

**Mid Term Performance Review Order
For 4th MYT Control Period (FY20-FY24)
&
True-up of 3rd MYT Control Period (FY 2014-
15 to FY 2018-19)
for
Himachal Pradesh State Electricity Board
Limited (HPSEBL)**



**Himachal Pradesh Electricity Regulatory
Commission
February 26, 2024**

Before the Himachal Pradesh Electricity Regulatory Commission**At Shimla****Petition No. 40/2023**

CORAM

Sh. DEVENDRA KUMAR SHARMA**Sh. YASHWANT
SINGH CHOGAL****Sh. SHASHI KANT JOSHI****In the matter of:**

Petition for True-up for third MYT Control Period (FY 2014-15 to FY 2018-19) & Mid-Term Performance Review for Fourth MYT Control Period (FY 2019-20 to FY 2023-24) 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 a Petition with the Himachal Pradesh Electricity Regulatory Commission (hereinafter referred to as 'the Commission' or the 'HPERC') for approval of its Aggregate Fixed Charges (AFC) and determination of Generation Tariff for its own generating stations for the fourth MYT Control Period (FY2019-20 to FY2023-24) and True-up for third MYT Control Period (FY 2014-15 to FY 2018-19) for Generation Business under Sections 62, 64 and 86 of the Electricity Act, 2003 (hereinafter referred to as 'the Act'), read with the HPERC (Terms and Conditions for Determination of Hydro Generation Supply Tariff) Regulations, 2011, HPERC (Terms and Conditions for Determination of Hydro Generation Supply Tariff) (first amendment) Regulations, 2011 and HPERC (Terms and Conditions for Determination of Hydro Generation Supply Tariff) (second amendment) Regulations, 2013.

The Commission scheduled a public hearing on 25.09.2023 in the Commission at Shimla, had interactions with the officers of HPSEBL and considered the documents available on record in the following Tariff Order.

The Commission in this order has determined the AFC and fixed charge of each of the generating station owned by the HPSEBL (except for which generic levelised generation tariff was already provided in the Commission's order Dated 15th January, 2014) for each year of the fourth Control Period (FY 2019-20 to FY 2023-24), under the Multi Year Tariff

(MYT) regime and approved True-up for third MYT Control Period (FY 2014-15 to FY 2018-19).

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 February 26, 2024 and would remain applicable during the Control period FY 2019-20 to FY 2023-24.

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 Consumers.

-Sd-

(Shashi Kant Joshi)

Member

-Sd-

(Yashwant Singh Chogal)

Member (Law)

-Sd-

(Devendra Kumar Sharma)

Chairman

Shimla

Dated: February 26, 2024

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ABBREVIATIONS

A&G expense	Administration & General expense
AFC	Annual Fixed Charges
Amp	Ampere
ARR	Aggregate Revenue Requirement
BHEL	Bharat Heavy Electrical Limited
BVPCL	Beas Valley Power Corporation Limited
CE	Chief Engineer
DE	Designed Energy
DG	Diesel Generator
DPR	Detailed Project Report
ECR	Energy Charge Rate
FY	Financial Year
FY 15	FY 2014-15
FY 16	FY 2015-16
FY 17	FY 2016-17
FY 18	FY 2017-18
FY 19	FY 2018-19
FY 20	FY 2019-20
FY 21	FY 2020-21
FY 22	FY 2021-22
FY 23	FY 2022-23
FY 24	FY 2023-24
GFA	Gross Fixed Asset
GoHP	Government of Himachal Pradesh
HEP	Hydro Electric plants
HP	Horse Power
HPERC	Himachal Pradesh Electricity Regulatory Commission
HPSEBL	Himachal Pradesh State Electricity Board
KVA	Kilo Volt Ampere
KW	Kilo Watt
LE	Life Extension
LT	Low Tension
MCLR	Marginal Cost of the Fund-Based Lending Rate
MCW	Misc. Capital Work
MPR	Mid-Term Performance Review
MU	Million Units
MVA	Mega Volt Ampere
MW	Mega Watt
MYT	Multi Year Tariff
O&M	Operation and maintenance
R&M	Repair and Maintenance
R.E	Resident Engineer
RMU	Renovation and Modernisation expenditure
RoE	Return on Equity
S&I	Survey and Investigation
S.E	Superintendent Engineer
SBI	State Bank of India
SLDC	State Load Dispatch Centre
TVS	Technical Validation Sessions
VCB	Vacuum Circuit Board
WC	Working Capital

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 6th January, 2001. After the enactment of the Electricity Act, 2003 on 26th May, 2003, the HPERC has been functioning as a 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 1st 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 10th 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). 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 30th July, 2011, HPERC (Terms and Conditions for

Determination of Hydro Generation Tariff) (Second Amendment) Regulations, 2013 on 1st November, 2013 and HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) (Third Amendment) Regulations, 2018 on 22nd November 2018.

- 1.4.5. The Commission issued the Multi-Year Tariff (MYT) Order for HPSEBL- Generation function for the 1st Control period (FY 2008-09 to FY 2010-11) on 30.05.2008, for 2nd Control Period (FY 2011-12 to FY 2013-14) on 19.07.2011, for 3rd Control Period (FY 2014-15 to FY 2018-19) on 10.06.2014 and for 4th Control Period (FY 2019-20 to FY 2023-24) on 11.11.2021.

1.5. Filing of Mid-Term Performance Review Petition for 4th MYT Control Period and True-Up of 3rd MYT Control Period

- 1.5.1. HPSEBL has filed Petition for hydro generation plants owned and operated by it, for approval of the Annual Fixed Charges (AFC) and determination of revised Annual Fixed Charges for FY 2022-23 to FY 2023-24, and True-up for the Third Control Period (FY 2019-20 to FY 2023-24).
- 1.5.2. The Petitioner filed a Petition vide filling No. 197/2022 on 05.11.2022.
- 1.5.3. HPSEBL has 22 hydro generation plants. Out of these 21 were operational during 2nd Control Period (FY 2011-12 to FY 2013-14). Subsequently, Ghanvi-II (2 x 5 MW) was commissioned in the year 2014. Further, the Commission has approved the levelized tariff for 10 MW Ghanvi II Small Hydro Electric Project vide order dated 28th September, 2022. While Uhl-III HEP is under construction and is yet to be commissioned.
- 1.5.4. Further, for 8 small hydro plants, levelized tariff has already been fixed by the Commission as per the order dated 15th January, 2014 in Petition No. 54/2013/2013-14/2967-84 at Rs 2.25/unit. Accordingly, the Petitioner has filed for tariff determination of remaining 13 hydro generating plants in this Petition.
- 1.5.5. Accordingly, out of the 14 operational plants during the 4th Control Period (after removing 8 small hydro plants for which levelized tariff has already been fixed by the Commission), HPSEBL has now submitted Petition for tariff determination of 13 hydro generation plants for 4th Control Period in its Petition.

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 The Commission asked the Petitioner to remove various discrepancies in the Petition and file additional information/clarification on the queries raised and subsequently HPSEBL filed its reply, as follows:

Table 1: Date of queries by Commission and responses by Petitioner

Sl.	Date of queries raised by the Commission	Date of response by Petitioner
1.	HPERC-F(1)-45/2022-2423 dated 12.12.2022	29.12.2022 & 06.09.2023
2.	HPERC-F(1)-45/2022-484-85 dated 27.05.2023	04.07.2023 & 27.07.2023

- 1.6.3 The staff of the Commission conducted Technical Validation Sessions (TVS) in its office on 21.06.2023 during which the discrepancies and additional information requirements were highlighted to the Petitioner.

1.7. Public Hearings

- 1.6.4 The Commission issued Interim Order dated 19.07.2023 which, 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: Newspapers in which salient features published

Sl.	Name of News Paper	Date of Publication
1.	Indian Express	24.07.2023
2.	Divya Himachal	24.07.2023
3.	The Tribune	25.07.2023
4.	Amar Ujala	25.07.2023

The Commission published a public 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 subsequent to the initial publication of initial disclosure by the HPSEBL. The public notice inviting objections/ suggestions was published in the following newspapers:-

Table 3: Newspaper in which Notice inviting objections published

Sl.	Name of News Paper	Date of Publication
1.	The Tribune	03.08.2023
2.	Dainik Bhaskar	03.08.2023

- 1.6.5 The last date for receipt of suggestions/ objections from stakeholders was given as 03.09.2023 by the Commission. The Petitioner was required to file the response to suggestions/ objections received by 08.09.2023. Last date for filing rejoinder on Petitioner's response was kept as 15.09.2023.
- 1.6.6 The Commission issued a public notice informing the public about the scheduled date of public hearing as 20th September, 2023 and its subsequent postponement to 25th September, 2023, due to administrative reasons. All the stakeholders were also informed about the date, time and venue for presenting their case in the public hearing.
- 1.6.7 The public hearing in the Petition has been conducted in the Commission on 25th September, 2023.
- 1.6.8 The Commission did not receive any comments/ suggestions from the stakeholders by the due date.

2. SUMMARY OF THE TRUE-UP PETITION FOR THE 3RD CONTROL PERIOD

2.1. Background

- 2.1.1. The Commission vide its Order dated June 10, 2014 had determined the Aggregate Revenue Requirement and Annual fixed Charges of Generating Stations owned and operated by HPSEBL for the 3rd MYT Control Period (FY 2014-15 to FY 2018-19) based on 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 the HPERC Generation Regulations, 2011 or Hydro Generation Tariff Regulations, 2011). The Commission vide its Order dated November 11, 2021, approved the business plan and determined the plant wise ARR/ AFC for the fourth control period (FY 19-20 to FY 23-24) for 13 hydro generation plants.
- 2.1.2. The Commission had undertaken the exercise despite limited availability of data to encourage the Utility to treat each of its generating plant as a profit center and revenue generation source.
- 2.1.3. The Commission, for determination of Annual Fixed charges for the stations owned and operated by the Petitioner, had followed the methodology adopted in the tariff order dated May 30, 2008 for the first Control Period, barring the determination of AFC for Larji HEP, which was separately determined in the Order dated July 7, 2011. The ARR/AFC so determined for the projects by Commission was combined to arrive at the ARR/ AFC for the Generation business of the HPSEBL.
- 2.1.4. HPSEBL has 22 hydro generation plants. Out of these 21 were operational during 2nd Control Period (FY 2011-12 to FY 2013-14). Whereas for the remaining hydro generating plant namely Ghanvi-2, the Commission had determined the capital cost and levelized tariff vide tariff Order dated September 28, 2022. The details of all the hydro plants operated by the Petitioner during the 3rd Control Period has been provided as follows:

Table 4: Details of HPSEBL Hydro Electric Stations

S. No.	Hydro Electric Plant	Date of Commissioning	Units	Installed Capacity (MW)	Design Energy (MU)
1	Andhra	1987	3 x 5.65 MW	16.95	87.30
2	Baner	1996	3 x 4.00 MW	12.00	60.67
3	Bassi	1970, 71, 81	4 x 16.50 MW	66.00	346.83
4	Bhaba	1989	3 x 40.00 MW	120.00	464.70
5	Binwa	1984	2 x 3.00 MW	6.00	29.25
6	Chaba	1913-14	2 x 0.5 + 3 x 0.25	1.75	7.67
7	Chamba	1938, 57, 85	3 x 0.15 MW	0.45	5.00
8	Gaj	1996	3 x 3.50 MW	10.50	38.31
9	Ghanvi	2000	2 x 11.25 MW	22.50	93.34

S. No.	Hydro Electric Plant	Date of Commissioning	Units	Installed Capacity (MW)	Design Energy (MU)
10	Giri	1978	2 x 30.00 MW	60.00	289.55
11	Gumma	2000	2 x 1.50 MW	3.00	18.11
12	Holi	2004	2 x 1.50 MW	3.00	17.52
13	Killar	1995	3 x 0.10 MW	0.30	1.16
14	Khauli	2006	2 x 6.00 MW	12.00	49.95
15	Larji	2006	3 x 42.00 MW	126.00	586.82
16	Nogli	1963, 69, 75	2 x 0.25 + 4 x 0.50 MW	2.50	14.70
17	Rong Tong	1986	4 x 0.50 MW	2.00	7.64
18	Rukti	1979, 80	3 x 0.50 MW	1.50	6.54
19	Sal – II	2000	2 x 1.00 MW	2.00	12.52
20	Thirot	1995	3 x 1.50 MW	4.50	23.44
21	Ghanvi-II	2014	2 x 5 MW	10.00	39.75
22	Bhaba Aug	2011	1x4.5 MW	4.50	23.44
23	Ligthi	-	1x0.4 MW	0.40	
24	Billing	-	1x0.4 MW	0.40	
	Total			488.25	2224.21

2.2. Allocation of corporate office and other common office O&M costs

2.2.1. The Petitioner has claimed the O&M expenses for true up of 3rd Control Period, as approved in the MYT Order dated June 10, 2014. Further, the Petitioner has submitted the actual O&M expense incurred in comparison to approved as follows:

Employee Expenses

Table 5: Approved Vs Actual Employee expenses submitted by Petitioner (Rs. Cr.)

Hydro Electric Plant	FY 15		FY 16		FY 17		FY 18		FY 19	
	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual
Andhra	5.77	5.01	6.33	5.19	6.95	6.64	7.63	6.94	8.37	6.61
Baner	4.02	4.22	4.41	4.30	4.84	5.01	5.32	5.15	5.84	5.19
Bassi	10.08	9.41	11.06	9.58	12.14	9.92	13.32	10.68	14.62	10.01
Bhaba	14.52	13.76	15.94	12.25	17.49	13.60	19.20	16.54	21.08	16.81
Binwa	3.45	5.37	3.79	4.11	4.15	4.22	4.56	4.55	5.01	4.32
Chaba	1.02	1.23	1.12	1.26	1.23	1.65	1.35	1.69	1.48	1.63
Chamba	0.20	0.06	0.22	0.00	0.24	0.00	0.26	0.00	0.29	0.00
Gaj	3.91	3.93	4.29	4.42	4.71	4.15	5.17	4.76	5.68	4.44
Giri	10.06	10.00	11.04	10.73	12.12	10.87	13.30	10.72	14.60	12.88
Larji	14.82	11.69	16.27	12.31	17.86	13.94	19.60	14.85	21.51	14.61
Nogli	1.45	1.42	1.59	1.42	1.75	1.52	1.92	1.94	2.11	2.11
Rongtong	1.24	0.61	1.36	0.69	1.49	0.72	1.64	0.85	1.80	0.67
Rukti	0.56	0.40	0.61	0.23	0.67	0.23	0.74	0.26	0.81	0.22
Total	67.45	61.69	74.02	62.37	81.25	68.26	89.19	74.38	97.90	75.18

Terminal Benefits**Table 6: Approved Vs Actual Terminal benefits submitted by Petitioner (Rs. Cr.)**

Hydro Electric Plant	FY 15		FY 16		FY 17		FY 18		FY 19	
	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual
Andhra	0.46	0.03	0.51	0.01	0.56	0.06	0.61	1.76	0.67	0.04
Baner	0.32	0.01	0.35	0.02	0.39	0	0.43	0.34	0.47	0.21
Bassi	0.81	0.09	0.88	0.1	0.97	0.85	1.07	1.1	1.17	0.14
Bhaba	1.16	0.02	1.28	0.03	1.4	1.92	1.54	1.32	1.69	0.04
Binwa	0.28	0.03	0.3	0.05	0.33	0.79	0.36	0.03	0.4	0.05
Chaba	0.08	0	0.09	0	0.1	0	0.11	0.13	0.12	0
Chamba	0.02	0	0.02	0	0.02	0	0.02	0	0.02	0
Gaj	0.31	0.02	0.34	0.02	0.38	0.49	0.41	0.22	0.45	0.13
Giri	0.80	0.22	0.88	0.33	0.97	0.00	1.06	1.27	1.17	0.35
Larji	1.19	0.02	1.3	0.04	1.43	4.54	1.57	0.15	1.72	0.04
Nogli	0.12	0.00	0.13	0.00	0.14	0.00	0.15	0.00	0.17	0.00
Rongtong	0.10	0.00	0.11	0.00	0.12	0.00	0.13	0.00	0.14	0.00
Rukti	0.04	0.00	0.05	0.00	0.05	0.02	0.06	0.00	0.06	0.00
Total	5.39	0.41	5.92	0.55	6.51	7.88	7.14	6.29	7.83	0.95

Repair and Maintenance (R&M) Expenses**Table 7: Approved Vs Actual R&M expenses submitted by Petitioner (Rs. Cr.)**

Hydro Electric Plant	FY 15		FY 16		FY 17		FY 18		FY 19	
	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual
Andhra	1.01	1.08	1.09	1.03	1.19	1.20	1.29	1.97	1.40	2.30
Baner	0.50	0.30	0.55	0.84	0.59	0.87	0.65	0.89	0.70	1.27
Bassi	0.62	0.75	0.67	0.80	0.73	0.94	0.80	0.99	0.86	1.05
Bhaba	6.86	4.33	5.02	1.46	5.45	4.38	5.92	4.75	6.43	4.51
Binwa	0.41	0.37	0.44	0.32	0.48	0.49	0.52	0.51	0.57	0.75
Chaba	0.29	0.34	0.31	0.33	0.34	0.23	0.37	0.27	0.40	0.37
Chamba	0.05	0.34	0.06	-0.15	0.06	0.15	0.07	0.34	0.07	0.46
Gaj	0.90	0.56	0.97	0.38	1.06	0.62	1.15	0.77	1.25	0.53
Giri	11.53	3.96	6.78	3.74	7.37	3.62	8.00	4.99	8.69	6.33
Larji	4.58	3.64	4.98	3.62	5.41	4.95	5.87	5.87	6.38	4.05
Nogli	0.81	0.90	0.88	0.50	0.95	0.64	1.03	0.78	1.12	0.86
Rongtong	0.16	0.06	0.18	0.09	0.19	0.03	0.21	0.01	0.22	0.01
Rukti	0.07	0.00	0.07	0.18	0.08	0.08	0.09	0.16	0.09	0.25
Total	27.33	15.92	21.50	12.97	23.36	17.56	25.38	21.45	27.54	21.53

Administration and General (A&G) Expenses**Table 8: Approved Vs Actual A&G expenses submitted by Petitioner (Rs. Cr.)**

Hydro Electric Plant	FY 15		FY 16		FY 17		FY 18		FY 19	
	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual
Andhra	0.07	0.10	0.08	0.07	0.08	0.08	0.09	0.07	0.10	0.07
Baner	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.06	0.08	0.06
Bassi	0.20	0.23	0.22	0.31	0.24	0.26	0.26	0.23	0.28	0.15
Bhaba	0.32	0.29	0.35	0.31	0.38	0.35	0.41	0.34	0.44	0.65
Binwa	0.05	0.07	0.05	0.06	0.06	0.06	0.06	0.05	0.07	0.05

Hydro Electric Plant	FY 15		FY 16		FY 17		FY 18		FY 19	
	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual	Approved	Actual
Chaba	0.01	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.02	0.00
Chamba	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gaj	0.06	0.10	0.06	0.11	0.07	0.09	0.08	0.11	0.08	0.12
Giri	0.15	0.26	0.17	0.27	0.18	0.38	0.20	0.17	0.21	0.21
Larji	0.25	0.63	0.27	0.40	0.29	0.50	0.32	0.46	0.34	0.41
Nogli	0.02	0.01	0.03	0.00	0.03	0.02	0.03	0.01	0.03	0.01
Rongtong	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rukti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.14	1.68	1.25	1.53	1.35	1.76	1.49	1.46	1.58	1.68

2.3. Carrying Cost Computation

2.3.1. To arrive at the applicable rate of interest for computation of Carrying Cost, the Petitioner has taken one-year weighted average of the SBI Base Rate (applicable for the True-Up period) plus 350 basis points, for each True-Up Year. The Year wise details have been given below:

Table 9: Carrying cost computation

True-Up Year	Weighted Average Base Rate (%)	Add: Basis Points (in %)	Rate of Interest for Carrying Cost (%)
FY 2014-15	10.00%	3.50%	13.50%
FY 2015-16	9.54%	3.50%	13.04%
FY 2016-17	9.29%	3.50%	12.79%
FY 2017-18	8.00%	3.00%	11.00%
FY 2018-19	8.39%	3.00%	11.39%

2.4. Capital Investment

In its true-up Petition, HPSEBL has submitted that additional capitalization was incurred in 3rd Control Period and the plant wise and year wise details of additional capitalization as submitted by the Petitioner are as follows:

Table 10: Details of Capitalisation in existing plants (Rs. Cr.)

Hydro Electric Plant	FY 15	FY 16	FY 17	FY 18	FY 19
Andhra	0.00	0.00	0.30	0.03	0.10
Baner	0.00	0.10	0.00	0.97	0.49
Bassi	3.00	0.41	0.23	6.66	10.03
Bhaba	8.35	0.54	64.97	26.33	24.83
Binwa	0.00	0.14	3.25	0.96	0.20
Chaba	0.01	0.00	0.44	0.00	0.00
Chamba	0.00	0.00	0.00	0.00	0.00
Gaj	0.00	0.00	0.00	0.53	0.69
Giri	0.27	2.43	0.01	0.00	0.00
Larji	0.00	0.72	1.22	0.06	1.38
Nogli	0.00	0.00	0.00	3.97	0.00
Rongtong	0.00	0.00	5.02	1.08	0.35
Rukti	0.00	0.00	7.44	1.47	0.00
Total	11.63	4.34	82.88	42.06	38.07

2.5. Design Energy, actual Generation and Net Salable Energy

2.5.1. The Petitioner has submitted that the design energy has been considered same as approved in MYT Order dated June 10, 2014. Further, the net saleable energy has been considered by the Petitioner after deducting the actual Auxiliary consumption from the actual gross generation during the respective True Up year. Further, the GoHP has 12% share in the generation of power from plants Gaj, Baner, Ghanvi, Khauli, Ghanvi II and Larji. The same has been reduced by the Petitioner from total generation to arrive at the net saleable energy from these plants to recover the AFC.

2.6. Capital Cost and Opening Gross Fixed Asset (GFA)

2.6.1. The Petitioner has considered the capital cost of projects as on 1st April, 2014 the same as approved in Tariff Order dated 19th July, 2011 and any additional capitalization as approved in true up of 2nd Control Period vide order dated 11th November, 2021. The plant wise opening capital cost considered as on 1st April, 2014 is submitted as follows:

Table 11: Opening GFA of HEPs submitted by Petitioner (Rs. Cr.)

Hydro Electric Plant	Opening GFA as on 1.4.2014
Andhra	57.61
Baner	55.67
Bassi	141.24
Bhaba	222.19
Binwa	17.44
Chaba	1.21
Chamba	0.5
Gaj	30.38
Giri	36.22
Larji	1096.39
Nogli	11.81
Rongtong	16.39
Rukti	1.59

2.7. Annual Fixed Charges (AFC)

2.7.1. The Petitioner has submitted the comparison of approved AFC charges vis-à-vis the actual expenses incurred for the individual generating plants for truing up of the 3rd Control Period. The various assumption made by the Petitioner for the True-Up of third Control Period are as follows:

- The Petitioner has submitted that the O&M expenses including terminal benefits have been considered for the years FY 2014-15 to FY 2018-19, as approved in Tariff Order dated 10.6.2014.
- The Petitioner has calculated the accumulated depreciation considering depreciation rate of 2.5% for each year post commercial operation date of the project up to a maximum of 90% of the original project cost of the asset. For project in operation for more than 12 years, the balance depreciation has been spread over the remaining useful life of the project. Further, the

Petitioner has claimed depreciation on additional capitalisation and any remaining depreciable value has been spread out during the useful life of the respective power house. The useful life of plant is 40 years, except in case of Bassi HEP and Giri HEP, where the useful life is extended as 60 years on account of Renovation and Modernization scheme. Further, the depreciation corresponding to deposit works, wherever applicable, has not been considered as per the HPERC Generation Regulations, 2011.

- c) The interest on loans has been computed by the Petitioner on normative basis as per Hydro Generation Tariff Regulations 2011. The rate of interest is calculated on the basis of actual loan portfolio at the beginning of each year applicable to the project.
- d) Further, in case of additional capitalisation considered for various generating stations, interest on loans has been claimed on actual debt component or 70% whichever is higher. The rate of interest is considered same as applicable to the project. In case of no specific loan portfolio is existing for the project, the Petitioner has considered the rate of interest of actual loan portfolio applicable to generation business towards the debt portion of Additional Capitalization. Further, the Petitioner has submitted the following rates of interests for computation of actual loan portfolio of generation business:

Table 12: Rate of Interest for actual loan of generation business submitted by Petitioner

True-Up Year	Rate of Interest for actual loan of generation business (%)
FY 2014-15	9.96%
FY 2015-16	9.92%
FY 2016-17	11.13%
FY 2017-18	9.82%
FY 2018-19	13.16%

- e) As specified in the principles of 2nd and 3rd amendment of Hydro Generation Tariff Regulations 2011, the actual interest on Working Capital incurred is considered for true up. Accordingly, the Petitioner has considered the following rates of interests to compute the Interest on Working Capital:

Table 13: Rate of Interest for Working Capital submitted by Petitioner

True-Up Year	Rate of Interest for Working Capital (%)
FY 2014-15	13.50%
FY 2015-16	13.04%
FY 2016-17	12.79%
FY 2017-18	12.43%
FY 2018-19	12.43%

- f) The ROE has been considered @ 15.50% on the equity base approved as per the Hydro Generation Tariff Regulations 2011, as amended from time to time. Further, the rate of return on equity has been computed by grossing up the base rate with the normal tax rate as per latest available audited accounts of the generating company.

2.8. Funding Pattern

- 2.8.1. The details of actual funding pattern have been specified for the respective power houses and details have been submitted in Form F5. However, in case of minor capital works, Board building works and works funded through own resource, the funding pattern have been considered as 70:30.
- 2.8.2. The Plant wise true-up of the AFC for the third control period submitted by the Petitioner vis-à-vis the approved has been provided in the following sections.

2.9. AFC for Andhra HEP

- 2.9.1. Andhra HEP is a 16.95 MW (3 x 5.65 MW) project commissioned in the year 1987.
- 2.9.2. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 57.61 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.
- 2.9.3. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue as submitted by the Petitioner are as follows:

Table 14: Andhra AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	87.3	87.3	87.3	87.3	87.3
B	Auxiliary Consumption	MU	0.87	0.87	0.87	0.87	0.87
C	Net Generation(A-B)	MU	86.43	86.43	86.43	86.43	86.43
D	Less: Free Power to GoHP	MU	0	0	0	0	0
E	Energy Available (C-D)	MU	86.43	86.43	86.43	86.43	86.43
F	Actual Generation	MU	71.78	61.85	54.77	65.53	58.95
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	7.31	8.01	8.78	9.62	10.54
i	R&M Expenses	Rs. Cr.	1.01	1.09	1.19	1.29	1.4
ii	Employees Expenses	Rs. Cr.	5.77	6.33	6.95	7.63	8.37
iii	Pension Contributions	Rs. Cr.	0.46	0.51	0.56	0.61	0.67
iv	A&G Expenses	Rs. Cr.	0.07	0.08	0.08	0.09	0.1
b	Depreciation	Rs. Cr.	1.1	1.1	1.12	1.13	1.14
c	Interest & Finance Charges	Rs. Cr.	0	0	0	0	0
d	Return on Equity	Rs. Cr.	0	0	0.01	0.02	0.02
e	Interest on Working Capital	Rs. Cr.	0.43	0.45	0.48	0.51	0.56
f	Total	Rs. Cr.	8.84	9.56	10.4	11.27	12.26
	AFC approved in MYT Order	Rs. Cr.	8.81	9.54	10.35	11.23	12.20
	Difference in AFC	Rs. Cr.	-0.03	-0.02	-0.05	-0.04	-0.06
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.51	0.55	0.6	0.65	0.71
h	Capacity Charges (=f/2)	Rs. Cr.	4.42	4.78	5.20	5.64	6.13
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	8.09	8.20	8.50	9.91	10.31
j	Cost allowed in distribution business	Rs. Cr.	7.24	8.21	8.48	9.91	10.30
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.85	0.01	-0.02	-	-0.01

- 2.9.4. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Andhra HEP.

2.10. AFC for Baner HEP

- 2.10.1. Baner HEP is a 12 MW (3 x 4 MW) project commissioned by the HPSEBL in the year 1996. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 55.67 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.
- 2.10.2. Further, the Commission had approved Return on Equity to HPSEBL for Rs. 15 Cr. invested in project by GoHP in Tariff Order dated 10.6.2014.
- 2.10.3. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 15: Baner AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	60.67	60.67	60.67	60.67	60.67
B	Auxiliary Consumption	MU	0.61	0.61	0.61	0.61	0.61
C	Net Generation(A-B)	MU	60.06	60.06	60.06	60.06	60.06
D	Less: Free Power to GoHP	MU	7.21	7.21	7.21	7.21	7.21
E	Energy Available (C-D)	MU	52.85	52.86	52.86	52.86	52.86
F	Actual Generation	MU	40.51	42.59	28.69	32.99	33.81
Annual Fixed Charges (AFC)							
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	4.90	5.37	5.89	6.48	7.09
i	R&M Expenses	Rs. Cr.	0.50	0.55	0.59	0.65	0.70
ii	Employees Expenses	Rs. Cr.	4.02	4.41	4.84	5.32	5.84
iii	Pension Contributions	Rs. Cr.	0.32	0.35	0.39	0.43	0.47
iv	A&G Expenses	Rs. Cr.	0.06	0.06	0.07	0.08	0.08
b	Depreciation	Rs. Cr.	1.19	1.21	1.21	1.43	1.66
c	Interest & Finance Charges	Rs. Cr.	-	-	-	-	-
d	Return on Equity	Rs. Cr.	2.33	2.33	2.33	2.36	2.37
e	Interest on Working Capital	Rs. Cr.	0.35	0.36	0.38	0.41	0.45
f	Total AFC claimed	Rs. Cr.	8.77	9.27	9.81	10.68	11.57
	AFC approved in MYT Order	Rs. Cr.	8.77	9.27	9.81	10.41	11.07
	Difference in AFC	Rs. Cr.	-	-	-	-0.27	-0.50
Tariff and Revenue (based on DE)							
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.83	0.88	0.93	1.01	1.09
h	Capacity Charges (=f/2)	Rs. Cr.	4.38	4.63	4.91	5.34	5.78
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	7.74	8.37	7.57	8.67	9.48
j	Cost allowed in distribution business	Rs. Cr.	5.87	8.37	7.57	8.45	9.08
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-1.87	-	-	-0.22	-0.40

- 2.10.4. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Baner HEP.

2.11.AFC for Bassi HEP

- 2.11.1. Bassi HEP is a 66 MW project commissioned by the Petitioner in the year 1970, 1971 and 1981. In the Tariff Order dated November 11, 2021, the Commission had approved an additional capitalization of Rs. 109.98 Cr towards RMU & LE in FY 2012-13. Accordingly, the approved capital cost of Rs.141.24 Cr. including RMU scheme expense of Rs. 109.98 Cr (100% funded by debt) has been considered. The Commission had also extended the useful life of the power house from 40 years to 60 years considering life extension of 20 years.

2.11.2. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 16: Bassi - AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S. No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	346.83	346.83	346.83	346.83	346.83
B	Auxiliary Consumption	MU	2.43	2.43	2.43	2.43	2.43
C	Net Generation(A-B)	MU	344.4	344.4	344.4	344.4	344.4
D	Less: Free Power to GoHP	MU	0	0	0	0	0
E	Energy Available (C-D)	MU	344.4	344.4	344.4	344.4	344.4
F	Actual Generation	MU	307.02	315.16	297	314.44	291.6
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	11.71	12.83	14.08	15.45	16.93
i	R&M Expenses	Rs. Cr.	0.62	0.67	0.73	0.8	0.86
ii	Employees Expenses	Rs. Cr.	10.08	11.06	12.14	13.32	14.62
iii	Pension Contributions	Rs. Cr.	0.81	0.88	0.97	1.07	1.17
iv	A&G Expenses	Rs. Cr.	0.2	0.22	0.24	0.26	0.28
b	Depreciation	Rs. Cr.	4.03	4.05	4.06	4.32	4.73
c	Interest & Finance Charges	Rs. Cr.	11.7	10.33	9.86	8.16	10.59
d	Return on Equity	Rs. Cr.	0.09	0.11	0.12	0.33	0.79
e	Interest on Working Capital	Rs. Cr.	1.01	1.01	1.04	1.06	1.2
f	Total AFC claimed	Rs. Cr.	28.55	28.33	29.16	29.31	34.23
	AFC approved in MYT Order	Rs. Cr.	24.89	25.24	25.71	26.31	27.05
	Difference in AFC	Rs. Cr.	-3.66	-3.09	-3.45	-3	-7.18
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.41	0.41	0.42	0.43	0.5
h	Capacity Charges (=f/2)	Rs. Cr.	14.27	14.17	14.58	14.65	17.11
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	27.00	27.13	27.15	28.03	31.60
j	Cost allowed in distribution business	Rs. Cr.	22.11	24.14	23.94	25.17	24.98
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-4.89	-2.99	-3.21	-2.86	-6.62

2.11.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Bassi HEP.

2.12.AFC for SVP Bhaba HEP

2.12.1. Bhaba HEP is a 120 MW (3 x 40 MW) project commissioned in the year 1989. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 222.19 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.

2.12.2. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 17: SVP Bhaba- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S. No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	464.70	464.70	464.70	464.70	464.70

S. No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
B	Auxiliary Consumption	MU	5.58	5.58	5.58	5.58	5.58
C	Net Generation(A-B)	MU	459.12	459.12	459.12	459.12	459.12
D	Less: Free Power to GoHP	MU	-	-	-	-	-
E	Energy Available (C-D)	MU	459.12	459.12	459.12	459.12	459.12
F	Actual Generation	MU	521.19	-	186.40	489.94	587.85
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	22.86	22.59	24.72	27.07	29.64
i	R&M Expenses	Rs. Cr.	4.62	5.02	5.45	5.92	6.43
ii	Additional O&M Expense for R&M activities	Rs. Cr.	2.24	-	-	-	-
iii	Employees Expenses	Rs. Cr.	14.52	15.94	17.49	19.20	21.08
iv	Pension Contributions	Rs. Cr.	1.16	1.28	1.40	1.54	1.69
v	A&G Expenses	Rs. Cr.	0.32	0.35	0.38	0.41	0.44
b	Depreciation	Rs. Cr.	4.92	4.99	9.53	11.93	14.65
c	Interest & Finance Charges	Rs. Cr.	0.05	0.01	2.69	4.94	8.19
d	Return on Equity	Rs. Cr.	0.38	0.39	1.47	1.90	2.66
e	Interest on Working Capital	Rs. Cr.	1.39	1.32	1.59	1.77	2.04
f	Total AFC claimed	Rs. Cr.	29.60	29.31	40.00	47.61	57.19
	AFC approved in MYT Order	Rs. Cr.	28.55	28.32	30.58	33.06	35.76
	Difference in AFC	Rs. Cr.	-1.05	-0.99	-9.42	-14.55	-21.43
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.32	0.32	0.44	0.52	0.62
h	Capacity Charges (=f/2)	Rs. Cr.	14.80	14.65	20.00	23.81	28.59
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	31.60	14.65	28.12	49.21	65.21
j	Cost allowed in distribution business	Rs. Cr.	32.31	-	17.68	34.17	40.78
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	0.71	-14.65	-10.44	-15.04	-24.43

2.12.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Bhaba HEP.

