

**Approval of Capital Cost and determination  
of tariff for 220 kV D/C Bajoli Holi HEP-  
Lahal Transmission line for the period from  
COD to FY 2023-24**

**Himachal Pradesh Power Transmission  
Corporation Limited  
(HPPTCL)**



**Himachal Pradesh Electricity Regulatory  
Commission  
November 17, 2023**

**BEFORE THE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION AT  
SHIMLA**

**PETITION NO: 27/2023**

Date of Decision :17.11.2023

CORAM

**Sh. DEVENDRA KUMAR SHARMA  
Sh. YASHWANT SINGH CHOGAL  
Sh. SHASHI KANT JOSHI**

In the matter of:

**Approval of capital cost and determination of tariff for the period starting from COD to FY 2023-24 for 200 kV D/C Bajoli Holi HEP –Lahal transmission line under the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011 and subsequent amendments to the Regulations carried thereafter and under Section 62, read with Section 86 of the Electricity Act, 2003.**

AND

In the matter of:

Himachal Pradesh Power Transmission Corporation Ltd. (HPPTCL).....Petitioner

## **ORDER**

The Himachal Pradesh Power Transmission Corporation Limited (hereinafter called the 'HPPTCL' or 'Petitioner') has filed the present Petition with the Himachal Pradesh Electricity Regulatory Commission (hereinafter referred to as 'the Commission' or 'HPERC') for approval of capital cost and determination of tariff for the period starting from COD to FY 2023-24 for 220 kV D/C Bajoli Holi-Lahal transmission line under the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulation, 2011, as amended from time to time, (hereinafter to be referred as HPERC Transmission Regulations, 2011 framed by the Commission and , under Section 62, read with Section 86 of the Electricity Act, 2003 (hereinafter referred to as "the Act").

The Commission having heard the applicant, interveners, Consumers and Consumer Representatives through various representations and having had formal interactions with

the officers of the HPPTCL and stakeholders and having considered the documents available on record, herewith accepts the application with modifications, conditions and directions specified in the following Tariff Order.

The Commission has determined the capital cost and Aggregate Revenue Requirement (ARR) for 220 kV D/C Bajoli Holi-Lahal transmission line in accordance with the guidelines laid down in Section 61 of the Electricity Act, 2003, the National Electricity Policy, the National Tariff Policy, CERC (Terms and Conditions of the Tariff) Regulations, 2019 and the HPERC Transmission Regulations, 2011 framed by the Commission. Details of prudence check and approach adopted by the Commission with regard to approval of capital cost and ARR for 220 kV D/C Bajoli Holi-Lahal transmission line are summarized in the detailed Order containing Chapters 1 to 4 (Pages 4 to 54).

-Sd-

**(SHASHI KANT JOSHI)**  
**Member**

-Sd-

**(YASHWANT SINGH  
CHOGAL)**  
**Member**

-Sd-

**(DEVENDRA KUMAR  
SHARMA)**  
**Chairman**

**Shimla**

**Dated: 17.11.2023**

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# 1. INTRODUCTION

## 1.1 Himachal Pradesh Electricity Regulatory Commission

1.1.1 The Himachal Pradesh Electricity Regulatory Commission (hereinafter referred to as 'HPERC' or 'the Commission') constituted under the Electricity Regulatory Commission Act, 1998 came into being in December 2000 and started functioning with effect from 6<sup>th</sup> January, 2001. After the enactment of the Electricity Act, 2003 on 26<sup>th</sup> May, 2003, the HPERC has been functioning as a statutory body with a quasi-judicial and legislative role under Electricity Act, 2003.

### 1.1.2 Functions of the Commission

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 licences 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 licence;
- 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.

1.1.3 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.

## **1.2 Himachal Pradesh Power Transmission Corporation Ltd.**

1.2.1 Himachal Pradesh Power Transmission Corporation Limited (hereinafter referred to as 'HPPTCL' or 'the Petitioner') is a deemed licensee under first, second and fifth provision of Section 14 of the Electricity Act, 2003 (hereinafter referred to as 'the Act') for transmission of electricity in the State of Himachal Pradesh.

1.2.2 The Government of Himachal Pradesh (hereinafter referred to as 'GoHP' or the 'State Government' formed HPPTCL through a notification vide its notification No. MPP-A-(1)-4/2006-Loose, dated 11<sup>th</sup>September,2008.

1.2.3 HPPTCL was entrusted with the following work / business with immediate effect:

- a) All new works of construction of Sub-Stations of 66 kV and above
- b) All new works of laying/ construction of transmission lines of 66 kV and above
- c) Formulation, updating, execution of Transmission Master Plan for the state for strengthening of Transmission network and evacuation of power including new works under schemes already submitted by the Himachal Pradesh State Electricity Board (HPSEB) under this plan to the Financial Institutions for funding and where loan agreements have not yet been signed
- d) All matters relating to planning and co-ordinations of the transmission related issues with CTU, CEA, Ministry of Power, State Government and HPSEBL
- e) Planning and co-ordination with the IPPs/ CPSUs/ State PSUs/ Other Departments or organizations or agencies of the Central Government and State Government, HPSEBL and HPPCL with regard to all transmission related issues

- 1.2.4 HPPTCL was declared the State Transmission Utility (STU) by the GoHP vide its order dated 10<sup>th</sup> June, 2010 and as a result thereof the Commission recognized HPPTCL as a deemed "Transmission Licensee" as per the Commission's Order dated 31<sup>st</sup> July, 2010 in Petition No. 32 of 2010 filed by HPPTCL under Sections 14 and 15 of the Act, for grant of Transmission Licensee in the State of Himachal Pradesh. Prior to FY 2010-11, the transmission tariff was being determined as a part of the tariff orders applicable to HPSEBL system.

### **1.3 Multi Year Tariff Framework**

- 1.3.1 The Commission follows the principles of Multi Year Tariff (MYT) for determination of tariffs, in line with the provision of Section 61 of the Act.
- 1.3.2 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 network expansion and load growth during the Control Period. The longer time span enables the Petitioner to propose its investment plan with details on the possible sources of financing and the corresponding capitalization schedule for each investment.
- 1.3.3 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.
- 1.3.4 Thereafter, the Commission had notified the HPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011. The regulations were amended as (First Amendment) Regulations, 2013 on 1<sup>st</sup> November, 2013, (Second Amendment) Regulations, 2018 on 22<sup>nd</sup> November, 2018 and (Third Amendment) Regulations, 2023 on 2<sup>nd</sup> June, 2023 (The Regulations and its subsequent amendments combined shall be herein after referred to as "HPERC Transmission Tariff Regulations, 2011").
- 1.3.5 The Commission issued the first Multi-Year Tariff (MYT) Order for HPPTCL for the period FY 2011-12 to FY 2013-14 on 14<sup>th</sup> July, 2011 and thereafter for the second Control Period (FY 2014-15 to FY 2018-19) on 10<sup>th</sup> June, 2014. The Commission has also issued the Tariff Order on True Up for the FY 2014-2015 to FY 2015-2016 and Mid Term Review for Third Control Period FY 2016-2017 to FY 2018-19. On 29<sup>th</sup> June, 2019, the Commission issued the MYT Order for the fourth Control Period (FY 2019-20 to FY 2023-24). Thereafter, the Commission issued the final True-up Order for second Control Period (FY 2014-15 to FY 2018-19) on 28<sup>th</sup> December, 2022.

### **1.4 Interaction with the Petitioner**

- 1.4.1 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.
- 1.4.2 Based on preliminary scrutiny of the Petition, the Commission vide letter No. HPERC-F(1)-38/2022- 2026-27 dated 16<sup>th</sup> November, 2022 issued the first set of deficiencies identified in the Petition, the reply to which was submitted by



the Petitioner on dated 13<sup>th</sup> December, 2022. Subsequently, the Commission issued the second set of deficiencies vide letters No. HPERC-F(1)-38/2022-3202 dated 17<sup>th</sup> February, 2023, the reply to which was submitted by the Petitioner on 18<sup>th</sup> April, 2023. Thereafter, a third set of deficiencies letter was issued vide email dated 22<sup>nd</sup> July, 2023, which was replied by the Petitioner on 17<sup>th</sup> August, 2023.

