP via order dated 14.03.2024 in the Petition No. 113/2023 for Rs. 185.87 Cr. The detail of funding of Rs. 185.87 Cr. approved is loan from PFC Ltd. amounting to Rs. 148.70 Cr, State Power Sector Development Funds Grant of Rs. 35 Cr accorded vide HPERC letter dated 30.12.2023 and Board's share of Rs. 2.17 Cr.
- 4.2.17. The Commission has relied on the documentary proofs submitted by the Petitioner and has approved the project funding for the approved additional capitalization as follows:

**Table 78: Debt Equity Grant approved by the Commission (Rs. Cr.)**

Hydro Plants	Approved	
	Additional Capitalisation	% of Funding
<b>Baner HEP</b>		
<b>Approved Additional Capitalisation</b>	<b>6.801</b>	
Debt	6.801	100.00%
Equity	-	-
<b>Total</b>	<b>6.801</b>	<b>100.00%</b>
<b>Bassi HEP</b>		
<b>Approved Additional Capitalisation</b>	<b>11.30</b>	
Debt	11.30	100.00%
Equity	-	-
<b>Total</b>	<b>11.30</b>	<b>100.00%</b>
<b>Gaj HEP</b>		
<b>Approved Additional Capitalisation</b>	<b>6.75</b>	
Debt	6.75	100.00%
Equity	-	-
<b>Total</b>	<b>6.75</b>	<b>100.00%</b>

Hydro Plants	Approved	
	Additional Capitalisation	% of Funding
Larji HEP		
<b>Approved Additional Capitalisation</b>	<b>185.87</b>	
Debt	148.70	80.00%
Equity	2.17	1.17%
Grant	35.00	18.83%
<b>Total</b>	<b>185.87</b>	<b>100.00%</b>

### Gross Fixed Assets

- 4.2.18. For considering the opening GFA, the Commission has considered the closing GFA of FY 2018-19 as approved during the True-up of 3<sup>rd</sup> Control Period as per Tariff Order dated 26<sup>th</sup> February, 2024. Further, the Commission has considered additional capitalization for 4<sup>th</sup> Control Period as approved in the MTR Order for 4<sup>th</sup> Control Period dated 26<sup>th</sup> February, 2024 (except for Giri HEP, where the capitalization against RMU&LE for Rs. 69.90 Cr. each approved in FY23 and FY24 has been reversed as the Petitioner has now proposed the work to be undertaken during the fifth Control Period).
- 4.2.19. For 5<sup>th</sup> MYT Control Period, the Commission has provisionally considered the additional capitalization for Baner, Bassi, Gaj and Larji, based on the supporting documents provided by the Petitioner as detailed in the previous section. For rest of the HEPs, due to absence of prior approval of additional capital expenditure sought by the Petitioner and absence of adequate DPR and proper justifications, the Commission has not considered any additional capitalization during the 5<sup>th</sup> Control Period. The same would be reviewed at the time of mid-term review of the respective plants for 5<sup>th</sup> Control Period, subject to prudence check and necessary documents provided by the Petitioner.

### Operation and Maintenance Expenses

- 4.2.20. The Employee cost, A&G expense and Repairs & Maintenance expenses together comprise the O&M expenses. The O&M expenses as per the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024 are considered as controllable costs except for Terminal Benefits (TBs) which are considered uncontrollable. The O&M expenses as per these Regulations are to be worked out for the Generation Business for each year of the Control Period as under:

*"35. Operation and Maintenance (O&M) Expenses.*

*35.1 Operation and Maintenance (O&M) expenses shall comprise of the following:-*

- a) salaries, wages, pension contribution and other employee costs;*
- b) administrative and general expenses including insurance charges, if any;*
- c) repairs and maintenance expenses; and*
- d) other miscellaneous expenses, statutory levies and taxes (except corporate income tax).*

### 35.2 O&M Norms.

(i) The hydro generating company shall propose separate trajectories of norms for each of the components of O&M expenses viz., employee cost, R&M expense and A&G expense;

...

35.4 The O&M expenses for the *n*th year of the control period shall be approved based on the formula given below:-

$$O\&M_n = R\&M_n + EMP_n + A\&G_n :$$

Where –

*O&M<sub>n</sub>* = Operation and Maintenance expense for the *n*th year;

*EMP<sub>n</sub>* = Employee Costs for the *n*th year;

*A&G<sub>n</sub>* = Administrative and General Costs for the *n*th year

*R&M<sub>n</sub>* = Repair and Maintenance Costs for the *n*th year

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

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (1+CPIinflation)$$

$$R\&M_n = K \times (GFA_{n-1}) \times (1+WPIinflation) \text{ and}$$

$$A\&G_n = (A\&G_{n-1}) \times (1+WPIinflation) + Provision$$

Where –

- *EMP<sub>n-1</sub>* - Employee Costs for the (*n-1*)th year;
- *A&G<sub>n-1</sub>* - Administrative and General Costs for the (*n-1*)th year;
- *Provision*: Cost for initiatives or other one-time expenses as proposed by the Hydro generating company and approved by the Commission after prudence check.
- '*K*' is a constant specified by the Commission in %. Value of *K* for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Hydro generating company's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-a-vis GFA approved by the Commission in past and any other factor considered appropriate 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;
- *GFA n-1*- Gross Fixed Asset of the Hydro generating company for the (*n-1*)th year;
- *G<sub>n</sub>* is a growth factor for the *n*th year and it can be greater than or less than zero based on the actual performance. Value of *G<sub>n</sub>* shall be determined by the Commission in the MYT tariff order for meeting the additional

*manpower requirement based on Hydro 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 further that, the impact of pay revision (including arrears) shall be allowed on actual during the mid-term performance review or at the end of the control period as per actual/ audited accounts, subject to prudence check and any other factor considered appropriate by the Commission."*

- 4.2.21. The Commission has approved the Operation and Maintenance Expenses for the Fifth Control Period in accordance with the Regulation 35 of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024. In line with the provisions of the above Regulations, the Commission has calculated the "WPI Inflation" and "CPI Inflation" based on the average increase in WPI and CPI data over last three years i.e., FY 2020-21 to FY 2022-23, as follows:

**Table 79: Approved WPI and CPI inflation for 5<sup>th</sup> Control Period**

Particulars	FY21	FY22	FY23	Average
<b>WPI Inflation</b>	1.29%	13.00%	9.41%	<b>7.90%</b>
<b>CPI Inflation</b>	5.02%	5.13%	6.05%	<b>5.40%</b>

- 4.2.22. As per the Regulation 35 of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024, the Employee expense, Administrative Expense and Repairs & Maintenance Expense shall be projected after escalating the Base year value by the approved "WPI Inflation" and "CPI Inflation".

- 4.2.23. For projecting the various components of O&M expense, the Commission has considered the actual expense for the period FY 2018-19 to FY 2022-23 provided by the Petitioner in its audited accounts. However, it was observed that there have been significant differences in year-on-year expenditure under each head i.e., employee, R&M and A&G. Accordingly, the Commission has considered average of past 5 years (i.e., FY19 to FY23) while determining the value for base year (FY 2023-24).

- 4.2.24. Detailed approach for projection of Employee expense, Administrative Expense and Repair & Maintenance Expense for the fifth Control Period is as below:

- i. **R&M:** In accordance with MYT Hydro Tariff Regulations, 2024, K factor is determined based on actual R&M expense and GFA for past five years i.e., FY 2018-19 to FY 2022-23 as actual R&M expense for FY 2023-24 is not submitted by the Petitioner and appropriate escalation based on WPI inflation has been considered to project the R&M cost for FY 2023-24 and each year for the fifth Control Period.
- ii. **Employee Cost:** As the actual employee expense for FY 2023-24 is not submitted by the Petitioner, actual employee cost for each plant for FY 2022-23 along with the approved CPI inflation has been considered as the base for projecting the employee cost for FY 2023-24. Further, an



escalation equivalent to approved CPI inflation is considered to arrive at the employee cost for each year of the 5<sup>th</sup> Control Period.

For Chamba, actual reported employee cost for period FY 2018-19 to FY 2022-23 was 'nil'. For such projects, the Commission has calculated employee cost by inflating approved employee cost for FY 2023-24 (as per MTR order of 4<sup>th</sup> Control Period), with approved CPI inflation year on year. The employee cost as per the accounts for FY23 for various hydro plants is as under:

**Table 80: Employee Cost as per accounts for FY23, for various plants**

Plant Name	Employee Cost as per Accounts (Rs. Cr.)
	FY23
Andhra	7.01
Baner	4.64
Bassi	13.67
Bhaba	20.63
Binwa	4.76
Chaba	1.52
Chamba	0.00
Gaj	4.71
Giri	15.39
Larji	17.53
Nogli	2.67
Rong Tong	0.76
Rukti	0.63

- iii. **A&G:** For calculation of A&G expense, similar approach is adopted as for the employee expense. Average of the actual A&G expense for each plant for FY 2018-19 to FY 2022-23 has been considered as the base for projecting the A&G expense for FY 2023-24. Further, an escalation equivalent to approved WPI inflation is considered to arrive at the A&G expense for each year of the 5<sup>th</sup> Control Period.