2.13.AFC for Binwa HEP

2.13.1. Binwa HEP is a 6 MW (2 x 3 MW) project commissioned by the Petitioner in the year 1984. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 17.44 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.

2.13.2. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 18: Binwa- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S. No.	Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	29.25	29.25	29.25	29.25	29.25
B	Auxiliary Consumption	MU	0.2	0.2	0.2	0.2	0.2
C	Net Generation(A-B)	MU	29.05	29.05	29.05	29.05	29.05
D	Less: Free Power to	MU	0	0	0	0	0

S. No.	Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
	GoHP						
E	Energy Available (C-D)	MU	29.05	29.05	29.05	29.05	29.05
F	Actual Generation	MU	28.04	27.21	27.55	31.64	32.1
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	4.19	4.58	5.02	5.5	6.05
i	R&M Expenses	Rs. Cr.	0.41	0.44	0.48	0.52	0.57
ii	Employees Expenses	Rs. Cr.	3.45	3.79	4.15	4.56	5.01
iii	Pension Contributions	Rs. Cr.	0.28	0.3	0.33	0.36	0.4
iv	A&G Expenses	Rs. Cr.	0.05	0.05	0.06	0.06	0.07
b	Depreciation	Rs. Cr.	0.3	0.31	0.68	0.86	0.98
c	Interest & Finance Charges	Rs. Cr.	0	0	0.11	0.18	0.19
d	Return on Equity	Rs. Cr.	0	0	0.11	0.14	0.14
e	Interest on Working Capital	Rs. Cr.	0.24	0.25	0.28	0.3	0.33
f	Total	Rs. Cr.	4.73	5.15	6.2	6.98	7.69
	AFC Approved in MYT Order	Rs. Cr.	4.71	4.88	5.32	5.8	6.35
	Difference in AFC	Rs. Cr.	-0.02	-0.27	-0.88	-1.18	-1.34
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate (=f*10/E*50%)	Rs./kWh	0.81	0.89	1.07	1.2	1.32
h	Capacity Charges (=f/2)	Rs. Cr.	2.36	2.57	3.1	3.49	3.85
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	4.65	4.99	6.04	7.29	8.1
j	Cost allowed in distribution business	Rs. Cr.	4.54	4.98	5.46	6.38	7.02
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.11	-0.01	-0.58	-0.91	-1.08

2.13.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Binwa HEP.

2.14.AFC for Chaba HEP

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

2.14.2. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 1.21 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project. Since it is a 94 year old plant, the initial cost of Rs. 1.21 Cr. has been completely depreciated.

2.14.3. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 19: Chaba- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
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S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	7.67	7.67	7.67	7.67	7.67
B	Auxiliary Consumption	MU	0.08	0.08	0.08	0.08	0.08
C	Net Generation(A-B)	MU	7.59	7.59	7.59	7.59	7.59
D	Less: Free Power to GoHP	MU	0	0	0	0	0
E	Energy Available (C-D)	MU	7.59	7.59	7.59	7.59	7.59
F	Actual Generation	MU	7.79	6.8	4.66	4.5	5.3
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	1.4	1.53	1.68	1.85	2.02
i	R&M Expenses	Rs. Cr.	0.29	0.31	0.34	0.37	0.4
ii	Employees Expenses	Rs. Cr.	1.02	1.12	1.23	1.35	1.48
iii	Pension Contributions	Rs. Cr.	0.08	0.09	0.1	0.11	0.12
iv	A&G Expenses	Rs. Cr.	0.01	0.01	0.01	0.02	0.02
b	Depreciation	Rs. Cr.	0	0	0	0	0
c	Interest & Finance Charges	Rs. Cr.	0	0	0.02	0.03	0.04
d	Return on Equity	Rs. Cr.	0	0	0.02	0.02	0.02
e	Interest on Working Capital	Rs. Cr.	0.08	0.08	0.09	0.1	0.1
f	Total AFC claimed	Rs. Cr.	1.48	1.61	1.81	2	2.19
	AFC approved in MYT Order	Rs. Cr.	1.48	1.62	1.77	1.94	2.12
	Difference in AFC	Rs. Cr.	0	0.01	-0.04	-0.06	-0.07
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.97	1.06	1.19	1.32	1.44
h	Capacity Charges (=f/2)	Rs. Cr.	0.74	0.81	0.90	1.00	1.09
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	1.50	1.53	1.46	1.59	1.86
j	Cost allowed in distribution business	Rs. Cr.	1.51	1.54	1.43	1.55	1.80
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	0.01	0.01	-0.03	-0.04	-0.06

2.14.4. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Chaba HEP.

2.15.AFC for BS-Chamba HEP

2.15.1. BS-Chamba HEP is a 0.45 MW (3 X 0.15 MW) project commissioned by the Petitioner in the year 1938, 1957 and 1985. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 0.5 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.

2.15.2. The summary of expenses actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 20: BS-Chamba- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	1.77	1.77	1.77	1.77	1.77
B	Auxiliary Consumption	MU	0.02	0.02	0.02	0.02	0.02
C	Net Generation(A-B)	MU	1.75	1.75	1.75	1.75	1.75

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
D	Less: Free Power to GoHP	MU	0	0	0	0	0
E	Energy Available (C-D)	MU	1.76	1.76	1.76	1.76	1.76
F	Actual Generation	MU	1.26	0.68	1	1.83	1.55
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	0.27	0.3	0.32	0.35	0.38
i	R&M Expenses	Rs. Cr.	0.05	0.06	0.06	0.07	0.07
ii	Employees Expenses	Rs. Cr.	0.2	0.22	0.24	0.26	0.29
iii	Pension Contributions	Rs. Cr.	0.02	0.02	0.02	0.02	0.02
iv	A&G Expenses	Rs. Cr.	0	0	0	0	0
b	Depreciation	Rs. Cr.	0.01	0.01	0.01	0.01	0.01
c	Interest & Finance Charges	Rs. Cr.	0	0	0	0	0
d	Return on Equity	Rs. Cr.	0	0	0	0	0
e	Interest on Working Capital	Rs. Cr.	0.02	0.02	0.02	0.02	0.02
f	Total AFC claimed	Rs. Cr.	0.3	0.33	0.35	0.38	0.41
	AFC approved in MYT Order	Rs. Cr.	0.29	0.31	0.34	0.38	0.41
	Difference in AFC	Rs. Cr.	-0.01	-0.02	-0.01	0	0
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.84	0.93	0.99	1.07	1.16
h	Capacity Charges (=f/2)	Rs. Cr.	0.15	0.16	0.17	0.19	0.20
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	0.25	0.23	0.27	0.39	0.39
j	Cost allowed in distribution business	Rs. Cr.	0.21	0.22	0.27	0.39	0.39
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.04	-0.01	-	-	-

2.15.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Chamba HEP.

2.16.AFC for Gaj HEP

2.16.1. Gaj HEP is a 10.50 MW (3 x 3.50 MW) project commissioned by the Petitioner in the year 1996. In the Tariff Order dated November 11, 2021 the Commission had approved capital cost of Rs. 30.38 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.

2.16.2. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 21: Gaj- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	38.31	38.31	38.31	38.31	38.31
B	Auxiliary Consumption	MU	0.38	0.38	0.38	0.38	0.38
C	Net Generation(A-B)	MU	37.93	37.93	37.93	37.93	37.93
D	Less: Free Power to GoHP	MU	4.55	4.55	4.55	4.55	4.55
E	Energy Available (C-D)	MU	33.38	33.38	33.38	33.38	33.38
F	Actual Generation	MU	44.05	40.38	29.17	29.69	34.63
	Annual Fixed						

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
	Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	5.18	5.66	6.22	6.81	7.46
i	R&M Expenses	Rs. Cr.	0.9	0.97	1.06	1.15	1.25
ii	Employees Expenses	Rs. Cr.	3.91	4.29	4.71	5.17	5.68
iii	Pension Contributions	Rs. Cr.	0.31	0.34	0.38	0.41	0.45
iv	A&G Expenses	Rs. Cr.	0.06	0.06	0.07	0.08	0.08
b	Depreciation	Rs. Cr.	0.64	0.64	0.64	0.67	0.7
c	Interest & Finance Charges	Rs. Cr.	0	0	0	0	0
d	Return on Equity	Rs. Cr.	2.33	2.33	2.33	2.35	2.38
e	Interest on Working Capital	Rs. Cr.	0.35	0.37	0.39	0.41	0.44
f	Total AFC claimed	Rs. Cr.	8.5	8.99	9.57	10.23	10.99
	AFC approved in MYT Order	Rs. Cr.	9.15	9.67	10.24	10.87	11.55
	Difference in AFC	Rs. Cr.	0.65	0.68	0.67	0.64	0.56
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	1.27	1.35	1.43	1.53	1.65
h	Capacity Charges (=f/2)	Rs. Cr.	4.25	4.50	4.79	5.12	5.49
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	9.86	9.94	8.97	9.67	11.19
j	Cost allowed in distribution business	Rs. Cr.	10.53	10.39	9.59	10.27	11.69
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	0.67	0.45	0.62	0.60	0.50

2.16.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Gaj HEP.

2.17.AFC for Giri HEP

2.17.1. Giri HEP is a 60 MW (2 x 30 MW) project commissioned by the Petitioner in the year 1978. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 36.22 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project. Further, extension of useful life of the power house from 40 years to 60 years has been considered, as the Commission had provided in-principle approval for RMU scheme via order in the Petition No. 44/2016 dated May 3, 2017 and also approved the capitalisation of scheme in 4th Control Period via order dated November 11, 2021.

2.17.2. Further, Commission had approved an additional O&M expense for R&M activities of Rs. 5.28 Cr. Since, O&M expense is a controllable parameter, the Petitioner requested Commission to approve the additional O&M expense towards R&M activities.

2.17.3. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 22: Giri- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	289.55	289.55	289.55	289.55	289.55
B	Auxiliary Consumption	MU	2.03	2.03	2.03	2.03	2.03
C	Net Generation(A-B)	MU	287.52	287.52	287.52	287.52	287.52
D	Less: Free Power to GoHP	MU	0	0	0	0	0
E	Energy Available (C-D)	MU	287.52	287.52	287.52	287.52	287.52
F	Actual Generation	MU	213.09	188.74	140.03	169.27	214.97
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	22.54	18.87	20.64	22.56	24.67
i	R&M Expenses	Rs. Cr.	6.25	6.78	7.37	8.00	8.69
ii	Additional O&M for R&M expense	Rs. Cr.	5.28	5.28	0.00	0.00	0.00
iii	Employees Expenses	Rs. Cr.	10.06	11.04	12.12	13.3	14.6
iv	Pension Contributions	Rs. Cr.	0.8	0.88	0.97	1.06	1.17
v	A&G Expenses	Rs. Cr.	0.15	0.17	0.18	0.2	0.21
b	Depreciation	Rs. Cr.	0.48	0.58	0.22	0.12	0.12
c	Interest & Finance Charges	Rs. Cr.	0	0.06	0.11	0.08	0.1
d	Return on Equity	Rs. Cr.	0.01	0.13	0.13	0.13	0.13
e	Interest on Working Capital	Rs. Cr.	1.26	1.02	1.09	1.15	1.26
f	Total AFC claimed	Rs. Cr.	24.29	20.65	22.19	24.04	26.27
	AFC approved in MYT Order	Rs. Cr.	24.08	20.38	21.87	23.79	26.01
	Difference in AFC	Rs. Cr.	-0.21	-0.27	-0.32	-0.25	-0.26
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.42	0.36	0.39	0.42	0.46
h	Capacity Charges (=f/2)	Rs. Cr.	12.14	10.32	11.09	12.02	13.14
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	21.15	17.10	16.50	19.09	22.96
j	Cost allowed in distribution business	Rs. Cr.	17.90	16.86	16.26	18.90	22.73
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-3.25	-0.24	-0.24	-0.19	-0.23

2.17.4. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Giri HEP.

2.18.AFC for Larji HEP

2.18.1. Larji HEP is a 126 MW (3 x 42 MW) project commissioned in the year 2006. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 1098.70 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, Commission had considered Rs. 155.57 Cr. being funded through equity and balance amount of Rs. 943.13 Cr. funded by way of Debt. The closing balance of loan approved by Commission in Tariff Order dated November 11, 2021, is Rs. 187.6 Cr. and the same has been considered as opening balance of loan for FY 2014-15.

2.18.2. Further, Commission had approved Return on Equity to HPSEBL for Rs. 155.57 Cr. invested in project by GoHP in Tariff Order dated June 10, 2014. Further, considering Minimum Alternative Tax of 20.01%, pre-tax RoE of 19.38 % ($1=5.50\%/(1-20.01\%)$) was approved in Tariff Order for Larji HEP dated July 7, 2011. Though there was no tax incidence for HPSEBL from FY 15 to FY 17, the Petitioner requested Commission to allow pre-tax RoE till FY 17, considering that the tax holiday of 10 years expired in FY 17 and thereafter allow the RoE of 15.50% from FY 18 onwards.

2.18.3. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows :

Table 23: Larji- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	586.82	586.82	586.82	586.82	586.82
B	Auxiliary Consumption	MU	7.04	7.04	7.04	7.04	7.04
C	Net Generation(A-B)	MU	579.78	579.78	579.78	579.78	579.78
D	Less: Free Power to GoHP	MU	69.57	69.57	69.57	69.57	69.57
E	Energy Available (C-D)	MU	510.21	510.21	510.21	510.21	510.21
F	Actual Generation	MU	562.89	576.73	537.47	537.01	525.24
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	20.84	22.82	24.99	27.36	29.95
i	R&M Expenses	Rs. Cr.	4.58	4.98	5.41	5.87	6.38
ii	Employees Expenses	Rs. Cr.	14.82	16.27	17.86	19.6	21.51
iii	Pension Contributions	Rs. Cr.	1.19	1.3	1.43	1.57	1.72
iv	A&G Expenses	Rs. Cr.	0.25	0.27	0.29	0.32	0.34
b	Depreciation	Rs. Cr.	56.69	56.71	56.75	56.75	56.8
c	Interest & Finance Charges	Rs. Cr.	11.62	5.36	1.09	0.00	0.00
d	Return on Equity	Rs. Cr.	30.15	30.19	30.26	24.21	24.27
e	Interest on Working Capital	Rs. Cr.	3.42	3.27	3.23	3.1	3.24
f	Total AFC claimed	Rs. Cr.	122.71	118.35	116.31	111.42	114.25
	AFC approved in MYT Order	Rs. Cr.	129.4	124.95	120.69	112.43	114.21
	Difference in AFC	Rs. Cr.	6.69	6.6	4.38	1.01	-0.04
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	1.2	1.16	1.14	1.09	1.12
h	Capacity Charges (=f/2)	Rs. Cr.	61.36	59.17	58.15	55.71	57.13
i	Revenue recoverable based on actual generation(=h+gxF/10)	Rs. Cr.	129.05	126.06	119.42	114.35	115.94
j	Cost allowed in distribution business	Rs. Cr.	142.97	132.65	122.61	115.37	115.89
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	13.92	6.59	3.19	1.02	-0.05

2.18.4. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Larji HEP.

2.19.AFC for Nogli HEP

- 2.19.1. Nogli HEP is a 2.50 MW (2 x 0.25 + 4 x 0.50 MW)) project commissioned by the Petitioner in the years 1963, 1970 and 1974. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 11.81 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project. Further, the plant has completely depreciated.
- 2.19.2. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 24: Nogli- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	9.86	9.86	9.86	9.86	9.86
B	Auxiliary Consumption	MU	0.10	0.10	0.10	0.10	0.10
C	Net Generation(A-B)	MU	9.76	9.76	9.76	9.76	9.76
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	9.76	9.76	9.76	9.76	9.76
F	Actual Generation	MU	6.15	6.76	7.53	3.56	3.93
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	2.40	2.63	2.87	3.13	3.43
i	R&M Expenses	Rs. Cr.	0.81	0.88	0.95	1.03	1.12
ii	Employees Expenses	Rs. Cr.	1.45	1.59	1.75	1.92	2.11
iii	Pension Contributions	Rs. Cr.	0.12	0.13	0.14	0.15	0.17
iv	A&G Expenses	Rs. Cr.	0.02	0.03	0.03	0.03	0.03
b	Depreciation	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
c	Interest & Finance Charges	Rs. Cr.	0.00	0.00	0.00	0.14	0.37
d	Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.18	0.18
e	Interest on Working Capital	Rs. Cr.	0.13	0.14	0.15	0.17	0.19
f	Total AFC claimed	Rs. Cr.	2.53	2.77	3.02	3.62	4.17
	AFC approved in MYT Order	Rs. Cr.	2.53	2.77	3.03	3.31	3.62
	Difference in AFC	Rs. Cr.	0.00	0.00	0.01	-0.31	-0.55
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	1.30	1.42	1.55	1.85	2.13
h	Capacity Charges (=f/2)	Rs. Cr.	1.27	1.39	1.51	1.81	2.08
i	Revenue recoverable based on actual generation(=h+gxF/10)	Rs. Cr.	2.06	2.35	2.68	2.47	2.92
j	Cost allowed in distribution business	Rs. Cr.	1.59	2.34	2.68	2.26	2.54
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.47	-0.01	0.00	-0.21	-0.38

- 2.19.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Nogli HEP.

2.20.AFC for Rongtong HEP

- 2.20.1. Rongtong HEP is a 2 MW (4 x 0.50 MW) project commissioned by the Petitioner in the year 1986-87. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 16.39 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.

2.20.2. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 25: Rongtong- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	7.64	7.64	7.64	7.64	7.64
B	Auxiliary Consumption	MU	0.08	0.08	0.08	0.08	0.08
C	Net Generation(A-B)	MU	7.56	7.56	7.56	7.56	7.56
D	Less: Free Power to GoHP	MU	0	0	0	0	0
E	Energy Available (C-D)	MU	7.56	7.56	7.56	7.56	7.56
F	Actual Generation	MU	0.37	0	0.63	1.02	1.17
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	1.5	1.65	1.8	1.98	2.16
i	R&M Expenses	Rs. Cr.	0.16	0.18	0.19	0.21	0.22
ii	Employees Expenses	Rs. Cr.	1.24	1.36	1.49	1.64	1.8
iii	Pension Contributions	Rs. Cr.	0.1	0.11	0.12	0.13	0.14
iv	A&G Expenses	Rs. Cr.	0	0	0	0	0
b	Depreciation	Rs. Cr.	0.28	0.28	0.69	0.83	0.93
c	Interest & Finance Charges	Rs. Cr.	0	0	0.16	0.27	0.32
d	Return on Equity	Rs. Cr.	0	0	0.23	0.28	0.3
e	Interest on Working Capital	Rs. Cr.	0.09	0.09	0.12	0.13	0.14
f	Total AFC claimed	Rs. Cr.	1.87	2.02	3	3.5	3.84
	AFC approved in MYT Order	Rs. Cr.	1.87	2.02	2.19	2.37	2.57
	Difference in AFC	Rs. Cr.	0	0	-0.81	-1.13	-1.27
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	1.24	1.34	1.98	2.31	2.54
h	Capacity Charges (=f/2)	Rs. Cr.	0.93	1.01	1.50	1.75	1.92
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	0.98	1.01	1.62	1.98	2.22
j	Cost allowed in distribution business	Rs. Cr.	0.09	-	1.19	1.35	1.48
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.89	-1.01	-0.43	-0.63	-0.74

2.20.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Rongtong HEP.

2.21.AFC for Rukti HEP

2.21.1. Rukti HEP is a 1.50 MW (3 x 0.50 MW) project commissioned by the HPSEBL in the year 1979 and 1980. In the Tariff Order dated November 11, 2021, the Commission had approved capital cost of Rs. 1.59 Cr. and no additional capitalization was approved in 2nd MYT Control Period. Further, there is no outstanding loan for the project.

2.21.2. The summary of actual expenses, AFC approved by the Commission and the resulting (gap)/surplus between the actual expenses and recovered revenue are as follows:

Table 26: Rukti- AFC for 3rd MYT Control Period True-up, submitted by Petitioner (Rs. Cr.)

S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
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S.No.	Particular	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
A	Gross Generation (DE)	MU	6.54	6.54	6.54	6.54	6.54
B	Auxiliary Consumption	MU	0.07	0.07	0.07	0.07	0.07
C	Net Generation(A-B)	MU	6.47	6.47	6.47	6.47	6.47
D	Less: Free Power to GoHP	MU	0	0	0	0	0
E	Energy Available (C-D)	MU	6.47	6.47	6.47	6.47	6.47
F	Actual Generation	MU	0.18	0.03	1.05	2.37	2.56
	Annual Fixed Charges (AFC)						
a	O&M expenses (i+ii+iii+iv)	Rs. Cr.	0.67	0.73	0.8	0.89	0.96
i	R&M Expenses	Rs. Cr.	0.07	0.07	0.08	0.09	0.09
ii	Employees Expenses	Rs. Cr.	0.56	0.61	0.67	0.74	0.81
iii	Pension Contributions	Rs. Cr.	0.04	0.05	0.05	0.06	0.06
iv	A&G Expenses	Rs. Cr.	0	0	0	0	0
b	Depreciation	Rs. Cr.	0.02	0.02	1.69	2.69	3.47
c	Interest & Finance Charges	Rs. Cr.	0	0	0.2	0.26	0.12
d	Return on Equity	Rs. Cr.	0	0	0.35	0.41	0.41
e	Interest on Working Capital	Rs. Cr.	0.04	0.04	0.09	0.12	0.13
f	Total AFC claimed	Rs. Cr.	0.73	0.79	3.13	4.38	5.1
	AFC approved in MYT Order	Rs. Cr.	0.73	0.79	0.87	0.95	1.04
	Difference in AFC	Rs. Cr.	0	0	-2.26	-3.43	-4.06
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.56	0.61	2.42	3.38	3.94
h	Capacity Charges (=f/2)	Rs. Cr.	0.36	0.39	1.56	2.19	2.55
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	0.37	0.40	1.82	2.99	3.56
j	Cost allowed in distribution business	Rs. Cr.	0.02	0.40	0.50	0.65	0.73
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.35	-	-1.32	-2.34	-2.83

2.21.3. The Petitioner has requested the Commission to approve the resulting surplus/ (Gap) as computed above for Rukti HEP.

2.22. Summary

2.22.1. The plant-wise total impact of True-Up for the 13 plants which is requested by HPSEBL is as follows:

Table 27: Summary-True-Up impact for 3rd Control Period (Rs. Cr.)

S.No.	Plant	FY 15	FY 16	FY 17	FY 18	FY 19
1	Andhra	(0.85)	0.01	(0.02)	(0.00)	(0.01)
2	Baner	(1.87)	0.00	0.00	(0.22)	(0.40)
3	Bassi	(4.89)	(2.99)	(3.21)	(2.86)	(6.62)
4	Bhaba	0.71	(14.65)	(10.44)	(15.04)	(24.43)
5	Binwa	(0.11)	(0.01)	(0.58)	(0.91)	(1.08)
6	Chaba	0.01	0.01	(0.03)	(0.04)	(0.06)
7	Chamba	(0.04)	(0.01)	(0.00)	0.00	0.00
8	Gaj	0.67	0.45	0.62	0.60	0.50

S.No.	Plant	FY 15	FY 16	FY 17	FY 18	FY 19
9	Giri	(3.25)	(0.24)	(0.24)	(0.19)	(0.23)
10	Larji	13.92	6.59	3.19	1.02	(0.05)
11	Nogli	(0.47)	(0.01)	0.00	(0.21)	(0.38)
12	Rongtong	(0.89)	(1.01)	(0.43)	(0.63)	(0.74)
13	Rukti	(0.35)	0.00	(1.32)	(2.34)	(2.83)
	Total	2.60	(11.85)	(12.45)	(20.83)	(36.32)

2.22.2. The Petitioner has requested the Commission to approve the total impact of True Up (Gap)/ Surplus along with Carrying/ Holding Cost and the same has been submitted along with provisional True Up as detailed out in next chapter.

3. SUMMARY OF MID-TERM PERFORMANCE REVIEW PETITION FOR 4TH MYT CONTROL PERIOD

3.1. Introduction

3.1.1. This chapter summarizes the highlights of the Mid-Term Performance Review (MPR) Petition filed by the Petitioner for determination of the Aggregate Fixed Charges (AFC) for the fourth MYT Control Period (FY 2019-20 – FY 2023-24).

3.2. Components of Annual Fixed Charge

3.2.1. In the MTR Petition, HPSEBL for the purpose of determination of Annual Fixed Charge and the tariff for sale of electricity from the generating station for the balance period of fourth Control Period, has considered the following elements as specified by HPERC Generation Tariff Regulations, 2011:

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

3.3. Other assumptions for the determination of Annual Fixed Charge

3.3.1. HPSEBL has estimated the AFC charges for the individual own generating plants based on the norms as per the HPERC Generation Tariff Regulations, 2011 and the historical numbers/trends. Further the Petitioner has submitted the provisional accounts of the power houses for FY 20 and FY 21. Further, for FY 22, the Petitioner has considered provisional capitalisation, actual generation and expected revenue to be recovered, however, the accounts for FY 22 are not finalised.

3.3.2. The Petitioner has submitted generation (MUs) from FY 2014 to FY 2021 as per the actual records and estimates of FY 2022 generation (MUs) and onwards is based on projections on the basis of energy availability approved by the Commission.

3.3.3. HPSEBL has considered the following for determination of AFC:

- The completed costs of projects as on 31.3.2019 under True Up of 3rd Control Period have been considered as capital cost of project.
- The base year considered for projections of the 4th MYT Control Period is FY 2018-19.

- 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.
- Since, there is no significant variation in the O&M expenses in the past, the Petitioner has considered the O&M costs as approved by the Commission vide Tariff Order dated 11.11.2021 for 4th MYT Control Period.
- The depreciation on the opening GFA for 4th Control Period has been considered same as approved by the Commission in Tariff Order dated 10.6.2014 and Tariff Order dated 11.11.2021. The Petitioner has claimed depreciation on additional capitalisation and any remaining depreciable value has been spread out during the useful life of the respective power house.
- The useful life of plant is 40 years, except in case of Bassi HEP and Giri HEP, the useful life is considered as 60 years. Further, the depreciation corresponding to deposit works, wherever applicable, have not been considered as per HPERC Generation Tariff Regulations, 2011.
- The GoHP has 12% share in the generation of power from plants Gaj, Baner, Ghanvi, Khauli, Ghanvi II and Larji. The same has been reduced from total generation to arrive at the net saleable energy from these plants to recover the AFC.
- The Petitioner has submitted the provisional capitalisation incurred for FY 2019-20 and FY 2020-21. Further, the Petitioner seeks to revise the tariff for FY 2022-23 and FY 2023-24 based on revised projected capitalisation.
- The interest on finance charges has been claimed on normative basis as per HPERC Generation Tariff Regulations, 2011. Further, the rate of interest is calculated on the basis of actual loan portfolio at the beginning of each year applicable to the project. Further, in case of additional capitalisation, interest on finance charges has been claimed on actual debt component or 70% whichever is higher. The rate of interest is considered same as applicable to the project.
- In case there is no specific loan portfolio for the project, the rate of interest of actual loan portfolio applicable to generation business has been considered.
- As per the HPERC Generation Tariff Regulations, 2011, the Interest and Finance Charges for the expected capital expenditure in the 4th MYT Control Period has been assumed to be 9.00% (SBI MCLR on 1st April, 2022 is 7.00% + 200 basis pts).
- As per the HPERC Generation Tariff Regulations, 2011, the Interest on Working Capital has been considered at 10.00% (SBI MCLR on 1st April, 2022 is 7.00% + 300 basis pts). Further, the Interest on Working Capital for FY 2019-20 to FY 2020-21 have been considered as follows:

Table 28: Rate of interest for working capital for FY 20 and FY 21 considered by Petitioner

True-Up Year	Rate of Interest for Working Capital (%)
FY 2019-20	10.75%
FY 2020-21	10.00%

- Further, the details of capitalisation work along with board approvals and sanction of schemes have been submitted.

3.4. Annual Fixed Charges for Andhra HEP

- 3.4.1. 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.
- 3.4.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 57.61 Cr as on 1st April, 2014. The Commission had considered 100% debt funding for the plant with no outstanding loans. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 0.37 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 57.99 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 29: Andhra HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	57.99	58.02	58.54	59.19	59.56
Additional Capitalization	0.03	0.53	0.64	0.37	0.37
Closing GFA	58.02	58.54	59.19	59.56	59.93

- 3.4.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 30: Andhra HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2022-23	Minor Capital Works	Estimate for Providing/Testing/ commissioning of 50KVA Generator Sets at Andhra power house under R.E. Andhra power House Division HPSEBL, Chirgaon.	0.06
		Sub-Total	0.37
FY 2023-24	Minor Capital Works	Estimate for Providing plant Lead Acid, Battery Bank along with Battery charger for Andhra power house under RE Andhra power house Divn. HPSEBL, Chirgaon.	0.30
FY 2023-24	Minor Capital Works	Estimate for Providing/ Testing/ commissioning of 50KVA Generator Sets at Andhra power house	0.07
		Sub-Total	0.37

- 3.4.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 31: Andhra HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	87.30	87.30	87.30	87.30	87.30
B	Auxiliary Consumption	MU	0.87	0.87	0.87	0.87	0.87
C	Net Generation(A-B)	MU	86.43	86.43	86.43	86.43	86.43
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	86.43	86.43	86.43	86.43	86.43
F	Actual Generation	MU	75.02	62.59	66.27	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	9.28	9.67	10.07	10.48	10.91

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
i	R&M Expenses	Rs. Cr.	1.46	1.50	1.55	1.59	1.64
ii	Employees Expenses	Rs. Cr.	7.39	7.70	8.03	8.37	8.72
iii	Pension Contributions	Rs. Cr.	0.36	0.39	0.41	0.44	0.47
iv	A&G Expenses	Rs. Cr.	0.07	0.08	0.08	0.08	0.08
b	Depreciation	Rs. Cr.	1.15	1.22	1.34	1.45	1.57
c	Interest & Finance Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
d	Return on Equity	Rs. Cr.	0.02	0.05	0.08	0.09	0.11
e	Interest on Working Capital	Rs. Cr.	0.43	0.41	0.43	0.45	0.47
f	Total AFC claimed	Rs. Cr.	10.87	11.35	11.92	12.48	13.07
	AFC approved in MYT Order	Rs. Cr.	10.84	11.25	11.67	12.10	12.55
	Difference in AFC		-0.03	-0.10	-0.25	-0.38	-0.52
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	5.44	5.68	5.96	6.24	6.53
h	Capacity Charges (=f/2)	Rs. Cr.	10.16	9.79	10.53		
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	10.15	9.69	10.29		
j	Cost allowed in distribution business	Rs. Cr.	-0.01	-0.10	-0.24		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.01	-0.10	-0.24		

3.4.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Andhra HEP.

3.5. Annual Fixed Charges for Baner HEP

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

3.5.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 55.67 Cr as on 1st April, 2014. The Commission had considered 100% debt funding for the plant with no outstanding loans. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 1.44 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 57.11 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 32: Baner HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	57.11	57.11	57.11	57.11	57.11
Additional Capitalisation	0	0	0	0	1.71
Closing GFA	57.11	57.11	57.11	57.11	58.82

3.5.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 33: Baner HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2023-24	Minor Capital Works	Replacement of complete existing electromechanics Governor with Digital Governor along with panel, existing Electro mechanical relay with numerical relay,	1.5
FY 2023-24	Minor Capital Works	Estimate for Providing, Fixing, installation and successful commissioning of 100KVA DG set(1No.)Noise less and 50KVA DG set(1NO.)Noise less of compact Design with standard accessories A/w engine and alternator protection and control of latest technology at Baner Power house and intake site	0.21

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
		Sub-Total	1.71

3.5.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 34: Baner HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	60.67	60.67	60.67	60.67	60.67
B	Auxiliary Consumption	MU	0.61	0.61	0.61	0.61	0.61
C	Net Generation(A-B)	MU	60.06	60.06	60.06	60.06	60.06
D	Less: Free Power to GoHP	MU	7.21	7.21	7.21	7.21	7.21
E	Energy Available (C-D)	MU	52.85	52.85	52.85	52.85	52.85
F	Actual Generation	MU	40.34	39.24	31.85	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	7.06	7.35	7.65	7.97	8.30
i	R&M Expenses	Rs. Cr.	1.04	1.07	1.10	1.14	1.17
ii	Employees Expenses	Rs. Cr.	5.70	5.94	6.19	6.45	6.72
iii	Pension Contributions	Rs. Cr.	0.26	0.27	0.29	0.31	0.34
iv	A&G Expenses	Rs. Cr.	0.06	0.07	0.07	0.07	0.07
b	Depreciation	Rs. Cr.	1.75	1.23	1.16	1.16	1.16
c	Interest & Finance Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
d	Return on Equity	Rs. Cr.	2.37	2.37	2.37	2.37	2.45
e	Interest on Working Capital	Rs. Cr.	0.38	0.36	0.37	0.38	0.40
f	Total AFC claimed	Rs. Cr.	11.57	11.32	11.55	11.89	12.31
	AFC approved in MYT Order	Rs. Cr.	10.95	11.25	11.57	11.90	12.25
	Difference in AFC		-0.62	-0.07	0.02	0.01	-0.06
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	5.78	5.66	5.78	5.94	6.16
h	Capacity Charges (=f/2)	Rs. Cr.	10.20	9.86	9.26		
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	9.67	9.78	9.27		
j	Cost allowed in distribution business	Rs. Cr.	-0.53	-0.08	0.01		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.53	-0.08	0.01		

3.5.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Baner HEP.

3.6. Annual Fixed Charges for Bassi HEP

3.6.1. Bassi HEP is a 66 MW (4 x 16.5 MW) project commissioned in the years 1970, 1971 and 1981. It is a peaking, storage based project with surface power station and rotating exciters.