- 1.4.3 Thus as observed above, based on the detailed scrutiny of the Petition, the information was sought by the Commission from time to time, which have been taken on record:

**Table 1: Communication with the Petitioner**

Sl.	Submission of the Petitioner	Date
1	Filing No. 157 of 2022	13 <sup>th</sup> December, 2022
2	Filing No. 157 of 2022	18 <sup>th</sup> April, 2023
3	Petition No. 27 of 2023	17 <sup>th</sup> August, 2023

## 1.5 Public Hearings

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

**Table 2: List of Newspapers for Public Hearing**

Sl.	Name of News Paper	Date of Publication
1.	The Indian Express	05 <sup>th</sup> May, 2023
2.	Divya Himachal	05 <sup>th</sup> May, 2023

- 1.5.2 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 which was published in the newspapers as mentioned in the table:

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

Sl.	Name of News Paper	Date of Publication
1.	Hindustan Times	12 <sup>th</sup> May, 2023
2.	Amar Ujala	12 <sup>th</sup> May, 2023

- 1.5.3 The stakeholders were requested to file their objections by 12<sup>th</sup> June, 2023. HPPTCL was required to submit replies to the suggestions/ objections to the Commission by 19<sup>th</sup> June, 2023 with a copy to the objectors on which the objectors were required to submit rejoinder by 24<sup>th</sup> June, 2023.
- 1.5.4 The Commission decided to conduct the public hearing and therefore issued a public notice informing the public about the scheduled date of public hearing as 27<sup>th</sup> June, 2023 which was further postponed to 30<sup>th</sup> June, 2023. All the

parties, who had filed their objections/ suggestions, were also informed about the date, time and venue for presenting their case in the public hearing.

- 1.5.5 The Commission has undertaken detailed scrutiny of the submissions made by the Petitioner and the various objections raised by stakeholders for the purpose of issuance of this Order.

## 2. STAKEHOLDER OBJECTIONS

### 2.1 Introduction

- 2.1.1 As detailed out in Chapter-1 of this Order, the Commission through Public Notice in various newspapers informed the public/stakeholders about the date for filing comments/ objections and date of public hearing as 30<sup>th</sup> June, 2023 for the Petition of approval of capital cost and determination of tariff for the period starting from COD to FY 2023-24 for 200 kV D/C Bajoli Holi HEP - Lahal transmission line
- 2.1.2 Accordingly, the public hearing was conducted on 30<sup>th</sup> June, 2023. M/s Bajoli Holi Hydropower Pvt. Ltd. and HPSEBL submitted their comments/ suggestions before the Commission. Issues raised by both stakeholders in their written submission, along with replies given by the Petitioner and views of the Commission are summarized in the following paragraphs.

#### ***Stakeholders' Submissions***

- 2.1.3 It was highlighted by the HPSEBL and M/s Bajoli Holi Hydropower Pvt. Ltd. that there were multiple revisions with regards to the increase in the cost vis-à-vis the cost approved in the DPR. It was further submitted that HPPTCL ought to have filed a revised summary of the Petition with the updated cost and reasons for the benefit of the public, respondents and Hon'ble Commission.

#### ***Petitioner's Response***

- 2.1.4 The Petitioner submitted that while submitting the Petition, it was amply clarified that all the capital costs submitted were provisional in nature based on provisional accounts of FY 2021-22. It was further submitted that the revised capital cost of Rs. 92.79 Cr. is lower than the cost submitted in Petition and is finalized based on the final accounts of FY 2021-22.

#### ***Commission's Observations***

- 2.1.5 It is observed that Petitioner has submitted the original tariff Petition based on provisional cost which was later revised. The Commission further sought Auditors' certificate in support of the revised claim of capital cost of Rs 92.79 Cr. The Commission has undertaken prudence check of the capital cost for the transmission line as discussed in 'Chapter 3: Approval of Capital Cost' of this Order.

**Stakeholders' Submissions**

- 2.1.6 M/s Bajoli Holi Hydropower Pvt. Ltd. highlighted that it is of the view that the Petition is deficient in necessary information and accordingly, ought to be dismissed. It stated that HPPTCL has failed to place on record crucial details and documents despite two opportunities having been granted by the Commission by way of issuing data gaps.

**Petitioner's Response**

- 2.1.7 The Petitioner submitted that all the queries raised by the Commission were duly cleared and henceforth based on the submissions made by the Petitioner, the Commission vide Interim Order dated 25.04.2023 directed the Petitioner to issue a Public Notice seeking stakeholder's comments. It was also stated that the Petition is not devoid of any crucial information and the request to submit a fresh Petition may be rejected.

**Commission's Observations**

- 2.1.8 The Commission takes cognizance of the views of stakeholder with respect to shortcomings in the submission made by the Petitioner. As highlighted in previous Chapter, the Commission has issued three Deficiency letters against which necessary clarification and additional documents were submitted by the Petitioner. The Commission has accordingly approved the capital cost and ARR based on the submissions of the Petitioner, facts of the case, relevant regulations and post detailed prudence check.

**Stakeholders' Submissions**

- 2.1.9 M/s Bajoli Holi Hydropower Pvt. Ltd. has highlighted that the Supply and Services Contract dated 05.12.2017 awarded to M/s APAR Industries ("Main Contract dated 05.12.2017") was originally valued at Rs. 58.54 Crore. HPPTCL has relied on five amendments to the Main Contract dated 05.12.2017 to state that there was change in scope which increased the cost by Rs. 10.72 Crore. Clarity was further sought with respect to whether the price variation claimed is in line with the contract. Further, HPPTCL has failed to clarify or submit documents to establish that the increase in cost claimed is not in any manner attributable to delay caused by M/s APAR Industries.

HPSEBL has concurred that proper justification is needed on the five no. of amendments issued on the contract

**Petitioner's Response**

- 2.1.10 The Petitioner has submitted that all the contract documents including amendments explicitly mention the item wise details of the cost and quantum variations along with necessary concurrence of the Board of Directors,. It was further re-iterated that all payments made were as per the contract and all the incurred costs were certified by the Statutory Auditor.

**Commission's Observations**

2.1.11 The record submitted by the Petitioner shows that the awarded contract was amended five times owing to factors such as change in design, quantity of material, enhancement in scope, etc. The Commission in its multiple deficiency letters asked the Petitioner to submit the CEA/BOD approvals for the amendments. In reply, the Petitioner has submitted the approvals of Director/Whole Time Director (WTD) corresponding to the amendments in accordance with the delegation of powers in HPPTCL.

The following table summarizes the awarded cost and revised cost after amendments:

**Table 4: DPR vs. Awarded Cost (Rs. Cr.)**

Particulars	Original Award	Amendment (1)	Amendment (2)	Amendment (3)	Amendment (4)	Amendment (5)
Date of Contract / amendment		19 <sup>th</sup> Jul, 2018	16 <sup>th</sup> Nov, 2019	18 <sup>th</sup> Feb, 2020	3 <sup>rd</sup> Dec, 2021	11 <sup>th</sup> Jan, 2022
Supply	29.64	Minor correction in award amount by Rs. 100	32.38	30.52	30.50	30.50
Services	28.90		28.90	38.90	38.90	38.75
<b>Total</b>	<b>58.54</b>	<b>58.54</b>	<b>61.28</b>	<b>69.42</b>	<b>69.41</b>	<b>69.27</b>
Reason for amendment		Excavation in Tower Foundation and Reinforcement & Concreting in Tower Foundations	During execution of work and check survey, need was felt to add multi-circuit tower along with body and leg extensions.	Deviation in Revetment quantity, replacement of Disc Insulator with Long Rod Polymer Insulator.	Savings on account of displacement of disc insulators with polymer insulators and finalisation of rates	Deviation in items such as Stub setting, excavation in Tower foundation, form work for all type of tower foundation in all type of soil, erection work, Random Rubble Masonry including Cement Mortar, Steel for Reinforcement etc.