For Chamba, Rontong and Rukti plants, actual A&G expenses for period FY 2018-19 to FY 2022-23 were 'nil'. For such projects, the Commission has calculated A&G cost by inflating approved A&G cost for FY 2023-24 (as per MTR order of 4<sup>th</sup> Control Period), with approved WPI inflation year on year.

**Table 81: A&G Cost for various plants as per Accounts and as per the average of the last 5 years**

Plant Name	A&G Cost as per Accounts (Rs. Cr.)					Average
	FY19	FY20	FY21	FY22	FY23	(FY19-23)
Andhra	0.10	0.07	0.07	0.08	0.06	<b>0.08</b>
Baner	0.08	0.09	0.19	0.21	0.26	<b>0.17</b>
Bassi	0.26	0.14	0.12	0.18	0.17	<b>0.17</b>
Bhaba	0.85	0.62	0.59	0.66	0.86	<b>0.72</b>

Plant Name	A&G Cost as per Accounts (Rs. Cr.)					Average
	FY19	FY20	FY21	FY22	FY23	(FY19-23)
Binwa	0.07	0.07	0.07	0.08	0.07	<b>0.07</b>
Chaba	0.01	0.00	0.01	0.06	0.05	<b>0.03</b>
Chamba	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
Gaj	0.14	0.19	0.18	0.19	0.18	<b>0.18</b>
Giri	0.32	0.21	0.22	0.36	0.38	<b>0.30</b>
Larji	0.62	0.39	0.38	0.42	0.79	<b>0.52</b>
Nogli	0.01	0.01	0.02	0.05	0.05	<b>0.03</b>
Rong Tong	0.00	0.00	0.00	0.01	0.00	<b>0.00</b>
Rukti	0.00	0.00	0.00	0.00	0.01	<b>0.00</b>

- iv. **Terminal benefit:** The Commission, in the MYT Order dated 15.03.2024 for HPSEBL's Distribution Business had allocated an amount each year during the 5<sup>th</sup> Control Period towards terminal benefits for the pension contribution for employees of generation business and reduced from the overall terminal benefits projected for HPSEBL for arriving at the approved terminal benefits for HPSEBL's Distribution Business. The amount of terminal benefit for the pension contribution approved towards HPSEBL's Generation Business in the MYT Order dated 15.03.2024 for HPSEBL's Distribution Business has been now allocated among various plants, in proportion of their installed capacity.

**Table 82: Total Terminal Benefit approved for Generation business as per Distribution Business' MYT Order for 5<sup>th</sup> Control Period (Rs. Cr.)**

Particulars	FY25	FY26	FY27	FY28	FY29
Terminal Benefit for Generation business (Rs. Cr.)	18.79	20.11	21.51	23.02	24.63

- v. **Expense towards S&I and Projects Division:** The Petitioner has claimed the Employee Cost along with their Pension contribution for S&I and Projects division, which has been disallowed by the Commission during True-up of FY 2022-23 of HPSEBL's Distribution business. In response to the query on activities being carried out by the Projects division, the Petitioner has submitted the following activities:
- Civil & Hydro-mechanical components of the RMU&LE scheme of the Generation Wing are being prepared by the Chief Engineer (PCA) through S&I and Project Division.
  - Arbitration Cases of these commissioned Power Houses are being dealt by the Chief Engineer (PCA).
  - Pre-monsoon & post monsoon inspection of the Dams of Generation Wing are carried out by this Wing.

The Commission is of the view that the above-mentioned activities performed by the S&I and Projects division corresponds to the projects

which are not yet commissioned or projects under construction stage and cannot be part of operational plants of HPSEBL. Also, any activity conducted towards existing plants needs to be handled at the plant site or under the generation wing. Therefore, the Petitioner needs to allocate expense towards S&I and Projects towards new projects. Therefore, the Commission has not allowed any employee cost and its Pension contribution/ Terminal benefits for S&I and Projects division for 5<sup>th</sup> Control Period.

## Depreciation

- 4.2.25. The Commission has determined the depreciation for the station in accordance to Regulation 40 of HPERC Generation Regulations, 2024. Regulation 40 (5) and 40(6) of these Regulations reads as under:

*"40.5. Depreciation for Existing Projects shall be calculated annually based on the Straight Line Method and at rates specified in Appendix-I to these Regulations for the assets of the generating station:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets:*

*Provided further that in the case of an existing hydro generating station, the generating company, with the consent of the beneficiaries, may charge depreciation at a rate lower than that specified in Appendix-I to these Regulations to reduce front loading of tariff.*

*40.6. Depreciation for New Projects shall be calculated annually based on the Straight Line Method and at rates specified in Appendix-II to these Regulations for the assets of the generating station:*

*Provided that the remaining depreciable value as on 31st March of the year closing after a period of 15 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets:*

*Provided further that in the case of a new hydro generating stations, the generating company, with the consent of the beneficiaries, may charge depreciation at a rate lower than that specified in Appendix-II to these Regulations to reduce front loading of tariff."*

- 4.2.26. Before the promulgation of HPERC Generation Regulations of 2011, the Commission used to calculate accumulated depreciation for the individual projects considering a depreciation rate of 2.50% for each year post commercial operation date of the projects upto a maximum of 90% of the original cost of the asset. Post implementation of HPERC Generation Regulations of 2011 (i.e., from FY 2011-12 onwards), for plants in operation for more than 12 years, the balance depreciation after adjusting for the depreciation upto FY 2010-11 has been spread over the remaining useful life of the project. In case of plants where age was less than 12 years, the Commission has considered depreciation at the rate of 5.28% until 12 years of plant life is completed post which the balance depreciation is spread across the remaining useful life of the project.

- 4.2.27. As all the commissioned plants have completed the life of 12 years, therefore, for 5<sup>th</sup> control period as per the provisions of the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024, the balance depreciation as on FY 2023-24 is spread across the remaining useful life of the project. The useful life of the project has been considered as 40 years in accordance with Regulation 3(80) of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024.
- 4.2.28. In case of plants where RMU & LE has been undertaken, an additional 20 years of life extension has been considered for the purpose of depreciation computation.

### **Interest on loans**

- 4.2.29. The Commission has determined the interest on loans in accordance to Regulation 38 of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024, continuing with the approach adopted in the tariff orders for previous Control Periods.
- 4.2.30. Interest on loan has been discussed in subsequent sub-sections along with each plant's individual AFC analysis.

### **Interest on Working Capital**

- 4.2.31. The interest on working capital has been determined in accordance with the Regulation 39 of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024. As per Regulation 39, the working capital for hydroelectric power station shall contain following components:
- a) Receivables equivalent to 45 days of annual fixed cost;
  - b) Maintenance spares equivalent to 15% of O&M Expenses including security expenses; and
  - c) Operation and Maintenance (O&M) expenses, including security expense for 1 month
- 4.2.32. As per Regulation 39, the rate of interest on working capital shall be on normative basis and shall be equal to the 1-year SBI MCLR as on 1<sup>st</sup> April 2024 plus 350 basis points for all the years of 5<sup>th</sup> MYT Control Period.

### **Return on Equity**

- 4.2.33. As per the Regulation 36 of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024, Return on equity is computed on the equity determined in accordance with Regulation 37 of above Regulations and on pre-tax basis at the base rate of 15.5% for existing projects and at bank rate as on 1st April of the year subject to 14% for additional capitalisation beyond the Original scope, to be grossed up as per Regulation 37(2) of the above Regulations. As applicability of income tax has not been there on the Petitioner in last few years, no gross-up for tax has been considered and the same shall be considered on actuals at the time of truing-up.