3.6.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 141.24 Cr as on 1st April, 2014. The Commission had also extended the useful life of the power house from 40 years to 60 years considering life

extension of 20 years. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 10.82 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 152.06 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 35: Bassi HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	152.06	152.89	155.33	164.47	166.23
Additional Capitalisation	0.83	2.44	9.15	1.76	28.90
Closing GFA	152.89	155.33	164.47	166.23	195.13

3.6.3. Further, the Petitioner envisages to capitalize the 100% of the scheme approved in 4th MYT Control Period in FY 2023-24. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 36: Bassi HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2022-23	Funded Scheme	Providing and Fixing and commissioning of New Battery Bank 220 Volt, 750 Ah in Place of existing damaged battery Bank	1.17
FY 2022-23	Minor Capital Works	Estimate for augmentation of unit auxiliary transformer 11/0.4 KV,300 KVA oil type to 11/0.4KV, 500 KVA Dry type copper wound transformer (indoor type),with off load tap links with enclosure for Bassi power house under R.E. Bassi Power House Division HPSEBL, Jogindernagar	0.29
FY 2022-23	Minor Capital Works	Estimate for supply of submersible pump(i) HITEC make submersible slurry pump suitable for removal of silt from cooling water pump model HSR 20 of rating 20HP,3PH,415 V, 50Hz with 10mtrs. Cable &150mm outlet for Bassi power house under R.E. Bassi Power House Division HPSEBL, Jogindernagar	0.3
		Sub-Total	1.76
FY 2023-24	Minor Capital Works	Replacement old obsolete hydraulic system at Chapprot provided for lifting penstock gate	0.5
FY 2023-24	Minor Capital Works	Replacement of LT Panel switch gear (800 Amp) complete in all respect	0.5
FY 2023-24	Funded Scheme	Supply, erection, testing and commissioning of 4 nos. new upper brackets (including dismantling of existing 4 nos. upper brackets), re-insulation of 02 nos. rotor poles of 4x16.50 MW Bassi HEP	7.76
FY 2023-24	Funded Scheme	Supply, erection, testing and commissioning of 4 nos. Modified new upper brackets, new bearing design of Kingsbury Pad supports, Self pumping and insulated upper bearing, improved bearing cooling and oil circulation with self pumping bearing design with new HPOP system at start and stop of machine for smooth/effective operation & maintenance of 4x16.5MW Bassi HEP.	10.93
FY 2023-24	Funded scheme	Upgradation/ Augmentation of 16 MVA, 132/33 kV Power Trf. To 132/33 kV, 1x25/31.5 MVA Power Trf., 33 kV switchyard (including augmentation of 33/11 kV 2x2.5 MVA trf to 33/11 kV 2x5 MVA trf) and 11 kV switchyard system	9
FY 2023-24	Minor Capital Works	Estimate for providing 1 No. dehydration plant of 4500 LPH capacity for Bassi power house under R.E. Bassi Power House Division HPSEBL, Jogindernagar	0.21
		Sub-Total	28.9

3.6.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 37: Bassi HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	346.83	346.83	346.83	346.83	346.83
B	Auxiliary Consumption	MU	2.43	2.43	2.43	2.43	2.43
C	Net Generation(A-B)	MU	344.40	344.40	344.40	344.40	344.40
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	344.40	344.40	344.40	344.40	344.40
F	Actual Generation	MU	330.22	303.77	291.08	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	12.88	13.43	14.02	14.65	15.30
i	R&M Expenses	Rs. Cr.	1.02	1.05	1.08	1.12	1.15
ii	Employees Expenses	Rs. Cr.	10.22	10.65	11.09	11.56	12.05
iii	Pension Contributions	Rs. Cr.	1.41	1.50	1.61	1.72	1.84
iv	A&G Expenses	Rs. Cr.	0.23	0.23	0.24	0.25	0.26
b	Depreciation	Rs. Cr.	4.80	4.94	5.40	5.56	7.10
c	Interest & Finance Charges	Rs. Cr.	8.89	8.95	8.03	7.85	8.51
d	Return on Equity	Rs. Cr.	0.82	0.94	1.36	1.43	2.34
e	Interest on Working Capital	Rs. Cr.	0.83	0.80	0.82	0.85	0.93
f	Total AFC claimed	Rs. Cr.	28.22	29.05	29.63	30.33	34.17
	AFC approved in MYT Order	Rs. Cr.	21.04	20.44	20.68	20.81	21.10
	Difference in AFC		-7.18	-8.61	-8.95	-9.52	-13.07
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	14.11	14.53	14.82	15.17	17.09
h	Capacity Charges (=f/2)	Rs. Cr.	27.64	27.34	27.34		
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	20.75	19.33	19.08		
j	Cost allowed in distribution business	Rs. Cr.	-6.89	-8.01	-8.26		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-6.89	-8.01	-8.26		

3.6.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Bassi HEP.

3.7. Annual Fixed Charges for SVP Bhaba HEP

3.7.1. 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.

3.7.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 222.19 Cr as on 1st April, 2014. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 93.23 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 315.42 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021- 22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 38: SVP Bhaba HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	315.42	322.23	340.58	340.58	353.49
Additional Capitalisation	6.81	18.35	0	12.91	1.76
Closing GFA	322.23	340.58	340.58	353.49	355.25

3.7.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 39: SVP Bhaba HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2022-23	Rehabilitation of 3x40 MW SVP Bhaba HEP	Prov. 10 MVA,220/22 kV Stn. Trf. & allied equipment & additional pressurized firefighting system for emulsifier system for 3 Nos. Generator transformers, 1 No. Stn. Trf & cable gallery for 220 kV XLPE cable for Bhaba P/H	12.91
		Sub-Total	12.91
FY 2023-24	Minor Capital Works	Replacement of existing main and emergency cooling system for 3x42MW SVP Bhaba	0.9
FY 2023-24	Minor Capital Works	Prov. & fix. of hydraulic operated Gate valve dia 300mm. The gate valve has to be adapted and modified to operate it hydraulically, which will be solenoid operated with limit switch cut off set-ups for 10 number valves	0.65
FY 2023-24	Minor Capital Works	Prov. & fix. Of Oil Pumping Unit for the hydraulic operated valves 10 No. Designed to operate all 10 gate valves with provision to even operate each valve individually	0.21
		Sub-Total	1.76

3.7.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 40: SVP Bhaba HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	464.70	464.70	464.70	464.70	464.70
B	Auxiliary Consumption	MU	5.58	5.58	5.58	5.58	5.58
C	Net Generation(A-B)	MU	459.12	459.12	459.12	459.12	459.12
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	459.12	459.12	459.12	459.12	459.12
F	Actual Generation	MU	582.66	471.97	616.95	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	25.52	26.60	27.73	28.89	30.12
i	R&M Expenses	Rs. Cr.	5.32	5.48	5.65	5.81	5.99
ii	Employees Expenses	Rs. Cr.	17.16	17.89	18.64	19.43	20.24
iii	Pension Contributions	Rs. Cr.	2.56	2.74	2.93	3.13	3.35
iv	A&G Expenses	Rs. Cr.	0.48	0.49	0.51	0.52	0.54
b	Depreciation	Rs. Cr.	16.29	19.44	21.32	25.39	28.89
c	Interest & Finance Charges	Rs. Cr.	6.96	6.19	4.19	2.03	0.55
d	Return on Equity	Rs. Cr.	2.98	3.83	3.83	4.43	4.51
e	Interest on Working Capital	Rs. Cr.	1.60	1.58	1.63	1.72	1.80
f	Total AFC claimed	Rs. Cr.	53.35	57.64	58.70	62.46	65.87
	AFC approved in MYT Order	Rs. Cr.	41.81	42.13	42.49	42.88	43.36
	Difference in AFC		-11.54	-15.51	-16.21	-19.58	-22.51

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	26.67	28.82	29.35	31.23	32.93
h	Capacity Charges (=f/2)	Rs. Cr.	60.52	58.45	68.79		
i	Revenue recoverable based on actual generation(=h+gxF/10)	Rs. Cr.	47.71	42.76	49.77		
j	Cost allowed in distribution business	Rs. Cr.	-12.81	-15.69	-19.02		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-12.81	-15.69	-19.02		

3.7.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for SVP Bhaba HEP.

3.8. Annual Fixed Charges for Binwa HEP

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

3.8.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 17.44 Cr as on 1st April, 2014. The Commission had considered 100% debt funding for the plant with no outstanding loans. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 3.58 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 21.02 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 41: Binwa HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	21.02	21.11	23	23.06	23.06
Additional Capitalisation	0.09	1.89	0.05	0	0.16
Closing GFA	21.11	23	23.06	23.06	23.22

3.8.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 42: Binwa HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2023-24	Minor Capital Works	Estimate for Providing/ Testing and commissioning of 100KVA Generator set at intake site at Binwa Power House under Resident Engineer Binwa Power House Division ,HPSEBL Uttrala.	0.10
FY 2023-24	Minor Capital Works	Estimate for Providing/ Testing and commissioning of 25KVA Generator set at intake site in Binwa Power House under Resident Engineer Binwa Power House Division, HPSEBL Uttrala.	0.06
		Sub-Total	0.16

3.8.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 43: Binwa HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	29.25	29.25	29.25	29.25	29.25
B	Auxiliary Consumption	MU	0.20	0.20	0.20	0.20	0.20
C	Net Generation(A-B)	MU	29.05	29.05	29.05	29.05	29.05
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	29.05	29.05	29.05	29.05	29.05
F	Actual Generation	MU	36.87	26.96	27.62	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	5.59	5.82	6.06	6.31	6.57
i	R&M Expenses	Rs. Cr.	0.60	0.62	0.64	0.66	0.68
ii	Employees Expenses	Rs. Cr.	4.80	5.00	5.21	5.43	5.66
iii	Pension Contributions	Rs. Cr.	0.13	0.14	0.15	0.16	0.17
iv	A&G Expenses	Rs. Cr.	0.06	0.06	0.06	0.06	0.06
b	Depreciation	Rs. Cr.	1.14	1.77	1.52	1.06	0.45
c	Interest & Finance Charges	Rs. Cr.	0.06	0.00	0.00	0.00	0.00
d	Return on Equity	Rs. Cr.	0.15	0.23	0.24	0.24	0.24
e	Interest on Working Capital	Rs. Cr.	0.27	0.27	0.28	0.28	0.28
f	Total AFC claimed	Rs. Cr.	7.20	8.09	8.09	7.89	7.54
	AFC approved in MYT Order	Rs. Cr.	6.16	6.40	6.65	6.91	7.19
	Difference in AFC		-1.04	-1.69	-1.44	-0.98	-0.35
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	3.60	4.05	4.04	3.94	3.77
h	Capacity Charges (=f/2)	Rs. Cr.	8.17	7.80	7.89		
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	6.98	6.16	6.47		
j	Cost allowed in distribution business	Rs. Cr.	-1.19	-1.64	-1.42		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-1.19	-1.64	-1.42		

3.8.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Binwa HEP.

3.9. Annual Fixed Charges for Chaba HEP

3.9.1. 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.

3.9.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 1.21 Cr as on 1st April, 2014. The Commission had considered 100% debt funding for the plant with no outstanding loans. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 0.45 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 1.66 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 44: Chaba HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

FY 20	FY 21	FY 22	FY 23	FY 24
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	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	1.66	1.66	1.71	2.58	2.58
Additional Capitalisation	0	0.05	0.87	0	0.59
Closing GFA	1.66	1.71	2.58	2.58	3.17

3.9.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 45: Chaba HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2023-24	Funded Scheme	Purchasing of the runner , side cover and Nozzles of the Unit No .V & VI of the Chaba HEP	0.50
FY 2023-24	Minor Capital Works	Estimate for Electrical Installation, Safety devices and luminaries in Transformer hall, Battery hall cum Breaker room, old breaker room, staff room etc. in 1.75 MW Chaba Power House	0.05
FY 2023-24	Minor Capital Works	Estimate for Electrical Installation, Safety devices and luminaries at Reservoir and Switchyard of 1.75 MW Chaba Power House	0.04
		Sub-Total	0.59

3.9.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 46: Chaba HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	7.67	7.67	7.67	7.67	7.67
B	Auxiliary Consumption	MU	0.08	0.08	0.08	0.08	0.08
C	Net Generation(A-B)	MU	7.59	7.59	7.59	7.59	7.59
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	7.59	7.59	7.59	7.59	7.59
F	Actual Generation	MU	4.67	4.78	5.12	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	2.09	2.17	2.26	2.36	2.44
i	R&M Expenses	Rs. Cr.	0.30	0.31	0.32	0.33	0.33
ii	Employees Expenses	Rs. Cr.	1.74	1.81	1.89	1.97	2.05
iii	Pension Contributions	Rs. Cr.	0.04	0.04	0.04	0.05	0.05
iv	A&G Expenses	Rs. Cr.	0.01	0.01	0.01	0.01	0.01
b	Depreciation	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
c	Interest & Finance Charges	Rs. Cr.	0.04	0.04	0.07	0.11	0.13
d	Return on Equity	Rs. Cr.	0.02	0.02	0.06	0.06	0.08
e	Interest on Working Capital	Rs. Cr.	0.09	0.09	0.09	0.10	0.10
f	Total AFC claimed	Rs. Cr.	2.24	2.32	2.49	2.63	2.76
	AFC approved in MYT Order	Rs. Cr.	2.19	2.27	2.37	2.47	2.55
	Difference in AFC		-0.05	-0.05	-0.12	-0.16	-0.21
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	1.12	1.16	1.25	1.31	1.38
h	Capacity Charges (=f/2)	Rs. Cr.	1.81	1.89	2.09		
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	1.76	1.85	1.97		
j	Cost allowed in distribution business	Rs. Cr.	-0.05	-0.04	-0.12		
k	Surplus(+) / Shortfall(-)	Rs. Cr.	-0.05	-0.04	-0.12		

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
	(=j-i)						

3.9.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Chaba HEP.

3.10. Annual Fixed Charges for BS-Chamba HEP

3.10.1. 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.

3.10.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 0.50 Cr as on 1st April, 2014. The Commission had considered 100% debt funding for the plant with no outstanding loans. The Opening capital cost as on 1st April, 2019 is claimed including no additional capitalisation during 3rd Control Period and arrived as Rs. 0.50 Cr.

3.10.3. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 47: Chamba HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	1.77	1.77	1.77	1.77	1.77
B	Auxiliary Consumption	MU	0.02	0.02	0.02	0.02	0.02
C	Net Generation(A-B)	MU	1.75	1.75	1.75	1.75	1.75
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	1.75	1.75	1.75	1.75	1.75
F	Actual Generation	MU	2.07	1.33	1.27	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	0.45	0.46	0.49	0.50	0.52
i	R&M Expenses	Rs. Cr.	0.13	0.13	0.14	0.14	0.14
ii	Employees Expenses	Rs. Cr.	0.30	0.31	0.33	0.34	0.36
iii	Pension Contributions	Rs. Cr.	0.01	0.01	0.01	0.01	0.01
iv	A&G Expenses	Rs. Cr.	0.01	0.01	0.01	0.01	0.01
b	Depreciation	Rs. Cr.	0.01	0.01	0.01	0.01	0.01
c	Interest & Finance Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
d	Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
e	Interest on Working Capital	Rs. Cr.	0.02	0.02	0.02	0.02	0.02
f	Total AFC claimed	Rs. Cr.	0.48	0.49	0.52	0.53	0.55
	AFC approved in MYT Order	Rs. Cr.	0.48	0.50	0.52	0.54	0.56
	Difference in AFC		0.00	0.01	0.00	0.01	0.01
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.24	0.24	0.26	0.27	0.28
h	Capacity Charges (=f/2)	Rs. Cr.	0.52	0.43	0.45		
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	0.52	0.44	0.45		
j	Cost allowed in distribution business	Rs. Cr.	0.00	0.01	0.00		

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	0.00	0.01	0.00		

3.10.4. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for BS-Chamba HEP.

3.11. Annual Fixed Charges for Gaj HEP

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

3.11.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 30.38 Cr as on 1st April, 2014. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 1.22 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 31.60 Cr. Further, the Commission had approved Return on Equity to HPSEBL for Rs. 15 Cr invested in project by GoHP in Tariff Order dated 10th June 2014. HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021- 22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 48: Gaj HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	31.6	31.83	32.14	32.19	32.27
Additional Capitalisation	0.23	0.31	0.05	0.08	2.15
Closing GFA	31.83	32.14	32.19	32.27	34.42

3.11.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 49: Gaj HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2022-23	Minor Capital Works	Estimate for providing extra strengthen to existing diversion structure of Gaj khud to divert the water flow toward trench weir by providing wire crates under Resident Engineer Gaj Power House Division, HPSEBL Gharoh.	0.04
FY 2022-23	Minor Capital Works	Estimate for Protection of Valve house road at RD 0/800 to 0/810 and 1/300 to 1/330 mtrs. by providing wire crates and cement concrete under Resident Engineer Gaj Power House Division, HPSEBL Gharoh.	0.04
		Sub-Total	0.08
FY 2023-24	Funded Scheme	Procurement of 2 Nos. spare runners	2.00
FY 2023-24	Minor Capital Works	Estimate for providing installation, cabling, earthing & commissioning of 125 KVA silent Diesel Generator set with automatic changeover system of Gaj Power House under Resident Engineer Gaj Power House Division, HPSEBL Gharoh.	0.15
		Sub-Total	2.15

3.11.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 50: Gaj HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	38.31	38.31	38.31	38.31	38.31

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
B	Auxiliary Consumption	MU	0.38	0.38	0.38	0.38	0.38
C	Net Generation(A-B)	MU	37.93	37.93	37.93	37.93	37.93
D	Less: Free Power to GoHP	MU	4.55	4.55	4.55	4.55	4.55
E	Energy Available (C-D)	MU	33.38	33.38	33.38	33.38	33.38
F	Actual Generation	MU	46.68	42.55	31.85	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	5.81	6.05	6.31	6.57	6.84
i	R&M Expenses	Rs. Cr.	0.66	0.68	0.70	0.72	0.74
ii	Employees Expenses	Rs. Cr.	4.81	5.01	5.23	5.45	5.68
iii	Pension Contributions	Rs. Cr.	0.22	0.24	0.26	0.27	0.29
iv	A&G Expenses	Rs. Cr.	0.12	0.12	0.12	0.13	0.13
b	Depreciation	Rs. Cr.	0.72	0.74	0.75	0.76	0.92
c	Interest & Finance Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.03
d	Return on Equity	Rs. Cr.	2.39	2.41	2.41	2.41	2.51
e	Interest on Working Capital	Rs. Cr.	0.31	0.30	0.31	0.32	0.34
f	Total AFC claimed	Rs. Cr.	9.23	9.50	9.78	10.07	10.64
	AFC approved in MYT Order	Rs. Cr.	9.11	9.36	9.62	9.90	10.18
	Difference in AFC		-0.12	-0.14	-0.16	-0.17	-0.46
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	1.38	1.42	1.46	1.51	1.59
h	Capacity Charges (=f/2)	Rs. Cr.	4.62	4.75	4.89		
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	11.07	10.80	9.55		
j	Cost allowed in distribution business	Rs. Cr.	10.62	10.41	9.40		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.45	-0.39	-0.15		

3.11.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Gaj HEP.

3.12. Annual Fixed Charges for Giri HEP

3.12.1. 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.

3.12.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 36.22 Cr as on 1st April, 2014. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 0.07 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 36.29 Cr. Further, extension of useful life of the power house from 40 years to 60 years has been considered by the Petitioner. HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021- 22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 51: Giri HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	36.29	36.29	38.42	38.42	38.69
Additional Capitalisation	0	2.13	0	0.27	72.03

	FY 20	FY 21	FY 22	FY 23	FY 24
Closing GFA	36.29	38.42	38.42	38.69	110.72

3.12.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 52: Giri HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2022-23	Board Building Works	Const. of one No. VIP room of Guest house at Giri Nagar	0.20
2022-23	Board Building Works	P/Laying interlocking blocks in road, parking area & passage of field hostel No.1 at Giri Nagar	0.07
		Sub-Total	0.27
FY 2023-24	Board Building Works	C/o three rooms rest cmp at Shaktinagar- Nahan with furnishing	0.70
FY 2023-24	Board Building Works	C/o Type -II Block (4 Sets) near field Hostel Giri Power House	0.80
FY 2023-24	Minor Capital Works	Estimate for replacement of 33KV old VCB of Paonta and Dhaulakaun feeder with 33 KV new VCB at 132/33 KV Sub-station Girinagar .	0.09
FY 2023-24	Minor Capital Works	Estimate for Manufacturing, Fabrication, Erection, Testing and Commissioning of Pivot Ring Self Lubricating Bushes, Bearing Body Upper Self Lubricating Bushes and Bearing Body Lower Self	
FY 2023-24		Lubricating Bushes for unit No.I of 2x30MW Giri Power House at Girinagar	0.26
FY 2023-24	Minor Capital Works	Estimate for Providing and Supplying of 1 No. Slurry/Silt agitator Submersible Pump FLOWMORE Make Model FLAS 10020(DM), 20HP/15kW, 1450RPM,2500LMP at 2x30MW Giri Power House at Girinagar	
FY 2023-24	RMU & LE scheme	RMU & LE scheme	69.90
		Sub-Total	72.03

3.12.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 53: Giri HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	289.55	289.55	289.55	289.55	289.55
B	Auxiliary Consumption	MU	2.03	2.03	2.03	2.03	2.03
C	Net Generation(A-B)	MU	287.52	287.52	287.52	287.52	287.52
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	287.52	287.52	287.52	287.52	287.52
F	Actual Generation	MU	224.29	164.12	209.91	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	19.30	20.09	20.90	21.76	22.65
i	R&M Expenses	Rs. Cr.	5.13	5.28	5.44	5.60	5.77
ii	Employees Expenses	Rs. Cr.	12.62	13.16	13.71	14.29	14.89
iii	Pension Contributions	Rs. Cr.	1.28	1.37	1.46	1.57	1.68
iv	A&G Expenses	Rs. Cr.	0.27	0.28	0.29	0.30	0.31
b	Depreciation	Rs. Cr.	0.13	0.24	0.26	0.29	4.63

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
c	Interest & Finance Charges	Rs. Cr.	0.07	0.14	0.19	0.17	2.71
d	Return on Equity	Rs. Cr.	0.13	0.23	0.23	0.24	3.59
e	Interest on Working Capital	Rs. Cr.	0.85	0.83	0.86	0.90	1.11
f	Total AFC claimed	Rs. Cr.	20.48	21.53	22.43	23.35	34.69
	AFC approved in MYT Order	Rs. Cr.	19.82	20.63	21.46	29.00	39.86
	Difference in AFC		-0.66	-0.90	-0.97	5.65	5.17
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.36	0.37	0.39	0.41	0.60
h	Capacity Charges (=f/2)	Rs. Cr.	10.24	10.76	11.21		
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	18.22	16.91	19.40		
j	Cost allowed in distribution business	Rs. Cr.	17.53	16.22	18.56		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.69	-0.69	-0.84		

3.12.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Giri HEP.

3.13. Annual Fixed Charges for Larji HEP

- 3.13.1. Larji HEP is a 126 MW (3 x 42 MW) project commissioned in the year 2006.
- 3.13.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 1,096.39 Cr as on 1st April, 2014. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 1.29 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 1,097.68 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021- 22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 54: Larji HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	1097.68	1097.68	1099.02	1099.02	1100.31
Additional Capitalisation	0	1.34	0	1.29	11
Closing GFA	1097.68	1099.02	1099.02	1100.31	1111.31

3.13.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 55: Larji HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2022-23	Board Building Works	P/F of paver block around the rest house of HPSEBL at Sunder Nagar and remaining portion around the CE office building	0.25
FY 2022-23	Minor Capital Works	Estimate for providing and laying Micro concrete and High Performance concrete in scoured Glacis Block along with fixing of rails, Anchors and welded wire mesh etc.in downstream of Radial Gate No.1&3 of Barrage of Larji HEP (126MW)	0.61
FY	Minor	Estimate for replacement of all damaged Seals steel plates,	0.16

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
2022-23	Capital Works	clamps, fasteners, nut & bolts etc. including epoxy painting of Radial Gate No.1(Size 11X12.50Mtrs.)complete in all respect at Barrage site of Larji HEP(126MW)	
FY 2022-23	Minor Capital Works	Estimate for supply, installation & commissioning of one no. new 2nd heavy duty submersible pump for the drainage gallery of the 3X42MW Larji power house under Resident Engineer Larji power house Division HPSEBL Thalout.	0.27
		Sub-Total	1.29
FY 2023-24	Funded Scheme	Purchase of New TRCM installed at Barrage site	5.06
FY 2023-24	Minor Capital Works	Estimate for repair and commissioning of 01 No. 132/11kV,52MVA, Three Phase Power Transformer (BHEL make) lying at 3x42 MW Larji Power House under Resident Engineer Larji Power House Division HPSEBL, Thalout including transportation and insurance from site to works and back, assembly at site, testing and repair.	2.39
FY 2023-24	Minor Capital Works	Estimate for Testing before and after transportation of 41 MVA, 132/11KV Generator transformer from UHL-III site to Larji HEP, Transportation alongwith insurance, unloading, Dragging to transformer hall, erection, modification and commissioning at Larji power House and then transportation, restoration of 41MVA transformer at UHL site as and when required by HPSEBL and its erection and testing thereof	1.09
FY 2023-24	Board Building Works	C/o additional 2 rooms of rest house at Sunder Nagar alongwith furnishing	0.25
FY 2023-24	Minor Capital Works	Estimate for providing and laying Micro concrete and High Performance concrete in scoured Glacis Block along with fixing of rails, Anchors and welded wire mesh etc.in downstream of Radial Gate No.1&3 of Barrage of Larji HEP (126MW)	0.62
FY 2023-24	Minor Capital Works	Estimate for replacement of all damaged Seals steel plates, clamps, fasteners, nut & bolts etc. including epoxy painting of Radial Gate No.1(Size 11X12.50Mtrs.) complete in all respect at Barrage site of Larji HEP(126MW)	0.16
FY 2023-24	Minor Capital Works	Estimate for Commissioning of AIMS Governor and OPU and Procurement of required material for 2X200KW Billing MHP under Larji power House Division HPSEBL Thalout	0.08
FY 2023-24	Minor Capital Works	Estimate for Replacement of old flow meter with new Micro processor based Electro-magnetic flow meter of deferent size for 3X42MW Larji Power House	0.22
FY 2023-24	Minor Capital Works	Estimate for Manufacturing Supply Installation, Testing and Commissioning of 220 Volt Battery bank consisting of 110 Nos. Plante battery Cells each (Capacity of cell 2v/1070Ah) of Exide Make for 3X42MW Larji Power House	1.13
		Sub-Total	11

3.13.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 56: Larji HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	586.82	586.82	586.82	586.82	586.82
B	Auxiliary Consumption	MU	7.04	7.04	7.04	7.04	7.04
C	Net Generation(A-B)	MU	579.78	579.78	579.78	579.78	579.78
D	Less: Free Power to GoHP	MU	69.57	69.57	69.57	69.57	69.57
E	Energy Available (C-D)	MU	510.21	510.21	510.21	510.21	510.21
F	Actual Generation	MU	589.61	541.39	480.47	0.00	0.00

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	24.18	25.20	26.26	27.39	28.55
i	R&M Expenses	Rs. Cr.	5.10	5.25	5.41	5.57	5.73
ii	Employees Expenses	Rs. Cr.	15.90	16.57	17.26	17.99	18.75
iii	Pension Contributions	Rs. Cr.	2.69	2.87	3.07	3.29	3.52
iv	A&G Expenses	Rs. Cr.	0.49	0.51	0.52	0.54	0.55
b	Depreciation	Rs. Cr.	10.28	10.33	10.34	10.40	10.84
c	Interest & Finance Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
d	Return on Equity	Rs. Cr.	24.27	24.33	24.33	24.39	24.83
e	Interest on Working Capital	Rs. Cr.	1.69	1.61	1.66	1.70	1.77
f	Total AFC claimed	Rs. Cr.	60.42	61.48	62.59	63.88	65.98
	AFC approved in MYT Order	Rs. Cr.	60.27	61.34	62.45	63.63	64.85
	Difference in AFC		-0.15	-0.14	-0.14	-0.25	-1.13
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.59	0.60	0.61	0.63	0.65
h	Capacity Charges (=f/2)	Rs. Cr.	30.21	30.74	31.29		
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	65.12	63.36	60.76		
j	Cost allowed in distribution business	Rs. Cr.	64.92	63.15	60.63		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.20	-0.21	-0.13		

3.13.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Larji HEP.

3.14. Annual Fixed Charges for Nogli HEP

3.14.1. 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.

3.14.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 11.81 Cr as on 1st April, 2014. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 3.97 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 15.78 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 57: Nogli HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	15.78	15.78	15.89	17.19	17.63
Additional Capitalisation	0	0.11	1.3	0.44	0
Closing GFA	15.78	15.89	17.19	17.63	17.63

3.14.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 58: Nogli HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2022-23	Minor Capital Works	Estimate for construction of 3 Nos. fire protection wall in between power transformer at 22KV yard of Nogli Power House	0.07
FY 2022-23	Minor Capital Works	Estimate for Restoration of spill way channel of Nogli Power house RD 148.00mtrs to 178.00mtrs damaged due to slide on right portion towards Nallah side and falling of big trees on dated 9.01.2021	0.37
		Sub-Total	0.44

3.14.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 59: Nogli HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	9.85	9.85	9.85	9.85	9.85
B	Auxiliary Consumption	MU	0.10	0.10	0.10	0.10	0.10
C	Net Generation(A-B)	MU	9.75	9.75	9.75	9.75	9.75
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	9.75	9.75	9.75	9.75	9.75
F	Actual Generation	MU	6.10	5.06	4.23	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	2.95	3.07	3.19	3.32	3.44
i	R&M Expenses	Rs. Cr.	0.78	0.81	0.83	0.86	0.88
ii	Employees Expenses	Rs. Cr.	2.10	2.18	2.28	2.37	2.47
iii	Pension Contributions	Rs. Cr.	0.05	0.06	0.06	0.07	0.07
iv	A&G Expenses	Rs. Cr.	0.02	0.02	0.02	0.02	0.02
b	Depreciation	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
c	Interest & Finance Charges	Rs. Cr.	0.32	0.34	0.37	0.44	0.45
d	Return on Equity	Rs. Cr.	0.18	0.19	0.25	0.27	0.27
e	Interest on Working Capital	Rs. Cr.	0.14	0.13	0.14	0.15	0.15
f	Total AFC claimed	Rs. Cr.	3.59	3.73	3.95	4.17	4.32
	AFC approved in MYT Order	Rs. Cr.	3.09	3.21	3.34	3.47	3.60
	Difference in AFC		-0.50	-0.52	-0.61	-0.70	-0.72
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	1.84	1.92	2.03	2.14	2.21
h	Capacity Charges (=f/2)	Rs. Cr.	1.80	1.87	1.97		
i	Cost allowed in distribution business	Rs. Cr.	2.92	2.84	2.83		
j	Cost allowed in distribution business	Rs. Cr.	2.51	2.44	2.40		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.41	-0.40	-0.44		

3.14.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Nogli HEP.

3.15. Annual Fixed Charges for Rongtong HEP

3.15.1. Rongtong HEP is a 2 MW (4 x 0.50 MW) project commissioned in the year 1986-87.

3.15.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 16.39 Cr as on 1st April, 2014. The Commission had considered 100% debt funding for the plant with no outstanding loans. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 6.45 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 22.84 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 60: Rongtong HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	22.84	23.42	23.78	23.78	23.78
Additional Capitalisation	0.58	0.36	0	0	0.27
Closing GFA	23.42	23.78	23.78	23.78	24.05

3.15.3. The details of revised projected capitalisation for FY 2022-23 and FY 2023-24 are as follows:

Table 61: Rongtong HEP-Revised projected additional capitalization for FY 22 and FY 23

Financial Year	Scheme	Work/ Equipment	Amount (in Rs. Cr.)
FY 2023-24	Minor Capital Works	Estimate for Providing Installation, Testing & Commissioning of Turbine oil centrifugal dehydration Plant, capacity 1500LPH, CBS Make, Model No.UOCP-010-S with inbuilt heating arrangement, working altitude up to 4500 mtrs. complete with all accessories for 4X500 KW Rongtong Power house	0.27
		Sub-Total	0.27

3.15.4. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 62: Rongtong HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	7.64	7.64	7.64	7.64	7.64
B	Auxiliary Consumption	MU	0.08	0.08	0.08	0.08	0.08
C	Net Generation(A-B)	MU	7.56	7.56	7.56	7.56	7.56
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	7.56	7.56	7.56	7.56	7.56
F	Actual Generation	MU	0.31	0.32	0.96	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	2.15	2.23	2.33	2.42	2.52
i	R&M Expenses	Rs. Cr.	0.23	0.23	0.24	0.25	0.25
ii	Employees Expenses	Rs. Cr.	1.88	1.95	2.04	2.12	2.21
iii	Pension Contributions	Rs. Cr.	0.04	0.05	0.05	0.05	0.06
iv	A&G Expenses	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
b	Depreciation	Rs. Cr.	1.10	1.26	1.42	1.64	1.10
c	Interest & Finance Charges	Rs. Cr.	0.20	0.11	0.02	0.00	0.00
d	Return on Equity	Rs. Cr.	0.33	0.34	0.34	0.34	0.36
e	Interest on Working Capital	Rs. Cr.	0.12	0.12	0.12	0.13	0.13
f	Total AFC claimed	Rs. Cr.	3.90	4.06	4.24	4.54	4.10

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
	AFC approved in MYT Order	Rs. Cr.	2.57	2.66	2.76	2.86	2.96
	Difference in AFC		-1.33	-1.40	-1.48	-1.68	-1.14
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	2.58	2.68	2.80	3.00	2.71
h	Capacity Charges (=f/2)	Rs. Cr.	1.95	2.03	2.12		
i	Revenue recoverable based on actual generation (=h+gx F/10)	Rs. Cr.	2.03	2.12	2.39		
j	Cost allowed in distribution business	Rs. Cr.	1.34	1.39	1.55		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.69	-0.73	-0.83		

3.15.5. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Rongtong HEP.

3.16. Annual Fixed Charges for Rukti HEP

3.16.1. 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.

3.16.2. The Commission in Tariff Order dated November 11, 2021, had approved a capital cost of Rs. 1.59 Cr as on 1st April, 2014. The Opening capital cost as on 1st April, 2019 including net additional capitalisation of Rs. 8.91 Cr. incurred during 3rd Control Period claimed in True Up is arrived as Rs. 10.50 Cr. Further, HPSEBL has submitted the provisional capitalisation for FY 2019-20 to FY 2021-22 and revised projected capitalisation for FY 2022-23 and FY 2023-24 as follows:

Table 63: Rukti HEP- GFA for 4th MYT Control Period submitted by Petitioner (in Rs. Cr.)

	FY 20	FY 21	FY 22	FY 23	FY 24
Opening GFA	10.5	10.61	10.61	10.61	10.61
Additional Capitalisation	0.11	0	0	0	0
Closing GFA	10.61	10.61	10.61	10.61	10.61

3.16.3. The revised AFC determined for 4th MYT Control Period for FY 2022-23 and FY 2023-24 along with provisional figures from FY 2019-20 to FY 2021-22 are as follows:

Table 64: Rukti HEP- Revised AFC for 4th MYT Control period (in Rs. Cr.)