The Petitioner has stated that enhanced scope of work, delay in forest clearance, change in quantities of material and additional material requirement, etc. have been major reasons for revision /amendment of

contract value. In one of the responses to the Commission's clarification, the Petitioner has submitted that the quantity of material has changed with respect to that considered at the time of preparing the DPR/award, which has also led to the increase in project cost. Based on the scrutiny of the contracts and amendments, it is observed that the enhanced hard cost vis-à-vis DPR was primarily due to increase in the quantity of material, modification/replacement in quantity of material, increase in material price etc. The matter has been elaborated in detail in 'Chapter 3: Approval of Capital Cost' of this order.

### **Stakeholders' Submissions**

- 2.1.12 M/s Bajoli Holi Hydropower Pvt. Ltd. Has highlighted the scope of work of the Main Contract dated 05.12.2017 which mentioned that '*The Design Charges for special tower are inclusive and any other item required for successful commissioning of the 220 kV Double Circuit BHL Line would be supplied by the Contractor without any additional cost.*' It was further highlighted that the Third Amendment permitted an increase of approximately Rs. 10.9 Crores in the head 'Installation and Other Services'. Further, the Petitioner needs to justify the increase in the cost of 'Revetment Works' wherein the masonry work including mortar increased from 2,000 CUM to 24,000 CUM, an increase of 1200% and further from 24,000 CUM to 25,779.074 CUM entailing additional cost of Rs. 0.86 Cr.

### **Petitioner's Response**

- 2.1.13 The Petitioner has submitted that the work of construction of Bajoli Holi-Lahal Transmission line was awarded to the contractor on 05.12.2017 whereas the final tree felling was completed by August 2021. The Petitioner has stated that the quantities ascertained at the time of award of contract were provisional in nature and were liable to change. It was also submitted that due to heavy rainfall/snow, some locations of the transmission line became sliding zone and hence, the requirement of the revetment quantities were increased to ensure the reliability and safety of the site and transmission line. The number of towers also got modified as per final and check survey leading to change/enhancement in the cost.

### **Commission's Observations**

- 2.1.14 The Commission has taken note of the submissions of M/s Bajoli Holi Hydropower Pvt. Ltd. and the Petitioner. The Commission sought justification on the significant increase in the quantity against which the Petitioner has submitted that the due to heavy rains/snowfall certain locations of said transmission line had come under sliding zones. Further, the Petitioner has also clarified that requirement of the revetment quantity were increased and said quantities were urgently required for ensuring reliability & safety of transmission line. The Petitioner has also provided justification for increase of cost on account of uncontrollable factors. The Commission has undertaken prudence check of the various submissions and clarification in response to the queries of the Commission which have also been detailed in 'Chapter 3: Approval of Capital Cost' of this Order.

**Stakeholders' Submissions**

- 2.1.15 M/s Bajoli Holi Hydropower Pvt. Ltd. has highlighted that all the amendments made to the contract dated 05.12.2017 specified that a detailed delay analysis shall be carried out separately but the HPPTCL has failed to place such analysis on record.

**Petitioner's Response**

- 2.1.16 The Petitioner has submitted in its reply dated 18.04.2023 that it has placed on record the justification on account of each event of delay and requested the Commission to approve the same.

**Commission's Observations**

- 2.1.17 The Commission has estimated the delay on account of various reasons and has considered the same appropriately while calculating the IDC and the capital cost of the project.

**Stakeholders' Submissions**

- 2.1.18 M/s Bajoli Holi Hydropower Pvt. Ltd. has highlighted that the reasons submitted by the Petitioner with regards to time overrun are not supported by any details or reasonable justifications and also lacked the details of the steps, if any, taken by it to mitigate the impact/ effect of such events. The stakeholder has also highlighted that the Petitioner should have started the construction work of the transmission line on towers located in non-forest land as the Petitioner was facing right of way issues on forest land. The objector has asked for justification for the same from the Petitioner.

**Petitioner's Response**

- 2.1.19 The Petitioner in its response has stated that the detailed response and documentary evidence justifying the delay has already been submitted. It was further submitted that major delay was primarily on account of COVID-19 pandemic and other Force Majeure events. Further, the Petitioner has made all possible efforts to reduce the delay and all supporting documents/ evidence have been submitted along with the Petition/ additional queries raised by the Commission. With regards to starting the work on towers on non-forest land, it was submitted that same would have required additional permissions and was in contradiction with Para 4.4 and Para 2.2 of the Guidelines for Diversion of Forest Land for non-forest purposes under the Forest (Conservation) Act, 1980.

**Commission's Observations**

- 2.1.20 The matter with respect to time overrun has been discussed in detail in the 'Chapter 3: Approval of Capital Cost' of this Order.

**Stakeholders' Submissions**

- 2.1.21 M/s Bajoli Holi Hydropower Pvt. Ltd. has sought clarification with regard to the forest clearance norms and conditions as specified in the DPR alleging that HPPTCL has violated the provisions of the DPR and has failed to act in a timely manner.

The HPSEBL, on the other hand, has contended that expenses towards forest clearance have increased significantly, however, no justification has been provided by the Petitioner.

**Petitioner's Response**

- 2.1.22 The Petitioner in its response has stated that the increase in cost towards obtaining forest clearance was not due to delay and is factually wrong. It was submitted that tree enumeration works were carried out by forest department. Post tree enumeration works, demand notice was raised by the concerned department and the payments were made by HPPTCL in favour of the concerned department for it being the statutory obligation. The Petitioner has stated that it was not in violation of provisions of the DPR as claimed by the stakeholder. The Petitioner has further submitted that the payment has been made directly to the concerned department and no part of the said payments has been retained by HPPTCL

**Commission's Observations**

- 2.1.23 The Petitioner has claimed a significant amount of Rs. 15.40 Cr for expenses towards obtaining forest clearance. The matter has been discussed in detail in Chapter 3, section 3.4.22 and 3.4.23 of this Order.

**Stakeholders' Submission**

- 2.1.24 M/s Bajoli Holi Hydropower Pvt. Ltd. has sought clarification with regard to the amount of Interest During Construction (IDC). It was submitted that HPPTCL has claimed Rs. 5.30 Crores as IDC. It has also been submitted that in terms of the approved DPR, IDC of Rs. 2.02 Crore was included. The IDC in the DPR was computed considering debt-equity ratio of 75:25. Pertinently, in the Petition, HPPTCL has computed IDC by considering an interest rate of 10%. This was directly contrary to the DPR which stated the interest rate at 4.64%. The stakeholder has stated that the Petitioner has not provided any reason/documentary evidence for changing the ROI to 10%. It was also submitted that no satisfactory answer has been received from the Petitioner despite the issue being raised multiple times.

**Petitioner's Response**

- 2.1.25 The Petitioner in its response has stated that the actual IDC claimed by HPPTCL is Rs. 8.13 Crores. It was also stated that IDC of Rs. 2.02 Crores was calculated based on LIBOR rate and the actual ROI of 10% was in line with the lending agreement signed by HPPTCL with the Government of Himachal Pradesh for funding received under ADB loan.



**Commission's Observations**

- 2.1.26 The Petitioner has submitted the agreement specifying the rate of interest applicable @10% by Government of Himachal Pradesh for funding received under ADB loan. The Commission has considered the same while calculating the IDC and Interest on Loan in ARR.

**Stakeholders' Submissions**

- 2.1.27 The stakeholder has highlighted that the amount received by the HPPTCL by way of Liquidated Damages of Rs. 2.02 Crores ought to be deducted from the Capital Cost while approving the same for determination of transmission charges.

**Petitioner's Response**

- 2.1.28 The Petitioner in response has submitted that LD charges amounting to Rs.2.02 Crores were deducted from the Capital Cost of the project and documentary evidence regarding the same has been submitted.

**Commission's Observations**

- 2.1.29 The Commission has considered the same while approving the capital cost of the transmission line in Chapter 3.