## Energy Generation and Auxiliary Consumption

- 4.2.34. The Petitioner has submitted the Energy Generation projections from Own Generation Stations for 5<sup>th</sup> MYT Control Period based on the moderation done on Design Energy (MU) for calculating the Energy Charge Rate (ECR) for 5<sup>th</sup> MYT Control Period, based on the provisions of the MYT Hydro Tariff Regulations. However, as the Petitioner could not submit the actual generation from the own hydro plants certified by the HPSLDC for the 4<sup>th</sup> Control Period, the Commission will consider any moderation of Design Energy based on submission of the same at the time of mid-term review or final truing-up.
- 4.2.35. The Commission in its Order dated 15.01.2014 for 'Restating of Design Energy and Reconsideration of Tariff for Small Hydro Power Plants of HPSEB Limited', has stated design energy and auxiliary consumption for various small hydro plants. The Commission has considered design energy and auxiliary consumption for these plants as per this Order.
- 4.2.36. For large hydro plants having installed capacity more than 25 MW, namely Bhaba, Bassi, Giri and Larji, the Commission has continued with the Design Energy and Auxiliary Consumption as considered in the previous MYT Order for 4<sup>th</sup> Control Period dated 11.11.2021.

### 4.3. Annual Fixed Charges for Andhra HEP

- 4.3.1. Andhra HEP is a 16.95 MW (3 x 5.65 MW) project commissioned by the HPSEBL in the year 1987. It is a peaking, storage project with surface power station and static excitation.
- 4.3.2. The Petitioner has proposed additional capitalization for the plant in its current Petition but has not submitted relevant details and supporting documents as stipulated in applicable HPERC Regulations. As discussed in Section 4.2 of this Order, the Commission has not allowed any additional capitalization during the 5<sup>th</sup> Control Period for the plant. Further, the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.
- 4.3.3. The details of the approved Annual Fixed Charges for the Andhra HEP for the Fifth Control Period are provided in the table below:

**Table 83: Approved AFC for Andhra HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (DE)	MU	87.30	87.30	87.30	87.30	87.30
Total Auxiliary	MU	0.87	0.87	0.87	0.87	0.87
Net generation	MU	86.43	86.43	86.43	86.43	86.43
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>86.43</b>	<b>86.43</b>	<b>86.43</b>	<b>86.43</b>	<b>86.43</b>
<b>Annual Fixed Charge</b>						
O&M Expenses	Rs. Cr.	10.76	11.42	12.12	12.86	13.65

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
a) R&M Expenses	Rs. Cr.	2.62	2.82	3.05	3.29	3.55
b) Employee Expenses	Rs. Cr.	7.39	7.79	8.21	8.66	9.12
c) Terminal Expenses	Rs. Cr.	0.66	0.71	0.76	0.81	0.87
d) A&G Expenses	Rs. Cr.	0.09	0.09	0.10	0.11	0.12
Depreciation	Rs. Cr.	1.10	1.10	1.10	0.78	0.00
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.49	0.52	0.55	0.58	0.60
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>12.34</b>	<b>13.03</b>	<b>13.76</b>	<b>14.22</b>	<b>14.26</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	0.71	0.75	0.80	0.82	0.82
Capacity Charges	Rs. Cr.	6.17	6.52	6.88	7.11	7.13

Note: The Auxiliary Consumption % of Andhra HEP considered is 1.00% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.4. Annual Fixed Charges for Baner HEP

4.4.1. Baner HEP is a 12 MW (3 x 4 MW) project commissioned by the HPSEBL in the year 1996.

4.4.2. The Petitioner has proposed additional capitalization for the plant in its current Petition. With respect to the proposed additional capitalization, the Commission sought details including rationale, DPR, prior approval, loan agreement, etc. for the Baner HEP. In response, the Petitioner has submitted the scheme/DPR for Renovation & Modernization works of Baner HEP amounting to Rs. 6.801 Cr and DPR, administrative approval & expenditure sanction accorded by Chief Engineer (Generation) for work executed under Minor Capital Works amounting to Rs. 3.77 Cr. As discussed in section 4.2 of this Order, the Commission has gone through the Petitioner's submissions and allowed Rs. 6.801 Cr for Renovation & Modernization works during the 5<sup>th</sup> Control Period for the plant but has not allowed any additional capitalization for Minor Capital Works as the same would come under R&M expense. Further, the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.4.3. The details of the approved Annual Fixed Charges for the Baner HEP for the Fifth Control Period are provided in the table below:

**Table 84: Approved AFC for Baner HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (DE)	MU	60.67	60.67	60.67	60.67	60.67
Total Auxiliary	MU	0.61	0.61	0.61	0.61	0.61
Net generation	MU	60.06	60.06	60.06	60.06	60.06
Less: Free Power to GoHP	MU	7.21	7.21	7.21	7.21	7.21
<b>Energy available for Sale</b>	<b>MU</b>	<b>52.85</b>	<b>52.85</b>	<b>52.85</b>	<b>52.85</b>	<b>52.85</b>

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	6.86	7.27	7.71	8.17	8.66
a) R&M Expenses	Rs. Cr.	1.15	1.24	1.34	1.45	1.56
b) Employee Expenses	Rs. Cr.	5.04	5.32	5.60	5.91	6.23
c) Terminal Expenses	Rs. Cr.	0.47	0.50	0.54	0.57	0.61
d) A&G Expenses	Rs. Cr.	0.19	0.21	0.22	0.24	0.26
Depreciation	Rs. Cr.	1.17	1.17	1.17	1.17	1.92
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.27
Return on Equity	Rs. Cr.	2.32	2.32	2.32	2.32	2.32
Interest on Working Capital	Rs. Cr.	0.36	0.38	0.39	0.41	0.45
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>10.70</b>	<b>11.13</b>	<b>11.58</b>	<b>12.07</b>	<b>13.62</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	1.01	1.05	1.10	1.14	1.29
Capacity Charges	Rs. Cr.	5.35	5.56	5.79	6.03	6.81

Note: The Auxiliary Consumption % of Baner HEP considered is 1.01% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.5. Annual Fixed Charges for Bassi HEP

4.5.1. Bassi HEP is a 60 MW (2 x 30 MW) project commissioned in the year 1970. It is a peaking, storage-based project with surface power station and rotating exciters.

4.5.2. The Petitioner has proposed additional capitalization for the plant in its current Petition. With respect to the proposed additional capitalization, the Commission sought details including rationale, DPR, prior approval, loan agreement, etc. for the Bassi HEP. In response, the Petitioner has submitted the supporting documents like scheme/DPR for the works mentioned below for which the Commission has approved the additional capital expenditure during the 5<sup>th</sup> Control Period for the plant:

1. Up-gradation/Augmentation of 16MVA, 132/33KV Power Transformer to 132/33KV, 1\*25/31.5 MVA Power Transformer of Bassi Power House under Bassi Power House Division, HPSEBL, Joginder Nagar (HP): Rs. 4.28 Cr
2. Up-gradation/Augmentation of 33/11 KV 2X2.5 MVA Power Transformer to 33/11 KV 2X 5 MVA Power Transformer at 33 KV Switchyard & 11 KV switchgear system of Bassi Power House: Rs. 4.40 Cr
3. Upgradation of SCADA, special T&P, measuring equipment, spare air water cooler for generator, hydraulic system of Chapprot, LT switch gear, LT distribution panel for Bassi PH: Rs. 2.62 Cr (as per DPR)

4.5.3. The Petitioner has also provided the supporting documents for the work "Providing wire crate for protection of dislodged land (due to heavy rainfall on 14.08.2023) along penstock near Anchor Block No.7 and removal of slips/ loose strata along the penstock under Bassi power House Division, HPSEBL, Joginder Nagar" amounting to Rs. 0.53 Cr as per DPR, but the Commission has not approved the same as this cost head would come under R&M expense.

4.5.4. Further, the ARR cost items for the plant are calculated in accordance with methodology discussed under section 4.2 of this Order.

4.5.5. The details of the approved Annual Fixed Charges for the Bassi HEP for the Fifth Control Period are provided in the table below:

**Table 85: Approved AFC for Bassi HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (DE)	MU	346.83	346.83	346.83	346.83	346.83
Total Auxiliary	MU	2.43	2.43	2.43	2.43	2.43
Net generation	MU	344.40	344.40	344.40	344.40	344.40
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>344.40</b>	<b>344.40</b>	<b>344.40</b>	<b>344.40</b>	<b>344.40</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	16.80	17.81	18.88	20.22	21.44
a) R&M Expenses	Rs. Cr.	2.20	2.37	2.56	2.97	3.21
b) Employee Expenses	Rs. Cr.	12.06	12.71	13.40	14.12	14.89
c) Terminal Expenses	Rs. Cr.	2.34	2.51	2.68	2.87	3.07
d) A&G Expenses	Rs. Cr.	0.20	0.22	0.24	0.26	0.28
Depreciation	Rs. Cr.	4.18	4.18	5.01	5.01	5.01
Interest Charges	Rs. Cr.	3.08	1.03	0.77	0.68	0.23
Return on Equity	Rs. Cr.	0.36	0.36	0.36	0.36	0.36
Interest on Working Capital	Rs. Cr.	0.86	0.87	0.93	0.99	1.03
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>25.28</b>	<b>24.25</b>	<b>25.94</b>	<b>27.26</b>	<b>28.07</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	0.37	0.35	0.38	0.40	0.41
Capacity Charges	Rs. Cr.	12.64	12.12	12.97	13.63	14.04