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
A	Gross Generation (DE)	MU	6.54	6.54	6.54	6.54	6.54
B	Auxiliary Consumption	MU	0.07	0.07	0.07	0.07	0.07
C	Net Generation(A-B)	MU	6.47	6.47	6.47	6.47	6.47
D	Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
E	Energy Available (C-D)	MU	6.47	6.47	6.47	6.47	6.47
F	Actual Generation	MU	2.56	2.56	2.56	0.00	0.00
	Annual Fixed Charges (AFC)						
a	O&M expenses (Rs. Cr.) (i+ii+iii+iv)	Rs. Cr.	0.47	0.49	0.51	0.53	0.54
i	R&M Expenses	Rs. Cr.	0.17	0.18	0.18	0.19	0.19

S.No.	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
ii	Employees Expenses	Rs. Cr.	0.27	0.28	0.29	0.30	0.31
iii	Pension Contributions	Rs. Cr.	0.03	0.03	0.04	0.04	0.04
iv	A&G Expenses	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
b	Depreciation	Rs. Cr.	0.34	0.02	0.02	0.02	0.02
c	Interest & Finance Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
d	Return on Equity	Rs. Cr.	0.42	0.42	0.42	0.42	0.42
e	Interest on Working Capital	Rs. Cr.	0.03	0.03	0.03	0.03	0.03
f	Total AFC claimed	Rs. Cr.	1.26	0.96	0.98	1.00	1.01
	AFC approved in MYT Order	Rs. Cr.	0.51	0.51	0.53	0.55	0.57
	Difference in AFC		-0.75	-0.45	-0.45	-0.45	-0.44
	Tariff and Revenue (based on DE)						
g	Energy Charge Rate(=f*10/E*50%)	Rs./kWh	0.97	0.74	0.76	0.77	0.78
h	Capacity Charges (=f/2)	Rs. Cr.	0.63	0.48	0.49		
i	Revenue recoverable based on actual generation (=h+gxF/10)	Rs. Cr.	0.88	0.67	0.68		
j	Cost allowed in distribution business	Rs. Cr.	0.38	0.40	0.37		
k	Surplus(+) / Shortfall(-) (=j-i)	Rs. Cr.	-0.50	-0.27	-0.31		

3.16.4. HPSEBL has requested the Commission to approve the provisional True up of FY 2019-20 and FY 2020-21 along with revised AFC for FY 2022-23 and FY 2023-24 for Rukti HEP.

3.17. Rectification of Errata in Generation Tariff Order dated 11.11.2021

3.17.1. The Petitioner has submitted that the rates of carrying/ holding cost for truing up the surplus of 2nd Control Period from FY 14 to FY 22 considered in Tariff Order dated 11.11.2021 is incorrect. The Petitioner has therefore, submitted the approved and revised rates of carrying cost applicable for truing up is submitted as follows:

Table 65: Approved Vs. Revised rates of Carrying cost (in %) submitted by the Petitioner

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21
Approved rate of Carrying Cost (in Order dated 11.11.2021)	14.45	14.75	14.75	12.20	11.00	11.15	11.55	10.75
Revised rate of Carrying Cost	13.20	13.50	13.04	12.79	11.00	11.39	11.16	10.07

3.17.2. Further, the Petitioner has filed for revising the computation methodology of carrying/ holding cost vide Review Petition in the matter of Mid Term Performance Review of Distribution business of HPSEBL for 4th MYT Control Period approved in Tariff Order dated 29.3.2022 vide Petition No.38/2022, which was disposed of vide Order dated 23.11.2022 by the Commission, however, a review Petition in the matter has been filed by the Discom before the Hon'ble APTEL which is in process.. Further, the Petitioner requested to consider the revised methodology to be applicable from 3rd Control Period onwards.

3.17.3. The Commission had approved the closing surplus with holding of Rs. 49.30 Cr. while truing up 2nd Control Period in Tariff Order dated 11.11.2021, which has now been revised by the Petitioner (considering rectified rate of holding cost for FY 14), as follows:

Table 66: Revised closing surplus for 2nd Control Period submitted by Petitioner (Rs. Cr.)

Particulars	FY 12	FY 13	FY 14
Opening Surplus/ (Gap)	0.00	27.95	38.67
Addition	26.25	6.14	4.7
Closing Surplus/ (Gap)	26.25	34.10	43.37
Interest Rate	13.00%	14.75%	13.20%
Average Surplus/ (Gap)	13.13	31.02	41.02
Carrying Cost	1.71	4.58	5.41
Closing Surplus/ (Gap) with holding cost	27.95	38.67	48.79

3.18.Computation of Revenue (Gap)/ Surplus for Provisional Truing Up from FY 20 to FY 21

3.18.1. The station-wise revenue (gap)/surplus submitted by the Petitioner from FY 20 to FY22 is as follows:

Table 67: of Revenue (gap)/ surplus for provisional true up from FY 20 to FY 21 submitted by Petitioner (Rs. Cr.)

Power House	FY 20	FY 21
Andhra	(0.01)	(0.10)
Baner	(0.53)	(0.08)
Bassi	(6.89)	(8.01)
Bhaba	(12.81)	(15.69)
Binwa	(1.19)	(1.64)
Chaba	(0.05)	(0.04)
Chamba	(0.00)	0.01
Gaj	(0.45)	(0.39)
Giri	(0.69)	(0.69)
Larji	(0.20)	(0.21)
Nogli	(0.41)	(0.40)
Rongtong	(0.69)	(0.73)
Rukti	(0.50)	(0.27)
Total	(24.42)	(28.22)

3.18.2. The opening Surplus for FY 15 is considered to be same as the closing surplus of FY 14. Further, the revenue (Gap)/Surplus for truing up of 3rd Control Period (FY 15 to FY 19) and provisional true up from FY 20 to FY21 is computed as follows:

Table 68: Revenue (Gap)/ Surplus along with carrying cost submitted by Petitioner (in Rs. Cr.)

Surplus / Gap	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	Total
Opening	48.79	51.39	39.54	27.09	6.26	(30.06)	(54.48)	(82.70)	
Surplus / (Gap)	2.60	(11.85)	(12.45)	(20.83)	(36.32)	(24.42)	(28.22)		(131.49)
Closing	51.39	39.54	27.09	6.26	(30.06)	(54.48)	(82.70)	(82.70)	
Rate of (Carrying)/ Holding	13.50%	13.04%	12.79%	11.00%	11.39%	11.16%	10.07%	10.00%	

Cost									
(Carrying)/ Holding Cost	6.76	5.93	4.26	1.83	(1.36)	(4.72)	(6.91)	(8.27)	(2.47)
Total									(133.95)

3.19. Revised Additional Expenditure submitted by Petitioner

3.19.1. The Petitioner in its additional submissions has re-submitted the following additional capital expenditure in 4th Control Period along with details like scheme, work details, administrative approvals, date of sanction for the work, etc:

FY 2020

Table 69: Revised Capital expenditure submitted by Petitioner for FY 2019-20

Name of Scheme	Work details for FY 20	Amount in Rs. Cr.	Administrative Approval	sanction of scheme	Sanction date
Andhra					
Minor Capital Work(Own Sources) 14.97.5	Est. For providing erection & commissioning of 2 No. 72.5 KV, 1600arms 4kva breaking capacity outdoor gas braker at Andhra PH (Minor Capital work)	0.03			
	Sub-total	0.03			
Bassi					
Minor Capital Work(Own Sources) 14.97.2	Esstt. For providing retaining wall in front of Block No. 2 type quarter No. 5,6,7&8 at colony at HPSEBL Colony Palampur(Minor capital Work)	0.20			
Minor Capital Work(Own Sources) 14.97.9	Purchase of 5 No's Greta mid back chair with Head rest 5 No's Companion C2 Computer Tables, 5 No's Acer desktop mini tower veriton M2460 G with Intel Core i5-7400 Processor, 4GB DDR RAM ITB HD with LED Monitor, 5 No's 1KVA offline UPS system ELNOVA Make, 1 No'XEROX Make monoprinter & 1 No Printer cum photostate machine Brother DCP-L2531DW for CE Gen. HPSEBL., Sunder Nagar.	0.05			
Minor Capital Work(Own Sources) 14.97.5	Procurement recommended critical spares and special T & P measurement equipment of Bassi HEP.	0.58	A/A &E/S accorded vide CE(P&M) office order endost. No. HPSEBL (Sectt.)402-150 (Bassi)/2015-16- 82442-49 dated 08.07.2015	TS No. CEG-13/2015-16 accorded vide CE(Gen.) letter No. HPSEBL/CE G/ DB-7/2015-16-9018-21 dated 02.09.2015	02.09.2015

Name of Scheme	Work details for FY 20	Amount in Rs. Cr.	Administrative Approval	sanction of scheme	Sanction date
	Sub-total	0.83			
Bhaba					
Own Sources	Estimate for purchase of 1 No. Mohinrda Beloro	0.08			
	Sub-total	0.08			
Binwa					
Minor Capital Work(Own Sources) 14.51.5	EST. FOR MANUFACTURING ERECTION & COMM. OF TRASH RACK CLEANING MACHINE WITH DRUM ROLLER STEEL ROPE 100 X 50 MM Channel, ANGLE NUTS & BOLTS RACHIT HANDLE FOR MANUALLY OPERATION AT FOREWAY OF BPHD UTTRALA	0.06	A/A &E/S No. CEG-84/ 2019-20 vide CE letter No. CEG/ DB-7/19-20-14136-38 dated 21.03.2020		21.03.2020
Minor Capital Work(Own Sources) 14.51.4	Esstt for construction of protection wall with wire creates from RD.00 to .45 mtr to protect the land slide work shop building on left bank of Binwa khad (Minor capital work)	0.03	A/A &E/S No. CEG-81/ 2019-20 vide CE letter No. CEG/ DB-7/19-20-14193-95 dated 21.03..2020		21.03.2020
	Sub-total	0.09			
Gaj					
Minor Capital Work(Own Sources)	Estimate for providing installation testing commissioning inc charging of 55 No battery cells 2volt 225AH battery bank in Gaj HEP under Minor Capital work	0.23	A/A & E/S No. CEG-68/2019-20 vide CEG letter No. HPSEBL/ CEG/DB-7/2019-20-13477-79 dated 07.03.2020		07.03.2020
	Sub-total	0.23			
Rong Tong					
Tribal Area Sub Plan Rongtong	Tribal Area Sub Plan Rongtong	0.58			
	Sub-total	0.58			
Rukti					
Tribal Area Sub Plan Rukti	Tribal Area Sub Plan Rukti	0.11			
	Sub-total	0.11			

FY 2021**Table 70: Revised Capital expenditure submitted by Petitioner for FY 2020-21**

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	sanction of scheme	Sanction date
Andhra					

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	Minor Capital Work/Estimate for Providing / Construction of Protection wall at Right Bank of Pubber River for protection of HPSEBL Middle School Buildings near D/S Colony at Sandhasu R.D 0.00 to 10.00 Mtr	0.05	A/A &E/S No. CEG- /2019-20 vide CE letter No. CEG/ DB-9/19-20-13308-10 dated 04.03.2020	TS No. 28/2019-20 vide SE Nahan letter No. HPSEBL/ SEGN/DB-10/2019-20-4115-18 dated 12.03.2020	12.03.2020
Minor Capital Work(Own Sources)	Minor Capital Work/Repair of damaged Abutments of Trench weir at Intake of Andhra Power House	0.06		TS No. APH-17/2019-20 vide RE Andhra PH letter No. HPSEBL/APH/ DB-2/2019-20-4011-13 dt. 31.03.2020	31.03.2020
Minor Capital Work(Own Sources)	Minor Capital Work/ Removal of silt/ slush from De silting Hopper No 2 valve gallery and clearing of hill side drain of reservoir of APH	0.03		TS No. APH-12/2019-20 vide RE Andhra PH letter No. HPSEBL/APH/ DB-2/2019-20-4008-10 dt. 31.03.2020	31.03.2020
Minor Capital Work(Own Sources)	Minor Capital Work/ Construction of Protection wall at right bank of pubbar river for protection of HPSEBL Middle school Building near D/s Colony at Sandhasu RD 10 to 20 mtrs.	0.05	A/A &E/S vide CE letter No. CEG/DB-9/19-20-13308-10 dated 04.03.2020	TS No. 28/2019-20 vide SE Nahan letter No. HPSEBL/ SEGN/DB-10/ 2019-20-4115-18 dated 12.03.2020	12.03.2020
Minor Capital Work(Own Sources)	Minor Capital Work/Estimate for channelisation of Andhra Khad including removal of big boulder and debris from U/S of Trench weir accumulated during flood in previous rainy season for making smooth flow of water over trench weir	0.06		TS No. APH-15/2019-20 vide RE Andhra PH letter No. HPSEBL/APH/ DB-2/2019-20-4011-13 dt. 31.03.2020	31.03.2020

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	Estimate for Providing of GI wire crate Wall near Confluence point of Jabbal nala Nalah near U/s S of Trench wire at Intake of Andhra Power House	0.06		TS No. APH-23/2019-20 vide RE Andhra PH letter No. HPSEBL/ APH/ DB-2/2019-20-4017-19 dt. 31.03.2019	31.03.2019
Minor Capital Work(Own Sources)	Estimate for Providing of GI wire Crate protection work near storage Reservoir of Andhra power house Chirgaon	0.05	A/A &E/S No. CEG-97/ 2019-20 vide CE letter No. CEG/ DB-9/20-21-14279-81 dated 30.03.2020	TS No. APH-21/2019-20 vide RE Andhra Letter No. HPSEBL/AP H/DB-2/2019-20-4014-16 dated 31.03.2020	31.03.2020
Minor Capital Work(Own Sources)	Construction of protection wall at Right Bank of Pubber River for protection of HPSEBL residential Colony at D/s Sandhasu at Rd 20.00 to 30.00 Mtr	0.06	A/A &E/S No. CEG-96/ 2019-20 vide CE letter No. CEG/ DB-9/20-21-14279-81 dated 30.03.2020	TS No. APH-20/2019-20 vide RE Andhra Letter No. HPSEBL/AP H/DB-2/2019-20-4014-16 dated 31.03.2020	31.03.2020
Minor Capital Work(Own Sources)	Construction of protection wall at Right Bank of Pubber River for protection of HPSEBL residential Colony at D/s Sandhasu at Rd 30.00 to 40.00 Mtr	0.05	A/A &E/S No. CEG-98/ 2019-20 vide CE letter No. CEG/ DB-9/20-21-14279-81 dated 30.03.2020	TS No. APH-22/2019-20 vide RE Andhra PH letter No. HPSEBL/ APH/ DB-2/2019-20-4017-19 dt. 31.03.2019	31.03.2019
Minor Capital Work(Own Sources)	Providing erection of 18 Mtr. Long Pole with foundation and fixing of 6 Nos. Zata Flood light Havellis make our equivalent at Andhra Power House.	0.06	A/A &E/S No. CEG-31/ 2020-21 vide CE letter No. CEG/DB-9/20-21-4825-27 dated 01.09.2020	TS No. SEGN 41/2020-21 vide SE Nahan letter No. HPSEBL/ SEGN/DB-10/2020-21-2000-03 dated 23.09.2021	31.03.2020

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
	Sub-total	0.53			
Bassi					
Procurement of recommended critical Spare & T&P equipment for 4*16.5MW Bassi HEP Loan No. 10 PFC	Procurement of recommended critical Spare & T&P equipment for 4*16.5MW Bassi HEP9 Loan No. 10 PFC	0.28	A/A &E/S accorded vide CE(P&M) office order endost. No. HPSEBL (Sectt.)402-150 (Bassi)/2015-16- 82442-49 dated 08.07.2015	TS No. CEG-13/2015-16 accorded vide CE(Gen.) letter No. HPSEBL/CE G/ DB-7/2015-16-9018-21 dated 02.09.2015	02.09.2015
Dismantling erection & commissioning of 4 No. Rotors leads and supply of 2 No. new Rotors Poles as spares for 4*16.5 MW Bassi Power House	Dismantling erection & commissioning of 4 No. Rotors leads and supply of 2 No. new Rotors Poles as spares for 4*16.5 MW Bassi Power House	2.14	A/A &E/S accorded vide CE(P&M) O/o endost. No. HPSEBL (SECTT.) 402-150/ (Bassi PH)/2018-19-379-83 dated 12.10.18		12.10.2018
Minor Capital Work(Own Sources) 14.97.5	Purchase of 2 Nos Computers SE Design PHE Sundernagar &1 No. Computer for RE Bassi Power House.	0.01	A/A & E/S No. CEG-99/2020-21 vide CEG letter No. HPSEB/ CEG/ DB-7/2020-21-15792-99 dated 31.03.2021	TS No. CEG-20/2020-21 vide CEG letter No. HPSEB/CE G/DB-7/2020-21-15792-99 dated 31.03.2021	31.03.2021
	Sub-total	2.43			
Bhaba					
Minor Capital Work(Own Sources)	Est. for shifting 1 No double pole structure of new feeder SR No. 84 near Sherpa colony from 66/22 kV Nathpa s/stn to 2X2.25 MW BAP Kafnu. Rs 456217, CAO 37 No. 0529884 dt. 08-03-2019 & 0016003 dt. 04-04-2020	0.04			

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	Removal of Silt /Slush /Grit/ Pebble etc deposited in the water conductor channel from intake tunnel after to desilting tank up to forebay of Lingti HEP (400KV)	0.05			
Minor Capital Work(Own Sources)	Providing and fixing of MS Sheet 10 MM Thick on wall of desilting Hopper outlet gallery where the concrete of wall eroded due to high velocity of water of 120 MW Bhaba Power House	0.05			
Minor Capital Work(Own Sources)	Providing Fencing Backside of reservoir of SVP Bhaba 120 MW	0.11			
Minor Capital Work(Own Sources)	Est for Construction of Discharge site on upstream of intake of SVP Bhaba 120 Mw by providing GI Wire Crate	0.05			
Minor Capital Work(Own Sources)	Estim. For repair of Burnt Rotor	0.45			
	Sub-total	0.75			
Binwa					
Minor Capital Work(Own Sources)	EST. TO PROTECT THE EROSION ALONG THE TAIL RACE OF bphd BY PROVIDING C.C.R/WALL IN 1:5:10 WITH 15% PLUM ALONG THE BINWA KHAD RD0.00 TO 8.00 MTRS UNDER BPHD UTTRALA	0.03	A/A &E/S No. CEG-65/ 2019-20 vide CE letter No. CEG/ DB-7/19-20-13432-34 dated 06.03.2020		06.03.2020
Minor Capital Work(Own Sources)	EST. FOR PROV. & FIXING 4 NOS. 33 KV 1250 AMP. 25 KA BREAKING CAPACITY OUTDOOR TYPE VCB IN PLACE OF OLD AND OBSOLETE 33 KV 1250 AMP MOCB AT 33KV 2x3 MW BPHD UTTRALA	0.12	A/A &E/S No. CEG-71/ 2019-20 vide CE letter No. CEG/ DB-7/19-20-13512-14 dated 07.03.2020		07.03.2020
Minor Capital Work(Own Sources)	EST. FOR PROV. CONCRETE WALL IN FRONT OF BINWA KHAD TO SUPPORT OF RETAINING WALL TO AVOID THE FURTHER EROSION BY FLOOD TO BINWA POWER HOUSE BUILDING AT RD 10.00 TO 55.00 MTR. UNDER BPHD-UTTRALA.	0.04	A/A &E/S No. CEG-12/ 2019-20 vide CE letter No. CEG/ DB-7/19-20-4457-59 dated 24.07.2019		24.07.2019

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	EST. FOR PROV. CONCRETE WALL IN FRONT OF BINWA KHAD TO SUPPORT OF RETAINING WALL TO AVOID THE FURTHER EROSION BY FLOOD TO BINWA POWER HOUSE BUILDING AT RD-55.00 TO 77.50 MTR. UNDER BPHD-UTTRALA.	0.03	A/A &E/S No. CEG-13/2019-20 vide CE letter No. CEG/ DB-7/19-20-4454-56 dated 24.07.2019		24.07.2019
Minor Capital Work(Own Sources)	EST FOR PROVING INSTALLATION TESTING & SUCCESSFUL COMMISSIONING OF OPTICAL FIBER CABLING SYSTEM FOR ONLINE REAL TIME MONITORING SYSTEM CCTV CAMARA & COMM. ETC AONGWITH ALIED COMPONENTS FOR BPHD UTTRALA	0.05	A/A &E/S No. CEG-21/2020-21 vide CE letter No. CEG/ DB-7/2020-21-3347-49 dated 25.07.2020		25.07.2020
Minor Capital Work(Own Sources)	Esstt for Assembling testing & comm. Of damaged 3600 KVA hydro alternator at Binwa PH	0.08	A/A &E/S No. CEG-47/2020-21 vide CE letter No. CEG/ DB-7/20-21-5371-73 dated 11.09.2020		11.09.2020
Minor Capital Work(Own Sources)	Estt. For inst. Test and comm of Surveillance system CCTV at dam Site	0.04	A/A &E/S No. CEG-63/2019-20 vide CE letter No. CEG/ DB-7/19-20-13429-31 dated 06.03.2020		06.03.2020
Funded Scheme	Purchase of 1 Number additional runner for Binwa PH	1.50	E/S No. HPSEBL/CEG/DB-7(Vol. XV)/2018-19-10698-705 dated 07.01.2019	TS No. CEG-34/2018-19 accorded vide CE(Gen.) letter No. HPSEBL/CEG/ DB-7/2018-19-10991-97 dated 16.01.2019	16.01.2019
	Sub-total	1.89			
Chaba					
Minor Capital Work(Own Sources)	Estt. For Prov.,Fixing and Testing and Comm. Of CCTV at Chaba PH	0.05		TS No. CEG-50/2020-21 accorded vide CE(Gen.) letter No.	21.03.2020

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
				HPSEBL/ CEG/ DB-10/2020-21-5507-09 dated 18.09.2020	
	Sub-total	0.05			
Gaj					
Minor Capital Work(Own Sources)	Prov. protection of the Power House bench along the Gaj Khad at left bank by prov. Plum concrete & wire crate under Gaj P/H Division HPSEBL Gharoh.	0.05			
Minor Capital Work(Own Sources)	Prov. of existing of up stream & down stream trench weir of Gaj Khad by prov. reinforced cement concrete M-25 over eroded trench weir of Gaj P/H	0.03			
Minor Capital Work(Own Sources)	Estt. For 2 No. Moog Vaulves Model D-633-345 B & 1 DIGITAL Excitation Control System for Gaj Power HOUSE	0.15			
Minor Capital Work(Own Sources)	Providing Extra strength to executing diversion structure of Gaj Khad to divert the water flow toward trench weir by providing wire crate under Gaj Power House division Garoh	0.04	A/A &E/S No. CEG-18/ 2020-21 vide CE letter No. CEG/ DB-7/20-21-2773-75 dated 13.07.2020		13.07.2020
Minor Capital Work(Own Sources)	Providing protection of value House Road at RD 0/800 to 0/810 & 1/330 Mtr. By Providing wire creates & Cement concrete under Gaj Power House .	0.04	A/A &E/S No. CEG-19/ 2020-21 vide CE letter No. CEG/ DB-7/20-21-2767-69 dated 13.07.2020		13.07.2020
	Sub-total	0.31			
Giri					
Capex New Board Building	Construction of New VIP Set in Field hostel at Girinagar a/w furniture, A.C.,LED etc. under R.E. Giri Power House Division HPSEBL Hgirinagar.	0.20		T/s No. SEGN-25/2019-20 vide SE Nahan letter SEGN/DB-11/ 2019-20-3016-19 dated 12.12.2019	12.12.2019
Minor Capital Work(Own Sources)	Estimate for providing & laying new wire crate at RD 66.50 Mtrs.to 75.25 Mtr. Washed away during flood to protect the land sliding upstream at Jateon Barrage under GPHD	0.03	A/A &E/S No. CEG-74/ 2019-20 vide CE letter No. CEG/ DB-9/2019-20-		13.03.2020

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
			13564-66 dated 13.03.2020		
Minor Capital Work(Own Sources)	Estimate for providing & laying new wire crate at RD 99.25 Mtrs.to 10555 Mtr. Washed away during flood to protect the land sliding upstream at Jateon Barrage under GPHD HPSEBL Girinagar	0.02	A/A &E/S No. CEG-75/ 2019-20 vide CE letter No. CEG/ DB-9/2019-20-13561-63 dated 13.03.2020		13.03.2020
Minor Capital Work(Own Sources)	Estimate for providing & laying new wire crate at RD 114.50 Mtrs.to 123.25 Mtr. Washed away during flood to protect the land sliding upstream at Jateon Barrage under GPHD HPSEBL Girinagar	0.03	A/A &E/S No. CEG-76/ 2019-20 vide CE letter No. CEG/ DB-9/2019-20-13558-60 dated 13.03.2020		13.03.2020
Minor Capital Work(Own Sources)	Estimate for providing & laying new wire crate at RD 205.25 Mtrs.to 230.25 Mtr. Washed away during flood to protect the land sliding upstream at Jateon Barrage under GPHD HPSEBL Girinagar	0.05	A/A &E/S No. CEG-77/ 2019-20 vide CE letter No. CEG/ DB-9/2019-20-13555-57 dated 13.03.2020		13.03.2020
Minor Capital Work(Own Sources)	Estimate for providing & laying toe Protection wall of G.I. wire crate at Babrog Nallah at right bank of at Jateon Barrage under GPHD HPSEBL Girinagar	0.05	A/A &E/S No. CEG-79/ 2019-20 vide CE letter No. CEG/ DB-9/2019-20-13549-51 dated 13.03.2020		13.03.2020
Minor Capital Work(Own Sources)	Prov. Of CCTV Surveillance in 220/132/33 kV s/stn in Giri PH	0.05	A/A &E/S No. CEG-36/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-4995-97 dated 04.09.2020	T/s No. SEGN-38/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-2004-07 dated 23.09.2020	04.09.2020
Minor Capital Work(Own Sources)	Estimate for providing & laying new wire crate at RD 45 Left Bank at Dabrog Ka Kallah at Jateon Barrage under GPHD HPSEBL Girinagar	0.06	A/A &E/S No. CEG-41/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-5202-04 dated 08.09.2020		08.09.2020

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	Estimate for CO2 flooding system for GPHD HPSEBL Girinagar	0.51	A/A &E/S No. CEG-19/ 2019-20 vide CE letter No. CEG/ DB-9/2019-20-6422-24 dated 04.09.2019		04.09.2019
Minor Capital Work(Own Sources)	Estimate for providing wire crate at RD 90.00 left bank of Dabog ka-kallah at right bank of a Jeton Barrage of 2x30 MW under GPHD HPSEBL Girinagar.	0.05	A/A &E/S No. CEG-42/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-5205-07 dated 08.09.2020		08.09.2020
Minor Capital Work(Own Sources)	Estimate for providing 1 No. Aluminium boat for maintenance of gate/under sluice gate etc. at Jeton Barrage of under GPHD HPSEBL Girinagar.	0.03	A/A &E/S No. CEG-17/ 2020-21 vide CE letter No. CEG/ DB-9/20-21-2647-4927 dated 30.09.2020		30.09.2020
Minor Capital Work(Own Sources)	Estimate for providing installation and commissioning CCTV surveillance in power House/ sub Division Office complex and works of area under GPHD HPSEBL Girinagar.	0.05	A/A &E/S No. CEG-37/ 2020-21 vide CE letter No. CEG/ DB-9/20-21-5055-57dated 30.09.2020	T/s No. SEGN-37/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-2004-07 dated 23.09.2020	30.09.2020
Minor Capital Work(Own Sources)	Estimate for Construction of new check post at Jateon barrage under RE GPHD HPSEBL Girinagar.	0.02		T/s No. SEGN-33/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-2004-07 dated 23.09.2020	23.09.2020
Minor Capital Work(Own Sources)	Estimate for providing 1 No. Aluminium boat 12'-6' long for support of main 20 feet long boat for maintenance of gates/under sluice gates etc. of at Jateon Barrage of under GPHD HPSEBL Girinagar	0.03	A/A &E/S No. CEG-87/ 2020-21 vide CE letter No. CEG/ DB-9/20-21-11517-19 dated 08.02.2021		08.02.2020

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	Estimate for providing & laying New wire crate at outfall of silt ejector gate of jateon barrage under BMSD of 2x30 MW under GPHD HPSEBL Girinagar	0.05	A/A &E/S No. CEG-78/ 2019-20 vide CE letter No. CEG/ DB-9/2019-20-13552-54 dated 13.03.2020		13.03.2020
Minor Capital Work(Own Sources)	Estimate for providing wire crate at R.D. 120.00 meter upstream of barrage right side of Dabrog Ka-Kallah at right bank of at Jateon Barrage of 2x30 MW under GPHD HPSEBL Girinagar	0.06	A/A &E/S No. CEG-90/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-11816-18 dated 16.02.2021		16.02.2021
Minor Capital Work(Own Sources)	Estimate for providing wire crate downstream of jateon barrage to protect the silt ejector outlet gate of Giri power house barrage at jateon barrage at jateon from R.D. 90.00 meter to 137.50 meter under RE GPHD HPSEBL Girinagar	0.04	A/A &E/S No. CEG-91/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-11937-39 dated 17.02.2021		17.02.2021
Minor Capital Work(Own Sources)	Estimate for Construction of Steel ladder in between Anchor Block No.5 to Anchor Block No. 4 for easy access to workers for mtc work of Penstock of 2X30 MW Giri power House Division HPSEBL Girinagar.	0.10	A/A &E/S No. CEG-27/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-4574-76 dated 28.08.2020	T/s No. SEGN-32/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-2004-07 dated 23.09.2020	28.08.2020
Minor Capital Work(Own Sources)	Estimate for construction of proposed cement concrete Retaining wall in the back side of Type-II block No.2 for protection of HPSEBL road at Shaktinagar Generation Circle complex damaged due to recently heavy rains on dated 16.08.2020 & 17.08.2020	0.05	A/A &E/S No. CEG-89/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-11945-47 dated 17.02.2021		17.02.2021
Minor Capital Work(Own Sources)	Estimate for providing, testing, configuration, installation, commissioning i/c transportation upto FOR IDS Tailrace water level monitoring system at tailrace of 2x30 MW Giri Power House under Resident Engineer, Giri Power House Division, HPSEBL Girinagar	0.05	A/A &E/S No. CEG-33/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-5004-06 dated 04.09.2020	T/s No. SEGN-36/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-2004-07 dated 23.09.2020	04.09.2020

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	Estimate for Providing, Erection of 18Mtrs. Long Pole with foundation & fixing of 6 Nos. Zata flood light Havells make or equivalent in Giri power house under Resident Engineer GPHD HPSEBL Girinagar.	0.07	A/A &E/S No. CEG-30/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-4816-18 dated 01.09.2020	T/s No. SEGN-34/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-2004-07 dated 23.09.2020	01.09.2020
Minor Capital Work(Own Sources)	Estimate for Providing, Erection of 18Mtrs. Long Pole with foundation & fixing of 6 Nos. Zata flood light Havells make or equivalent in Jatun barrage under Resident Engineer GPHD HPSEBL Girinagar.	0.07	A/A &E/S No. CEG-32/ 2020-21 vide CE letter No. CEG/ DB-9/2020-21-4819-21 dated 01.09.2020	T/s No. SEGN-35/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-2004-07 dated 23.09.2020	01.09.2020
Minor Capital Work(Own Sources)	Estimate for replacement of Battery bank alongwith Battery chargers of (2x30 MW) Giri Power House under Resident Engineer Giri Power House Division HPSEBL Girinagar.	0.46		T/s No. SEGN-51/2020-21 vide SE Nahan letter SEGN/DB-11/ 2019-20-4762-65 dated 31.03.2021	31.03.2021
	Sub-total	2.13			
Larji					
Minor Capital Work(Own Sources)	Civil work of surge shaft pressure shaft PH Larji	0.01			
Board Building	Construction of Type Two Quarter at Sarabai Colony Larji HEP	0.43			
Minor Capital Work(Own Sources)	Prov. & Installation of Two No. Non linear field discharge resister in DAVR panel of 3X42 LPHD Thalout	0.34	A/A &E/S No. CEG-42/ 2019-20 vide CE letter No. CEG/ DB-8/2020-21-12999-13001 dated 26.02.2020		26.02.2020
Minor Capital Work(Own Sources)	Prov. & Installation of One No. Non linear field discharge resister in DAVR panel of 3X42 LPHD Thalout	0.17	A/A &E/S No. CEG-16/ 2019-20 vide CE letter No. CEG/ DB-8/2020-21-5627-29 dated		20.08.2019

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
			20.08.2019		
Minor Capital Work(Own Sources)	Centrifugal Submersible drainage pump of 50 HP in Larji Power House	0.25	A/A &E/S No. CEG-1/ 2019-20 vide CE letter No. CEG/ DB-8/2020-21-1977-79 dated 29.05.2019		29.05.2019
Minor Capital Work(Own Sources)	Purchase of New traveller 14+D Vehicle for shift duty under Sr. Executive Eng MTc. Div Thalout	0.16		TS No. CEG-16/ 2020-21 vide CE letter No. CEG/ DB-8/2020-21-4464-66 dated 26.08.2020	26.08.2020
	Sub-total	1.36			
Nogli					
Minor Capital Work(Own Sources)	Estt. For Providing and fixing of fire extinguishers at 2.5 MW NOGLI HEP	0.06	A/A &E/S No. CEG-52/ 2020-21 vide CE letter No. CEG/ DB-10/2020-21-5500-02 dated 18.09.2020		18.09.2020
Minor Capital Work(Own Sources)	Estt. For Prov.,Fixing and Testing and Comm. Of CCTV at Nogli PH	0.05	A/A &E/S No. CEG-49/ 2020-21 vide CE letter No. CEG/ DB-10/2020-21-5510-12 dated 18.09.2020		18.09.2020
	Sub-total	0.11			
Rong Tong					
Minor Capital Work(Own Sources)	Repair and Refurbishment of Runner , rebabbiting of pads , fabrication & providing Of Pad of 4x500 KV Rong tong P/ House	0.05			
Tribal Area Sub Plan Rongtong	Fabrication Manufacturing and fixing in position cooling water filter of SS by providing 125 micron wire mesh Filtration of Rong tong Power House	0.05			

Name of Scheme	Work details for FY 21	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Tribal Area Sub Plan Rongtong	REPAIR AND REBUILDING OF Shaft top and Bottem cver , Guide vanes & Bribaction of Thrust Coller of 4x 500 KV Rongtong Power House	0.05			
Tribal Area Sub Plan Rongtong	Providing of excitation transformer and Valves in 4x500 KW Rongtong Power House	0.05			
Tribal Area Sub Plan Rongtong	Dismantling assembly and realignment testing and commissioning of unit No -4 Of Rongtong Power House	0.05			
Tribal Area Sub Plan Rongtong	Est for demolition of existing RCC Foundation of Rongtong Power House	0.02			
Tribal Area Sub Plan Rongtong	Dismantling of damaged exiting RCC Foundation of Unit II and construction of new Foundation work Rongtong Power House	0.01			
Tribal Area Sub Plan Rongtong	Repair of MIV of Unit No 1 of Rongtong Power House	0.05			
Minor Capital Work(Own Sources)	Repair of Servomotor of unit No I of Rongtong Power House	0.03			
	Sub-total	0.36			