**Stakeholders' Submissions**

- 2.1.30 The Stakeholders has highlighted that the Long Term Access (LTA) Agreement had three elements namely 220 kV Double Circuit Bajoli Holi Line, 400/220/33 KV, 2\*315 MVA, Lahal GIS-Sub-station, and 400 KV D/C Transmission Line from Lahal Pooling Station to Chamera Pooling Station. It was mentioned that the Petition has been filed separately for the 220 kV Bajoli Holi Line and for remaining two elements. It was submitted that there has been a direct impact on GMR due to the delay in commissioning of the Permanent Evacuation System by HPPTCL which included the 220 kV Double Circuit Bajoli Holi Line. Pertinently, the fact that GMR has been paying transmission charges to HPPTCL has not been disclosed by HPPTCL in the present Petition. As per the stakeholder, GMR was put to loss on account of the delay by HPPTCL in commissioning the entire transmission system as GMR was restricted to evacuation of lower quantum while its entire 180 MW project had been commissioned. As per Stakeholder, the HPPTCL is liable to pay damages/transmission charges to GMR equivalent to commissioned capacity deprived for evacuation i.e. 120 MW from March 2022 till 12.05.2022 and 60 MW from 13.05.2022 till 11.01.2023

Further, GMR has also paid an additional amount of approximately Rs. 4.6 Crore to HPPTCL on account of usage of the transmission line of Greenko Budhil as part of the interim arrangement. This amount also needs to be accounted for and considered by this Commission.

**Petitioner's Response**

- 2.1.31 The Petitioner has submitted that the 400/220/33 KV, 2\*315 MVA, Lahal GIS-Sub-station; and 400 KV D/C Transmission Line from Lahal Pooling Station to Chamera Pooling Station are not in scope of the present Petition and hence, issues related to same shall not be addressed. Further, even during the unavailability of Permanent Evacuation System, HPPTCL has made available interim evacuation system to M/s GMR and the HPSEBL for which Petitions were filed before Hon'ble Uttarakhand Electricity Regulatory Commission (UERC) from time to time.

**Commission's Observations**

- 2.1.32 The current Petition under consideration is regarding determination of the capital cost and tariff determination for 220 kV Bajoli Holi Line, therefore, the issue raised by the GMR can be taken up separately through appropriate Petition under relevant provisions of the HPERC Regulations for adjudication before this Commission.

**Stakeholders' Submissions**

- 2.1.33 M/s Bajoli Holi has highlighted that the 220 kV Bajoli Holi Lahal Transmission Line had higher capital cost as compared to other similarly placed projects like the 220 kV D/C Charor-Banala Transmission Line of the same length and similar scope of work. It was submitted that there is a substantial difference in the hard cost between the two transmission lines, both of which have been set up by the HPPTCL.

**Petitioner's Response**

- 2.1.34 The Petitioner in its response has submitted that although both the transmission lines had similar scope of work, it wasn't appropriate to compare them with each other as there are other factors which affect the cost of the project. It was further submitted that major difference in the cost was on account of deviation in cost of forest clearance.

**Commission's Observations**

- 2.1.35 The Commission has considered the submissions carefully. The Petitioner has submitted multiple reasons of increase in cost primarily due to time overrun in achieving COD on account of uncontrollable factors. The Commission has done the prudence check for each reason provided by the Petitioner for time over run in detail and has considered the documentary evidence provided in support of the same and accordingly approved the final capital cost of the transmission line, as discussed in detail of 'Chapter 3: Approval of Capital Cost' of this Order.

**Stakeholders' Submission**

- 2.1.36 M/s Bajoli Holi has highlighted that HPPTCL had submitted that post approval of tariff, it shall approach Hon'ble Central Electricity Regulatory Commission

("CERC") for inclusion of the asset in the PoC Mechanism. Further, in terms of response dated 09.12.2022, HPPTCL has submitted that:

- (a) The 220 kV Double Circuit BHL Line was developed to evacuate power from GMR's Project along with other hydro power stations to the Chamera Station of PGCIL and that the transmission line is carrying most of its power outside the state of Himachal Pradesh.
- (b) The certification of the 220 kV Double Circuit BHL line as being intra or inter-state will depend on outcome of Petition No. 57/MP/2022 and Petition No. 5/MP/2022.

It was further submitted that CERC has issued Order dated 05.04.2023 in Petition No. 57/MP/2023 and the 220 kV Double Circuit BHL Line was commissioned on 29.11.2021. Accordingly, HPPTCL already possessed necessary data to conduct power flow analysis and should have already approached the CERC. Therefore, the HPPTCL ought to be directed by this Commission to conduct power flow data in coordination with NRLDC and approach Hon'ble CERC for certification of the 220 kV Double Circuit BHL Line as an Inter-State Transmission line. Further, in terms of the Petition and response to data gaps, it is clear that HPPTCL considers the 220 kV Double Circuit Transmission Line as part of the ISTS network. Accordingly, HPPTCL ought to have conducted the load flow studies and approached CERC.

### ***Petitioner's Response***

- 2.1.37 The Petitioner in its response has submitted that 220kV D/C Bajoli Holi-Lahal Transmission line is STU Line and is intra-state in nature. On account of this, Transmission tariff of this line and mechanism of recovery of approved charges is to be decided by the Commission. Further, the Petitioner has decided to withdraw its submission made under Para 9 and Para 4.13.2 of Tariff Petition.

### ***Commission's Observations***

- 2.1.38 The transmission line has been developed to evacuate power of M/s GMR Bajoli Holi HEP along with other hydro stations to Chamera Pooling Station of PGCIL through 400kV D/C Lahal-Chamera Transmission line. The Petitioner, as per the Petition, has submitted that after the approval of tariff, it shall approach the Hon'ble CERC for inclusion of the asset in the PoC mechanism as per CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020. Accordingly, the Petitioner is directed to approach CERC in the matter. In the event, the line is not declared as inter-state, appropriate application should be made before the Commission along with justification and evidence for recovery of transmission charges from respective beneficiaries.

## 3. APPROVAL OF CAPITAL COST

### 3.1 Introduction

3.1.1 HPPTCL has submitted a Petition for determination of capital cost of 220kV D/C Bajoli Holi-Lahal transmission line and ARR for the period from COD to FY 2023-24 in line with the provisions of the HPERC Transmission Regulations, 2011, as amended from time to time.

3.1.2 As per Regulation 14 of the HPERC Transmission Regulations, 2011, as amended from time to time, the Capital Cost of Project is described as under:

#### **14. Capital cost of the project**

*(1) The capital cost for a project shall include-*

*(a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;*

*(b) capitalised initial spares subject to the ceiling norms as per regulation 15;*

*(c) additional capital expenditure determined under regulation 16:*

*Provided that the assets forming part of the project, but not in use, shall be taken out of the capital cost.*

*(2) The capital cost admitted by the Commission, after prudence check, shall form the basis for determination of tariff:*

*Provided that the prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:*

*Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff:*

*Provided further that where the implementation agreement and the transmission service agreement entered into between the transmission licensee and the long-term transmission customer provides for ceiling of*

*actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff:*

*"Provided further that in case of the existing projects, the capital cost admitted by the Commission prior to the start of the control period and the additional capital expenditure projected to be incurred for the respective years of the control period, as may be admitted by the Commission, shall form the basis for determination of tariff:"*