Note: The Auxiliary Consumption % of Bassi HEP considered is 0.70% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

## 4.6. Annual Fixed Charges for Bhaba HEP

4.6.1. Bhaba HEP is a 120 MW (3 x 40 MW) project commissioned in the year 1989.

4.6.2. The Petitioner has proposed additional capitalization for the plant in its current Petition but has not submitted relevant details and supporting documents as stipulated in applicable HPERC Regulations. As discussed in Section 4.2 of this Order, the Commission has not allowed any additional capitalization during the 5<sup>th</sup> Control Period for the plant. Further, the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.6.3. The details of the approved Annual Fixed Charges for the Bhaba HEP for the Fifth Control Period are provided in the table below:



**Table 86: Approved AFC for Bhaba HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	464.70	464.70	464.70	464.70	464.70
Total Auxiliary	MU	5.58	5.58	5.58	5.58	5.58
Net generation	MU	459.12	459.12	459.12	459.12	459.12
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>459.12</b>	<b>459.12</b>	<b>459.12</b>	<b>459.12</b>	<b>459.12</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	30.07	31.91	33.87	35.95	38.16
a) R&M Expenses	Rs. Cr.	4.82	5.20	5.61	6.06	6.53
b) Employee Expenses	Rs. Cr.	19.74	20.80	21.92	23.11	24.36
c) Terminal Expenses	Rs. Cr.	4.68	5.01	5.36	5.74	6.14
d) A&G Expenses	Rs. Cr.	0.83	0.90	0.97	1.05	1.13
Depreciation	Rs. Cr.	9.10	9.10	9.10	9.10	9.10
Interest Charges	Rs. Cr.	0.81	0.27	0.09	0.03	0.01
Return on Equity	Rs. Cr.	1.05	1.05	1.05	1.05	1.05
Interest on Working Capital	Rs. Cr.	1.50	1.57	1.66	1.75	1.84
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>42.53</b>	<b>43.91</b>	<b>45.77</b>	<b>47.88</b>	<b>50.17</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	0.46	0.48	0.50	0.52	0.55
Capacity Charges	Rs. Cr.	21.27	21.95	22.88	23.94	25.08

Note: The Auxiliary Consumption % of Bhaba HEP considered is 1.20% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

## 4.7. Annual Fixed Charges for Binwa HEP

4.7.1. Binwa HEP is a 6 MW (2 x 3 MW) project commissioned in the year 1984.

4.7.2. The Petitioner has proposed additional capitalization for the plant in its current Petition. With respect to the proposed additional capitalization, the Commission sought details including rationale, DPR, prior approval, loan agreement, etc. for the Binwa HEP. In response, the Petitioner has submitted the copy of scheme for Residual Life Assessment (RLA) of Binwa PH and mentioned that the scheme/DPR for RMU&LE works shall be finalized on the basis of the RLA study of Binwa Power House. The Commission understands that as the RLA study for those plants is necessary whose useful life have been completed and only upon the result of the RLA study, it could be established as to whether the plant needs to undergo RMU&LE works or not. Therefore, the Commission accords In-Principle approval of RLA scheme, provided the Petitioner selects the expert agency based on the competitive bidding guidelines. In addition, the Commission is of the view that the RLA work is an incidental cost of RMU&LE work and therefore, the cost towards RLA study would be approved along with the RMU&LE work when capitalised. Further, in absence of supporting documents, the Commission has not approved the capital expenditure towards RMU&LE works and directs the Petitioner to finalize and submit the details of the scheme to Commission for approval along with Mid Term Review of the 5<sup>th</sup> Control Period. Accordingly, the

Commission has not approved any cost towards RLA study and RMU&LE work for 5<sup>th</sup> Control Period for Binwa HEP.

4.7.3. Further the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.7.4. The details of the approved Annual Fixed Charges for the Binwa HEP for the Fifth Control Period are provided in the table below:

**Table 87: Approved AFC for Binwa HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	29.25	29.25	29.25	29.25	29.25
Total Auxiliary	MU	0.20	0.20	0.20	0.20	0.20
Net generation	MU	29.05	29.05	29.05	29.05	29.05
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>29.05</b>	<b>29.05</b>	<b>29.05</b>	<b>29.05</b>	<b>29.05</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	5.76	6.10	6.46	6.84	7.24
a) R&M Expenses	Rs. Cr.	0.82	0.88	0.95	1.03	1.11
b) Employee Expenses	Rs. Cr.	4.63	4.88	5.15	5.42	5.72
c) Terminal Expenses	Rs. Cr.	0.23	0.25	0.27	0.29	0.31
d) A&G Expenses	Rs. Cr.	0.08	0.09	0.10	0.10	0.11
Depreciation	Rs. Cr.	0.14	0.00	0.00	0.00	0.00
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	-0.05	-0.05	-0.05	-0.05	-0.05
Interest on Working Capital	Rs. Cr.	0.26	0.27	0.28	0.30	0.32
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>6.12</b>	<b>6.32</b>	<b>6.70</b>	<b>7.09</b>	<b>7.51</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	1.05	1.09	1.15	1.22	1.29
Capacity Charges	Rs. Cr.	3.06	3.16	3.35	3.55	3.76

Note: The Auxiliary Consumption % of Binwa HEP considered is 0.68% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.8. Annual Fixed Charges for Chaba HEP

4.8.1. Chaba HEP is a 1.75 MW (2 x 0.5 MW + 3 x 0.25 MW) project commissioned in the year 1913-14.

4.8.2. The Petitioner has proposed additional capitalization for the plant in its current Petition but has not submitted relevant details and supporting documents as stipulated in applicable HPERC Regulations. As discussed in Section 4.2 of this Order, the Commission has not allowed any additional capitalization during the 5<sup>th</sup> Control Period for the plant. Further the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses,

Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.8.3. The details of the approved Annual Fixed Charges for the Chaba HEP for the Fifth Control Period are provided in the table below:

**Table 88: Approved AFC for Chaba HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	7.67	7.67	7.67	7.67	7.67
Total Auxiliary	MU	0.08	0.08	0.08	0.08	0.08
Net generation	MU	7.59	7.59	7.59	7.59	7.59
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>7.59</b>	<b>7.59</b>	<b>7.59</b>	<b>7.59</b>	<b>7.59</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	2.71	2.88	3.06	3.25	3.45
a) R&M Expenses	Rs. Cr.	0.82	0.89	0.96	1.04	1.12
b) Employee Expenses	Rs. Cr.	1.79	1.88	1.99	2.09	2.21
c) Terminal Expenses	Rs. Cr.	0.07	0.07	0.08	0.08	0.09
d) A&G Expenses	Rs. Cr.	0.03	0.03	0.04	0.04	0.04
Depreciation	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.12	0.13	0.14	0.14	0.15
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>2.83</b>	<b>3.01</b>	<b>3.19</b>	<b>3.39</b>	<b>3.61</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	1.86	1.98	2.10	2.24	2.38
Capacity Charges	Rs. Cr.	1.42	1.50	1.60	1.70	1.80

Note: The Auxiliary Consumption % of Chaba HEP considered is 1.04% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

## 4.9. Annual Fixed Charges for Chamba HEP

4.9.1. Chamba HEP is a 0.45 MW (3 X 0.15 MW) project commissioned in the years 1938, 1957 and 1985.

4.9.2. The Petitioner has proposed additional capitalization for the plant in its current Petition but has not submitted relevant details and supporting documents as stipulated in applicable HPERC regulations. As discussed in section 4.2 of this Order, the Commission has not allowed any additional capitalization during the 5<sup>th</sup> Control Period for the plant. Further, the ARR cost items for the plant are calculated in accordance with methodology discussed under section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.9.3. The details of the approved Annual Fixed Charges for the Chamba HEP for the Fifth Control Period are provided in the table below:

Table 89: Approved AFC for Chamba HEP

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	1.77	1.77	1.77	1.77	1.77
Total Auxiliary	MU	0.02	0.02	0.02	0.02	0.02
Net generation	MU	1.75	1.75	1.75	1.75	1.75
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	0.91	0.97	1.03	1.10	1.18
a) R&M Expenses	Rs. Cr.	0.50	0.53	0.58	0.62	0.67
b) Employee Expenses	Rs. Cr.	0.38	0.40	0.42	0.45	0.47
c) Terminal Expenses	Rs. Cr.	0.02	0.02	0.02	0.02	0.02
d) A&G Expenses	Rs. Cr.	0.01	0.01	0.01	0.02	0.02
Depreciation	Rs. Cr.	0.01	0.00	0.00	0.00	0.00
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.04	0.04	0.05	0.05	0.05
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>0.95</b>	<b>1.01</b>	<b>1.08</b>	<b>1.15</b>	<b>1.23</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	2.73	2.89	3.08	3.30	3.52
Capacity Charges	Rs. Cr.	0.48	0.51	0.54	0.58	0.62