FY 2022
Table 71: Revised Capital expenditure submitted by Petitioner for FY 2021-22

Name of Scheme	Work details for FY 22	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Andhra					
Minor Capital Work(Own Sources)	Plante battery bank Andhra P/House	0.23	A/A &E/S No. CEG-9/2020-21 vide CE letter No. CEG/ DB-9/19-20-1441-43 dated 03.06.2020	TS No. 16/2019-20 vide SE Nahan letter No. HPSEBL/SEGN/DB-10/2020-21-670-73 dated 23.06.2020	23.06.2020
Minor Capital Work(Own Sources)	Repair of Power channel of G RE Andhra	0.41			
Minor Capital Work(Own Sources)	FOTE, RTU, DCPS 48V in Andhra	0.16			

Name of Scheme	Work details for FY 22	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Work(Own Sources)	Prov. protection wall near HPSEBL Rest House RE ANDHRA	0.06	A/A &E/S vide CE letter No. CEG/DB-9/19-20-13308-10 dated 04.03.2020	TS No. 28/2019-20 vide SE Nahan letter No. HPSEBL/SEGN/DB-10/2019-20-4115-18 dated 12.03.2020	12.03.2020
Misc. Capital Works	Repair of Type-II block-1 Chr. Colony RE ANDHRA	0.05	A/A &E/S No. 54/2021-22 vide CE letter No. CEG/DB-9/2021-22-14718-20 dated 26.02.2022		26.02.2022
Misc. Capital Works	Repair of Type-II block-4 Chr colony RE ANDHRA	0.05	A/A &E/S No. 55/2021-22 vide CE letter No. CEG/DB-9/2021-22-14718-20 dated 26.02.2022		26.02.2023
Misc. Capital Works	Renovation of control duty room Gushali RE ANDHRA	0.05	A/A &E/S No. 55/2021-22 vide CE letter No. CEG/DB-9/2021-22-14718-20 dated 26.02.2022		26.02.2023
	Sub-total	1.01			
Bassi					
Minor Capital Work(Own Sources) 14.97.5	Centrifugal separator (Module Model:-MAB-103B-24m(FPSS) at Bassi Power	1.41	A/A & E/S No. CEG-49/2019-20 vide CEG letter No. HPSEB/ CEG/DB-7/2019-20-13232-34 dated 03.03.2020	TS No. CEG-30/2019-20 vide CEG letter No. HPSEB/CEG/DB-7/2019-20-13232-34 dated 03.03.2020	03.03.2020
Supply, Erection. Testing & Commissioning of 4Nos New Upper Bracket of Bassi HEP(dismantling of existing 4Nos Upper brackets) re-insulation of 2Nos rotor BASSI HEP	2.39	A/A &E/S accorded vide CE(P&M) O/o endost. No. HPSEBL (SECTT.) 402-150/ (Bassi PH)/2018-19-379-83 dated 12.10.18		12.10.2018

Name of Scheme	Work details for FY 22	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Scheme Code 14600)					
Supply, Erection. Testing & Commissioning of 4Nos modified New Upper Bracket of Bassi HEP(Scheme Code 15631)	dismantling of existing 4Nos Upper brackets) new bearing design of BASSI HEP	5.35	A/A &E/S accorded vide CE(P&M) O/o endost. No. HPSEBL (SECTT.) 402-150/ (Bassi PH)/2019-81096-104 dated 26.02.2020		26.02.2020
	Sub-total	9.15			
Binwa					
Minor Capital Work(Own Sources)	Estimate for replacement of main distributing sleeve in pendulum assembly of Machine No. 2 of BPHD.	0.06	A/A &E/S No. CEG-62/ 2019-20 vide CE letter No. CEG/ DB-7/19-20-13435-37 dated 06.03.2020		06.03.2020
	Sub-total	0.06			
Chaba					
Minor Capital Work(Own Sources)	quarter two block double story 8 set at Chaba power house. RE Ghanvi	0.05	A/A & E/S accorded vide CE(P&M) office order endost No. HPSEB (Sectt.) 401-Estimate (022)/ 10-67941-49 dated 19.08.2010	TS No. CEG-38/2010-11 accorded vide CE(Gen.) letter No. HPSEBL/CE G/ DB-10/2010-11-6013-15 dated 27.08.2010	
Minor Capital Work(Own Sources)	quarter one block triple story 6 set at Chaba power house. RE Ghanvi	0.04	A/A & E/S accorded vide CE(P&M) office order endost No. HPSEB (Sectt.) 401-Estimate (022)/ 10-67941-49 dated 19.08.2010	TS No. CEG-39/2010-11 accorded vide CE(Gen.) letter No. HPSEBL/CE G/ DB-10/2010-11-6016-18 dated 27.08.2010	
	Sub-total	0.09			

Name of Scheme	Work details for FY 22	Amount in Rs. Cr.	Administrative Approval	sanction of scheme	Sanction date
Gaj					
Minor Capital Work(Own Sources)	Estimate for providing /laying of cement concrete over existing road surface approaching to Gaj Power House from RD 73.50 Mtr. To 26.50 Mtr. By providing cement concrete 1.2.4 under Gaj P/H Gharoh. (Minor Capital Works)	0.05			
	Sub-total	0.05			
Nogli					
Minor Capital Work(Own Sources)	commissioning of down comer system for 2.5 MW Nogli Power House	0.05	A/A &E/S No. CEG-53/ 2020-21 vide CE letter No. CEG/ DB-10/2020-21-5497-99 dated 18.09.2020		18.09.2020
Minor Capital Work(Own Sources)	2.5 MW Nogli Power RE Ghanvi (Estimate for providing, fixing, testing and commissioning of static excitation system for Unit No. 2)	0.06	A/A &E/S No. CEG-78/ 2020-21 vide CE letter No. CEG/ DB-10/2020-21-11148-50 dated 30.01.2021		30.01.2021
Minor Capital Work(Own Sources)	static excitation system for unit Unit no-V for 2.5 MW Nogli Power House Re Ghanvi	0.05	A/A &E/S No. CEG-79/ 2020-21 vide CE letter No. CEG/ DB-10/2020-21-11154-56 dated 30.01.2021		30.01.2021
	Sub-total	0.16			

FY 2023**Table 72: Revised Capital expenditure submitted by Petitioner for FY 2022-23**

Name of Scheme	Work details for FY 23	Amount in Rs. Cr.	Administrative Approval	sanction of scheme	Sanction date
Bassi					
Funded Scheme	Providing and Fixing and commissioning of New Battery Bank 220 Volt, 750 Ah in Place of existing damaged battery Bank	1.17	A/A &E/S vide CE(Gen.) letter No. HPSEBL/ CEG/DB-Scheme/ 2020-21-6041-46 dated 26.09.2020 and Funded by REC		26.09.2020

Name of Scheme	Work details for FY 23	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
MCW	Estimate for augmentation of unit auxiliary transformer 11/0.4 KV, 300 KVA oil type to 11/0.4KV, 500 KVA Dry type copper wound transformer (indoor type), with off load tap links with enclosure for Bassi power house under R.E. Bassi Power House Division HPSEBL, Jogindernagar	0.29	A/A No. CEG-1/2020-21		
MCW	Estimate for supply of submersible pump(i) HITEC make submersible slurry pump suitable for removal of silt from cooling water pump model HSR 20 of rating 20HP, 3PH, 415 V, 50Hz with 10mtrs. Cable & 150mm outlet for Bassi power house under R.E. Bassi Power House Division HPSEBL, Jogindernagar	0.30	A/A & E/S No. CEG- 3/2020-21 accorded vide CE(Gen.) letter No. HPSEBL/CEG/DB-7/2020-21-530-32 dated 06.05.2020		06.05.2020
	Sub-total	1.76			
Giri					
Board Building Works	Const. of one No. VIP room of Guest house at Giri Nagar	0.20			
Board Building Works	P/Laying interlocking blocks in road, parking area & passage of field hostel No.1 at Giri Nagar	0.07			
	Sub-total	0.27			
Larji					
Board Building Works	P/F of paver block around the rest house of HPSEBL at Sunder Nagar and remaining portion around the CE office building	0.25		TS No. 44/2019-20 vide SE Sarabai letter No. HPSEBL/SEGS/DB-29/2019-20-4262-63 dated 07.03.2020	07.03.2020
Minor Capital Works	Estimate for providing and laying Micro concrete and High Performance concrete in scoured Glacis Block along with fixing of rails, Anchors and welded wire mesh etc.in downstream of Radial Gate No.1&3 of Barrage of Larji HEP (126MW)	0.61	A/A & E/S No. CEG-11/2020-21 vide CE letter No. CEG/ DB-8/2020-21-2080-82 dated 24.06.2020		24.06.2020

Name of Scheme	Work details for FY 23	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Works	Estimate for supply, installation & commissioning of one no. new 2nd heavy duty submersible pump for the drainage gallery of the 3X42MW Larji power house under Resident Engineer Larji power house Division HPSEBL Thalout.	0.27	A/A &E/S No. CEG-16/ 2020-21 vide CE letter No. CEG/ DB-8/2020-21-2356-58 dated 01.07.2020		01.07.2020
	Sub-total	1.13			
Nogli					
Minor Capital Works	Estimate for construction of 3Nos. fire protection wall in between power transformer at 22 KV yard of Nogli Power House	0.07	A/A &E/S No. CEG-61/ 2019-20 vide CE letter No. CEG/ DB-10/2019-20-13372-74 dated 05.03.2020		05.03.2020
Minor Capital Works	Estimate for Restoration of spill way channel of Nogli Power house RD 148.00mtrs to 178.00mtrs damaged due to slide on right portion towards Nallah side and falling of big trees on dated 9.01.2021	0.37	A/A &E/S No. CEG-97/ 2020-21 vide CE letter No. CEG/ DB-10/2020-21-15600-02 dated 26.03.2021		26.03.2021
	Sub-total	0.44			

FY 2024
Table 73: Revised Capital expenditure submitted by Petitioner for FY 2023-24

Name of Scheme	Work details for FY 24	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Andhra					
Minor Capital Works	Estimate for Providing/ Testing/ commissioning of 50KVA Generator Sets at Andhra Power House	0.07	A/A &E/S No. CEG-10/ 2020-21 vide CE letter No. CEG/ DB-9/ 19-20-1441-43 dated 03.06.2020		03.06.2020
	Sub-total	0.07			
Baner					
	Replacement of complete existing electromechanic Governor with Digital Governor alongwith panel, existing Electro mechanical relay with numerical relay,	1.50	Scheme under preparation		

Name of Scheme	Work details for FY 24	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Works	Estimate for Providing, Fixing, installation and successful commissioning of 100KVA DG set(1No.)Noise less and 50KVA DG set(1No.)Noise less of compact Design with standard accessories A/w engine and alternator protection and control of latest technology at Baner Power house and intake site	0.21	A/A & E/S No. CEG-12/2021-22 vide CE(Gen.) letter No. HPSEBL/ CEG/ DB-7/ 2021-22-1650-53 dated 31.05.2021	TS No. GCP-08/2021-22 vide SE Plampur letter No. HPSEBL/ GCP/ DB-3 (Baner)/2021-22-771-73 dated 10.06.2021	10.06.2021
	Sub-total	1.71			
Bassi					
MCW	Replacement old obsolete haudric system at Chapprot provided for lifting penstock gate	0.50	Scheme under preparation		
MCW	Replacement of LT Pannel switch gear (800 Amp) complete in all respect	0.50	Scheme under preparation		
Funded Scheme	Supply, erection, testing and commissioning of 4 nos. new upper brackets (including dismantling of existing 4 nos. upper brackets), re-insulation of 02 nos. rotor poles of 4x16.50 MW Bassi HEP	3.23	A/A &E/S accorded vide CE(P&M) O/o endost. No. HPSEBL (SECTT.) 402-150/ (Bassi PH)/2018-19-379-83 dated 12.10.18		12.10.2018
Funded Scheme	Supply, erection, testing and commissioning of 4 nos. Modified new upper brackets, new bearing design of Kingsbury Pad supports, Self pumping and insulated upper bearing, improved bearing cooling and oil circulation with self pumping bearing design with new HPOP system at start and stop of machine for smooth/effective operation & maintenance of 4x16.5MW Bassi HEP.	5.58	A/A &E/S accorded vide CE(P&M) O/o endost. No. HPSEBL (SECTT.) 402-150/ (Bassi PH)/2019-81096-104 dated 26.02.2020		26.02.2020
Funded Scheme	Upgradation/ Augmentation of 16 MVA, 132/33 kV Power Trf. To 132/33 kV, 1x25/31.5 MVA Power Trf., 33 kV switchyard (including augmentation of 33/11 kV 2x2.5 MVA trf to 33/11 kV 2x5 MVA trf) and 11 kV switchyard system	9.00	Scheme under preparation		
MCW	Estimate for providing 1 No. dehydration plant of 4500 LPH capacity for Bassi power house under R.E. Bassi Power House Division HPSEBL, Jogindernagar	0.21	A/A No. CEG-2/2020-21 accorded vide CE(Gen.) letter No. HPSEBL/ CEG/DB-7/		06.05.2020

Name of Scheme	Work details for FY 24	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
			2020-21-533-35 dated 06.05.2020		
	Sub-total	19.02			
Bhaba					
	Replacement of existing main and emergency cooling system for 3x42MW SVP Bhaba	0.90	Scheme under preparation		
	Prov. & fix. of hydraulic operated Gate valve dia 300mm. The gate valve has to be adapted and modified to operate it hydraulically, which will be solenoid operated with limit switch cut off set-ups for 10 number valves	0.65	Scheme under preparation		
	Prov. & fix. Of Oil Pumping Unit for the hydraulic operated valves 10 No. Designed to operate all 10 gate valves with provision to even operate each valve individually	0.21	Scheme under preparation		
	Sub-total	1.76			
Binwa					
Minor Capital Works	Estimate for Providing/ Testing and commissioning of 100KVA Generator set at intake site at Binwa Power House under Resident Engineer Binwa Power House Division ,HPSEBL Uttrala.	0.10	A/A &E/S No. CEG-59/ 2020-21 vide CE letter No. CEG/ DB-7/20-21-6319-21 dated 30.09.2020		30.09.2020
Minor Capital Works	Estimate for Providing/ Testing and commissioning of 25KVA Generator set at intake site in Binwa Power House under Resident Engineer Binwa Power House Division,HPSEBL Uttrala.	0.06	A/A &E/S No. CEG-60/ 2020-21 vide CE letter No. CEG/ DB-7/20-21-6325-27 dated 30.09.2020		30.09.2020
	Sub-total	0.16			
Chaba					
Funded Scheme	Purchasing of the runner , side cover and Nozzles of the Unit No .V & VI of the Chaba HEP	0.50	Scheme under preparation		
Minor Capital Works	Estimate for Electrical Installation, Safety devices and luminaries in Transformer hall, Battery hall cum Breaker room, old breaker room, staff room etc. in 1.75 MW Chaba Power House	0.05	A/A &E/S No. CEG-25/ 2021-22 vide CE letter No. CEG/ DB-10/2021-22-5189-91 dated 05.08.2021		05.08.2021

Name of Scheme	Work details for FY 24	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Works	Estimate for Electrical Installation, Safety devices and luminaries at Reservoir and Switchyard of 1.75 MW Chaba Power House	0.04	A/A &E/S No. CEG-26/ 2021-22 vide CE letter No. CEG/ DB-10/2021-22-5192-94 dated 05.08.2021		05.08.2021
	Sub-total	0.59			
Gaj					
Funded Scheme	Procurement of 2 Nos. spare runners	2.00	Scheme under preparation		
Minor Capital Works	Estimate for providing installation, cabling, earthing & commissioning of 125 KVA silent Diesel Generator set with automatic changeover system of Gaj Power House under Resident Engineer Gaj Power House Division, HPSEBL Gharoh.	0.15	A/A &E/S No. CEG-43/ 2020-21 vide CE letter No. CEG/ DB-7/20-21-5213-15 dated 09.09.2020		09.09.2020
	Sub-total	2.15			
Giri					
Board Building Works	C/o three rooms rest cmp at Shaktinagar- Nahan with furnishing	0.70		T/s No. SEGN-39/2020-21 vide SE Nahan letter SEGN/DB-11/ 2020-21-2048-51 dated 26.09.2020	26.09.2020
Board Building Works	C/o Type -II Block (4 Sets) near field Hostel Giri Power House	0.80	Scheme under preparation		
Minor Capital Works	Estimate for replacement of 33KV old VCB of Paonta and Dhaulakaun feeder with 33 KV new VCB at 132/33 KV Sub-station Girinagar .	0.09	A/A &E/S No. CEG-50/ 2019-20 vide CE letter No. CEG/ DB-9/2021-22-13216-18 dated 03.03.2020		03.03.2020
Minor Capital Works	Estimate for Manufacturing, Fabrication, Erection, Testing and Commissioning of Pivot Ring Self Lubricating Bushes, Bearing Body Upper Self Lubricating Bushes and Bearing Body Lower Self Lubricating Bushes for unit No.I of 2x30MW Giri Power House at Girinagar	0.26	A/A &E/S No. CEG-02/ 2021-22 vide CE letter No. CEG/ DB-9/2021-22-1163-65 dated 30.04.2021		30.04.2021

Name of Scheme	Work details for FY 24	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Works	Estimate for Providing and Supplying of 1 No. Slurry/Silt agitator Submersible Pump FLOWMORE Make Model FLAS 10020(DM), 20HP/15kW, 1450RPM,2500LMP at 2x30MW Giri Power House at Girinagar	0.28	A/A &E/S No. CEG-03/ 2021-22 vide CE letter No. CEG/ DB-9/2021-22-1160-62 dated 30.04.2021		30.04.2021
	Sub-total	2.13			
Larji					
Funded Scheme	Purchase of New TRCM installed at Barrage site Larji PH	5.06	A/A vide CE(P&M) letter No. HPSEBL/402-49/(Larji HEP 126 MW)/2020-920-24 dated 14.07.2020		14.07.2020
Minor Capital Works	Estimate for repair and commissioning of 01 No. 132/11kV,52MVA, Three Phase Power Transformer (BHEL make) lying at 3x42 MW Larji Power House under Resident Engineer Larji Power House Division HPSEBL, Thalout including transportation and insurance from site to works and back, assembly at site, testing and repair.	2.39	A/A &E/S No. CEG-1/ 2021-22	TS No. CEG-1/2021-22 vide CE letter No. CEG/ DB-8/2020-21-847-49 dated 26.04.2021	26.04.2021
Minor Capital Works	Estimate for Testing before and after transportation of 41 MVA, 132/11KV Generator transformer from UHL-III site to Larji HEP, Transportation alongwith insurance, unloading, Dragging to transformer hall, erection, modification and commissioning at Larji power House and then transportation, restoration of 41MVA transformer at UHL site as and when required by HPSEBL and its erection and testing thereof	1.09	A/A &E/S No. CEG-5/ 2021-22	TS No. CEG-4/ 2021-22 vide CE letter No. CEG/ DB-8/2020-21-1144-46 dated 30.04.2021	30.04.2021
Board Building Works	C/o additional 2 rooms of rest house at Sunder Nagar alongwith furnishing	0.25		TS No. 36/2021-22 vide SE Sarabai letter No. HPSEBL/ SEGS/DB-13-1/2021-2981-82 dated 23.10.2021	23.10.2023

Name of Scheme	Work details for FY 24	Amount in Rs. Cr.	Administrative Approval	Sanction of scheme	Sanction date
Minor Capital Works	Estimate for replacement of all damaged Seals steel plates, clamps, fasteners, nut & bolts etc. including epoxy painting of Radial Gate No.1(Size 11X12.50Mtrs.) complete in all respect at Barrage site of Larji HEP(126MW)	0.16	A/A &E/S No. CEG-13/ 2020-21 vide CE letter No. CEG/ DB-8/2020-21-2205-07 dated 27.06.2020		27.06.2020
Minor Capital Works	Estimate for Replacement of old flow meter with new Micro processor based Electro-magnetic flow meter of deferent size for 3X42MW Larji Power House	0.22	A/A &E/S No. CEG-16/ 2021-22 vide CE letter No. CEG/ DB-8/2021-22-3075-77 dated 29.06.2020		29.06.2020
Minor Capital Works	Estimate for Manufacturing Supply Installation, Testing and Commissioning of 220 Volt Battery bank consisting of 110 Nos. Plante battery Cells each (Capacity of cell 2v/1070Ah) of Exide Make for 3X42MW Larji Power House	1.13	A/A &E/S No. CEG-17/ 2021-22	TS No. CEG-10/ 2021-22 vide CE letter No. CEG/ DB-8/2020-21-3072-74 dated 29.06.2021	29.06.2021
	Sub-total	10.30			

4. OBJECTION FILED AND ISSUES RAISED BY CONSUMERS DURING PUBLIC HEARING

- 4.1.1. The interested parties/stakeholders were asked to file their objections and suggestions on the Petition by 03.09.2023. However, no comments and suggestions were received from any stakeholder including Consumers/ Consumer associations and general public by the given due date.
- 4.1.2. A Public Hearing was held on 25.09.2023, 3:00 PM where none of the stakeholders appeared to make any objections or provided any comments/ suggestions.

5. ANALYSIS OF TRUE UP OF FY15 - FY19 UNDER THIRD CONTROL PERIOD

5.1. Background

- 5.1.1. The Petitioner in its Multi Year Tariff Petition for the fourth Control Period has submitted True-up of the 13 Hydro-electric Plants (HEP) for the 3rd Control Period based on the variation in actual expenses and revenue from the numbers approved in Tariff Order dated June 10, 2014. The Petitioner has provided plant-wise internal accounts prepared by their accounts team for the period April 1, 2015 to March 31, 2019 in support of the actual expenses and revenue for the period.
- 5.1.2. The Commission has reviewed the operational and financial performance of the Petitioner for third Control Period based on the Petitioner's submission and unaudited plant-wise accounts made available. The Commission has also finalised the true-up in line with the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and amendments thereof (hereinafter referred to as the 'HPERC Generation Regulations, 2011' or 'Hydro Generation Tariff Regulations, 2011'), taking into account all the information, data submissions and necessary clarifications submitted by the HPSEBL.
- 5.1.3. This Chapter covers analysis on the proposed plant wise true-up of AFC for each year of the third Control Period including O&M expenses, Depreciation, Interest and Finance Charges and Working Capital Requirement, etc.

5.2. Commission's Approach

- 5.2.1. Regulation 9 of the Hydro Generation Tariff Regulations 2011, as amended from time to time, provides for the True-Up of the Annual Revenue Requirement and Annual Fixed Cost of Hydro Electric Plants owned and operated by HPSEBL. The relevant portion of the aforementioned Regulation has been provided below:

"9. True Up

*(1) The true up across various controllable parameters shall be conducted by the Commission, for the previous years for which the **actual/audited** accounts are made available by the generator, at the times and as per principles stated below: -*

(A) at the times -

(i) for the previous years of the previous Control Period:- along with the Petition for determination of ARR cum generation tariff for the Control Period;

(ii) for the previous years of the Control Period and for the previous Control Period:- along with the mid-term performance review during the Control Period; and

(iii) for the Control Period true up:- along with the mid-term performance review of the next Control Period;

(B) as per principles -

(i) the Commission shall review actual capital investment vis-à-vis

approved capital investment;
(ii) depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission; and
(iii) any surplus and deficit on account of O&M expenses shall be to the account of the generating company and shall not be trued up in ARR.

(2) The gain or loss on account of other controllable factors, unless otherwise specifically provided by the Commission shall be to the account of the generating company.

(3) Notwithstanding anything contained in these regulations, the gains or losses in the controllable items of ARR on account of force majeure, change in law and change in taxes and duties shall be passed on as an additional charge or rebate in ARR over such period as may be laid down in the order of the Commission."

- 5.2.2. For estimating the separate costs of generation plants, the Commission in its previous Orders had directed HPSEBL to maintain separate record of accounts for each generating plant, such as amounts of revenue, cost, asset, liability, and reserve for the generation business. The Petitioner in the current Petition has provided unaudited plant-wise accounts. However, it is observed that the plant-wise accounts submitted by the Petitioner are prepared internally and have not been certified by the Statutory Auditor. It is observed that despite several reminders in the previous Orders, the Petitioner has not submitted the audited accounts for the generation business resulting in limited analysis of the actual expenditure corresponding to the various plants as the common expenses remain unallocated or the allocation is undertaken based on assumptions which may not be best representation of the expenditure at the respective plants.
- 5.2.3. During prudence check as well, it was observed that contradictory numbers have been submitted by the Petitioner in response to the clarifications and additional information sought by the Commission during the processing of the Petition. It was observed that there were instances of non-reconciliation between the accounts viz-a-viz submissions in the Petition and significant adjustments in the accounts which does not represent the facts in the Petition. **Therefore, the Petitioner is directed to maintain proper plant-wise accounts and undertake audit of the same in future.**
- 5.2.4. The Order for levelized tariff for 8 small hydro plants (Killar, Sal-II, Gumma, Ghanvi, Holi, Khauli, Bhaba Augmentation and Thiroth) was issued by the Commission on 15.01.2014 and the tariff determined thereof became applicable from 01.04.2014 i.e. FY 2014-15. Further, the Commission had determined levelized tariff for Ghanvi II plant which was commissioned in the year 2014 vide order dated 28th September 2022.
- 5.2.5. The Commission, for True-Up of Annual Fixed Charges and the tariff for sale of electricity from the generating stations, has considered the following elements as specified by the 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)

- 5.2.6. Further, the Commission sought additional clarifications on various issues to validate the data 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 raised during the discussions.
- 5.2.7. The following sections details the methodology adopted by the Commission for undertaking truing-up of various parameters of each plant for the third Control Period.

Operation and Maintenance Expenses

- 5.2.8. The Petitioner in its Tariff Petition has claimed the O&M Expenses for FY 2014-15 to FY 2018-19 similar to that approved in Tariff Order dated June 10, 2014 for each of the generating stations.
- 5.2.9. The Commission asked the Petitioner to provide the comparison of approved and actual details of plant-wise O&M for each year of the third Control Period. A comparison of the same is provided in the table below:

Table 74: O&M Expense including terminal benefits (in Rs. Cr.) approved in 3rd MYT Tariff Order Vs actual O&M Expense filed by Petitioner

Name of station	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19	Total	Total Deviation
Andhra	Approved in MYT Order	7.31	8.01	8.78	9.62	10.54	44.26	4.00
	Actual	6.22	6.30	7.98	10.74	9.02	40.26	
Baner	Approved in MYT Order	4.90	5.37	5.89	6.48	7.09	29.73	0.80
	Actual	4.59	5.22	5.95	6.44	6.73	28.93	
Bassi	Approved in MYT Order	11.71	12.83	14.08	15.45	16.93	71.00	13.41
	Actual	10.48	10.79	11.97	13.00	11.35	57.59	
Bhaba	Approved in MYT Order	22.86	22.59	24.72	27.07	29.64	126.88	29.22
	Actual	18.40	14.05	20.25	22.95	22.01	97.66	
Binwa	Approved in MYT Order	4.19	4.58	5.02	5.50	6.05	25.34	-0.91
	Actual	5.84	4.54	5.56	5.14	5.17	26.25	
Chaba	Approved in MYT Order	1.40	1.53	1.68	1.85	2.02	8.48	-0.65
	Actual	1.57	1.59	1.88	2.09	2.00	9.13	
Chamba	Approved in MYT Order	0.27	0.30	0.32	0.35	0.38	1.62	0.42
	Actual	0.40	-0.15	0.15	0.34	0.46	1.20	
Gaj	Approved in MYT Order	5.18	5.66	6.22	6.81	7.46	31.33	5.36
	Actual	4.61	4.93	5.35	5.86	5.22	25.97	
Giri	Approved in MYT Order	22.54	18.87	20.64	22.56	24.67	109.28	27.98
	Actual	14.44	15.07	14.87	17.15	19.77	81.30	
Larji	Approved in MYT Order	20.84	22.82	24.99	27.36	29.95	125.96	29.24
	Actual	15.98	16.37	23.93	21.33	19.11	96.72	

Name of station	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19	Total	Total Deviation
Nogli	Approved in MYT Order	2.40	2.63	2.87	3.13	3.43	14.46	2.32
	Actual	2.33	1.92	2.18	2.73	2.98	12.14	
Rongtong	Approved in MYT Order	1.50	1.65	1.80	1.98	2.16	9.09	5.35
	Actual	0.67	0.78	0.75	0.86	0.68	3.74	
Rukti	Approved in MYT Order	0.67	0.73	0.80	0.89	0.96	4.05	2.02
	Actual	0.40	0.41	0.33	0.42	0.47	2.03	
Total	Approved in MYT Order	105.77	107.57	117.81	129.05	141.28	601.48	118.56
	Actual	85.93	81.82	101.15	109.05	104.97	482.92	

5.2.10. The Commission had already approved terminal liabilities/ benefits towards the generation business of HPSEBL in the MYT Order dated 10.06.2014 for each of the generating stations. The Commission observes that the actual terminal liabilities (of Rs. 17.03 Cr.) is lower than the approved terminal liabilities (Rs. 34.56 Cr.) towards generation business in the 3rd Control Period. Since the approved amount of terminal benefits towards generation business was considered while truing-up of the Distribution Business ARR for the respective years, the Commission has continued with the approved amount of terminal liabilities for the purpose of truing-up of the terminal benefits under the generation business as well.

5.2.11. Therefore, O&M expenses for various plants have been compared with respect to the approved O&M cost of each plant vis-à-vis the actual O&M cost excluding terminal benefits during the third Control Period as summarized below:

Table 75: Approved O&M cost vs actual O&M cost for various plants excluding terminal benefits (in Rs. Cr.)

Name of station	Particular	FY 15	FY 16	FY 17	FY 18	FY 19	Total
Andhra	Approved in 3rd MYT order	6.85	7.50	8.22	9.01	9.87	41.45
	Submitted by Petitioner	6.19	6.29	7.92	8.98	8.98	38.36
	Deviation	0.66	1.21	0.30	0.03	0.89	3.09
Baner	Approved in 3rd MYT order	4.58	5.02	5.50	6.05	6.62	27.77
	Submitted by Petitioner	4.58	5.20	5.95	6.10	6.52	28.35
	Deviation	0.00	-0.18	-0.45	-0.05	0.10	-0.58
Bassi	Approved in 3rd MYT order	10.90	11.95	13.11	14.38	15.76	66.10
	Submitted by Petitioner	10.39	10.69	11.12	11.90	11.21	55.31
	Deviation	0.51	1.26	1.99	2.48	4.55	10.79
Bhaba	Approved in 3rd MYT order	21.70	21.31	23.32	25.53	27.95	119.81
	Submitted by Petitioner	18.38	14.02	18.33	21.63	21.97	94.33
	Deviation	3.32	7.29	4.99	3.90	5.98	25.48
Binwa	Approved in 3rd MYT order	3.91	4.28	4.69	5.14	5.65	23.67
	Submitted by Petitioner	5.81	4.49	4.77	5.11	5.12	25.30
	Deviation	-1.90	-0.21	-0.08	0.03	0.53	-1.63

Name of station	Particular	FY 15	FY 16	FY 17	FY 18	FY 19	Total
Chaba	Approved in 3rd MYT order	1.32	1.44	1.58	1.74	1.90	7.98
	Submitted by Petitioner	1.57	1.59	1.88	1.96	2.00	9.00
	Deviation	-0.25	-0.15	-0.30	-0.22	-0.10	-1.02
Chamba	Approved in 3rd MYT order	0.25	0.28	0.30	0.33	0.36	1.52
	Submitted by Petitioner	0.40	-0.15	0.15	0.34	0.46	1.20
	Deviation	-0.15	0.43	0.15	-0.01	-0.10	0.32
Gaj	Approved in 3rd MYT order	4.87	5.32	5.84	6.40	7.01	29.44
	Submitted by Petitioner	4.59	4.91	4.86	5.64	5.09	25.09
	Deviation	0.28	0.41	0.98	0.76	1.92	4.35
Giri	Approved in 3rd MYT order	21.74	17.99	19.67	21.50	23.50	104.40
	Submitted by Petitioner	14.22	14.74	14.87	15.88	19.42	79.13
	Deviation	7.52	3.25	4.80	5.62	4.08	25.27
Larji	Approved in 3rd MYT order	19.65	21.52	23.56	25.79	28.23	118.75
	Submitted by Petitioner	15.96	16.33	19.39	21.18	19.07	91.93
	Deviation	3.69	5.19	4.17	4.61	9.16	26.82
Nogli	Approved in 3rd MYT order	2.28	2.50	2.73	2.98	3.26	13.75
	Submitted by Petitioner	2.33	1.92	2.18	2.73	2.98	12.14
	Deviation	-0.05	0.58	0.55	0.25	0.28	1.61
Rongtong	Approved in 3rd MYT order	1.40	1.54	1.68	1.85	2.02	8.49
	Submitted by Petitioner	0.67	0.78	0.75	0.86	0.68	3.74
	Deviation	0.73	0.76	0.93	0.99	1.34	4.75
Rukti	Approved in 3rd MYT order	0.63	0.68	0.75	0.83	0.90	3.79
	Submitted by Petitioner	0.40	0.41	0.31	0.42	0.47	2.01
	Deviation	0.23	0.27	0.44	0.41	0.43	1.78
Total	Approved in 3rd MYT order	100.08	101.33	110.95	121.53	133.03	566.92
	Submitted by Petitioner	85.49	81.22	92.48	102.73	103.97	465.89
	Deviation	14.59	20.11	18.47	18.80	29.06	101.03

5.2.12. Based on the information submitted, it is observed that the actual O&M expenses across the plants has been significantly lower than the approved O&M expenses by approximately Rs. 101.03 Cr.

5.2.13. With respect to the provisions of the Hydro Generation Tariff Regulations, 2011, the 2nd amendment dated November 1, 2013 specifies as follows:

"9. True Up

(1) The true up across various controllable parameters shall be conducted by the Commission, for the previous years for which the actual/audited accounts are

made available by the generator, at the times and as per principles stated below:

-

(A) at the times -

(i) for the previous years of the previous control period:- along with the Petition for determination of ARR cum generation tariff for the control period;

(ii) for the previous years of the control period and for the previous control period:- along with the mid-term performance review during the control period; and

(iii) for the control period true up:- along with the mid-term performance review of the next control period;

(B) as per principles -

(i) the Commission shall review actual capital investment vis-à-vis approved capital investment;

(ii) depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission; and

(iii) any surplus and deficit on account of O&M expenses shall be to the account of the generating company and shall not be trued up in ARR.

..."