- 3.1.3 The Commission has reviewed the proposed capital cost for 220kV D/C Bajoli Holi-Lahal transmission line and ARR proposed for each year by the Petitioner from COD until the end of the Control Period i.e. FY 2023-24. Multiple set of deficiencies in the Petition were shared with the Petitioner to realistically validate the claims of the Petitioner viz. reasons for cost and time overrun, amendments to contract along with relevant approvals, Interest During Construction (IDC), beneficiary details etc.
- 3.1.4 The original Petition lacks significant detailing and supporting information to ascertain the capital cost for the line. Information provided in the Petition was inadequate or lacked justifications w.r.t capital cost, increase in actual cost vis-à-vis awarded cost, time and cost overrun, missing documents and approvals, schedule of debt disbursement, IDC computation, etc. for which the Commission sought additional submissions and supporting documents from the Petitioner through deficiency letters for the purpose of reviewing the capital cost and ARR for the 220kV D/C Bajoli Holi-Lahal transmission line. In some of the cases, the information provided by the Petitioner in response to the queries of the Commission remained incomplete and/or could not be validated through appropriate supporting documents.
- 3.1.5 The Commission has undertaken detailed prudence check and adequate assumptions considered, wherever required, for approving the capital cost of the transmission line. The scrutiny and prudence check undertaken by the Commission for approval of capital cost of 220kV D/C Bajoli Holi-Lahal transmission line has been discussed in the following paragraphs.
- 3.1.6 Relevant technical details and configuration of the transmission line as submitted by the Petitioner is tabulated as follows:

**Table 5: Asset Details**

Name of Transmission line	S/C or D/C	Type of Conductor	Voltage level kV	Line Length (Km)	COD
Bajoli Holi HEP - Lahal Transmission Line	D/C	Twin Moose	220 kV	18.34	19 <sup>th</sup> November, 2021

## 3.2 Summary of the Project

### Petitioner Submission

- 3.2.1 The Petitioner has submitted that the Board of Director's (BoD) of HPPTCL had approved the proposal for construction of 220 kV D/C Bajoli Holi HEP-Lahal

transmission line in the 19<sup>th</sup> Board Meeting held on 24<sup>th</sup> June, 2013 vide agenda item No. 19.05. Thereafter, CEA accorded its approval on the Detailed Project Report (DPR) submitted vide letter dated 24<sup>th</sup> May, 2016.

- 3.2.2 The project was envisaged to evacuate 431 MW of power from M/s GMR Bajoli Holi Hydro Power Pvt. Ltd. (3x60 MW), Bara Bangal HEP(200MW) and approx. 51 MW of Small HEPs in Bharmour area which were awarded to various IPP's by GoHP. The arrangement in addition to the evacuation needs of new generating stations shall also improve reliability and redundancy of the system to evacuate power in case of outage of any transmission line because of unforeseen conditions.
- 3.2.3 HPPTCL has submitted that the capital cost of the instant project was envisaged as Rs.66.38 Cr. including IDC as per the scope of work defined in original DPR. The same was approved by CEA vide letter dated 24<sup>th</sup> May 2016.
- 3.2.4 The Petitioner submitted that competitive bidding was carried out to award the project. The project was awarded on Turnkey basis to M/s APAR Industries Ltd. in Joint Venture with M/s M. J. Engineering Works Pvt. Ltd. vide LOA No. HPPTCL/ADB/220kV D/C Bajoli Holi-Lahal /2017-18-8974-80 dated 5<sup>th</sup> December, 2017 at the bid price of Rs.58.54 Cr. The awarded contract included supply, erection, and commissioning cost of the project. The Petitioner further submitted that the above contract was amended five times and the final revised awarded cost was Rs.69.27 Cr.
- 3.2.5 The effective date of the contract was 26<sup>th</sup> December, 2017. The time period for execution of project from effective date of contract was 18 months i.e. till 28<sup>th</sup> June, 2019. It is submitted that the project completion date was extended from 28<sup>th</sup> June, 2019 to 30<sup>th</sup> April, 2020 vide Letter No. HPPTCL/contracts/ADB/Bajoli Holi-Lahal Line/2019-20 7066-74 dated 11<sup>th</sup> September, 2019. Primary reasons for extension being the need to add multi circuit tower along with body and leg extensions. Subsequently, amendment was issued to the contract post finalisation of tower location chart.
- 3.2.6 The COD of the project was finalised as 19<sup>th</sup> November, 2021 with the actual capital cost based on the provisional accounts for FY 2021-22 as Rs.97.60 Cr. including IDC and Departmental Charges (DC).
- 3.2.7 The Petitioner also submitted that the implementation of the project got delayed on account of reasons purely beyond the control of the Petitioner. Primary reasons highlighted by the Petitioner included delay in handing over of site, pending litigation, enhanced scope of work, delay in getting forest clearance, inclement weather conditions, COVID-19, local hindrance etc. The reasons for delay and cost enhancement have been discussed in detail in the subsequent sections.
- 3.2.8 The following table provides the overall capital cost of Bajoli – Lahal transmission line as submitted by the Petitioner:

**Table 6: DPR vs Claimed cost (Rs. Cr.)**

Particulars	DPR Cost	Claimed
Cost of 220 kV D/C Line including Departmental charges	64.36	88.04

Particulars	DPR Cost	Claimed
Interest During Construction	2.02	9.54
<b>Total</b>	<b>66.38</b>	<b>97.60</b>

3.2.9 The Petitioner has submitted that the initial contract consisting of Supply and Services was amended five times, the details of which are provided as follows:

**Table 7: Summary of Contract Value and Amendments**

Particulars	Supply Contract (Rs. Cr.)	Services Contract (Rs. Cr.)	Total (Rs. Cr.)
<b>Initial Award Price</b>	<b>29.64</b>	<b>29.80</b>	<b>58.54</b>
1 <sup>st</sup> Amendment	Minor Correction in award amount by Rs. 100		58.54
2 <sup>nd</sup> Amendment	32.38	28.90	61.28
3 <sup>rd</sup> Amendment	30.52	38.90	69.42
4 <sup>th</sup> Amendment	30.50	38.90	69.41
5 <sup>th</sup> Amendment	30.50	38.75	69.27

3.2.10 The following table provides the breakup and variation of actual capital cost submitted by the Petitioner vis-à-vis the cost as per DPR:

**Table 8: Details of Cost Variation in Total Project Cost (Rs. Cr.)**

Particulars	DPR Cost	Claimed	Variation	% Variation
Land Cost	-	0.99	0.99	-
Preliminary works like compensation, forest clearance, survey charges etc.	2.17	16.60	14.42	662.7%
Transmission Lines material	11.51	30.30	18.78	163.2%
Erection, Stringing & Civil works including foundation	42.87	35.82	(7.05)	(16.45%)
Contingency @ 3%, Project Overhead @ 11% and Contingency for Forest @8%	7.79	4.30	(3.49)	(44.80%)
Tender expenses/Advertisement	-	0.01	0.01	-
Misc. Expenses	-	0.005	0.005	-
Interest During Construction	2.01	9.54	7.52	373.45%
<b>Total</b>	<b>66.38</b>	<b>97.59</b>	<b>31.21</b>	<b>47.03%</b>

### Commission's Analysis

3.2.11 The Commission observed that 220 kV D/C transmission line from Bajoli Holi HEP to 33/220/400 kV GIS Sub-station at Lahal was envisaged to evacuate 431MW power from M/s GMR Bajoli Holi Hydro Power Pvt. Ltd. (3x60 MW), Bara Bangal HEP (200 MW) and approximately 51MW of Small HEPs in Bharmour area. At present, the Bara Bengal HEP allotted to M/s Malana Power Company Limited has been cancelled by DoE. M/s GMR Bajoli Holi HEP has signed an agreement with HPPTCL in accordance with HPERC (Grant of Connectivity, Long Term Access and Medium term open access in intra-state transmission and related matters) Regulation, 2010 for evacuation of its power.

As per the Petitioner, an Integrated Transmission System in the area has been constructed due to the limited corridor availability which is also expected to improve the reliability and redundancy of the system.