Note: The Auxiliary Consumption % of Chamba HEP considered is 1.13% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.10. Annual Fixed Charges for Gaj HEP

- 4.10.1. Gaj HEP is a 10.50 MW (3 x 3.50 MW) project commissioned by the HPSEBL in the year 1996.
- 4.10.2. The Petitioner has proposed additional capitalization for the plant in its current Petition. With respect to the proposed additional capitalization, the Commission sought details including rationale, DPR, prior approval, loan agreement, etc. for the Baner HEP. In response, the Petitioner has submitted the scheme/DPR for Renovation & Modernization works of the power house and for procurement of Runners amounting to Rs. 10 Cr. But as per the DPR, the cost towards Renovation & Modernization works amounts to Rs. 4.75 Cr and the cost towards procurement of Runners amounts to Rs. 2 Cr. Based on the analysis of the documentary proof submitted, the Commission is of the view that the procurement of Runners is necessary as per the requirement as mentioned in the DPR for R&M works. Accordingly, the Commission has approved Rs. 4.75 Cr towards Renovation & Modernization works and Rs. 2.00 Cr towards procurement of runners.
- 4.10.3. Further, the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.10.4. The details of the approved Annual Fixed Charges for the Gaj HEP for the Fifth Control Period are provided in the table below:

**Table 90: Approved AFC for Gaj HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	38.31	38.31	38.31	38.31	38.31
Total Auxiliary	MU	0.38	0.38	0.38	0.38	0.38
Net generation	MU	37.93	37.93	37.93	37.93	37.93
Less: Free Power to GoHP	MU	4.55	4.55	4.55	4.55	4.55
<b>Energy available for Sale</b>	<b>MU</b>	<b>33.38</b>	<b>33.38</b>	<b>33.38</b>	<b>33.38</b>	<b>33.38</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	6.50	6.89	7.29	8.00	8.48
a) R&M Expenses	Rs. Cr.	0.95	1.03	1.11	1.46	1.58
b) Employee Expenses	Rs. Cr.	4.94	5.21	5.49	5.79	6.10
c) Terminal Expenses	Rs. Cr.	0.41	0.44	0.47	0.50	0.54
d) A&G Expenses	Rs. Cr.	0.19	0.21	0.23	0.24	0.26
Depreciation	Rs. Cr.	0.14	0.14	0.73	0.73	0.73
Interest Charges	Rs. Cr.	0.00	0.00	0.25	0.33	0.11
Return on Equity	Rs. Cr.	2.31	2.31	2.31	2.31	2.31
Interest on Working Capital	Rs. Cr.	0.33	0.34	0.37	0.41	0.42
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>9.27</b>	<b>9.68</b>	<b>10.96</b>	<b>11.78</b>	<b>12.06</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	1.39	1.45	1.64	1.76	1.81
Capacity Charges	Rs. Cr.	4.64	4.84	5.48	5.89	6.03

Note: The Auxiliary Consumption % of Gaj HEP considered is 1.00% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.11. Annual Fixed Charges for Giri HEP

4.11.1. Giri HEP is a 60 MW (2 x 30 MW) project commissioned in the year 1978.

4.11.2. As discussed in Section 4.2 of this Order, the Commission has observed that the scheme/ DPR for the works to be carried out for "RMU & LE work" and "Capital works of machines of Giri HEP (against Minor capital)" are under preparation and scheme for RMU & LE of Giri HEP shall be finalized on the basis of report of RLA study. Therefore, the Commission has not approved the "RMU & LE work" and "Capital works of machines of Giri HEP (against Minor capital)" in absence of supporting documents.

4.11.3. Further, the Commission understands that as the RLA study for those plants are necessary whose useful life have been completed and only upon the result of the RLA study, it could be understood whether the plant has to undergo RMU&LE works or not. Therefore, the Commission gives In-Principle approval of RLA scheme, provided the Petitioner selects the expert agency based on the competitive bidding guidelines. In addition, the Commission is of the view that the RLA study is an incidental cost of RMU&LE work and therefore, the cost towards RLA study would be approved along with the RMU&LE works when

capitalised. Accordingly, the Commission has not approved any cost towards RLA study for 5th Control Period for Giri HEP.

- 4.11.4. In addition, the Commission in its MYT Order for 4th Control Period dated 11.11.2021 has provisionally allowed capitalization of Rs. 69.90 Cr. in FY23 and remaining Rs. 69.90 Cr. in FY24 - one in each year for the two units of plant for which RMU&LE scheme is being implemented. As the Petitioner has proposed capital expenditure in 5th Control Period for RMU&LE work again, and the work towards RMU&LE approved in FY23 & FY24 has not been executed in respective years, therefore, the Commission has de-capitalised the provisionally approved capitalization amount towards RMU&LE works in FY23 & FY24 in last MYT Order for 4th Control Period, subject to review, at the time of true-up of 4th Control Period.
- 4.11.5. The ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.
- 4.11.6. The details of the approved Annual Fixed Charges for the Giri HEP for the Fifth Control Period are provided in the table below:

**Table 91: Approved AFC for Giri HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	289.55	289.55	289.55	289.55	289.55
Total Auxiliary	MU	2.03	2.03	2.03	2.03	2.03
Net generation	MU	287.52	287.52	287.52	287.52	287.52
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>287.52</b>	<b>287.52</b>	<b>287.52</b>	<b>287.52</b>	<b>287.52</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	26.09	27.78	29.58	31.50	33.55
a) R&M Expenses	Rs. Cr.	9.35	10.09	10.89	11.75	12.67
b) Employee Expenses	Rs. Cr.	14.05	14.81	15.61	16.45	17.34
c) Terminal Expenses	Rs. Cr.	2.34	2.51	2.68	2.87	3.07
d) A&G Expenses	Rs. Cr.	0.35	0.37	0.40	0.43	0.47
Depreciation	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	1.15	1.23	1.31	1.39	1.48
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>27.24</b>	<b>29.00</b>	<b>30.88</b>	<b>32.89</b>	<b>35.03</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	0.47	0.50	0.54	0.57	0.61
Capacity Charges	Rs. Cr.	13.62	14.50	15.44	16.45	17.52

Note: The Auxiliary Consumption % of Giri HEP considered is 0.70% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

## 4.12. Annual Fixed Charges for Larji HEP

- 4.12.1. The Larji Hydro Electric Project is a 126 MW (3 X 42 MW) plant on river Beas in district Kullu. The plant was Commissioned in year 2006.
- 4.12.2. The Petitioner has proposed additional capitalization for the plant in its current Petition. With respect to the proposed additional capitalization, the Commission sought details including rationale, DPR, prior approval, loan agreement, etc. for the Larji HEP. In response, the Petitioner has stated that the proposed capital expenditure is towards "Restoration of Larji HEP" scheme amounting to Rs. 185.87 Cr. The detail of the funding proposed has been loan from PFC Ltd. amounting to Rs. 148.70 Cr, State Power Sector Development Funds Grant Rs. 35.00 Cr accorded vide HPERC letter No. HPERC/ED(T)/D(TEco.)/2023-24-3193-97 dated 30.12.2023 and Board's share of Rs. 2.17 Cr. From the entire scheme amount of Rs. 185.87 Cr, the Petitioner has submitted the additional capital expenditure for FY 2023-24 amounting to Rs. 30 Cr and the rest of Rs. 155.87 Cr for FY 2024-25. Therefore, the Commission has considered an additional capital expenditure of Rs. 30 Cr for FY 2023-24 and calculated the opening GFA for FY 2024-25 to be Rs. 1,115.60 Cr. and considered an additional capital expenditure of Rs. 155.87 Cr towards "Restoration of Larji HEP" scheme for the 5<sup>th</sup> Control Period.
- 4.12.3. In its Petition, the HPSEBL has also submitted that de-capitalization of Rs. 1.97 Cr and Rs. 2.98 Cr has been proposed during FY 2024-25 and FY 2025-26 respectively for the 5<sup>th</sup> Control Period. The Commission has considered this de-capitalization while calculating the GFA for the project and the amount of the decapitalization has been adjusted in the opening GFA and accumulated depreciation.
- 4.12.4. Further the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.
- 4.12.5. The details of the approved Annual Fixed Charges for the Larji HEP for the Fifth Control Period are provided in the table below:

**Table 92: Approved AFC for Larji HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	586.82	586.82	586.82	586.82	586.82
Total Auxiliary	MU	7.04	7.04	7.04	7.04	7.04
Net generation	MU	579.78	579.78	579.78	579.78	579.78
Less: Free Power to GoHP	MU	69.57	69.57	69.57	69.57	69.57
<b>Energy available for Sale</b>	<b>MU</b>	<b>510.21</b>	<b>510.21</b>	<b>510.21</b>	<b>510.21</b>	<b>510.21</b>
<b>Annual Fixed Charge</b>						
O&M Expenses	Rs. Cr.	29.44	32.38	34.42	36.63	38.98
a) R&M Expenses	Rs. Cr.	7.23	8.88	9.56	10.31	11.13
b) Employee Expenses	Rs. Cr.	16.68	17.58	18.53	19.53	20.59

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
c) Terminal Expenses	Rs. Cr.	4.92	5.26	5.63	6.02	6.45
d) A&G Expenses	Rs. Cr.	0.61	0.65	0.71	0.76	0.82
Depreciation	Rs. Cr.	24.50	24.46	24.46	24.46	24.46
Interest Charges	Rs. Cr.	5.53	7.37	2.46	0.82	0.27
Return on Equity	Rs. Cr.	24.21	24.45	24.45	24.45	24.45
Interest on Working Capital	Rs. Cr.	2.14	2.30	2.31	2.39	2.48
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>85.81</b>	<b>90.96</b>	<b>88.11</b>	<b>88.75</b>	<b>90.65</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	0.84	0.89	0.86	0.87	0.89
Capacity Charges	Rs. Cr.	42.90	45.48	44.05	44.37	45.32

Note: The Auxiliary Consumption % of Larji HEP considered is 1.20% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

### 4.13. Annual Fixed Charges for Nogli HEP

4.13.1. Nogli HEP is a 2.50 MW (2 x 0.25 + 4 x 0.50 MW) project commissioned in the years 1963, 1970 and 1974. It is a non-peaking, run of the river project with surface power station and static excitation.

4.13.2. The Petitioner has proposed additional capitalization for the plant in its current Petition but has not submitted relevant details and supporting documents as stipulated in applicable HPERC regulations. As discussed in Section 4.2 of this Order, the Commission has not allowed any additional capitalization during the 5<sup>th</sup> Control Period for the plant. Further the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.13.3. The details of the approved Annual Fixed Charges for the Nogli HEP for the Fifth Control Period are provided in the table below:

**Table 93: Approved AFC for Nogli HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	9.86	9.86	9.86	9.86	9.86
Total Auxiliary	MU	0.10	0.10	0.10	0.10	0.10
Net generation	MU	9.76	9.76	9.76	9.76	9.76
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>9.76</b>	<b>9.76</b>	<b>9.76</b>	<b>9.76</b>	<b>9.76</b>
<b>Annual Fixed Charge</b>						
O&M Expenses	Rs. Cr.	3.42	3.64	3.87	4.11	4.37
a) R&M Expenses	Rs. Cr.	1.11	1.20	1.30	1.40	1.51
b) Employee Expenses	Rs. Cr.	2.18	2.30	2.42	2.55	2.69
c) Terminal Expenses	Rs. Cr.	0.10	0.10	0.11	0.12	0.13
d) A&G Expenses	Rs. Cr.	0.03	0.03	0.04	0.04	0.04
Depreciation	Rs. Cr.	0.00	0.00	0.00	0.00	0.00



Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.15	0.16	0.17	0.18	0.19
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>3.58</b>	<b>3.80</b>	<b>4.04</b>	<b>4.29</b>	<b>4.57</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	1.83	1.95	2.07	2.20	2.34
Capacity Charges	Rs. Cr.	1.79	1.90	2.02	2.15	2.28

Note: The Auxiliary Consumption % of Nogli HEP considered is 1.01% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.14. Annual Fixed Charges for Rongtong HEP

4.14.1. Rong Tong HEP is a 2 MW (4 x 0.50 MW) project commissioned in the year 1986-87.

4.14.2. The Petitioner has proposed additional capitalization for the plant in its current Petition but has not submitted relevant details and supporting documents as stipulated in applicable HPERC regulations. As discussed in Section 4.2 of this Order, the Commission has not allowed any additional capitalization during the 5th Control Period for the plant. Further the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.14.3. The details of the approved Annual Fixed Charges for the Rongtong HEP for the Fifth Control Period are provided in the table below:

**Table 94: Approved AFC for Rongtong HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	7.64	7.64	7.64	7.64	7.64
Total Auxiliary	MU	0.08	0.08	0.08	0.08	0.08
Net generation	MU	7.56	7.56	7.56	7.56	7.56
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>7.56</b>	<b>7.56</b>	<b>7.56</b>	<b>7.56</b>	<b>7.56</b>
<b>Annual Fixed Charges</b>						
O&M Expenses	Rs. Cr.	0.95	1.00	1.07	1.13	1.20
a) R&M Expenses	Rs. Cr.	0.18	0.19	0.21	0.22	0.24
b) Employee Expenses	Rs. Cr.	0.69	0.73	0.77	0.81	0.85
c) Terminal Expenses	Rs. Cr.	0.08	0.08	0.09	0.10	0.10
d) A&G Expenses	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Cr.	0.31	0.31	0.31	0.00	0.00
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.05	0.05	0.05	0.05	0.05
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>1.31</b>	<b>1.37</b>	<b>1.43</b>	<b>1.18</b>	<b>1.25</b>

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	0.87	0.90	0.94	0.78	0.83
Capacity Charges	Rs. Cr.	0.65	0.68	0.71	0.59	0.63

Note: The Auxiliary Consumption % of Rongtong HEP considered is 1.05% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.15. Annual Fixed Charges for Rukti HEP

4.15.1. Rukti HEP is a 1.50 MW (3 x 0.50 MW) project commissioned in the year 1979 and 1980. It is a non-peaking, run of the river project with surface power station and static excitation.

4.15.2. The Petitioner has proposed additional capitalization for the plant in its current Petition but has not submitted relevant details and supporting documents as stipulated in applicable HPERC Regulations. As discussed in Section 4.2 of this Order, the Commission has not allowed any additional capitalization during the 5th Control Period for the plant. Further the ARR cost items for the plant are calculated in accordance with methodology discussed under Section 4.2 (under headings as Gross Fixed Assets, Operation and Maintenance Expenses, Depreciation, Interest on loans, Interest on Working Capital and Return on Equity) of this Order.

4.15.3. The details of the approved Annual Fixed Charges for the Rukti HEP for the Fifth Control Period are provided in the table below:

**Table 95: Approved AFC for Rukti HEP**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (Design Energy)	MU	6.54	6.54	6.54	6.54	6.54
Total Auxiliary	MU	0.07	0.07	0.07	0.07	0.07
Net generation	MU	6.47	6.47	6.47	6.47	6.47
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
<b>Energy available for Sale</b>	<b>MU</b>	<b>6.47</b>	<b>6.47</b>	<b>6.47</b>	<b>6.47</b>	<b>6.47</b>
<b>Annual Fixed Charge</b>						
O&M Expenses	Rs. Cr.	0.78	0.83	0.88	0.94	1.00
a) R&M Expenses	Rs. Cr.	0.28	0.31	0.33	0.36	0.39
b) Employee Expenses	Rs. Cr.	0.43	0.46	0.48	0.51	0.54
c) Terminal Expenses	Rs. Cr.	0.06	0.06	0.07	0.07	0.08
d) A&G Expenses	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.03	0.04	0.04	0.04	0.04
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>0.81</b>	<b>0.87</b>	<b>0.92</b>	<b>0.98</b>	<b>1.05</b>
<b>Tariff</b>						
Energy Charge Rate	Rs/kWh	0.63	0.67	0.71	0.76	0.81
Capacity Charges	Rs. Cr.	0.41	0.43	0.46	0.49	0.52

Note: The Auxiliary Consumption % of Rukti HEP considered is 1.07% of Gross Generation as approved in Mid Term Performance Review Order dated February 26, 2024.