- 5.2.14. Further, while truing up the O&M expenses for 2nd Control Period in Tariff Order dated November 11, 2021, the Commission had specified in Para 5.2.23 as follows:

"5.2.23. Further, O&M expense is required to be Trued-up in accordance with the Regulation 9 of the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011. As per the aforementioned regulations, O&M expense is Controllable in nature and any surplus or deficit on controllable items has to be on account of HPSEBL itself. Therefore, the Commission has continued with the O&M expense approved in the Tariff Order for Second Control Period dated July 19, 2011."

- 5.2.15. Accordingly, as per the principles specified in Regulation 9 of the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and the approach followed during the truing-up of second Control Period, the Commission has considered the approved O&M expenses for 3rd Control Period, as claimed by the Petitioner.
- 5.2.16. Based on the above table, it is observed that the approved O&M cost is more than actual O&M expenses by Rs. 101.03 Cr. As per principles specified in Regulation 9 of the Hydro Generation Tariff Regulations, 2011, the Commission has allowed the O&M expenses for 3rd Control Period, as approved in Tariff Order dated June 10, 2014.
- 5.2.17. It is also observed that the Petitioner has proposed several works of the nature of O&M under additional capitalization as covered under Para 5.2.27 of this Chapter. The Commission has appropriately considered the surplus under the O&M expenses towards meeting such additional capital expenditure undertaken by the

Petitioner corresponding to the various plants during the third Control Period as the same were of nature of repairs and maintenance and no prior approval of the Commission was sought with respect to such capital works.

Additional Capital Expenditure

- 5.2.18. The Commission in the Tariff Order dated June 10, 2014 for the Third Control Period had not approved any additional capital expenditure for the thirteen generating stations in the absence of adequate details in the capital expenditure plan and funding plan for third Control Period filed by the Petitioner.
- 5.2.19. In the current True-Up Petition, it is observed that the Petitioner has submitted additional capitalization for each of the plants during the third Control Period along with details of works as part of supporting annexures.
- 5.2.20. As per the Hydro Generation Tariff Regulations, 2011, the following has been specified in Regulation 36 regarding prior approval from the Commission:

"36. Beginning of the control period - business plan filings

(1) The generating company shall file for the Commission's approval, during the year preceding the first year of the control period or any other date, as may be directed by the Commission, a business plan approved by its board of directors. The business plan shall be for the entire control period and shall, interalia, contain -

(a) Capital Investment Plan: This shall include details of the investments planned by the generating company, alongwith the corresponding capitalisation schedule and financing plan. This plan shall be commensurate with capacity enhancement and proposed efficiency improvements for various plants of the company;

(b) Capital Structure: The generating company shall submit plant-wise details of the capital structure and cost of financing (interest on debt and return on equity), after considering the existing market conditions, terms of the existing loan agreements, risks associated in generation business and creditworthiness;

....."

- 5.2.21. Further in case of capitalisation under Renovation and Modernisation works, the Regulation 14 (1) specifies as below:

"(1) The generating company for meeting the expenditure on renovation and modernization for the purpose of extension of life beyond the useful life of the generating station or a unit thereof shall make an application 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, record of consultation with beneficiaries and any other information considered to be relevant by the generating company.

.....

"

- 5.2.22. The Regulations specify the need to obtain prior approval to undertake any additional capital expenditure during the Control Period as part of the business plan. However, it was observed that the Petitioner had not sought any approval or submitted any details of the works to the Commission for undertaking these works during the 3rd Control Period. The Commission asked the Petitioner to submit additional supporting documents/ justifications towards additional capitalisation and other relevant details for 3rd Control Period.
- 5.2.23. In response, the Petitioner was able to submit only some approvals and documents with respects to 8 HEP schemes. For the remaining additional capitalization proposed against various plants, the Petitioner was unable to provide any scheme level approvals from the Board and prior approval from the Commission or any other details.
- 5.2.24. The Commission further sought additional information along with supporting documents like approval of the Commission, DPR, approval of the competent authority/ board of directors, actual funding availed, source of loan, loan agreement, equity disbursement along with proof, source of grant, etc. However, the Petitioner was unable to provide any details of the works undertaken such as DPR, cost benefit analysis, documentary evidences for funding, and approval of the Commission. The Petitioner only referred to the list of works undertaken with funding breakup of the additional capitalization.
- 5.2.25. In reply to a subsequent query, the Petitioner provided certain documents to support the capital expenditure undertaken. Based on scrutiny of these documents, it was observed that few works were supported by copy of budget allotment letter and work order/ estimated price from the vendor during the third Control Period. Supporting documents in respect of the additional capitalization such as DPR for works, prior approval of Commission, approvals from the Board, etc. were not submitted for majority of the capital expenditure incurred during the third Control Period, excluding the 8 HEP schemes and rehabilitation of Bhaba HEP.
- 5.2.26. It is observed that details such as administrative approvals, abstract/ scope of work, etc. are submitted to support the additional capitalisation, which merely indicate the estimated cost of work but do not provide the justification for the works, actual cost incurred or the execution/ completion of work. Therefore, the Petitioner has not been able to establish/ substantiate the actual cost of additional capitalisation.
- 5.2.27. Further, on scrutiny of the works submitted by the Petitioner, it is observed that multiple works were undertaken by Petitioner for small amounts and are of the nature of routine operation and maintenance of the respective plants. In absence of any substantive documents detailing the nature of work and supporting DPR, Board approval, and prior Commission's approval with respect to the proposed capital works, the Commission is of the view that these works cannot be classified under additional capital expenditure and has proceeded with approval for only those works, where prior approval is obtained from the Commission with regards to the work undertaken. Also, the Commission has dealt with allowance or disallowance of additional capitalisation undertaken in the true-up for the third Control Period, as explained in foregoing section.

5.2.28. The Petitioner has claimed additional capital expenditure against rehabilitation of Bhabha HEP and another scheme called "8 HEP scheme" under which additional capital works towards Baner, Binwa, Gaj and Bhabha had been undertaken. With respect to proposed Additional Capitalization under these schemes, the Commission has undertaken a detailed scrutiny as provided below:

- i. **Bhabha HEP:** The Petitioner has filed for true-up of AFC for Bhabha HEP on account of additional capital expenditure for rehabilitation scheme for recommissioning of the Bhabha power plant and has further submitted that the additional capitalisation has been funded 90% through debt and the loan was sanctioned by M/s PFC. However, the proposed capitalization was subject to prudence check. Further, the Commission in Tariff Order dated November 11, 2021 had specified in Para 6.6.2, 6.6.3, 6.6.4 as below:

"6.6.2. It is observed that significant capital expenditure was done during FY 2016-17 to FY 2018-19 on account of rehabilitation scheme of the Bhabha plant. In a submission, the Petitioner has stated that SVP Bhabha was damaged due to an unfortunate fire accident on Jan 22, 2015. In reply to Commission's query, the Petitioner submitted the report of committee constituted for investigation of break down, DPR documents, copy of work orders and copy of approval from competent authority.

6.6.3. As per these submissions, the Commission observed that competent authority of HPSEBL had sanctioned Rs. 76.03 Cr as the cost of rehabilitation scheme for recommissioning of the Bhabha power plant. While the Petitioner has not undertaken prior approval from the Commission towards additional capitalization of Bhabha HEP, the Commission has considered the capital expenditure of Rs. 76.03 Cr. provisionally in GFA during the 3rd Control Period for the purpose of opening GFA in the tariff determination for 4th Control Period. The proposed capitalization shall be subject to prudence check at the time of true-up for 3rd Control Period. In accordance with the submissions in the Petition, Rs. 65.01 Cr. is capitalized in FY 2016-17 and the remaining expenditure of Rs. 11.02 Cr. is capitalized in FY 2017-18 for Bhabha HEP provisionally. The actual capitalization shall be determined at the time of true-up and determination of additional capitalization for the plant.

6.6.4. In the absence of any details and supporting document regarding equity infusion, the additional capitalization has been considered to be funded from 100% from debt. Interest rate of 10.55% is considered provisionally, as per submission of the Petitioner for 4th Control Period."

In Tariff Order dated 11th November, 2021, the Commission had provisionally approved an additional capitalization of Rs. 76.03 Cr (Rs. 65.01 Cr. in FY 2016-17 and Rs. 11.02 Cr. in FY 2017-18) towards the cost of rehabilitation scheme for recommissioning of Bhabha power plant. The Commission had also considered de-capitalization of Rs. 23.09 Cr. (decapitalization of Rs. 19.72 Cr. in FY 2014-15 and Rs. 3.37 Cr. in FY 2015-16). Further, the additional capitalisation was considered to be funded 100% from debt and the interest rate was provisionally considered as 10.55% in tariff Order dated 11th November, 2021.

In the absence of sufficient details of additional capitalization incurred on account of rehabilitation scheme for recommissioning of Bhabha HEP, the Commission had directed in Para 7.1.3 of the Tariff Order dated November 11, 2021 as follows:

“Additional Capitalization of Bhabha Power Plant

7.1.3. 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.).”

The Commission sought justification for delay in filing of Petition for approval of additional capitalisation of Bhabha HEP. In reply to query, the Petitioner has submitted that Rehabilitation of Bhabha HEP is under execution and all works except 10 MVA station transformers and GIS bus duct has been completed. The balance work will be completed in FY 2023-24.

Therefore, it is observed that the Petitioner has neither submitted separate Petition for approval of rehabilitation scheme nor provided any additional details such as Auditor Certificate to ascertain the additional capitalization in the current MTR Petition. In the absence of these details, the Commission has continued with the provisionally approved amount of additional capitalization of Rs. 76.03 Cr. (Rs. 65.01 Cr. in FY 2016-17 and Rs. 11.02 Cr. in FY 2017-18) in the tariff Order for the third Control Period. The Commission has proceeded to approve the additional capitalization with 100% debt and further details of rates of interest considered are discussed in the plant specific sub-section of Annual Fixed Charges for Bhabha HEP.

- ii. **8 HEP scheme:** HPSEBL had accorded administrative approval and expenditure sanction for Renovation and Modernization of 8 Hydro Electric plants namely (i) Giri HEP (2x30 MW), (ii) Larji HEP (3x42 MW), (iii) Khauli HEP (2x6 MW), (iv) Baner HEP (3x4 MW), (v) Binwa HEP (2x3 MW), (vi) Ghanvi HEP (2x11.25 MW), (vii) Gaj HEP (3x3.5 MW) and (viii) Bhabha HEP (3x40 MW). Further, 80% of the scheme cost was proposed to be funded from M/s PFC and remaining 20% from equity.

The Petitioner has claimed total additional capitalization of Rs. 8.14 Cr. for Bhabha HEP, Rs. 0.59 Cr. for Baner HEP, Rs. 4.54 Cr. for Binwa HEP and Rs. 0.74 Cr. for Gaj HEP from FY 2014-15 to FY 2018-19, and no additional capitalisation was incurred for remaining plants.

The Commission sought clarification for actual cost exceeding of what was approved/ sanctioned by Board, reason for spread out of additional capitalisation across multiple years and also segregation of IDC included in additional capitalisation claimed under the scheme. Also, the Commission sought justification from the Petitioner with respect to variations in the cost of procurement of runners in between Baner, Binwa and Bhabha plant and also the reasons for purchase of spare runner in case of Bhabha HEP.

In reply, the Petitioner has revised its submissions of additional capitalization under 8 HEP schemes and has submitted the segregated cost of additional capitalisation and IDC included as follows:

Table 76: Details of additional capitalization under 8 HEP scheme

Plant Name	Name of scheme	Sanctioned Cost in Rs. Cr.	Capitalization claimed in 3 rd Control Period in Rs. Cr.		
			Cost	IDC	Total
Baner	Providing 1 No. Pelton Runner in Baner PH	1.71	0.10	0.49	0.59
Binwa	Providing 2 Nos. Pelton Runner in respect of Binwa P/H Utrala	2.97	3.32	1.22	4.54
Gaj	Providing 3 Nos Digital Governor for Gaj HEP	1.90	0.00	0.31	0.31
Gaj	Procurement of 2 No. Runners for Gaj HEP	1.09	0.00	0.09	0.09
Bhaba	Estt. For Revamping of Muslifire system for protection of unit/ station transformer and spriler system for protection of 220 KV oil filled cables installed 3*40 MW	0.54	0.62	0.05	0.68
Bhaba	Estt. For reconditioning of three no 11/220 KV 50MVA Transformer and one no 22/222 KV, 10 MVA station transformer of 3*40 MW Bhava	2.69	2.81	1.21	4.02
Bhaba	Prov. 4 Nos spare fluid coil and reinstallation of 2 Nos damaged coil of rotor for 3*40 MW	1.36	0.94	0.43	1.37
Bhaba	Purchase of spare runner for SVP	9.74	0.18	3.21	3.39
	Total	21.99	7.97	7.01	14.98

With respect to spare runner for Bhaba HEP, the Petitioner has submitted that it was necessary to keep spare runner at Power House, as the machines of Bhaba Power are high headed machines and rate of pitting is high which causes more damages to the runner. However, the Petitioner was unable to provide any reasonable explanation against the variation in cost of runners procured for different plants. While the Commission is of the view that this expenditure should not be allowed in absence of adequate approvals and compliance to the Regulations but denying the complete cost would result in significant financial disallowance for the Petitioner. Therefore, the Commission has scrutinized the type of works undertaken by the Petitioner based on the details provided and has approved select expenditure (i.e. procurement of runners) as one-time additional expense. The Commission makes it quite clear that this is a one-time allowance and would not be considered as precedence in approval of additional capital expenditure in future true-up exercises. ***The Petitioner is directed to undertake prior approvals for any additional capital expenditure required to be undertaken with respect to the generating stations. Further, the Petitioner is directed to claim additional capitalisation strictly as per the provisions under Regulations.***

The Commission observed that the expenses pertain to specific replacement of spare equipment i.e. runner, etc. which has been allowed as a one-time expense in the previous Order. Further, necessity to have IDC corresponding to procurement of spare does not arise as the same are procured directly and do not require a longer time frame. The plant-wise works and amount approved are as follows:

Table 77: Plant wise works and one time expense approved under 8 HEP scheme (in Rs. Cr.)

Plant Name	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
Baner	Providing 1 No. Pelton Runner in Baner PH	0.00	0.10	0.00	0.00	0.00
Binwa	Providing 2 Nos. Pelton Runner in respect of Binwa P/H Uttrala	0.00	0.00	2.79	0.53	0.00
Bhaba	Estt. For Revamping of Muslifire system for protection of unit/ station transformer and spriler system for protection of 220 KV oil filled cables installed 3*40 MW	0.56	0.00	0.07	0.00	0.00
	Estt. For reconditioning of three no 11/220 KV 50MVA Transformer and one no 22/222 KV, 10 MVA station transformer of 3*40 MW Bhava	0.19	1.05	1.53	0.04	0.00
	Prov. 4 Nos spare fluid coil and reinstallation of 2 Nos damaged coil of rotor for 3*40 MW	0.00	0.00	0.88	0.05	0.00
	Purchase of spare runner for SVP	0.00	0.00	0.00	0.18	0.00
	Sub-total	0.75	1.05	2.48	0.27	0.00
	Total for all Plants	0.75	1.15	5.27	0.80	0.00

It is observed that there is a surplus O&M expenses of approx. 101 Cr. as detailed in Para 5.2.16 of this Order. The Commission is of the view that the additional requirement under these 8 HEP schemes could be conveniently funded through this surplus remaining with HPSEBL under the O&M expenses. Also, considering the nature of works which is primarily replacement of parts/ equipment as well as their limited cost, the Commission is of the view that the Petitioner should have covered the same under the R&M activities and not separately claim under additional capital expenditure.

Accordingly, based on the scrutiny of documents submitted by the HPSEBL like board approvals and sanction letter for loan by M/s PFC, the Commission has allowed the expenditure towards 8 HEP schemes, as one-time expenditure, to be funded from surplus of O&M expenses.

- iii. **Balance Additional Capitalization:** In addition to 8 HEP scheme and Bhaba rehabilitation scheme, it is observed that the Petitioner has submitted additional capitalization of Rs. 66 Cr. for the true-up of third Control Period. Based on scrutiny and additional submissions in response to the queries, the Commission observed that the proposed plant-wise additional capitalization comprises of several small expenditure which are of the nature of Repairs and Maintenance. Also, the Petitioner has not submitted any documents i.e. DPR, cost-benefit analysis or approval from its Board towards such additional capital expenditure. Appropriate in-principle or prior approval has not been undertaken from the Commission

against the additional capital expenditure undertaken for the respective plants.

The Commission observed that the Petitioner has significant surplus under the O&M expenditure (amounting to Rs. 101.03 Cr) which is over and above actual O&M expenditure as explained in Para 5.2.16 of the current Tariff Order. Hence, the additional capitalisation amounting to residual amount of Rs. 66.00 Cr. can easily be met by the Petitioner from the additional O&M expenses allowed by the Commission, and still the Petitioner would have surplus amount of Rs. 21 Cr (after considering expense of Rs. 14 Cr. for 8 HEP schemes), unutilised as part of true-up of third Control Period. **Therefore, the Commission has not approved any additional capitalization towards Rs. 66 Cr. claimed by the Petitioner and directs the Petitioner to undertake such small and recurring expenditure as part of regular O&M expenses.**

5.2.29. Based on the above, the proposed vs approved additional capital expenditure for various HPSEBL generation plants has been detailed in table below:

Table 78: Additional Capital Expenditure (Rs. Cr) approved by Commission for 3rd Control Period.

Name of station	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
Andhra	Claimed	-	-	0.28	-	0.10
	Approved	-	-	-	-	-
Baner	Claimed	-	0.10	-	0.97	0.49
	Approved	-	-	-	-	-
Bassi	Claimed	3.00	0.41	0.23	6.66	10.03
	Approved	-	-	-	-	-
Bhaba	Claimed	8.35	0.54	64.97	26.33	24.83
	Approved	-	-	65.01	11.02	-
Binwa	Claimed	-	0.14	3.25	0.96	0.20
	Approved	-	-	-	-	-
Chaba	Claimed	0.01	-	0.44	-	-
	Approved	-	-	-	-	-
Chamba	Claimed	-	-	-	-	-
	Approved	-	-	-	-	-
Gaj	Claimed	-	-	-	0.53	0.69
	Approved	-	-	-	-	-
Giri	Claimed	0.27	2.43	0.01	-	-
	Approved	-	-	-	-	-
Larji	Claimed	-	0.72	1.22	0.06	1.38
	Approved	-	-	-	-	-
Nogli	Claimed	-	-	-	3.97	-
	Approved	-	-	-	-	-
Rongtong	Claimed	-	-	5.02	1.08	0.35
	Approved	-	-	-	-	-
Rukti	Claimed	-	-	7.44	1.47	-
	Approved	-	-	-	-	-
Total	Claimed	11.63	4.34	82.86	42.03	38.07
	Approved	-	-	65.01	11.02	-

Decapitalization

5.2.30. The Petitioner has submitted the details of decapitalisation. The Commission scrutinized the details and found inconsistencies in the submissions, as the figures did not reconcile with books of accounts and sought further clarification.

5.2.31. The Commission sought clarification regarding reconciliation of decapitalization or replacement of assets with books of accounts. In reply, the Petitioner submitted the following details of decapitalisation in reconciliation with accounts:

Table 79: Details of decapitalization submitted by Petitioner for 3rd Control Period

Plant Name	Financial Year	Head	Detail of Decapitalization declared by Petitioner	Amount in Rs. Cr.
Baner	2016-17	10.211	Office Building	0.06
	2018-19	10.720	Buses including mini-buses (Bus No. HP-40-0733) hereby declared as obsolete/unserviceable	0.03
	2018-19	10.730	Jeeps and motor cars (Gypsy No. HP-40-1233) hereby declared as obsolete /unserviceable vide letter no. BPHDJ/SP-5/2018-19-601-02 dated 05.06.2018	0.03
	2018-19		Rectification in accounts	0.12
Bassi	2017-18	10.730	Jeeps and motor cars (Vehicle No. HP 39-A-9095) transferred to RE Khauli Division HPSEBL Shahpur Kangra	0.06
	2018-19		Changes in accounts head of assets	9.56
Bhaba	2014-15	10.305	Hydraulic works part of hydro-electric systems, reinforced concrete pipe lines and surge tanks, steel pipelines, service gates, steel surge, hydraulic control valves and other hydraulic works	15.40
	2014-15	10.543	Other transmission works	4.15
	2014-15	10.553	Material handling equipment crane	0.17
	2015-16	10.401	Pucca road (HPSEBL has transferred Wangtoo to Bhaba road to HPPWD department)	3.37
	2018-19		Changes in accounts head of assets	8.69
Binwa	2017-18	10.720	Buses including mini-buses (TATA Bus No. HP-37-9332) declared unserviceable (by S.E. (Gen.) Circle HPSEBL, Palampur vide o/o Endst. No. GCP/PS-143 A Confd/Vol.-XIII/09-10-9319-22 dt. 29.03.2010). Same has been decapitalized during 6/2017 vide TEO No. 65 for 6/2017.	0.03
	2018-19	10.401	Pucca road: The Board has approved the proposal (vide CE (P&M) Shimla letter No. HPSEB(Sectt.)/409-49(Binwa)/03-27051-68 dt. 18.06.2003) and handed over 8.575 KM road to HPPWD department during 10/2003 for maintenance purpose. The same has been decapitalized in compliance to CE (Gen) HPSEBL, Sunder Nagar office letter No. HPSEB/CEG/DB-5/(VOL-VI)/2010-11-9423-27 dated 12.11.2010 during 3/2019 VIDE TEO NO. 256 for 3/2019 (MOC).	0.94
	2018-19		Rectification in accounts	0.16
Gaj	2018-19		Vehicle assets decapitalized	0.06
	2018-19		Rectification in accounts	0.29
Giri	2014-15	10.531	Hydel Power Generation Plant: 132/33 KV Giri Kulhal Line transferred to HPPTCL Ltd., Hamirpur	0.21
	2018-19	10.531	Hydel Power Generation Plant: IDC wrongly Charged to Giri Power-House transferred to RE Bhaba (Rs. 1,78,73,406/-, RE Ghanvi Rs. 55,56,653/- & RE Gaj Rs. 8,53,385/-)	2.43
	2018-19		Vehicle asset decapitalized	0.10
	2018-19		Rectification in accounts	1.30
Larji	2017-18		Vehicle asset decapitalized	0.11
	2017-18		Office equipment	0.01
	2018-19		RE Larji had transferred Traffic tunnel to NHAH and decapitalized worth Rs. 66.0 Cr, which was initially booked in our account under GL 11.(i.e. the asset not belonging to Board)	66.00
	2018-19		Assets valuing to Rs. 1.98 Cr. were decapitalized	1.98

Plant Name	Financial Year	Head	Detail of Decapitalization declared by Petitioner	Amount in Rs. Cr.
	2018-19		Rectification in accounts	2.09
Rukti	2018-19		Rectification in accounts	0.16
	2018-19		IDC withdrawn from books of accounts	0.13

5.2.32. Further, as regards 8 HEP schemes, the Petitioner has submitted that the works executed were procurement of spares and of the nature of Repairs, Renovation and re-conditioning, where de-capitalization is not required.

5.2.33. After scrutinizing the details, the Commission has not considered decapitalization on account of accounting rectification, book adjustment or IDC withdrawal. However, the Commission has approved decapitalization of assets where the Petitioner has submitted proper details where plant and machinery, vehicles, etc. are decapitalised due to expiry of useful life period of such assets or replacement of assets on account of renovation/ other works. Also, in case of Larji HEP, it is observed that an amount of Rs. 11.00 Cr. was approved by the Commission towards Traffic Tunnel in the Order for 'Determination of Capital Cost of Larji HEP (126 MW) and Other Related Issues' dated 07.07.2011 which has now been transferred to NHAI. The Commission has undertaken decapitalization to the extent of amount of Rs. 11 Cr. considered under the capital cost of Larji HEP.

5.2.34. Accordingly, the Commission has approved the decapitalization as follows:

Table 80: Decapitalization approved for 3rd Control Period (Rs. Cr.)

Name of station	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
Andhra	Accounts	-	-	-	-	-
	Approved	-	-	-	-	-
Baner	Accounts	-	-	0.06	-	0.18
	Approved	-	-	0.06	-	0.06
Bassi	Accounts	-	-	-	0.06	9.56
	Approved	-	-	-	0.06	-
Bhaba	Accounts	19.72	3.37	-	-	8.69
	Approved	19.72	3.37	-	-	-
Binwa	Accounts	-	-	-	0.03	1.10
	Approved	-	-	-	0.03	0.94
Chaba	Accounts	-	-	-	-	-
	Approved	-	-	-	-	-
Chamba	Accounts	-	-	-	-	-
	Approved	-	-	-	-	-
Gaj	Accounts	-	-	-	-	0.35
	Approved	-	-	-	-	0.06
Giri	Accounts	0.21	-	-	-	3.83
	Approved	0.21	-	-	-	0.10
Larji	Accounts	-	-	-	0.12	70.07
	Approved	-	-	-	0.12	12.98
Nogli	Accounts	-	-	-	-	-
	Approved	-	-	-	-	-
Rong Tong	Accounts	-	-	-	-	-
	Approved	-	-	-	-	-
Rukti	Accounts	-	-	-	-	0.29
	Approved	-	-	-	-	-
Total	Accounts	19.93	3.37	0.06	0.21	94.07
	Approved	19.93	3.37	0.06	0.21	14.14

Gross Fixed Assets (GFA)

- 5.2.35. The Commission has adopted the opening GFA similar to the closing GFA approved in true up of 2nd Control Period in Tariff Order dated 11th November, 2021.
- 5.2.36. Further in the truing up of 2nd MYT Control Period in Tariff Order dated November 11, 2021, the Commission had provisionally considered an additional capitalization of Rs. 109.98 Cr towards RMU & LE scheme in Bassi HEP, resulting in closing GFA of Rs. 141.24 Cr. for FY 2013-14. However, an amount of Rs. 2.19 Cr. was decapitalized and therefore, the net GFA of Rs. 139.05 Cr. is considered as the opening GFA for the third Control Period i.e. FY 2014-15.
- 5.2.37. Further, the Commission has considered the opening GFA approved in the MYT Order for 3rd Control Period along with approved additional capitalization as discussed above in this True-up Order to determine the approved GFA for each year of the 3rd Control Period.

Table 81: Plant wise GFA (in Rs. Cr.) approved by Commission for 3rd Control Period

Name of station	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
Andhra	Opening	57.61	57.61	57.61	57.61	57.61
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	-	-
	Closing	57.61	57.61	57.61	57.61	57.61
Baner	Opening	55.67	55.67	55.67	55.61	55.61
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	0.06	-	0.06
	Closing	55.67	55.67	55.61	55.61	55.55
Bassi	Opening	139.05	139.05	139.05	139.05	138.99
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	0.06	-
	Closing	139.05	139.05	139.05	138.99	138.99
Bhaba	Opening	222.19	202.47	199.10	264.11	275.13
	Capitalization	-	-	65.01	11.02	-
	Decapitalization	19.72	3.37	-	-	-
	Closing	202.47	199.10	264.11	275.13	275.13
Binwa	Opening	17.44	17.44	17.44	17.44	17.41
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	0.03	0.94
	Closing	17.44	17.44	17.44	17.41	16.47
Chaba	Opening	1.21	1.21	1.21	1.21	1.21
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	-	-
	Closing	1.21	1.21	1.21	1.21	1.21
Chamba	Opening	0.50	0.50	0.50	0.50	0.50
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	-	-
	Closing	0.50	0.50	0.50	0.50	0.50
Gaj	Opening	30.38	30.38	30.38	30.38	30.38
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	-	0.06
	Closing	30.38	30.38	30.38	30.38	30.32
Giri	Opening	36.22	36.01	36.01	36.01	36.01
	Capitalization	-	-	-	-	-
	Decapitalization	0.21	-	-	-	0.10
	Closing	36.01	36.01	36.01	36.01	35.91
Larji	Opening	1,098.70	1,098.70	1,098.70	1,098.70	1,098.58

Name of station	Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	0.12	12.98
	Closing	1,098.70	1,098.70	1,098.70	1,098.58	1,085.60
Nogli	Opening	11.81	11.81	11.81	11.81	11.81
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	-	-
	Closing	11.81	11.81	11.81	11.81	11.81
Rong Tong	Opening	16.39	16.39	16.39	16.39	16.39
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	-	-
	Closing	16.39	16.39	16.39	16.39	16.39
Rukti	Opening	1.59	1.59	1.59	1.59	1.59
	Capitalization	-	-	-	-	-
	Decapitalization	-	-	-	-	-
	Closing	1.59	1.59	1.59	1.59	1.59
Total	Opening	1,688.76	1,668.84	1,665.47	1,730.42	1,741.23
	Capitalization	0.00	0.00	65.01	11.02	0.00
	Decapitalization	19.93	3.37	0.06	0.21	14.14
	Closing	1,668.84	1,665.47	1,730.42	1,741.23	1,727.09

Depreciation

5.2.38. The Commission has determined the depreciation for the station in accordance to Regulation 20 of Hydro Generation Tariff Regulations, 2011, which states as under:

"20(5) For generating station which are in operation for less than 12 years, the difference between the cumulative depreciation recovered and the cumulative depreciation arrived at by applying the depreciation rates specified in this regulation corresponding to 12 years, shall be spread over the period up to 12 years, and the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the asset.

20(6) For the project in operation for more than 12 years, the balance depreciation to be recovered shall be spread over the remaining useful life of the asset."

5.2.39. Before the promulgation of Hydro Generation Tariff Regulations, 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 Hydro Generation Tariff Regulations, 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. Further, the Commission had considered similar approach for depreciation as specified in Para 6.2.19 of previous Tariff Order dated 11.11.2021 as under :

"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."

- 5.2.40. The useful life of the project has been considered as 40 years in accordance to Regulation 3(36) of Hydro Generation Tariff Regulations, 2011, which defines the useful life. However, in case of few plants, i.e. Bassi HEP and Nogli HEP, the useful life was extended upto 60 years in Tariff Order dated November 11, 2021, on account of renovation and modernization activities approved for the respective plants and accordingly, the extended useful life has been considered, wherever applicable. In case of Bhaba HEP, the Petitioner has not sought life extension for the plant. However, in view of rehabilitation scheme for recommissioning of Bhaba HEP, the Commission has considered a life extension of 20 years for Bhaba HEP as well (taking its total useful life from 40 years to 60 years).
- 5.2.41. In case of Larji HEP, the depreciation rate of 5.17% (approved in the Commission's Tariff Order dated July 19, 2011) has been considered to calculate the depreciation for the third Control Period.
- 5.2.42. The Commission sought clarification regarding details of decapitalization or replacement of assets. However, the Petitioner has submitted accumulated depreciation upto 2014 of Rs. 14.26 Cr. against decapitalized assets amounting to Rs. 19.72 Cr. only for Bhaba HEP in FY 2014-15, while the Petitioner has not submitted these details in case of other plants. Hence, the Commission has proceeded to compute accumulated depreciation corresponding to decapitalized assets as per following methodology.
- 5.2.43. In case of decapitalization of asset, the depreciation is computed taking into consideration the accumulated depreciation corresponding to asset decapitalized. For e.g., in case of Bhaba HEP, depreciation in FY 2014-15 is computed as follows:
- The depreciable value of Bhaba HEP in FY 2014-15 is Rs. 182.22 Cr. (90% of closing GFA i.e. Rs. 202.47 Cr.) Further, the accumulated depreciation till FY 2013-14 is Rs. 133.74 Cr.
 - The accumulated depreciation of Rs. 11.87 Cr. has been computed based on the decapitalized assets amounting to Rs. 19.72 Cr. as per applicable depreciation rates during the past years and has been adjusted in the opening accumulated depreciation in FY 2014-15.
 - Therefore, the depreciation for FY 2014-15 is arrived by spreading the balance depreciation of Rs. 60.35 Cr. ($=182.22-[133.74 - 11.87]$) across remaining useful life of the plant.
- 5.2.44. The Commission has followed similar methodology as explained above to compute the depreciation for other plants also.

Interest on loans

- 5.2.45. The Commission has determined the interest charged in accordance to Regulation 17 of Hydro Generation Tariff Regulations, 2011 and based on capital cost and means of finance approved for each generating station in the tariff Order dated June 10, 2014.

- 5.2.46. For most of the plants (except for Bassi and Larji), there was no interest on loan approved for 3rd Control Period in Tariff Order dated June 10, 2014, as there was no loan outstanding. In case of Bhaba HEP, there was no outstanding loan, however, interest on loan towards funding additional capitalisation towards rehabilitation has been allowed provisionally as explained in sub-section for Bhaba HEP. Further, interest on loan is discussed in subsequent sub-sections along with each plant's individual AFC True-up analysis.

Interest on Working Capital

- 5.2.47. The interest on working capital has been determined in accordance with the Regulation 18 and 19 of Hydro Generation Tariff Regulations, 2011. As per Regulation 18, the working capital for hydroelectric power station shall contain following components:
- Operation and Maintenance (O&M) expenses for 1 month
 - Maintenance spares equivalent to 15% of O&M
 - Receivables equivalent to two months of fixed cost
- 5.2.48. As per Regulation 19, as amended for the 2nd Amendment of Hydro Generation Tariff Regulations, 2011 dated November 1, 2013, the rate of interest on working capital shall be on normative basis and shall be equal to the average base rate of the State Bank of India for the last 6 months prior to filing of the MYT Petition plus 350 basis points.
- 5.2.49. The rate of Interest on working capital considering the SBI prime lending rate applicable for the respective year is as follows:

Table 82: Approved rate of Interest on Working Capital

Particular	FY 15	FY 16	FY 17	FY 18	FY 19
Rate of Interest on WC (Average SBI base rate plus 350 basis points)	13.50%	13.04%	12.79%	12.43%	12.43%

Return on Equity

- 5.2.50. As per the Regulation 21 of Hydro Generation Tariff Regulations, 2011, Return on equity is computed on the equity determined in accordance with Regulation 16 and on pre-tax basis at the base rate of 15.5% to be grossed up as per sub-regulation (3) of this Regulation. However, as the Petitioner has not paid any tax during the third Control Period, RoE of 15.5% has been allowed on equity portion of respective plants. The closing equity of second Control Period for the respective plants has been considered for working out the return on equity for the truing-up for third Control Period.

Generation and Auxiliary Consumption

- 5.2.51. Plant wise actual generation was submitted by the Petitioner. It was observed that while actual generation in case of few plants was higher than the design energy, in case of others actual generation was lower than the design energy. However, except for Bhaba HEP, the Petitioner did not provide any particular

reasons in case of such plants where actual generation was lower than design energy.

5.2.52. Further, discrepancies were observed in the submissions of actual generation (MUs) in few plants vis-à-vis the generation quantum from own generating stations submitted as part of true-up for distribution business during the respective years. The Petitioner was asked to submit the SLDC certified data regarding the same which has not been submitted resulting in non-reconciliation of actual generation units from these plants. ***In absence of relevant information, the Commission has considered the actual generation units considered as per the distribution business true-up and directs the Petitioner to submit SLDC certified data for true-up of 4th Control Period.***

5.2.53. In line with the Hydro Generation Tariff Regulations, 2011, the Commission has considered true-up AFC and design energy for determination of Fixed charge and Energy Charge Rate (ECR) for each year of the 3rd Control Period. Also, for the purpose of true-up, the Commission has considered Auxiliary Consumption figures approved in its MYT order for 3rd Control Period. Accordingly, the true-up fixed charge and ECR is considered for determination of realizable revenue against each plant based on the actual generation for each year of the 3rd MYT Control Period.