- 3.2.12 As per the DPR, the project was originally envisaged at a cost of Rs.66.38 Cr. and accordingly the BOD approval for construction of 220 kV Bajoli Holi-Lahal transmission line was received in the 19<sup>th</sup> meeting held on 24<sup>th</sup> June, 2013 vide agenda item no 19.05. Further, CEA accorded its approval to the project vide its Letter No. 8/20/2016-PSP&PA-I/ dated 24<sup>th</sup> May, 2016.
- 3.2.13 The Commission sought clarification from the Petitioner with respect to the approval status of the transmission line from the Commission. In response, the Petitioner submitted that although, the said scheme was not initially submitted for approval, application was submitted before the Commission for taking in-principle approval for 14 nos. of schemes including the instant Transmission asset. The Petitioner submitted the relevant documents in support of its claim. The Petitioner further submitted that the Commission in reply directed the Petitioner to approach the Commission for approval of the schemes on one-to-one basis as the works on these schemes had already initiated by the Petitioner. Accordingly the Petitioner has submitted the instant Petition for determining the tariff.
- 3.2.14 It is observed that the project was envisaged at a debt-equity ratio of 75:25 as per the DPR. HPPTCL had secured funding for the project under the transmission scheme funded from Asian Development Bank (ADB)
- 3.2.15 As per the contract agreements submitted by the Petitioner, the contract for supply and services for the transmission line was awarded on 5th December, 2017 to M/s APAR Industries Ltd. in joint venture with M/s M.J.Engineering Works Pvt. Ltd. Subsequently, five amendments were issued to the contract which covered aspects of change in scope, delay, etc. which have been discussed in detail in the subsequent sections.
- 3.2.16 As per the submission of the Petitioner, the delay in COD of the project was approx. 29 months primarily on account of factors such as delay in handing over of site, local hindrances, inclement weather conditions, delay in getting requisite approvals and clearances and change in scope, etc..
- 3.2.17 The Commission, in order to establish the capital cost of the project, sought the auditor certificate for the project from the Petitioner as the same was not submitted along with the Petition. In reply to the first deficiency letter dated 16th Nov, 2022, the Petitioner submitted the auditor certificate with capital cost as Rs 89.28 Cr. Subsequently, the Commission sought justification for variation in cost vis-à-vis submitted as per Petition. In response, the Petitioner submitted a revised capital cost of Rs. 92.79 Cr., as on COD as against the previous capital cost of Rs. 89.28 Cr.. However, the revised capital cost was not supported by any certificate by the Statutory Auditor. In response to the clarification for revision in capital cost, the Petitioner has submitted that the revised capital cost claimed for the transmission asset as Rs.89.28 Cr. included the Departmental Charges and IDC only upto 31st March, 2021 as per the bookings done in SAP system even though DC & IDC were to be taken upto 19<sup>th</sup> November, 2021 i.e. the actual COD of transmission line. The Petitioner



finally on multiple clarifications sought by Commission, submitted the Auditor certificate in support of the revised capital cost of Rs 92.79 Cr, in reply to the 3<sup>rd</sup> Deficiency Letter dated 22<sup>nd</sup> Jul, 2023. The consideration of capital cost has been discussed further in detail in the relevant section of this order.

- 3.2.18 The Commission in order to undertake in-depth analysis has perusal the approvals of the BOD/competent agencies, details of awards/ contracts, correspondences, documents against project funding, payments made to contractors, and COD certificate, etc. Accordingly, the capital cost of the project along with overheads has been approved as discussed in the relevant sections of this order.

### 3.3 Energy flow and Nature of Asset

#### Petitioner Submissions

- 3.3.1 The Petitioner has submitted that the project has been constructed to evacuate power from M/s GMR Bajoli Holi Hydro Power Pvt. Ltd. (BHHEP) (Bajoli Holi HEP (3x 60 MW), Bara Bangal HEP(200MW) and approx. 51 MW of Small HEPs in Bharmour area which were awarded to various IPP's by GoHP. The total available potential to be evacuated through this line was envisaged as ~431MW. However, at present the Bara Bangal HEP (200MW) allotted to M/s Malana Power Company Limited has been cancelled by DoE on the request of the Developer. Further, M/s GMR Bajoli Holi HEP has signed CON-8 with HPPTCL in accordance with HPERC (Grant of Connectivity, Long Term Access and Medium Term Open Access in intra-state transmission and related matters) Regulation, 2010.
- 3.3.2 Considering that multiple projects are coming up in Ravi River basin in Himachal Pradesh, the HPPTCL has constructed an Integrated Transmission System in the area due to the limited corridor availability and as such too many circuits cannot be constructed. The Petitioner further submitted that CON-8 has been executed with BHHEP on 6<sup>th</sup> May, 2013 and further, LTA has been executed on 3<sup>rd</sup> Sep, 2015 for capacity of 178.2 MW.
- 3.3.3 With regards to evacuation of power from Small HEPs, HPPTCL is constructing 220/66kV Heiling Sub-station by LILO of single circuit of 220kV D/C Bajoli Holi-Lahal Transmission line. This Sub-station shall be used to pool the power of small HEP's at 66kV level and the power shall be evacuated through 400kV line from Lahal Pooling Station to Chamera. Presently, the power of small HEP's in the area who have signed PPA with HPSEBL is being pooled through 220kV D/C Bajoli Holi-Lahal transmission line by charging it at 33kV level and through Lahal Sub-station of HPPTCL.
- 3.3.4 Further, HPPTCL, HPSEBL, Jagdambey Hydro Projects LLP and M/s GMR Bajoli Holi HEP have signed IPTA on 21<sup>st</sup> May, 2022 for evacuation of power of Salun HEP(9MW) and Kuwarsi-II HEP(15MW) by charging one circuit of 220kV Bajoli Holi-Lahal Transmission line at 33kV level. The respective IPPs were earlier evacuating their power through 33kV network of HPSEBL at 33/220kV Lahal Sub-station of HPPTCL. This arrangement for evacuation of power of IPPs (who have signed PPA with HPSEBL) was effective till 31<sup>st</sup>October, 2022 and w.e.f.

1<sup>st</sup> November, 2022 IPPs have agreed to evacuate their power from existing 33kV system of HPSEBL.

- 3.3.5 The Petitioner submitted that considering the Inter-State nature of the line, after taking approval of tariff, it shall approach the Hon'ble CERC for inclusion of the asset in the PoC mechanism as per CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020.

### Commission's Analysis

- 3.3.6 It is observed that 220 kV D/C Bajoli Holi-Lahal transmission line was planned to evacuate 431 MW of power from Bajoli Holi HEP (3x60 MW) for which LTA has been executed on dated 3<sup>rd</sup> September, 2015, Bara Bangal HEP (200 MW) and approximately 51 MW of small HEPs in Bharmour area. However, allotment of Bara Bangal HEP (200 MW) has been cancelled by the GoHP but said HEP may also come up in future on the allotment to some other developer.
- 3.3.7 In response to one of the queries regarding beneficiaries and off takers of the project, the Petitioner stated that it is constructing 220/66 kV Heiling Sub-station by LILO of single circuit of 220 kV D/C Bajoli Holi-Lahal Transmission Line. Upon commissioning of Heiling Sub-station, power of small HEPs (Kuwarsi-II HEP) (15 MW) in joint mode with Salun (9 MW) Chate ka Nalla (9 MW) and Toral Kundli (18 MW) having PPA with HPSEBL will also be pooled through the 220 kV Bajoli Holi-Lahal Transmission Line. The Petitioner further submitted that the said asset shall be included in TSA (Transmission Service Agreement) signed with HPSEBL for purpose of recovery.
- 3.3.8 The Petitioner with respect to the COD of the project has submitted the certificate from HPSLDC dated 23<sup>rd</sup> November, 2022 regarding successful first time charging certifying the COD of the line as 19<sup>th</sup> November, 2021. Accordingly, the COD has been considered as 19<sup>th</sup> November, 2021 for all purposes in this order.
- 3.3.9 The Commission sought a list of existing generators evacuating power against which it was established that currently only M/s Bajoli GMR Bajoli Holi HEP is connected to the system
- 3.3.10 With respect to future beneficiaries, the Petitioner has submitted the details along with status of their projects as follows:

**Table 9: List of Future Beneficiaries**

Beneficiaries	Connection Point	Agreement
Chate ka Nalla (9 MW) Toral Kundli (18 MW)	As per Connection Agreement dated 7 <sup>th</sup> Apr, 2016 executed between M/s Jagdambey & HPPTCL, the power of IPPs i.e. Salun (9 MW), Chate ka Nalla (9 MW), Toral Kundli (18 MW) shall be evacuated through 66/220 kV Heiling Sub-station in joint mode with Kuwarsi-II HEP	Connection Agreement was signed on dated 7 <sup>th</sup> April, 2016 between M/s Jagdambey & HPPTCL.
Kuwarsi HEP (9.9 MW)	IPP has applied for connectivity at 66/220 kV Heiling Sub-station and is under process	Connectivity applied by IPP and same is under process.