#### 4.16. Total ARR/ AFC for 5<sup>th</sup> Control Period

4.16.1. The table below summarizes the Annual Fixed Charge, combined for 13 HEPs of HPSEBL, as approved in this order.

**Table 96: Total AFC for 13 HEPs of HPSEBL, for 5th Control Period**

Particulars	Units	FY 25	FY 26	FY 27	FY 28	FY 29
<b>Generation</b>						
Gross Generation (DE)	MU	1,936.91	1,936.91	1,936.91	1,936.91	1,936.91
Total Auxiliary	MU	19.49	19.49	19.49	19.49	19.49
Net generation	MU	1,917.42	1,917.42	1,917.42	1,917.42	1,917.42
Less: Free Power to GoHP	MU	81.33	81.33	81.33	81.33	81.33
<b>Energy available for Sale</b>	<b>MU</b>	<b>1,836.09</b>	<b>1,836.09</b>	<b>1,836.09</b>	<b>1,836.09</b>	<b>1,836.09</b>
<b>Annual Fixed Charge</b>						
O&M Expenses	Rs. Cr.	141.04	150.87	160.23	170.70	181.37
<i>a) R&amp;M Expenses</i>	<i>Rs. Cr.</i>	<i>32.03</i>	<i>35.64</i>	<i>38.43</i>	<i>41.94</i>	<i>45.26</i>
<i>b) Employee Expenses</i>	<i>Rs. Cr.</i>	<i>90.01</i>	<i>94.87</i>	<i>99.99</i>	<i>105.40</i>	<i>111.09</i>
<i>c) Terminal Expenses</i>	<i>Rs. Cr.</i>	<i>16.38</i>	<i>17.53</i>	<i>18.75</i>	<i>20.07</i>	<i>21.47</i>
<i>d) A&amp;G Expenses</i>	<i>Rs. Cr.</i>	<i>2.63</i>	<i>2.84</i>	<i>3.06</i>	<i>3.30</i>	<i>3.56</i>
Depreciation	Rs. Cr.	40.64	40.45	41.87	41.24	41.22
Interest Charges	Rs. Cr.	9.41	8.66	3.57	1.87	0.89
Return on Equity	Rs. Cr.	30.21	30.45	30.45	30.45	30.45
Interest on Working Capital	Rs. Cr.	7.47	7.90	8.25	8.68	9.14
<b>Total AFC</b>	<b>Rs. Cr.</b>	<b>228.77</b>	<b>238.33</b>	<b>244.37</b>	<b>252.94</b>	<b>263.07</b>

#### 4.17. Tariff for Uhl-III HEP

4.17.1. The Petitioner has submitted that it is in the process of compiling the accounts for the Plant and shall submit a detailed Petition for Capital Cost and determination of AFC and Tariff at the earliest.

4.17.2. Further, the Petitioner has requested the Commission to allow the interim tariff of Rs. 9.50/kWh till the determination of project specific tariff to avoid carrying cost and additional impact during the 5<sup>th</sup> Control period.

4.17.3. The Commission in its Distribution Tariff Order dated 15 March, 2024 has considered a provisional tariff of Rs. 5.00 per unit for the 5th Control Period. Therefore, the Commission has continued with this provisional tariff of Rs. 5.00 per unit which would be reviewed at the time of filing of the Petition for determination of project specific tariff for Uhl-III, based on the actual audited accounts.

#### 4.18. Tariff for HIMURJA HEPs

4.18.1. The Petitioner has submitted that 5 No. of projects have been transferred to the HPSEBL by the HIMURJA and are being operated by the Generation and Distribution wing of the HPSEBL. The details of the projects with the details of PPA signed with HIMURJA for these projects are as under:

**Table 97: Details of 5 HEPs transferred from HIMURJA**

Sr. No.	Name of Project	Installed Capacity (KW)	Year of Commissioning	Date of handover	PPA date with HIMURJA	PPA Rate (Rs./Unit)	O&M by
1.	Sach	2x450	2010	31-10-2018	21-10-2010	2.95	Operation Wing
2.	Sural	2x50	2007	31-10-2018	04-10-2007	2.95	Operation Wing
3.	Purthi	2x50	2004	31-10-2018	04-10-2007	2.95	Operation Wing
4.	Lingti	2x200	2009	06-02-2018	02-09-2005	2.5	Generation Wing
5.	Billing	2x200	2013	17-03-2018	13-08-2014	APPC Rate	Generation Wing

4.18.2. The Petitioner has prayed the Commission to approve the tariff for these projects as per the PPA rate or as may be considered appropriate by the Commission.

4.18.3. In response to the query, the Petitioner has submitted that in a meeting held among HPERC, HPSEBL, Directorate of Energy, HIMURJA and Electricity Ombudsman on 17.12.2014, it was decided that since HPSEBL has its own Generation Wing looking after the operation and maintenance of Hydro-electric projects, these projects can be managed more efficiently by HPSEBL. In view of aforesaid decision as conveyed by the Commission, these projects (Sach, Sural, Purthi, Lingti, and Billing) of HIMURJA were taken over by HPSEBL. Copy of Memorandum of Understanding (MoU) was also signed between HPSEBL and HIMURJA on 17.03.2024. The copies of PPAs were also analysed by the Commission.

4.18.4. The Commission observes that the tariff of these plants was already in place when the plants were being operated by HIMURJA under the respective tariff category for such generating stations. Therefore, the Commission allows the Petitioner to continue with the similar tariff.

#### 4.19. Normative Plant Availability Factor

4.19.1. In accordance with Regulation 18 of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024, the operational norms for hydro station shall include Normative Annual Plant Availability Factor (NAPAF) as follows:

##### **"18. Operational Norms.**

*18.1 The norms of operation for hydro generating stations shall be as under-*

*(a) Normative Annual Plant Availability Factor (NAPAF) for hydro generating stations shall be determined by the Commission as per the following criteria:-*

*(i) storage and pondage type plants with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of up to 8%, and where plant availability is not affected by silt : 90%*

*(ii) In case of storage and pondage type plants with head variation between full reservoir level and minimum draw down level is more than 8% and when plant availability is not affected by silt, the month-wise peaking capability as provided*

by the project authorities in the DPR (approved by Central Electricity Authority (CEA) or the State Government) shall form basis of fixation of NAPAF;

(iii) Pondage type plants where plant availability is significantly affected by silt: 85%; and

(iv) Run-of-river generating stations: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant.

(2) A further allowance may be made by the Commission in NAPAF determination under special circumstances, e.g. abnormal silt problem or other operating conditions, and known plant limitations.

(3) In case of a new hydro electric project the developer shall have the option of approaching the Commission in advance for fixation of NAPAF based on the principles enumerated in clause (a) of Sub-regulation 18.1 of this Regulation.

(4) The Commission may lay down relaxed operational norms including the norms of NAPAF and auxiliary consumption contained in these Regulations for a generating station, and these relaxed norms shall be applicable for determination of tariff for such generating station during the control period.

(5) The norms of operation under these Regulations shall be ceiling norms and shall not preclude generating companies and the beneficiaries from agreeing to improve norms of the operation. If the Power Purchase Agreement (PPA) stipulates better norms of operation then such norms provided in the PPA shall be considered.

(6) In case of renovation and modernisation, de-rating or re-rating of the generating station, norms of operation shall be reviewed and modified accordingly.”

4.19.2. The Petitioner has not submitted the True-up petition for 4<sup>th</sup> Control Period and also, the actual plant availability for the 4<sup>th</sup> Control Period certified by HPSLDC has not been provided by the Petitioner. Therefore, the Commission has continued the NAPAF as approved for the 4<sup>th</sup> Control Period in MYT Order dated 11.11.2021.

4.19.3. The table below summarizes the approved NAPAF for fifth Control Period for various generation plants of the Petitioner.

**Table 98: Approved NAPAF for 5<sup>th</sup> MYT Control Period**

Plant	Approved NAPAF for 4 <sup>th</sup> Control Period as per MYT Tariff Order dated 11.11.2021	Approved NAPAF for 5 <sup>th</sup> Control Period
Andhra	85%	85%
Baner	80%	80%
Bassi	80%	80%
Bhaba	85%	85%
Binwa	90%	90%
Chaba	85%	85%
Chamba	65%	65%

<b>Plant</b>	<b>Approved NAPAF for 4<sup>th</sup> Control Period as per MYT Tariff Order dated 11.11.2021</b>	<b>Approved NAPAF for 5<sup>th</sup> Control Period</b>
Gaj	90%	90%
Giri	90%	90%
Larji	85%	85%
Nogli	85%	85%
Rukti	50%	50%
Rong Tong	85%	85%

4.19.4. The above approved NAPAF shall be considered for recovery of fixed charges as per Regulation 42 (Computation of Capacity Charge and Energy Charge) of HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024. The Petitioner is directed to provide details of plant availability factor duly certified by HPSLDC along with truing-up for the fourth Control Period.