5.2.54. In case of plants where actual generation was higher than the design energy, the Commission has considered the provision 26 (7) of Hydro Generation Tariff Regulations, 2011 as amended by the second amendment of Regulation on dated November 1, 2013, which provides for limiting ECR to a maximum of one rupee fifteen paise per unit. The Regulation 26(7) as amended by the 2nd Amendment has been reproduced as follows:

"In case the energy charge rate (ECR) for a hydro generating station, as computed in sub-regulation (5) of this regulation, exceeds one rupee fifteen paise per kWh, and the actual saleable energy in a year exceeds $\{DE \times (100 - AUX) \times (100 - FEHS) / 10000\}$ MWh, the Energy charge for the energy in excess of the above shall be billed at one rupee fifteen paise per kWh only"

5.2.55. The Plant wise True-Up of the AFC vis-à-vis the actual has been provided in the following sections.

5.3. Annual Fixed Charges for Andhra HEP

5.3.1. Andhra HEP is a 16.95 MW (3 x 5.65 MW) project commissioned in the year 1987. The project was executed with a capital cost of Rs. 57.61 Cr and was funded through 100% debt with no outstanding loan.

5.3.2. The Petitioner has filed for true-up of AFC for 3rd Control Period on account of additional capital expenditure.

5.3.3. As discussed in Para 5.2.29 of this Order, no additional capitalization has been approved for Andhra HEP during 3rd Control Period. Also as discussed in Para 5.2.16 of this Order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.

- 5.3.4. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in interest for working capital. The details of the True-Up of Annual Fixed Charges for the Andhra HEP for third Control Period are provided in the table below:

Table 83: Trued-up AFC of 3rd Control Period for Andhra HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
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
Energy Available (DE)	MU	86.43	86.43	86.43	86.43	86.43
Actual Generation	MU	71.69	61.85	54.77	65.53	59.05
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	7.31	8.01	8.78	9.62	10.54
a) Employee expense	Rs. Cr.	5.77	6.33	6.95	7.63	8.37
b) R&M Expenses	Rs. Cr.	1.01	1.09	1.19	1.29	1.40
c) A&G Expenses	Rs. Cr.	0.46	0.51	0.56	0.61	0.67
d) Terminal benefits	Rs. Cr.	0.07	0.08	0.08	0.09	0.10
Depreciation	Rs. Cr.	1.10	1.10	1.10	1.10	1.10
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.	0.43	0.45	0.48	0.51	0.56
Total	Rs. Cr.	8.83	9.56	10.36	11.23	12.19
AFC approved in MYT order	Rs. Cr.	8.83	9.57	10.38	11.27	12.24
Difference in AFC	Rs. Cr.	-0.01	0.01	0.02	0.04	0.04
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	0.51	0.55	0.60	0.65	0.71
Capacity Charge	Rs. Cr.	4.42	4.78	5.18	5.61	6.10

5.4. Annual Fixed Charges for Baner HEP

- 5.4.1. Baner HEP is a 12 MW (3 x 4 MW) project commissioned in the year 1996.
- 5.4.2. The Commission in its tariff Order dated 30th May 2008 had considered Rs.55.67 Cr as the capitalized project cost for the purpose of determination of AFC during the Control Period.
- 5.4.3. The Commission has continued with Rs. 15 Cr. GoHP equity as considered in closing balance for FY 2013-14 based on the truing up of 2nd Control period as per tariff order dated 11th November, 2021.
- 5.4.4. Further, in reference to Para 5.2.34, the Commission has considered decapitalization amount of Rs. 0.06 Cr. in FY 2016-17 and Rs. 0.06 Cr. in FY 2018-19, while calculating the GFA. Accumulated depreciation corresponding to asset decapitalized has been computed as per methodology specified in Para 5.2.43.
- 5.4.5. Also as discussed in Para 5.2.16 of this Order, no change has been approved in O&M cost, on account of it being a controllable cost item.
- 5.4.6. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in depreciation, interest charges, return on equity and interest for working capital. The details of the True-Up of Annual Fixed Charges for the Baner HEP for third Control Period are provided in the table below:

Table 84: Trued-up AFC of 3rd Control Period for Baner HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
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
Energy Available (DE)	MU	52.85	52.85	52.85	52.85	52.85
Actual Generation	MU	40.51	42.59	28.69	32.98	33.81
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	4.90	5.37	5.89	6.48	7.09
a) Employee expense	Rs. Cr.	4.02	4.41	4.84	5.32	5.84
b) R&M Expenses	Rs. Cr.	0.50	0.55	0.59	0.65	0.70
c) A&G Expenses	Rs. Cr.	0.32	0.35	0.39	0.43	0.47
d) Terminal benefits	Rs. Cr.	0.06	0.06	0.07	0.08	0.08
Depreciation	Rs. Cr.	1.17	1.17	1.17	1.17	1.17
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	2.33	2.33	2.33	2.33	2.33
Interest on Working Capital	Rs. Cr.	0.35	0.36	0.38	0.40	0.43
Total	Rs. Cr.	8.75	9.23	9.77	10.38	11.02
AFC Approved in MYT Order	Rs. Cr.	8.77	9.27	9.81	10.41	11.07
Difference in AFC	Rs. Cr.	0.02	0.04	0.04	0.03	0.05
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	0.83	0.87	0.92	0.98	1.04
Capacity Charge	Rs. Cr.	4.37	4.61	4.88	5.19	5.51

5.5. Annual Fixed Charges for Bassi HEP

- 5.5.1. Bassi HEP is a 66 MW (4 x 16.5 MW) project commissioned in the year 1970, 1971 and 1981.
- 5.5.2. In case of Bassi HEP, the opening GFA of Rs. 139.05 Cr. is now considered for FY 2014-15, as explained in Para 5.2.36.
- 5.5.3. The weighted average rates of interest allowed are considered as per details of actual loans submitted for approval of interest on loan by the Petitioner.
- 5.5.4. Further in reference to Para 5.2.34, the Commission has considered decapitalization amount of Rs. 0.06 Cr. in FY 2017-18 while calculating the GFA. Accumulated depreciation corresponding to asset decapitalized has been computed as per methodology specified in Para 5.2.43.
- 5.5.5. As discussed in Para 5.2.29 of this Order, no additional capitalization has been approved for Bassi HEP during 3rd Control Period. No change has been approved in O&M cost as the same is considered to be a controllable cost as also discussed in Para 5.2.16 of this Order.
- 5.5.6. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in depreciation, interest charges and interest for working capital. The details of the True-Up of Annual Fixed Charges for the Bassi HEP for third Control Period are provided in the table below:

Table 85: Trued up AFC of 3rd Control Period for Bassi HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
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

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Less: Free Power to GoHP	MU	0.00	0.00	0.00	0.00	0.00
Energy Available (DE)	MU	344.40	344.40	344.40	344.40	344.40
Actual Generation	MU	307.02	314.46	297.00	314.44	291.59
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	11.71	12.83	14.08	15.45	16.93
a) Employee expense	Rs. Cr.	10.08	11.06	12.14	13.32	14.62
b) R&M Expenses	Rs. Cr.	0.62	0.67	0.73	0.80	0.86
c) A&G Expenses	Rs. Cr.	0.81	0.88	0.97	1.07	1.17
d) Terminal benefits	Rs. Cr.	0.20	0.22	0.24	0.26	0.28
Depreciation	Rs. Cr.	3.85	3.85	3.85	3.85	3.85
Interest Charges	Rs. Cr.	11.20	9.12	7.99	5.77	6.00
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.99	0.97	0.99	0.99	1.07
Total	Rs. Cr.	27.75	26.78	26.92	26.04	27.85
AFC Approved in MYT	Rs. Cr.	24.89	25.24	25.71	26.31	27.05
Difference in AFC	Rs. Cr.	-2.86	-1.54	-1.21	0.27	-0.80
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	0.40	0.39	0.39	0.38	0.40
Capacity Charge	Rs. Cr.	13.88	13.39	13.46	13.02	13.92

5.6. Annual Fixed Charges for Bhaba HEP

- 5.6.1. Bhaba HEP is a 120 MW (3 x 40 MW) project commissioned in the year 1989. The Commission in its earlier tariff orders had considered the completed cost of the project as per the Accounts at Rs. 222.19 Cr for tariff determination. The project was assumed to be funded through 100% debt with no outstanding loan.
- 5.6.2. In para 5.2.29, the Commission has dealt with approval of the additional capitalisation for Bhaba HEP.
- 5.6.3. The weighted average rate of interest allowed is considered as per details of actual loans undertaken for Rehabilitation scheme of Bhaba HEP for provisional approval of interest on loan.
- 5.6.4. In reference to Para 5.2.34, the Commission has considered asset decapitalization amounting to Rs. 19.72 Cr. in FY 2014-15 and Rs. 3.37 Cr. in FY 2015-16. Further the accumulated depreciation corresponding to asset decapitalized has been computed as per methodology specified in Para 5.2.43.
- 5.6.5. The Commission has considered a life extension of 20 years for Bhaba HEP (taking its total life from 40 years to 60 years), as discussed in Para 5.2.40. Accordingly, the remaining depreciation for the plant has been spread out over the extended life.
- 5.6.6. The Commission, in tariff order dated June 10, 2014 had provisionally approved additional O&M expenses of Rs. 2.24 Cr. in FY 2014-15 for repairs and maintenance activities and are subject to actual. However, as per the details submitted by the Petitioner, the O&M expenses approved in 3rd Control Period are already higher than the actual O&M expenses. Hence, the Commission has not allowed any additional O&M expenses and has continued with the approved O&M expenses.
- 5.6.7. The difference in AFC are primarily on account of change in depreciation, interest charges, return on equity and interest for working capital. The details of the True-

Up of Annual Fixed Charges for the Bhaba HEP for third Control Period are provided in the table below:

Table 86: Trued-up AFC of 3rd Control Period for Bhaba HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	459.12	459.12	459.12	459.12	459.12
Actual Generation	MU	521.19	0.00	186.40	489.94	587.94
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	20.62	22.59	24.72	27.07	29.64
a) Employee expense	Rs. Cr.	14.52	15.94	17.49	19.20	21.08
b) R&M Expenses	Rs. Cr.	4.62	5.02	5.45	5.92	6.43
c) A&G Expenses	Rs. Cr.	1.16	1.28	1.40	1.54	1.69
d) Terminal benefits	Rs. Cr.	0.32	0.35	0.38	0.41	0.44
e) Additional R&M expense	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Cr.	3.94	3.88	3.31	3.61	3.61
Interest Charges	Rs. Cr.	0.00	0.00	3.42	5.80	7.31
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	1.23	1.29	1.44	1.57	1.74
Total	Rs. Cr.	25.79	27.76	32.89	38.06	42.29
AFC Approved in MYT Order	Rs. Cr.	28.55	28.32	30.58	33.06	35.76
Difference in AFC	Rs. Cr.	2.76	0.56	-2.31	-5.00	-6.53
Tariff and Revenue						
Energy Charge Rate	Rs./ Kwh	0.28	0.30	0.36	0.41	0.46
Capacity Charge	Rs. Cr.	12.90	13.88	16.44	19.03	21.15

5.7. Annual Fixed Charges for Binwa HEP

- 5.7.1. Binwa HEP is a 6 MW (2 x 3 MW) project commissioned by the Petitioner in the year 1984. The project was executed with a capital cost of Rs. 17.44 Cr and was funded through 100% debt with no outstanding loan.
- 5.7.2. In reference to Para 5.2.34, the Commission has considered decapitalization amount of Rs. 0.03 Cr. in FY 2017-18 and Rs. 0.94 Cr. in FY 2018-19, while calculating the GFA. Further the accumulated depreciation corresponding to asset decapitalized has been computed as per methodology specified in Para 5.2.43.
- 5.7.3. Also as discussed in Para 5.2.16 of this Order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.
- 5.7.4. The difference in AFC are primarily on account of change in depreciation, interest charges, return on equity and interest for working capital. The details of the True-Up Annual Fixed Charges for the Binwa HEP for the third Control Period are provided in the table below:

Table 87: Trued-up AFC of 3rd Control Period for Binwa HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	29.05	29.05	29.05	29.05	29.05
Actual Generation	MU	28.04	27.21	27.55	31.64	32.10
Annual Fixed Charge						

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
O&M Expenses	Rs. Cr.	4.19	4.58	5.02	5.50	6.05
a) Employee expense	Rs. Cr.	3.45	3.79	4.15	4.56	5.01
b) R&M Expenses	Rs. Cr.	0.41	0.44	0.48	0.52	0.57
c) A&G Expenses	Rs. Cr.	0.28	0.30	0.33	0.36	0.40
d) Terminal benefits	Rs. Cr.	0.05	0.05	0.06	0.06	0.07
Depreciation	Rs. Cr.	0.31	0.31	0.31	0.31	0.29
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.	0.24	0.25	0.27	0.29	0.31
Total	Rs. Cr.	4.74	5.14	5.60	6.10	6.66
AFC Approved in MYT Order	Rs. Cr.	4.71	5.14	5.60	6.11	6.67
Difference in AFC	Rs. Cr.	-0.03	0.00	0.00	0.01	0.01
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	0.82	0.88	0.96	1.05	1.15
Capacity Charge	Rs. Cr.	2.37	2.57	2.80	3.05	3.33

5.8. Annual Fixed Charges for Chaba HEP

- 5.8.1. Chaba HEP is a 1.75 MW (2 x 0.5 MW + 3 x 0.25 MW) project commissioned in the year 1913-14. The project was executed with a capital cost of Rs. 1.21 Cr and was funded through 100% debt. It is a 94 year old completely depreciated plant with no outstanding loan.
- 5.8.2. The Petitioner has filed for true-up of AFC for 3rd Control Period on account of additional capital expenditure.
- 5.8.3. As discussed in Para 5.2.29 of this Order, no additional capitalization has been approved for Chaba HEP during 3rd Control Period. Also as discussed in Para 5.2.16 of this order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.
- 5.8.4. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in interest for working capital. The details of the Trued-Up Annual Fixed Charges for the Chaba HEP for third Control Period are provided in the table below:

Table 88: Trued-up AFC of 3rd Control Period for Chaba HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	7.59	7.59	7.59	7.59	7.59
Actual Generation	MU	7.79	6.80	4.66	4.50	5.30
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	1.40	1.53	1.68	1.85	2.02
a) Employee expense	Rs. Cr.	1.02	1.12	1.23	1.35	1.48
b) R&M Expenses	Rs. Cr.	0.29	0.31	0.34	0.37	0.40
c) A&G Expenses	Rs. Cr.	0.08	0.09	0.10	0.11	0.12
d) Terminal benefits	Rs. Cr.	0.01	0.01	0.01	0.02	0.02
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.	0.08	0.08	0.09	0.09	0.10
Total	Rs. Cr.	1.48	1.61	1.77	1.94	2.12
AFC Approved in MYT Order	Rs. Cr.	1.48	1.62	1.77	1.94	2.12

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Difference in AFC	Rs. Cr.	0.00	0.01	0.00	0.00	0.00
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	0.97	1.06	1.16	1.28	1.40
Capacity Charge	Rs. Cr.	0.74	0.81	0.88	0.97	1.06

5.9. Annual Fixed Charges for Chamba HEP

- 5.9.1. Chamba HEP is a 0.45 MW (3 X 0.15 MW) project commissioned by the Petitioner in the year 1938, 1957 and 1985. The project was executed with a capital cost of Rs. 0.50 Cr and was funded through 100% debt with no outstanding loan.
- 5.9.2. The Petitioner has filed for true-up of AFC for 3rd Control Period and no additional capital expenditure has been claimed.
- 5.9.3. As discussed in Para 5.2.29 of this order, no additional capitalization has been approved for Chamba HEP during 3rd Control Period. Also as discussed in Para 5.2.16 of this order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.
- 5.9.4. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in interest for working capital. The details of the Trued-Up Annual Fixed Charges for the Chamba HEP for third Control Period are provided in the table below:

Table 89: Trued-up AFC of 3rd Control Period for Chamba HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	1.75	1.75	1.75	1.75	1.75
Actual Generation	MU	1.26	0.68	1.00	1.83	1.55
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	0.27	0.30	0.32	0.35	0.38
a) Employee expense	Rs. Cr.	0.20	0.22	0.24	0.26	0.29
b) R&M Expenses	Rs. Cr.	0.05	0.06	0.06	0.07	0.07
c) A&G Expenses	Rs. Cr.	0.02	0.02	0.02	0.02	0.02
d) Terminal benefits	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Cr.	0.01	0.01	0.01	0.01	0.01
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.	0.02	0.02	0.02	0.02	0.02
Total	Rs. Cr.	0.29	0.33	0.35	0.38	0.41
AFC Approved in MYT Order	Rs. Cr.	0.29	0.31	0.34	0.38	0.41
Difference in AFC	Rs. Cr.	0.00	-0.02	-0.01	0.00	0.00
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	0.84	0.93	0.99	1.08	1.17
Capacity Charge	Rs. Cr.	0.15	0.16	0.17	0.19	0.20

5.10. Annual Fixed Charges for Gaj HEP

- 5.10.1. Gaj HEP is a 10.50 MW (3 x 3.50 MW) project commissioned by the Petitioner in the year 1996.

- 5.10.2. The Commission in its tariff order dated 30th May 2009 had considered Rs. 60.58 Cr as the capitalized project cost for the purpose of determination of AFC during the Control Period.
- 5.10.3. However, the Commission in Tariff Order dated 11th November, 2011 had revised the approved opening GFA from Rs. 60.58 Cr. to Rs.30.38 Cr. on account of decapitalization, followed by which no additional capitalisation was approved in True Up of 2nd Control Period. Accordingly, Rs.30.38 Cr. has been considered as opening GFA for True Up of 3rd Control Period.
- 5.10.4. The Commission has continued with Rs. 15 Cr. GoHP equity as considered in closing balance for FY 2013-14 based on the truing up of 2nd Control period as per tariff order dated 11th November, 2021.
- 5.10.5. In reference to Para 5.2.34, the Commission has considered decapitalization amount of Rs. 0.06 Cr. in FY 2018-19. Further the accumulated depreciation corresponding to asset decapitalized has been computed as per methodology specified in Para 5.2.43.
- 5.10.6. No change has been approved in O&M cost on account of it being a Controllable Cost item, as discussed in Para 5.2.16 of this Order.
- 5.10.7. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, are on account of change in depreciation, interest charges, return on equity and interest for working capital. The details of the Trued-Up Annual Fixed Charges for the Gaj HEP for third Control Period are provided in the table below:

Table 90: Trued-up AFC of 3rd Control Period for Gaj HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	33.38	33.38	33.38	33.38	33.38
Actual Generation	MU	44.05	39.61	29.17	29.69	34.63
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	5.18	5.66	6.22	6.81	7.46
a) Employee expense	Rs. Cr.	3.91	4.29	4.71	5.17	5.68
b) R&M Expenses	Rs. Cr.	0.90	0.97	1.06	1.15	1.25
c) A&G Expenses	Rs. Cr.	0.31	0.34	0.38	0.41	0.45
d) Terminal benefits	Rs. Cr.	0.06	0.06	0.07	0.08	0.08
Depreciation	Rs. Cr.	0.64	0.64	0.64	0.64	0.64
Interest Charges	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Cr.	2.33	2.33	2.33	2.33	2.33
Interest on Working Capital	Rs. Cr.	0.35	0.37	0.39	0.41	0.44
Total	Rs. Cr.	8.50	8.99	9.57	10.18	10.86
AFC Approved in MYT Order	Rs. Cr.	9.15	9.67	10.24	10.87	11.55
Difference in AFC	Rs. Cr.	0.65	0.68	0.67	0.69	0.69
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	1.27	1.35	1.43	1.53	1.63
Capacity Charge	Rs. Cr.	4.25	4.50	4.79	5.09	5.43

5.11. Annual Fixed Charges for Giri HEP

- 5.11.1. Giri HEP is a 60 MW (2 x 30 MW) project commissioned by the Petitioner in the year 1978.
- 5.11.2. The Commission in its tariff order date 30th May 2009 had considered the project with capital cost of Rs. 36.22 Cr for tariff determination and funded through 100% debt with no outstanding loan.
- 5.11.3. The Petitioner has filed for true-up of AFC for 3rd Control Period on account of additional capital expenditure. As discussed in Para 5.2.29 of this Order, no additional capitalization has been approved for Giri HEP during 3rd Control Period.
- 5.11.4. In reference to Para 5.2.34, the Commission has considered decapitalization amount of Rs. 0.21 Cr. in FY 2014-15 and Rs. 0.10 Cr. in FY 2018-19. Further, the accumulated depreciation corresponding to asset decapitalized has been computed as per methodology specified in Para 5.2.43.
- 5.11.5. Also as discussed in section 5.2 of this Order, no change has been approved in O&M cost, on account of it being a Controllable Cost item. The Commission in tariff order dated June 10, 2014 had provisionally approved additional O&M expense of Rs. 5.28 Cr. in FY 2014-15 for repairs and maintenance activities which was subject to true-up as per actual. As per the details submitted by the Petitioner, the O&M expenses approved in 3rd Control Period is observed to be higher than the actual O&M expenses. Hence, the Commission has not allowed any additional O&M expenses and has continued with the approved O&M expenses.
- 5.11.6. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in depreciation and interest for working capital. The details of the Trued-Up Annual Fixed Charges for the Giri HEP for third Control Period are provided in the table below:

Table 91: Trued-up AFC of 3rd Control Period for Giri HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	287.52	287.52	287.52	287.52	287.52
Actual Generation	MU	213.09	188.34	140.03	169.27	214.96
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	17.26	18.87	20.64	22.56	24.67
a) Employee expense	Rs. Cr.	10.06	11.04	12.12	13.30	14.60
b) R&M Expenses	Rs. Cr.	6.25	6.78	7.37	8.00	8.69
c) A&G Expenses	Rs. Cr.	0.80	0.88	0.97	1.06	1.17
d) Terminal benefits	Rs. Cr.	0.15	0.17	0.18	0.20	0.21
e) Additional R&M expense	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Cr.	0.35	0.35	0.35	0.35	0.08
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.	0.96	1.01	1.09	1.15	1.25
Total	Rs. Cr.	18.58	20.24	22.08	24.07	26.00
AFC Approved in MYT Order	Rs. Cr.	24.08	20.38	21.87	23.79	26.01
Difference in AFC	Rs. Cr.	5.50	0.14	-0.21	-0.28	0.01
Tariff and Revenue						

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Energy Charge Rate	Rs./Kwh	0.32	0.35	0.38	0.42	0.45
Capacity Charge	Rs. Cr.	9.29	10.12	11.04	12.03	13.00

5.12. Annual Fixed Charges for Larji HEP

- 5.12.1. Larji HEP is a 126 MW (3 x 42 MW) project commissioned in the year 2006.
- 5.12.2. Further, as per the Order dated 07.07.2011, for approval of Capital cost of Larji Power Plant, the Commission approved Capital Cost of Rs. 1098.70 Cr. The Commission had considered Rs. 155.57 Cr. being funded through equity infusion and the balance amount of Rs. 943.13 Cr. funded by way of Debt.
- 5.12.3. In reference to Para 5.2.34, the Commission has considered decapitalization amount of Rs. 0.12 Cr. in FY 2017-18 and Rs. 12.98 Cr. in FY 2018-19. Further, the accumulated depreciation corresponding to asset decapitalized has been computed as per methodology specified in Para 5.2.43. The corresponding equity and debt against the decapitalized amount has also been adjusted in the respective year.
- 5.12.4. The Commission in its Order dated 11.11.2021, had also trued up the AFC of Larji HEP for 2nd Control Period from FY 2011-12 to FY 2013-14. The Commission had approved Rs. 187.62 Cr as the closing loan balance for FY 2013-14.
- 5.12.5. For the purpose of True-up of interest charges in this order, the Commission has considered the submission of Petitioner for weighted average rate of interest and actual loan repayment. Accordingly, the interest charges worked out by the Commission for the Control Period from FY 2014-15 to FY 2018-19 is summarised below:

Table 92: Approved Interest Cost for Larji HEP

Particulars	Units	FY 15	FY 16	FY 17	FY 18	FY 19
Opening Balance	Rs. Cr.	187.62	107.62	28.62	0.00	0.00
Fresh loan taken	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Principal Repayment	Rs. Cr.	80.00	79.00	28.62	0.00	0.00
Closing balance	Rs. Cr.	107.62	28.62	0.00	0.00	0.00
Wtd. Avg. Interest Rate	%	7.87%	7.85%	7.48%	NA	NA
Interest Payment	Rs.Cr.	11.62	5.35	1.07	0.00	0.00

- 5.12.6. The Commission in its Order dated 10.06.2014 had also approved the applicable rate of return on the equity for first 10 years beginning from the date of COD as 19.38%. However, in view of no tax liability during the third Control Period, the Commission has considered rate of return on equity for Larji HEP to be 15.5% for truing-up. Considering there is no tax incidence on HPSEBL during the 3rd Control Period, therefore RoE rate of 15.50% is taken on post tax basis for True-up.
- 5.12.7. As discussed in Para 5.2.29 of this Order, no additional capitalization has been approved for Larji HEP during third Control Period. Also, as discussed in Para 5.2.16 of this Order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.
- 5.12.8. The details of the Trued-up Annual Fixed Charges for the Larji HEP for the third Control Period are provided in the table below:

Table 93: Trued-up AFC of 3rd Control Period for Larji HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	510.21	510.21	510.21	510.21	510.21
Actual Generation	MU	562.89	576.80	537.47	536.88	525.22
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	20.84	22.82	24.99	27.36	29.95
a) Employee expense	Rs. Cr.	14.82	16.27	17.86	19.60	21.51
b) R&M Expenses	Rs. Cr.	4.58	4.98	5.41	5.87	6.38
c) A&G Expenses	Rs. Cr.	1.19	1.30	1.43	1.57	1.72
d) Terminal benefits	Rs. Cr.	0.25	0.27	0.29	0.32	0.34
Depreciation	Rs. Cr.	56.81	56.81	56.81	56.81	56.14
Interest Charges	Rs. Cr.	11.62	5.35	1.07	0.00	0.00
Return on Equity	Rs. Cr.	24.11	24.11	24.11	24.11	23.97
Interest on Working Capital	Rs. Cr.	3.28	3.13	3.09	3.10	3.21
Total	Rs. Cr.	116.66	112.22	110.08	111.38	113.27
AFC Approved in MYT Order	Rs. Cr.	129.40	124.95	120.69	112.43	114.21
Difference in AFC	Rs. Cr.	12.74	12.73	10.61	1.05	0.94
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	1.14	1.10	1.08	1.09	1.11
Capacity Charge	Rs. Cr.	58.33	56.11	55.04	55.69	56.63

5.13. Annual Fixed Charges for Nogli HEP

- 5.13.1. 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. The project was executed with a capital cost of Rs. 11.81 Cr and was funded through 100% debt. It is a completely depreciated plant with no outstanding loan.
- 5.13.2. The Petitioner has filed for true-up of AFC for 3rd Control Period on account of additional capital expenditure. As discussed in Para 5.2.29 of this order, no additional capitalization has been approved for Nogli HEP during 3rd Control Period. Also as discussed in Para 5.2.16 of this order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.
- 5.13.3. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in interest for working capital. The details of the Trued-Up Annual Fixed Charges for the Nogli HEP for third Control Period are provided in the table below:

Table 94: Trued-up AFC of 3rd Control Period for Nogli HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	9.76	9.76	9.76	9.76	9.76
Actual Generation	MU	6.15	6.76	7.53	3.56	3.93
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	2.40	2.63	2.87	3.13	3.43
a) Employee expense	Rs. Cr.	1.45	1.59	1.75	1.92	2.11
b) R&M Expenses	Rs. Cr.	0.81	0.88	0.95	1.03	1.12
c) A&G Expenses	Rs. Cr.	0.12	0.13	0.14	0.15	0.17
d) Terminal benefits	Rs. Cr.	0.02	0.03	0.03	0.03	0.03
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

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Return on Equity	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs. Cr.	0.13	0.14	0.15	0.16	0.17
Total	Rs. Cr.	2.53	2.77	3.02	3.29	3.60
AFC Approved in MYT Order	Rs. Cr.	2.53	2.77	3.03	3.31	3.62
Difference in AFC	Rs. Cr.	0.00	0.00	0.01	0.02	0.02
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	1.30	1.42	1.55	1.68	1.85
Capacity Charge	Rs. Cr.	1.27	1.39	1.51	1.64	1.80

5.14. Annual Fixed Charges for Rongtong HEP

- 5.14.1. Rongtong HEP is a 2 MW (4 x 0.50 MW) project commissioned by the Petitioner in the year 1986-87.
- 5.14.2. The Petitioner has filed for true-up of AFC for 3rd Control Period on account of additional capital expenditure.
- 5.14.3. As discussed in Para 5.2.29 of this Order, no additional capitalization has been approved for Rongtong HEP during 3rd Control Period. Also as discussed in Para 5.2.16 of this Order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.
- 5.14.4. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in interest for working capital. The details of the Trued-Up Annual Fixed Charges for the Rongtong HEP for third Control Period are provided in the table below:

Table 95: Trued-up AFC of 3rd Control Period for Rongtong HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	7.56	7.56	7.56	7.56	7.56
Actual Generation	MU	0.37	0.00	0.63	1.02	1.17
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	1.50	1.65	1.80	1.98	2.16
a) Employee expense	Rs. Cr.	1.24	1.36	1.49	1.64	1.80
b) R&M Expenses	Rs. Cr.	0.16	0.18	0.19	0.21	0.22
c) A&G Expenses	Rs. Cr.	0.10	0.11	0.12	0.13	0.14
d) Terminal benefits	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Cr.	0.31	0.31	0.31	0.31	0.31
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.	0.09	0.09	0.10	0.11	0.12
Total	Rs. Cr.	1.90	2.06	2.21	2.40	2.59
AFC Approved in MYT Order	Rs. Cr.	1.87	2.02	2.19	2.37	2.57
Difference in AFC	Rs. Cr.	-0.03	-0.04	-0.02	-0.03	-0.02
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	1.26	1.36	1.46	1.59	1.71
Capacity Charge	Rs. Cr.	0.95	1.03	1.11	1.20	1.29

5.15. Annual Fixed Charges for Rukti HEP

- 5.15.1. Rukti HEP is a 1.50 MW (3 x 0.50 MW) project commissioned by the HPSEBL in the year 1979 and 1980.
- 5.15.2. The Petitioner has filed for true-up of AFC for 3rd Control Period on account of additional capital expenditure.
- 5.15.3. As discussed in Para 5.2.29 of this Order, no additional capitalization has been approved for Rukti HEP during 3rd Control Period. Also as discussed in Para 5.2.16 of this Order, no change has been approved in O&M cost, on account of it being a Controllable Cost item.
- 5.15.4. The difference in Trued-up numbers for 3rd Control Period from the approved numbers in the Tariff Order dated June 10, 2014, is on account of change in interest for working capital. The details of the Trued-Up Annual Fixed Charges for the Rukti HEP for third Control Period are provided in the table below:

Table 96: Trued-up AFC of 3rd Control Period for Rukti HEP

Particulars	Unit	FY 15	FY 16	FY 17	FY 18	FY 19
Gross Generation (DE)	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
Energy Available (DE)	MU	6.47	6.47	6.47	6.47	6.47
Actual Generation	MU	0.18	0.03	1.00	2.37	2.56
Annual Fixed Charge						
O&M Expenses	Rs. Cr.	0.67	0.73	0.80	0.89	0.96
a) Employee expense	Rs. Cr.	0.56	0.61	0.67	0.74	0.81
b) R&M Expenses	Rs. Cr.	0.07	0.07	0.08	0.09	0.09
c) A&G Expenses	Rs. Cr.	0.04	0.05	0.05	0.06	0.06
d) Terminal benefits	Rs. Cr.	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Cr.	0.02	0.02	0.02	0.02	0.02
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	0.04	0.05	0.05
Total	Rs. Cr.	0.73	0.79	0.86	0.96	1.03
AFC Approved in MYT Order	Rs. Cr.	0.73	0.79	0.87	0.95	1.04
Difference in AFC	Rs. Cr.	0.00	0.00	0.01	-0.01	0.01
Tariff and Revenue						
Energy Charge Rate	Rs./Kwh	0.56	0.61	0.67	0.74	0.80
Capacity Charge	Rs. Cr.	0.36	0.40	0.43	0.48	0.52

5.16. Summary of surplus/ (gap) for all plants

- 5.16.1. Based on the revised capacity charges and energy charges as per the Hydro Generation Tariff Regulations, 2011, and the actual generation from respective plants, the Commission has worked out the total cost of generation to be recovered from the distribution business.
- 5.16.2. Details of total trued-up AFC recoverable based on actual generation of various plants is summarized in table below:

Table 97: Total revenue recoverable for all generation plants (Rs. Cr.)

Plant Name	FY 15	FY 16	FY 17	FY 18	FY 19
Andhra	8.08	8.20	8.46	9.87	10.26
Baner	7.73	8.33	7.54	8.43	9.03

Plant Name	FY 15	FY 16	FY 17	FY 18	FY 19
Bassi	26.24	25.61	25.06	24.91	25.71
Bhaba	27.54	13.88	23.12	39.33	48.23
Binwa	4.66	4.98	5.45	6.37	7.01
Chaba	1.50	1.53	1.43	1.55	1.80
Chamba	0.25	0.23	0.27	0.39	0.39
Gaj	9.73	9.71	8.97	9.62	11.01
Giri	16.17	16.75	16.42	19.12	22.72
Larji	122.69	119.55	113.02	114.29	114.93
Nogli	2.06	2.34	2.67	2.24	2.53
Rongtong	1.00	1.03	1.20	1.36	1.50
Rukti	0.38	0.40	0.50	0.65	0.72
Total	228.01	212.53	214.11	238.13	255.84

5.16.3. The Commission had approved power purchase cost from own generation as part of the Distribution business in the truing-up for respective years. A comparison of the same along with surplus-gap to be adjusted for each year is summarized below:

Table 98: Surplus/ (Gap) for all generation plants

Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
Total Trued-up recovery from all Generating Stations as discussed above (A)	228.01	212.53	214.11	238.13	255.84
Cost of own generation allowed in Distribution True-up (B)	245.94	210.10	217.66	234.82	249.41
Distribution Order details	MPR Order dated 17.04.2017	4 th APR Order dated 04.05.2018	MYT Order dated 29.06.2019	1 st APR Order dated 06.06.2020	2 nd APR Order dated 31.05.2021
Surplus/(Gap): (B) – (A)	17.93	(2.43)	3.55	(3.31)	(6.43)

5.16.4. As regards rate of interest for computation of carrying cost, the Commission has reviewed the same as part of the distribution business Tariff Order dated 31st March, 2023 in Para 6.19.5, as follows:

“Errata in rate of holding cost considered in FY 18 and FY 19 in the MPR Order dated 29th March 2022

6.19.5 The Petitioner has submitted that in the MPR Order dated 29.03.2022, the computation of rate of holding cost for the years FY 2017-18 and FY 2018-19 has been considered based on interest rate of 12.43% for calculation of holding cost.