- 3.3.11 The Commission further sought the Inter/Intra State status of the line against which the Petitioner has submitted that the transmission line has been developed to evacuate power of M/s GMR Bajoli Holi HEP along with other hydro stations to Chamera Pooling Station of PGCIL through 400kV D/C Lahal-Chamera Transmission line. Further, said transmission line will also be utilized by the HPSEBL through Heiling Sub-station of HPPTCL. The instant transmission line carries most of its power outside the State of HP, and, therefore, the Petitioner has submitted to approach the Hon'ble CERC for it to be considered as part of ISTS system. However, till such time the inter/intra status of said transmission line cannot be predicted for sure.
- 3.3.12 Accordingly, it can be concluded from the Petitioner's submission that the line is being primarily used to evacuate power outside state and, therefore, the Petitioner is directed to approach Hon'ble CERC for recovery as per CERC Sharing Regulations, 2020. In the event the line is not declared as inter-state, appropriate application should be made before the Commission along with justification and evidence for recovery of transmission charges from respective beneficiaries.

### 3.4 Capital Cost

#### Petitioner's submissions

- 3.4.1 The Petitioner submitted that as per award, the project execution was to start from 26<sup>th</sup> December, 2017 and works were to be completed within 18 months i.e. by 28<sup>th</sup> June, 2019. The project completion date was extended from 28<sup>th</sup> June, 2019 to 30<sup>th</sup> April, 2020 vide Letter No. HPPTCL/contracts/ ADB/ Bajoli Holi-Lahal Line/ 2019-20 7066-74 dated 11<sup>th</sup> September, 2019. The project completion date was further extended upto 31<sup>st</sup> December, 2020 due to reasons such as COVID-19 pandemic, delayed clearances, inclement weather conditions, hindrance by local people (ROW issues), change in scope of work etc. which were beyond control of the Petitioner.
- 3.4.2 The project got further delayed till 30<sup>th</sup> September, 2021 due to second wave of COVID-19 Pandemic, hindrance by local people (RoW issues), inclement weather conditions etc.
- 3.4.3 Further, the initial contract was amended five times, the details of which are provided as follows:

**Table 10: Summary of Contract Value and Amendments**

Sl.	Particulars	Supply (Rs. Cr.)	Services (Rs. Cr.)	Total (Rs. Cr.)
1.	Initial Award Price	29.64	28.90	58.54
2.	1 <sup>st</sup> Amendment	Minor Correction in award amount by Rs. 100		58.54
3.	2 <sup>nd</sup> Amendment	32.38	28.90	61.28
4.	3 <sup>rd</sup> Amendment	30.52	38.90	69.42

Sl.	Particulars	Supply (Rs. Cr.)	Services (Rs. Cr.)	Total (Rs. Cr.)
5.	4 <sup>th</sup> Amendment	30.50	38.90	69.41
6.	5 <sup>th</sup> Amendment	30.50	38.75	69.26

3.4.4 The Petitioner has submitted that against the awarded cost of Rs. 69.26 Cr towards supply and services, only Rs. 66.12 Cr has been incurred as on COD

3.4.5 The following table provides a comparative view with respect to the Supply and Services cost as envisaged in the DPR and awarded cost post 5<sup>th</sup> amendment:

**Table 11: Comparison – Awarded Cost (Rs. Cr.)**

Particulars	Capital Cost – DPR	Initial Contract Award	Awarded Cost (Post 5 <sup>th</sup> Amendment)	Variation vis-à-vis Award Price
Supply	11.51	29.64	30.51	0.87
Services	42.87	28.90	38.76	9.85
<b>Total</b>	<b>54.38</b>	<b>58.54</b>	<b>69.27</b>	<b>10.72</b>

3.4.6 The Petitioner has submitted that enhancement in cost is on account of combination of factors leading to time and cost overrun. The main reasons cited by the Petitioner leading to delay in construction include:

- Delay in handing over of Private Land: The private land was to be handed over by 26<sup>th</sup> March, 2018 as per the approved L2 schedule. However, the permission to start the work could be accorded to the firm only by 17<sup>th</sup> May, 2018.
- Forest Land: As per the approved L2 schedule, the forest case was to be cleared by 26<sup>th</sup> March, 2018. The Stage-I approval of the forest case was received on 26<sup>th</sup> Sep, 2017, and Stage-II thereafter on 11<sup>th</sup> December, 2018 with a permission to cut down maximum of 135 trees. The Forest clearance accorded was revoked by the Forest Department in response to GoHP letter dated 28<sup>th</sup> March, 2019 vide with permission to increase the maximum number of trees to be cut down was sought for 501 Nos. and liberty was granted to resubmit the proposal along with justification. The cutting of trees was finally completed in the month of August, 2021 due to which the work of 5 No. towers for erection as well as stringing could not be taken up.
- Delay due to court cases: The construction activity was hampered due to filing of Civil Suits against HPPTCL by the land owners underneath the Tower No. 10, 53, 58, 50 & 51.

3.4.7 With regards to the cost overrun, the Petitioner has submitted that the enhanced scope of work due to increase in line length and increase in cost of material combined with cost towards acquisition of private land, crop compensation, increased IDC and Departmental Charges etc. resulted in cost overrun of the project. The relevant submissions in the Petition by the Petitioner with regards to cost overrun have been provided as follows:

**"4.6 Reasons for Cost Over Run**

- *The contract for Construction of 220 kV D/C Transmission Line from Bajoli Holi HEP to 33/220/400 kV GIS sub-station at Lahal in Chamba District of Himachal Pradesh was awarded to M/s APAR Industries Ltd. In Joint Ventures with M/s M.J. Engineering Works Pvt. Ltd for Rs. 58.54 Cr. The contract was further amended five times and additional cost was incurred due to change in scope of work, variation in quantity of material etc. The actual award price after all amendments was Rs. 69.26 Cr..*
- *Further, as per the DPR, the total cost of transmission material was Rs. 19.50 Cr. which increased to Rs. 30.51 Cr.*
- *The increase in final award cost is attributable to following reasons:*
  - *The DPR was prepared and submitted in August 2015 and the quantities were taken on assumption basis. The actual award/execution quantity of Galvanised Street Structure increased from 1300 MT to 1492 MT. The unit rates at the time of award increased to Rs. 88,430/MT against the DPR unit rate of Rs. 61,461/MT (inclusive of freight, CST, entry tax etc @10%)*
  - *The unit rate at the time of award for ACSR Moose Conductor was Rs. 3,85,511/km whereas in the DPR unit rate was considered as Rs. 2,69,463/km (inclusive of freight, CST, entry tax etc. @10%). Thus, despite of no variation in the quantity, there was a significant price escalation of approximately Rs. 4.19 Cr..*
  - *Another major reason for increase in cost was on account of Forest Clearances. At the DPR preparation stage, the cost for forest clearance, crop compensation was Rs. 2.16 Cr. However, additional expenses of Rs. 16.28 Cr. Were incurred for same as on COD out of which Rs. 15.39 Cr. Was incurred only on account of Forest clearances.*
  - *No cost estimation was determined for Land in the DPR. However, cost of Rs. 1.0 Cr. Was incurred against land during implementation phase.*

3.4.8 The Petitioner has submitted that project cost envisaged in DPR was Rs.66.38 Cr., which due to time and cost overrun attributable to various force majeure conditions, increased to Rs. 97.59Cr. as on date of energization.