## 5. DIRECTIVES

- 5.1.1. The Commission has issued directions and advisories to HPSEBL in the MYT and MTR Order for the fourth Control Period against which the Petitioner has submitted a directive compliance report as a part of the tariff Petition. The following table summarizes the compliance status of old directives and new directions, which the Petitioner is mandated to submit timely compliance status:

S. No.	Directive	Petitioner's Reply	Commission's View
5.1.1	<p><b>Plant-wise Audited Accounts</b></p> <p>The Petitioner is directed to maintain proper books of accounts for each plant of HPSEBL and get it audited by statutory auditor along with Audited accounts of HPSEBL.</p> <p>Further, the Petitioner is directed to submit audited plant wise accounts for truing-up of fourth Control Period. Otherwise, the Commission shall be constrained to take strict action as per the provisions of the Electricity Act, 2003 including capping of AFC to some benchmark norms as decided by the Commission.</p>	The directive is being implemented.	<p>It is observed that the directive has been implemented to some extent. The plant wise account for FY 2018-19 to FY 2022-23 have been prepared and duly signed by the Chartered Accountant for the respective years. But the question with regard to certification of plant-wise account from Statutory Auditor is still a concern.</p> <p>In view of the above, the Petitioner is directed to certify the books of accounts for each plant from the Statutory Auditor for truing-up of 4<sup>th</sup> Control Period. Otherwise, the Commission shall be constrained to take strict action as per the provisions of the Regulations and Electricity Act, 2003 including capping of AFC to some benchmark norms.</p>

S. No.	Directive	Petitioner's Reply	Commission's View
5.1.2	<p><b>Additional Capitalization of Bassi Power Plant</b></p> <p>With respect to approved amount of Rs. 109.98 Cr. towards RMU &amp; LE for Bassi power plant during the 2nd Control Period, the submission of the Petitioner is incomplete, and the actual amount is not supported by auditor certificate. The Commission directs the Petitioner to submit a separate Petition for approval of additional capitalization towards RMU &amp; LE scheme undertaken during second Control Period with all supporting data (including DPR, details of works, year wise expenditure, auditor certificate, Board approval, etc.).</p>	<p>Auditor for verification of expenditure against RMU&amp;LE scheme for Bassi PH has been appointed. Audit work is in progress and work shall be completed by 15.06.2024 and thereafter, the separate Petition of RMU&amp;LE for Bassi Power House shall be filled.</p>	<p>The reply furnished by the Petitioner is quite vague. The Petitioner is required to submit the Petition for RMU &amp; LE of Bassi along with the true up Petition for the fourth control period. In absence of the same, the Commission may initiate Suo-moto action in the matter.</p>
5.1.3	<p><b>Additional Capitalization of Bhaba Power Plant</b></p> <p>The Commission has currently considered provisional amount of additional capitalization for Bhabha power plant during the third Control Period. The Commission directs the Petitioner to submit a separate Petition for approval of additional capitalization towards Bhabha additional capitalization undertaken during third Control Period with all supporting data (including DPR, details of works, year-wise expenditure, auditor certificate, Board approval, etc.).</p>	<p>The scheme for Rehabilitation of Bhaba HEP is under execution and the Petition for the additional capitalization of Bhaba PH shall be submitted within the time frame given by HPERC i.e., within 3 months of completion of all additional capitalization works.</p>	<p>The Petitioner is again directed to submit the Petition for additional capitalisation of Bhaba within 3 months of completion of all Additional Capitalisation works, as approved by the Commission, related to the Bhabha hydro power plant.</p>



S. No.	Directive	Petitioner's Reply	Commission's View
5.1.4	<p><b>High O&amp;M expenditure</b></p> <p>It is observed that the O&amp;M expenditure for the generating stations are very high and primarily comprise of employee expense. The Commission directs the Petitioner to rationalise employee staffing at the stations and reduce the O&amp;M expenses by developing O&amp;M/staffing norms for the stations and submit a proposal to the Commission for approval. In most of the small hydroelectric projects under operation by the Petitioner and in some of the medium size plants, O&amp;M expenditure is much more than the revenue receipt for the plants. The Petitioner should take immediate steps to bring its routine O&amp;M expenditure within the revenue accrued from each power plant. The Commission will not entertain O&amp;M expenditure on any power plant which is more than the revenue from FY 2022-23 onwards.</p>	<p>This directive is being implemented. As during the 3rd Control Period (FY-15 to FY-19) approved O&amp;M cost is more than actual O&amp;M expenses by ₹101.03 Cr</p>	<p>The Petitioner is again directed to undertake appropriate steps for reducing the O&amp;M expenses for its generating stations and submit the same along with subsequent petition failing which the Commission would be bound to disallow the higher O&amp;M expenses after undertaking benchmarking and prudence check.</p>
5.1.5	<p><b>Submission of Plant Availability Factor (PAF)</b></p> <p>The Petitioner is directed to provide details of plant availability factor duly certified by SLDC along with truing-up for the fourth Control Period.</p>	<p>Matter has been taken up with HPSLDC vide this office letter No. HPSEBL/CEG/ DB-17/2024-25-964-68 dated 09.05.2024 for certifying the Plant Availability Factor (PAF) and actual generation for the Power Houses under</p>	<p>It is observed that even after several directives, the Petitioner has failed to submit the SLDC certificate with regard to the Plant Availability Factor of various stations. The directive therefore, is being continued and in case the Petitioner is unable</p>

S. No.	Directive	Petitioner's Reply	Commission's View
		<p>Generation Wing for last 5 years (4<sup>th</sup> Control Period). However, the same is still awaited and shall be furnished as the same is received from HPSLDC.</p>	<p>to provide SLDC certificate with regard to the stations for 4<sup>th</sup> Control Period, the Commission shall be constrained to take appropriate action as per the provisions of the Regulations and Electricity Act, 2003.</p> <p>The Petitioner is directed to submit the same along with the True-up of 4<sup>th</sup> Control Period.</p>
5.1.6	<p><b>Submission of Mid-term Review along with truing-up for third Control Period</b></p> <p>Considering that the third Control Period is over and accounts for the period is available, the Petitioner is directed to submit the Petition for Mid-term Review along with truing-up for third Control Period by 31 December 2021. This would ensure timely adjustment of surplus / gap in the tariff for subsequent period.</p>	<p>MTR order for 4<sup>th</sup> Control Period has been issued by HPERC on 26.02.2024.</p>	<p>Compliance noted.</p>
5.1.7	<p><b>Prior Approval for deviation in Additional Capitalization</b></p> <p>The Petitioner is directed to take prior approval from the Commission in case the actual additional capitalization is higher than 5% of the approved additional capitalization with respect to</p>	<p>Prior Approval for deviation in Additional Capitalization shall be taken as and when required</p>	<p>The directive is being continued.</p>

S. No.	Directive	Petitioner's Reply	Commission's View
	its hydro plants as part of the in-principle approval.		
5.1.8	<p><b>Data from real time water discharge management systems</b></p> <p>It is observed that the Petitioner has installed real time water discharge management systems at several of its plants. The Petitioner is directed to periodically upload plant wise data from these real time water discharge management systems on its website. The Petitioner is also directed to work out efficiency of each generating machine in its power houses for each quarter, considering the actual discharge and available head. This information for each machine in its power houses be submitted to the Commission at the end of each quarter.</p>	This directive is being implemented	The Petitioner is required to implement the directive and provide the details at the earliest to the Commission. Hence, the directive is being continued.

**New Directives:**

**Submission of True-up for 4<sup>th</sup> Control Period**

- 5.1.2. As per the provisions of the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024, the Petitioner should have submitted the true-up for 4<sup>th</sup> Control Period (from FY 2019-20 to FY 2022-23) along with this current Petition. Now, considering that the 4<sup>th</sup> Control Period is over and accounts for the period is available, the Petitioner is directed to submit the Petition for true-up for 4<sup>th</sup> Control Period within 3 months of publication of this Tariff Order. This would ensure timely adjustment of surplus / gap in the tariff for subsequent period.

**Submission of Plant Availability Factor**

5.1.3. The Petitioner is directed to provide details of plant availability factor for each plant duly certified by HPSLDC along with truing-up for the 4<sup>th</sup> Control Period.

**In-principle approval of Additional Capital Expenditure**

5.1.4. In absence of adequate justification and DPRs for proposed additional capital expenditure, the Commission has disallowed the same for some of the generating stations during 5<sup>th</sup> Control Period. However, the Petitioner is directed to submit detailed DPR along with supporting documents and Board approval for in-principle approval of the proposed additional capital expenditure as per the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2024. In absence of the same, the Commission shall be constrained to disallow the additional capital expenditure towards the respective plant.

-Sd-

**(SHASHI KANT JOSHI)**

**Member**

-Sd-

**(YASHWANT SINGH CHOGAL)**

**Member, Law**

-Sd-

**(DEVENDRA KUMAR SHARMA)**

**Chairman**

**Shimla**

**Dated: 19<sup>th</sup> March, 2025**