However, as per Regulation 11(2) of 3rd Amendment of HPERC (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011, the applicable rate for carrying cost or holding cost is average SBI MCLR (1 Year) of the relevant year plus 300 basis points. The interest rate as per the same would be 11.00% for FY 2017-18 and 11.39% for FY 2018-19.

HPSEBL has requested the Commission for correction in rates of interest for holding cost for FY 2017-18 and FY 2018-19.

6.19.6 The Commission has reviewed that the submissions made by the Petitioner in this regard and observed that the revised carrying cost provision, as per third amendment, is for fourth Control Period starting 1st April 2019 and, therefore, the carrying cost considered towards Truing-up of Controllable parameters is correct. However, based on the submissions of the Petitioner, it is observed that there was an error in carrying cost considered towards Truing-up of uncontrollable parameters for FY 2017-18 and FY 2018-19. The Commission has, therefore, rectified the carrying cost applied on the surplus quantum of FY 2017-18 as computed in the First APR Order dated 06.06.2020 as below:

...."

5.16.5. In view of the above, the Commission has continued with similar approach and considered the applicability of carrying cost for the entire Control Period for which amendment has been made applicable.

5.16.6. Along with Surplus/ (Gap) in revenue for various plants, the Commission has also allowed carrying cost equivalent to interest cost of working capital loans on the Surplus/ (Gap) determined.

5.16.7. The overall closing surplus indicated above, shall be adjusted in the Order for HPSEBL - distribution business for FY 2022-23, along with carrying cost as follows:

Table 99: Overall surplus/ (gap) with carrying cost (Rs. Cr.)

Particulars	FY 15	FY 16	FY 17	FY 18	FY 19
Opening Surplus/ (Gap)	0.00	19.14	19.05	25.26	24.88
Addition	17.93	-2.43	3.55	-3.31	-6.43
Closing Surplus/ (Gap)	17.93	16.71	22.60	21.95	18.46
Interest Rate	13.50%	13.04%	12.79%	12.43%	12.43%
Average Surplus/ (Gap)	8.97	17.93	20.82	23.60	21.67
Carrying Cost	1.21	2.34	2.66	2.93	2.69
Closing Surplus/ (Gap) with carrying cost	19.14	19.05	25.26	24.88	21.15

Particulars	FY 20	FY 21	FY 22	FY 23	FY 24
Opening Surplus/ (Gap)	21.15	23.59	26.13	28.74	31.62
Addition	0.00	0.00	0.00	0.00	0.00
Closing Surplus/ (Gap)	21.15	23.59	26.13	28.74	31.62
Interest Rate	11.55%	10.75%	10.00%	10.00%	11.50%
Average Surplus/ (Gap)	21.15	23.59	26.13	28.74	31.62
Carrying Cost	2.44	2.54	2.61	2.87	3.64
Closing Surplus/ (Gap) with carrying cost	23.59	26.13	28.74	31.62	35.25

5.16.8. A surplus amount of Rs. 35.25 Cr. is computed based on the truing-up for the third Control Period for the generation business of HPSEBL. The surplus amount shall be adjusted along with the HPSEBL distribution ARR for FY 2024-25 as part of the MYT Order.

- 5.16.9. Further, the Commission had approved closing surplus of Rs. 49.30 Cr. in FY 2013-14 in Tariff Order dated 11.11.2021. As the amount is pending for adjustment in distribution Order, the Commission shall also adjust the amount in the subsequent Order of the distribution business.

6. MID-TERM PERFORMANCE REVIEW OF FOURTH MYT CONTROL PERIOD

6.1. Background

- 6.1.1. This Chapter covers Mid-Term Performance Review (MPR) of HPSEBL generation business for the fourth Control Period. Further, the Commission has undertaken the review of capital expenditure works submitted in the current Petition in 4th MYT Control Period.
- 6.1.2. HPSEBL has filed for a Mid-Term Performance Review (MPR) along with review of the AFC for FY 2022-23 and FY 2023-24 in accordance with the provisions of the Hydro Generation Tariff Regulations, 2011 as amended from time to time.
- 6.1.3. HPSEBL has 22 hydro generation plants. For Ghanvi-II, the Commission has approved the levelized tariff vide order dated 28th September 2022. Further, the Commission has approved levelized tariff for 8 SHPs (Killar, Sal-II, Gumma, Ghanvi, Holi, Khauli, Bhaba Augmentation and Thiroth) vide its order HPERC/Petition No. 54/2013/2013-14/2967-84 dated 15th January 2014. These plants have not been considered in this Order for MTR.

6.2. Commission's Approach

- 6.2.1. In accordance with the Hydro Generation Tariff Regulations, 2011, HPSEBL has filed Petition for Mid-Term Performance Review which includes provisional true up of FY 2019-20 to FY 2020-21 and Determination of revised AFC for FY 2022-23 to FY 2023-24.
- 6.2.2. By way of the 2nd Amendment of Hydro Generation Tariff Regulations, 2011, Regulation 23-a for Mid-Term Performance review is inserted, which provides as follows:

"(23-a) "mid-term performance review" or "MPR" means the review of performance of the generator undertaken by the Commission for the year after the middle year of the control period and this includes the True Up of the previous control period and True Up of previous years of the control period;"
- 6.2.3. In addition to this, by way of the Second Amendment of Hydro Generation Tariff Regulations, 2011 dated 1st November, 2013, the proviso to Regulation 37 was substituted as following:

"(2) To address any mid-term changes on account of unexpected outcomes, the Commission shall undertake mid-term performance review of generating company's performance for the year after the mid year of the control period;

(3) The generation company shall make a Petition / application for mid-term performance review on the controllable / uncontrollable factors not less 120 days before the commencement of the year after the mid year of the control period as per principles laid down as follows:-

(a) In the mid-term performance review, the Commission shall make a comparison of the actual performance and expected revenue from tariff and charges vis-à-vis that approved in the first year of the Control period and the

generation company shall submit to the Commission all information together with audited account statements, extracts of books of account and such other details in such form and in such manner as may be laid down by the Commission by an order and also as per the provisions of the Conduct of Business Regulations. The mid-term performance review shall comprise of the following:-

- (i) true-up of previous control period;*
 - (ii) true-up of previous years of control period for which audited accounts are made available by the generator company;*
 - (iii) review of ARR for the balance years of the control period in case of any major change in uncontrollable and/ or controllable parameters;*
 - (iv) review of generation tariff on account of modification in ARR for the balance years of the control period.*
-"*

- 6.2.4. It is observed that, the Petitioner has submitted the current Petition for revised AFC for FY 2022-23 to FY 2023-24 on account of revised capital expenditure. The O&M expenditure has been claimed similar to the amount approved by the Commission in the MYT Order for 4th Control Period dated 11.11.2021. Further, the Commission finds that the Petitioner has also submitted the provisional accounts, which is not sufficient to undertake the true-up. Considering the fact that the entire fourth Control Period is nearing end, it is felt that revision of AFC for FY23 and FY24 will not serve the required purpose and the same shall be taken -up at the time of final true-up for the Control Period. However, in view of the submissions of various capital expenditure proposals for the plants, the Commission has decided to undertake limited review of Capital Expenditure submitted by the Petitioner as part of the Mid-term Performance Review of 4th MYT Control Period.
- 6.2.5. The Commission has sought several clarifications on various issues based on the scrutiny of the Petition and additional information has been 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.
- 6.2.6. 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.

6.3. Additional Capitalisation

- 6.3.1. As per Regulation 13 of Hydro Generation Tariff Regulations, 2011, the Additional Capitalisation shall only be allowed in the cases where the expenditure done is covered under the original scope of work and/or for other reasons as mentioned in the aforementioned Regulation. The relevant portion of the said Regulation has been reproduced below:-

'13. Additional Capitalisation

- (1) The capital expenditure 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;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 12;*
- (d) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- (e) Change in law:*

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

(2) The capital expenditure incurred on the following counts after the cut off date may, in its discretion, be admitted by the Commission, subject to prudence check, :-

- (a) liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- (b) change in law;*

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

Provided that in any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalisation for determination of tariff w.e.f. 1.4.2011.'

6.3.2. In its Petition, the Petitioner has proposed additional capital expenditure and capitalization for various plants during the 4th Control Period.

6.3.3. The Petitioner had not segregated the details of schemes which were approved in the MYT Order dated 11.11.2021 and new schemes covered in the MPR (Mid-term Performance Review) Petition. Therefore, the Commission sought information with respect to the progress of the approved schemes in the MYT Order. In response, the Petitioner has not been able to provide the requisite details with respect to works approved in the 4th MYT Control Period.

6.3.4. When the Commission sought further clarifications, the Petitioner submitted a revised list of capital expenditure which included multiple schemes below Rs. 5

lakh for each of the hydro generating stations, which were of the nature of minor capital works. Further, the Petitioner had also proposed few schemes with additional capital expenditure of more than Rs. 5 Cr.

- 6.3.5. However, for the purpose of review, the Commission has considered the additional capitalization under two parts i.e. Additional capitalization approved in MYT Order for fourth Control Period and Additional capitalization for new schemes proposed as part of Mid-term Performance Review. The following table summarises the schemes approved in MYT Order dated 11.11.2021 and new schemes submitted in MPR Petition against which the Petitioner has claimed additional capitalization:

Table 100: Additional capitalization proposed in 4th MYT Control Period (in Rs. Cr.)

Particulars	FY 20	FY 21	FY 22	FY 23	FY 24
Approved Schemes	0.00	2.14	2.39	0.00	3.23
New Schemes	1.95	7.78	8.13	3.60	34.66
Total	1.95	9.92	10.52	3.60	37.89

- 6.3.6. The following sections cover the detail of the schemes claimed and schemes approved by the Commission.

Additional Capitalization approved in MYT order dated 11.11.2021

- 6.3.7. The Commission in the MYT order for 4th MYT Control Period dated 11.11.2021 had approved capitalization for 2 plants namely, Bassi and Giri HEP, as follows:

"...

Bassi HEP: The Commission has provisionally allowed additional capital expenditure of Rs. 7.76 Cr. for Bassi HEP, as per the in-principle approval awarded earlier vide its letter HPERC/ Capex-Gen/ 2018-1179 dated 01-08-18, subject to true-up later. Therefore, the Commission has considered the proposed additional capital expenditure for tariff determination as discussed in the plant specific sub-section of Annual Fixed Charges for Bassi HEP.

.....

Giri HEP: The Petitioner has proposed capital expenditure in 4th Control Period for RMU & LE scheme. It is observed that an in-principle approval was provided by the Commission for the RMU scheme of Giri HEP via order dated 3.5.2017 in the Petition No. 44/2016 for Rs. 139.80 Crores. The Petitioner's submission considers capital expenditure in years FY20 to FY22, with each individual year's expenditure capitalized over next 5 years distributed equally. The Commission has provisionally capitalized 50% of the additional capital expenditure in FY23 and remaining 50% in FY24 – one in each year for the two units of plant for which RMU scheme is being implemented. Interest rate of 10.55% is considered for 4th Control Period, as per submission of Petitioner. The Petitioner is directed to finalize and submit the details of the scheme to Commission for approval along with Mid Term Review of the 4th Control Period."

- 6.3.8. The year-wise capitalisation approved against the above works for each plant in MYT order dated 11.11.2021 and the proposal of the Petitioner against the same are as follows:

Table 101: Plant wise Capital Expenditure in Rs. Cr. – Approved and Proposed

Name of station		FY 20	FY 21	FY 22	FY 23	FY 24
Bassi	Approved in MYT order	1.99	2.99	2.77	-	-
	Proposed in MTR Petition	-	2.14	2.39	-	3.23
Giri	Approved in MYT order	46.50	71.95	21.35	-	-
	Proposed in MTR Petition	-	-	-	-	-

6.3.9. The Petitioner has claimed additional capitalization in Bassi HEP against the following scheme:

Table 102: Additional capitalization claimed in Bassi HEP in 4th MYT Control Period (in Rs. Cr.)

Plant	Scheme		FY 20	FY 21	FY 22	FY 23	FY 24
Bassi HEP	<i>Supply, erection, testing and commissioning of 4 nos. new upper brackets (including dismantling of existing 4 nos. upper brackets), re-insulation of 02 nos. rotor poles of 4x16.50 MW Bassi HEP</i>	Approved	1.99	2.99	2.77	0.00	0.00
		Proposed	0.00	2.14	2.39	0.00	3.23

6.3.10. In response to the query, the Petitioner submitted that the scheme has been approved by the Commission and funded by REC vide sanctioned No.: REC/SO/SML/HP-GE-DIS-338-2018-14600/556 dated 11.01.2018. Further, the Petitioner has submitted as follows:

"In the year 2018, vibration values were observed to be on higher side. Subsequently the job order was placed in favour of M/s Andritz for checking the reasons of high vibration and M/s Dianemic-Vadodra (3rd party) was engaged by the firm for above job and the top bracket of all the machines were found cracked leading to high vibration. Therefore, the work of first scheme was awarded on 22.09.2018 and M/s Andritz Hydro undertook/commenced the job from Oct-2018. During the course when the machines were dismantled for interface measurement thrust and Guide bearing were found damaged which required immediate replacement/ renewal to avoid further damage to the machines, as strongly recommended by the firm. The various meetings/ MOM's were held at different level and it was decided to frame the second scheme which includes replacement of bearings, modification of brackets and other allied works. Eventually the Modified upper bracket scheme was awarded to the firm during the year feb.-2020 & M/s Andritz commenced the job on dated 16.01.2021. Since the activities of both the scheme was to be performed parallel, the execution of first scheme was put on hold and eventually the work of first and second scheme was commenced during the year 2020, which resulted delay in the execution of first scheme. Also COVID-19 factor contributed to delay."

6.3.11. Further, the Petitioner has proposed the scheme “*RMU & LE scheme*” which has been approved for Giri HEP. The Petitioner has claimed additional capitalisation as follows:

Table 103: Additional capitalization claimed in Giri HEP in 4th MYT Control Period (in Rs. Cr.)

Plant	Scheme		FY 20	FY 21	FY 22	FY 23	FY 24
Giri HEP	RMU & LE scheme	Approved	0.00	0.00	0.00	69.90	69.90
		Proposed	0.00	0.00	0.00	0.00	69.90

6.3.12. However, the Petitioner has not projected any additional capitalization in its revised submissions and has not submitted further details in additional submissions with regards to the above scheme.

6.3.13. It is observed that the Petitioner has not made any significant progress against the schemes approved in Tariff Order dated 11.11.2021. As a result, the additional capitalisation approved in the MYT Order is required to be reversed. However, in view of the fact that the 4th Control Period is nearing end, the Commission has decided to retain the additional capital expenditure as approved in Order dated 11.11.2021 and shall review the same at the end of the Control Period during final true-up.

New Additional capital expenditure proposed by the Petitioner

6.3.14. The Petitioner has claimed new additional capital expenditure works in fourth Control Period as follows:

Table 104: New scheme additional capital expenditure claimed by Petitioner in 4th MYT Control Period (in Rs. Cr.)

Plant Name	FY 20	FY 21	FY 22	FY 23	FY 24
Andhra	0.03	0.53	1.01	0.00	0.07
Baner	0.00	0.00	0.00	0.00	1.71
Bassi	0.83	0.29	6.76	1.76	15.79
Bhaba	0.08	0.75	0.00	0.00	1.76
Binwa	0.09	1.89	0.06	0.00	0.16
Chaba	0.00	0.05	0.09	0.00	0.59
Gaj	0.23	0.31	0.05	0.00	2.15
Giri	0.00	2.13	0.00	0.27	2.13
Larji	0.00	1.36	0.00	1.13	10.30
Nogli	0.00	0.11	0.16	0.44	0.00
Rong Tong	0.58	0.36	0.00	0.00	0.00
Rukti	0.11	0.00	0.00	0.00	0.00
Sub-total	1.95	7.78	8.13	3.60	34.66

6.3.15. The new schemes/ works against which the Petitioner has proposed additional capital expenditure during the 4th MYT Control Period includes i) Externally funded schemes ii) Miscellaneous capital works and board building works. Further, based on the additional submissions, it was observed that the Petitioner has also included few schemes against which the DPR are still under

preparation. Hence, the Commission while evaluating the additional capitalisation has excluded the schemes which are still under preparation from the proposed total additional capitalisation. The details of claimed works are summarised as follows:

Table 105: Additional capitalization claimed by Petitioner (in Rs. Cr.)

Particulars		FY 20	FY 21	FY 22	FY 23	FY 24
Total capitalization claimed	A	1.95	7.78	8.13	3.60	34.66
Scheme under preparation	B	0.00	0.00	0.00	0.00	19.82
Net Capitalization excluding schemes under preparation	C=A-B	1.95	7.78	8.13	3.60	14.84
Externally funded schemes	(I)	0.58	1.78	5.35	1.17	5.58
Misc. Capital Work (MCW) Schemes	(II)	1.37	6.00	2.78	2.43	9.26

6.3.16. Each of the above types of schemes have been discussed in detail in the following sections.

Externally funded schemes

6.3.17. In addition, the Petitioner has claimed additional capitalisation against the following externally funded schemes:

Table 106: Additional Capitalization claimed under externally funded schemes (in Rs. Cr.)

S. No.	Plant	Scheme	FY 20	FY 21	FY 22	FY 23	FY 24
1	Bassi HEP	Supply, erection, testing and commissioning of 4 nos. Modified new upper brackets, new bearing design of Kingsbury Pad supports, Self pumping and insulated upper bearing, improved bearing cooling and oil circulation with self pumping bearing design with new HPOP system at start and stop of machine for smooth/effective operation & maintenance of 4x16.5MW Bassi HEP	0.00	0.00	5.35	0.00	5.58
2	Bassi HEP	Providing and Fixing and commissioning of New Battery Bank 220 Volt, 750 Ah in Place of existing damaged battery Bank	0.00	0.00	0.00	1.17	0.00
3	Bassi HEP	Procurement recommended critical spares and special T & P measurement equipment of Bassi HEP	0.58	0.28	0.00	0.00	0.00
4	Binwa	Purchase of 1 Number additional runner for Binwa PH	0.00	1.50	0.00	0.00	0.00
		Total	0.58	1.78	5.35	1.17	5.58

6.3.18. The Commission has noted that very limited details and supporting documents (like administrative approvals) have been submitted for externally funded schemes.

- 6.3.19. The Commission sought details regarding the scheme including Board approval, 3rd party DPR, cost benefit analysis, justification for delay and funding details. For e.g., with regards to scheme under S.No.1 in the above table, the Petitioner, in reply has submitted that the scheme has been sanctioned on 26.02.2020 and funded by REC vide sanctioned no. REC/SO/SML/HP-GE-DIS-338-2019-15631/516 dated 10.02.2020. The work was awarded by CE Gen., HPSEBL, Sunder Nagar vide award no. HPSEBL/GCP/SP-102(Bassi)/2019-20-13095-101 dated 28.02.2020 and completed on 15.03.2022. Further, the Petitioner has submitted that DPR/Scheme/ Estimate are being prepared by the HPSEBL itself and 3rd party DPR document is not required.
- 6.3.20. Based on the review of various submissions with regard to the externally funded schemes, the Commission is of the view that these works are of the nature of R&M expenses and, therefore, the Petitioner has been unable to provide any substantiative documents for undertaking these works. The Commission is of the view that schemes which are of nature of minor capital works, the Petitioner has already been allowed sufficient O&M cost to cover these expenditures. It is, therefore, felt prudent to undertake a detailed review at the time of truing-up of the fourth Control Period for such works. The Petitioner is required to submit appropriate details substantiating the type of work along with necessary documents at the time of truing up.

Misc. Capital Work (MCW) Schemes

- 6.3.21. The Commission sought additional details with respect to the proposed works including prior approval from the Commission, Board approval, funding details, DPR and related documents, cost benefit analysis, etc. The Petitioner in reply has submitted that it is still in the process of arranging approval from the Commission. Further, the Petitioner has submitted that the cost benefit analysis of schemes is not feasible and the technical studies towards requirement of proposed works shall be carried out during preparation of scheme. Based on the review of documents, it is observed that the Petitioner has merely submitted administrative approvals, reports and estimates of works by vendors for few schemes. However, these documents provided are inadequate as the same donot include cost benefit analysis, financial viability, DPR, Board Approvals, etc., which are required as per the provisions of the Regulations.
- 6.3.22. The Commission also sought the approval of the Board of the Petitioner for the various works undertaken or proposed to be undertaken during the fourth Control Period. The Petitioner has submitted approval from various levels like Resident Engineer (R.E), Superintendent Engineer (S.E), Chief Engineer (C.E), etc. and approval from the Board has been submitted for only few minor capital work/ board building works related schemes. This shows that the schemes submitted for approval of capital expenditure are not capital intensive schemes but are of the nature of repairs and maintenance, which should be part of the O&M expenses already allowed by the Commission.
- 6.3.23. ***As regards actual additional capitalisation claimed by Petitioner for previous years (i.e. from FY 2019-20 to FY 2021-22), the Petitioner is directed to claim the same as per the audited accounts and in***

accordance with the provisions of Hydro Generation Tariff Regulations, 2011.

- 6.3.24. It has also been observed as part of truing-up for the third Control Period that there is a significant amount of surplus under the O&M expenses as the actual expenditure is very low as compared with the approved. **The Commission directs the Petitioner to undertake the recurring expenditure of the nature of R&M as part of the approved O&M expenses instead of submitting the same under additional capital expenditure.**

Scheme under preparation

- 6.3.25. For few works, the Petitioner has submitted that the scheme is still under preparation. The Petitioner has claimed capitalisation of Rs. 9.00 Cr. in the Petition against the following scheme which is still under preparation:

Table 107: Additional capitalization claimed against scheme under preparation in Bassi HEP

Plant	Scheme	FY 20	FY 21	FY 22	FY 23	FY 24
Bassi HEP	Upgradation/ Augmentation of 16 MVA, 132/33 kV Power Trf. To 132/33 kV, 1x25/31.5 MVA Power Trf., 33 kV switchyard (including augmentation of 33/11 kV 2x2.5 MVA trf to 33/11 kV 2x5 MVA trf) and 11 kV switchyard system	0.00	0.00	0.00	0.00	9.00

- 6.3.26. The Petitioner was unable to submit DPR and other documents required for approval of additional capital expenditure. In the absence of the same, the Commission has disallowed new additional capital expenditure proposed during fourth Control Period. **The Commission directs the Petitioner to seek approval of the Commission for the scheme, post finalization of DPR and as per the requirement of the Hydro Generation Tariff Regulations, 2011 along with the business plan for the next control period.**

- 6.3.27. Since the entire fourth Control Period is nearing completion, the Commission has decided to retain the capital expenditure as approved for the fourth Control Period in the MYT Order dated 11.11.2021. **For the new schemes, the Petitioner is directed to submit detailed DPR along with other supporting documents for approval of the proposed additional capital expenditure along with the Business Plan and MYT filing for the next Control Period.**

Additional O&M expenses

- 6.3.28. The Petitioner has claimed additional O&M expenditure towards BVPCL and S&I projects to be allowed in the AFC of respective expenses of generation business for FY 2021-22.
- 6.3.29. Further, the Petitioner in additional submissions has claimed that the O&M cost including pension contribution towards BVPCL and S&I projects (Employee cost of Rs. 19.92 Cr, A&G cost of Rs. 4.23 Cr. and R&M cost of Rs. 0.06 Cr.), which was disallowed in distribution business in Tariff Order dated 31.03.2023, shall be considered under Generation Business. It has been further requested to allow it

in the AFC of respective expenses of generation business for FY 2021-22 and as per actual in forthcoming APRs. In reply to additional clarifications sought by the Commission, the Petitioner submitted that the employees deputed under S&I and Projects are imparting various functions for the organisation like survey and investigation for generation projects, infrastructure developments etc. and forms crucial part of the organisation.

6.3.30. 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 wherever these costs are incurred or shall form as part of AFC/tariff for new projects, if applicable.

6.4. Annual Fixed Charges for 4th MYT Control Period

6.4.1. In view of the above, the AFC/ Tariff for 13 plants as approved in MYT Order dated 11th November, 2021 is to be continued as shown in the following table:

Table 108: AFC/ Tariff approved in 4th MYT Control Period

Plant Name	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
Andhra	Annual Fixed Charge (AFC)	Rs. Cr.	10.84	11.24	11.66	12.09	12.55
	Energy Rate	Rs./ kWh	0.63	0.65	0.67	0.70	0.73
	Capacity Charge	Rs. Cr.	5.42	5.62	5.83	6.05	6.27
Baner	Annual Fixed Charge (AFC)	Rs. Cr.	10.95	11.25	11.57	11.90	12.25
	Energy Rate	Rs./ kWh	1.04	1.06	1.09	1.13	1.16
	Capacity Charge	Rs. Cr.	5.47	5.63	5.79	5.95	6.12
Bassi	Annual Fixed Charge (AFC)	Rs. Cr.	21.03	20.44	20.69	20.80	21.10
	Energy Rate	Rs./ kWh	0.31	0.30	0.30	0.30	0.31
	Capacity Charge	Rs. Cr.	10.52	10.22	10.34	10.40	10.55
Bhaba	Annual Fixed Charge (AFC)	Rs. Cr.	41.82	42.12	42.48	42.89	43.36
	Energy Rate	Rs./ kWh	0.46	0.46	0.46	0.47	0.47
	Capacity Charge	Rs. Cr.	20.91	21.06	21.24	21.45	21.68
Binwa	Annual Fixed Charge (AFC)	Rs. Cr.	6.15	6.39	6.64	6.91	7.18
	Energy Rate	Rs./ kWh	1.06	1.10	1.14	1.19	1.24
	Capacity Charge	Rs. Cr.	3.07	3.20	3.32	3.45	3.59
Chaba	Annual Fixed Charge (AFC)	Rs. Cr.	2.18	2.27	2.36	2.46	2.56
	Energy Rate	Rs./ kWh	1.43	1.49	1.55	1.62	1.68
	Capacity Charge	Rs. Cr.	1.09	1.13	1.18	1.23	1.28
Chamba	Annual Fixed Charge (AFC)	Rs. Cr.	0.48	0.50	0.52	0.54	0.56
	Energy Rate	Rs./ kWh	1.37	1.43	1.48	1.54	1.60
	Capacity Charge	Rs. Cr.	0.24	0.25	0.26	0.27	0.28
Gaj	Annual Fixed Charge (AFC)	Rs. Cr.	9.11	9.36	9.62	9.90	10.18
	Energy Rate	Rs./ kWh	1.36	1.40	1.44	1.48	1.53
	Capacity Charge	Rs. Cr.	4.55	4.68	4.81	4.95	5.09
Giri	Annual Fixed Charge (AFC)	Rs. Cr.	19.82	20.63	21.46	28.99	39.85
	Energy Rate	Rs./ kWh	0.34	0.36	0.37	0.50	0.69
	Capacity Charge	Rs. Cr.	9.91	10.32	10.73	14.49	19.92
Larji	Annual Fixed Charge (AFC)	Rs. Cr.	60.27	61.34	62.46	63.63	64.86

Plant Name	Particular	Unit	FY 20	FY 21	FY 22	FY 23	FY 24
	Energy Rate	Rs./ kWh	0.59	0.60	0.61	0.62	0.64
	Capacity Charge	Rs. Cr.	30.13	30.67	31.23	31.81	32.43
Nogli	Annual Fixed Charge (AFC)	Rs. Cr.	3.09	3.21	3.33	3.47	3.60
	Energy Rate	Rs./ kWh	1.58	1.64	1.71	1.78	1.85
	Capacity Charge	Rs. Cr.	1.54	1.60	1.67	1.73	1.80
Rongtong	Annual Fixed Charge (AFC)	Rs. Cr.	2.57	2.66	2.76	2.86	2.96
	Energy Rate	Rs./ kWh	1.70	1.76	1.82	1.89	1.96
	Capacity Charge	Rs. Cr.	1.28	1.33	1.38	1.43	1.48
Rukti	Annual Fixed Charge (AFC)	Rs. Cr.	0.51	0.51	0.53	0.55	0.57
	Energy Rate	Rs./ kWh	0.40	0.39	0.41	0.43	0.44
	Capacity Charge	Rs. Cr.	0.26	0.26	0.27	0.28	0.29

7. DIRECTIVES

The Commission had issued directions and advisories to HPSEBL in the MYT 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
7.1.1	<p>Plant-wise Audited Accounts</p> <p>It is observed that the plant-wise accounts submitted by the Petitioner are prepared internally and have not been certified by the statutory auditor. Also, information available in the respective plant-wise accounts did not reconcile with the overall generation business as per the Audited accounts of HPSEBL for the respective years of the 2nd Control Period. Also, contradictory numbers have been submitted by the Petitioner in response to the clarifications and additional information sought by the Commission during the processing of the Petition. Due to significant differences observed, the Commission is of the view that plant-wise accounts are not being maintained appropriately. Therefore, the Petitioner is directed to maintain proper plant-wise accounts and undertake audit of the same. In future, true up Petition shall not be entertained without plant-wise audited accounts.</p>	<p>In this context it is intimated that the plant wise account for FY 2014-15 to 2020-21 have been prepared and duly signed by the Charter Accountant and the plant Wise account has also been tallied with the audited account Of the HPSEBL in the respective year. The question with regard to certification of plant-wise account from Statutory Auditor is concerned, the said matter has been taken up with the Director (Tech) Shimla vide this UO No. 8372 dated 12.12.2022.</p>	<p>The reply furnished by the Petitioner is quite vague and unprofessional. Further, it is observed that the Petitioner lacks seriousness in maintenance of books of accounts for each plant of HPSEBL. This is evident from the examples cited by Petitioner in reply to deficiencies like rectification of entries in books of accounts, IDC withdrawn from books of accounts, transfer of IDC from one plant to another plant, etc.</p> <p>In view of the above, 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 true-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>

S. No.	Directive	Petitioner's Reply	Commission's View
7.1.2	Additional Capitalization of Bassi Power Plant With respect to approved amount of Rs. 109.98 Cr. towards RMU & 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 & LE scheme undertaken during second Control Period with all supporting data (including DPR, details of works, year-wise expenditure, auditor certificate, Board approval, etc.).	It is intimated that the matter for appointment of Auditor for verification Of expenditure against RMU&LE scheme Bassi has been taken with the Director (Tech) Shimla vide this UO No. 8372 dated 12.12.2022. But, the auditor has not been appointed as yet. Thereafter, the separate Petition of RMU&LE for Bassi Power House shall be filled.	The reply furnished by the Petitioner is quite vague and providing reference of the other Units/wings of the HPSEBL which is unprofessional on part of the Petitioner. The Petitioner is required to submit the Petition for RMU & LE of Bassi within 3 months of issuance of this Order. Otherwise, the Commission may initiate suo moto action in the matter.
7.1.3	Additional Capitalization of Bhabha Power Plant 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.).	The scheme for Rehabilitation of Bhabha HEP is under execution.	The Petitioner is required to submit the Petition for additional capitalisation of Bhabha within 3 months of completion of all Additional Capitalisation works, as approved by the Commission, related to the Bhabha hydro power plant.
7.1.4	High O&M expenditure It is observed that the O&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&M expenses by developing O&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&M expenditure is much more than the revenue receipt for the plants. The Petitioner should take immediate steps to bring its routine O&M expenditure within the revenue accrued from each power plant. The Commission will not entertain O&M expenditure on any power plant which is more than the revenue from FY 2022-23 onwards.	In this regard the reply may be obtained from the F&A Wing of HPSEBL. As almost 75% of the O&M expenditure is contributed towards the employee cost.	It is observed that the providing reference of its other department is unprofessional on part of the Petitioner and a consolidated response to the Directive on behalf of the Petitioner is required to be submitted. The Petitioner is directed to undertake appropriate steps for reducing the O&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&M after undertaking benchmarking and prudence check.
7.1.5	In-principle approval of Additional	This office vide letter No.	The response of the Petitioner reflects lack

S. No.	Directive	Petitioner's Reply	Commission's View
	Capital Expenditure In absence of adequate DPR and justification for proposed additional capital expenditure, the Commission has disallowed the additional capital expenditure proposed for generating stations during 4 th Control Period. Plants for which additional capital expenditure has not been approved for the fourth Control Period and in cases where tenders have not been invited so far, 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. In absence of detailed DPR and in-principle approval for the proposed expenditure, the Commission shall be constrained to disallow additional expenditure towards the respective plant.	HPSEBL/CEG/HPERC-35/2020-21-3192-3200 dated 21.07.2020 (Annexure Q13 (A)) & No. HPSEBL/CEG/DB-Annual plant/2022-23-2250-60 dated 07.06.2022 (Annexure Q13(B)) has requested the Chief Engineer (Comm.). HPSBEL, Shimla to arrange the approval of HPERC. However, the approval is still awaited.	of seriousness in providing adequate data / information for proper scrutiny of the proposed expenses. It is observed that the Petitioner was unable to provide approval against the additional capital expenditure till date. The Petitioner is directed to undertake approval of additional capital expenditure in line with the provisions of the Hydro Generation Tariff Regulations, 2011 for the next Control Period. In absence of appropriate DPR and approvals, any Additional Capital Expenditure incurred by the Petitioner shall be disallowed.
7.1.6	Submission of Plant Availability Factor The Petitioner is directed to provide details of plant availability factor duly certified by SLDC along with truing-up for the fourth Control Period.	The detail of plant availability factor duly certified by SLDC along with truing-up for 4 th control period being certified from SLDC & shall be furnished accordingly.	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 to provide SLDC certificate with regard to the stations for 4 th Control Period, the Commission shall be constrained to penalise the Petitioner to the extent of 10% of Annual Fixed Cost of the respective generating station.
7.1.7	Submission of Mid-term Review along with truing-up for third Control Period 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	The Petition is under process/ consideration.	The Compliance is noted.

S. No.	Directive	Petitioner's Reply	Commission's View
	surplus / gap in the tariff for subsequent period.		
7.1.8	<p>Prior Approval for deviation in Additional Capitalization</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 its hydro plants as part of the in-principle approval.</p>	Prior approval for deviation in Additional Capitalization shall be taken as and when required.	The directive is being continued.
7.1.9	<p>Data from real time water discharge management systems</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>	The directive is being implemented.	The Petitioner is required to implement the same and provide details at the earliest. Hence, the directive is being continued.

-Sd-

(Shashi Kant Joshi)
Member

-Sd-

(Yashwant Singh Chogal)
Member (Law)

-Sd-

(Devendra Kumar Sharma)
Chairman

Shimla

Dated: February 26, 2024