3.4.9 The capital cost claimed by the Petitioner has been provided as follows:

**Table 12: Capital Cost claimed by Petitioner (Rs. Cr.)**

Particulars	DPR	Claimed
Supply	11.51	30.30
Services	42.87	35.82
Land Cost/Acquisition	-	0.99
Tender & Survey Testing	2.18	16.62
Damaged Crop Compensation		
Forest Clearance	7.80	
Line Shifting & Other Misc. Charges		

Particulars	DPR	Claimed
Departmental Charges (DC)		4.30
Interest during construction (IDC)	2.01	9.54
<b>Total</b>	<b>66.38</b>	<b>97.59</b>

### Commission's Analysis

- 3.4.10 The Commission has observed that the project cost as per DPR was Rs.66.38 Cr. which included Rs. 7.80 Cr. towards forest clearance, right of way, Departmental Charges etc. and Rs. 54.38 Cr. towards Supply and Services cost. In initial scrutiny, the Commission observed a significant increase in actual cost vis-à-vis the DPR cost. Accordingly, a detailed prudence check with respect to the increase in hard cost of the transmission line was undertaken.
- 3.4.11 In its various deficiency letters, the Commission sought additional information and supporting documents from the Petitioner including auditor certificate, approvals of BOD, details of awards/ contracts, correspondences, payments made to contractors, COD certificate, etc.
- 3.4.12 During initial scrutiny, it was observed that the Petitioner had not submitted the auditor certificate against the claimed capital cost of the project. Accordingly, the Petitioner was asked to submit a capital cost certificate from the Statutory Auditor in support of the cost claimed for the transmission line. The Petitioner in reply submitted the desired certificate with Rs 89.28 Cr as the capital cost of the project as on COD as against Rs 97.59 Cr submitted in the petition. The Commission sought justification for the variation as part of the Second Deficiency Letter dated 17<sup>th</sup> Feb, 2023.
- 3.4.13 In response to query of the Commission, the Petitioner submitted revised capital cost as on COD as Rs. 92.79 Cr. The Petitioner further clarified that the capital cost has been revised as DC and IDC were considered upto 31<sup>st</sup> March, 2021 erroneously, as per the bookings done in SAP system while DC & IDC are to be considered upto the date of COD of the transmission line i.e. 19<sup>th</sup> November, 2021. Details regarding same were provided as follows:

**Table 13: Revised Capital Cost (Rs. Cr.)**

Description	Amount (in Rs. Cr.)
Capital Cost as per Auditor Certificate supplied to Commission vide Affidavit dated 09.11.2022	89.28
Departmental Charges w.e.f. 01.04.2021 to 19.11.2021 not considered in cost of Rs. 89.28 Cr.	0.68
IDC w.e.f. 01.04.2021 to 19.11.2021 not considered in cost of Rs. 89.28 Cr.	2.83
<b>Revised Capital Cost as on COD</b>	<b>92.79</b>

Subsequently, the Petitioner submitted the Auditor certificate in support of the revised capital cost in its reply to the 3<sup>rd</sup> Deficiency letter dated 22<sup>nd</sup> July, 2023 shared by Commission.

3.4.14 The Commission with respect to the selection process of contractor observed that the competitive bidding mechanism was followed by the Petitioner which is in line with the applicable ADB procedures and accordingly, the prices were discovered for supplies and services contracts of the project.

3.4.15 The awarded contract was amended five times owing to factors such as change in design, replacement of material, enhancement in scope, etc. The Commission in its multiple deficiency letters has asked the Petitioner to submit the BOD approvals for the amendments issued to the contractor. However, in response, the Petitioner submitted the approvals of Director/Whole Time Directors (WTD) corresponding to the amendments in accordance with the delegation of powers in HPPTCL.

3.4.16 The following table summarizes the awarded cost and revisions thereafter:

**Table 14: DPR vs Awarded Cost (Rs. Cr.)**

Particulars	Original Award	Amendment (1)	Amendment (2)	Amendment (3)	Amendment (4)	Amendment (5)
Date of Contract / amendment		19 <sup>th</sup> Jul, 2018	16 <sup>th</sup> Nov, 2019	18 <sup>th</sup> Feb, 2020	3 <sup>rd</sup> Dec, 2021	11 <sup>th</sup> Jan, 2022
Supply	29.64	Minor correction in award amount by Rs. 100	32.38	30.52	30.50	30.50
Services	28.90		28.90	38.90	38.90	38.75
<b>Total</b>	<b>58.54</b>	<b>58.54</b>	<b>61.28</b>	<b>69.42</b>	<b>69.41</b>	<b>69.27</b>
Reason for amendment		Excavation in Tower Foundation and Reinforcement & Concreting in Tower Foundations	During execution of work and check survey, need was felt to add multi-circuit tower along with body and leg extensions.	Deviation in Revetment quantity, replacement of Disc Insulator with Long Rod Polymer Insulator.	Savings on account of displacement of disc insulators with polymer insulators and finalisation of rates	Deviation in items such as Stub setting, excavation in Tower foundation, form work for all type of tower foundation in all type of soil, erection work, Random Rubble Masonry including Cement Mortar, Steel for Reinforcement etc.

3.4.17 The Petitioner has stated that amendments was issued on account of multiple reasons. In one of the responses to the Commission's clarification, the

Petitioner submitted that the quantity of material has changed with respect to that considered at the time of preparing the DPR/award, which also led to increase in project cost. Based on the scrutiny of the contracts and amendments, it is observed that the increased hard cost was primarily towards reasons such as increase in the quantity of material, modification/replacement of quantity of material, increase in material price, etc.

- 3.4.18 The Commission upon further scrutiny of the Petitioner's submission as per query raised in second deficiency letter dated 17<sup>th</sup> Feb, 2023 along with the supporting documents observed that the actual cost towards supplies and services incurred by the Petitioner as on COD and as claimed is lower than the awarded cost (post 5<sup>th</sup> Amendment). In this regard, the Commission had further sought clarification from the Petitioner on the pending works along with subsequent costs and its coverage under additional capital expenditure proposed, against which the Petitioner submitted that the work towards benching/backfilling are primarily pending.
- 3.4.19 With regards to enhancement in services cost, the Commission further sought justification from the Petitioner for huge deviation in the quantity requirement of RRM in revetment works from 2,000 CU.M to 24,030 CU.M as submitted and why was the same not estimated/envisaged in the initial stage. The Petitioner in reply submitted that the construction work of transmission line was awarded to contractor on 5<sup>th</sup> December, 2017, whereas final tree felling could only be completed by August, 2021. Therefore, quantities as considered during time of award were not finalized and were liable to change. Further, due to heavy rains/snowfall certain locations of said transmission line had come under sliding zones. Therefore, as per actual site conditions, the requirement of the revetment increased and said quantities were urgently required for ensuring reliability & safety of transmission line. The Petitioner has submitted the documentary evidence in this regard such as the enhanced scope of work along with the cost components, approvals etc. which have been carefully considered by the Commission.
- 3.4.20 In response to the clarification, the Petitioner has submitted that no variation in cost was allowed to the contractor against the contract and subsequent amendments and payments have been done strictly in accordance with the awarded contract and its subsequent amendments.
- 3.4.21 As discussed above, with respect to the supplies and services cost, the actual cost claimed by the Petitioner is lower than the awarded cost (post 5<sup>th</sup> amendment). Accordingly, the Commission has approved supply cost of Rs. 30.23 Cr and services cost of Rs. 32.58 Cr. post scrutiny of the submissions of the Petitioner.
- 3.4.22 It is also observed that the Petitioner has claimed a significant amount of Rs. 15.40 Cr expenses towards obtaining forest clearance, as against the cost of Rs. 2.16 Cr. envisaged in the DPR. The Commission in this regard had sought justification from the Petitioner against which the Petitioner submitted that it had started work for identification of land prior to placing award to M/s APAR Industries Limited. As per the approved L2 schedule, forest case had to be cleared by 26<sup>th</sup> March, 2017. The Stage-I approval of the forest case was received on 26<sup>th</sup> September 2017, and award was placed on 5<sup>th</sup> December,



2017 which was later than receiving Stage-I approval. The award was placed on the basis of assumption that Stage-II approval will be received at timeline matching with placement of award. However, HPPTCL faced obstacles/hindrances in receiving final approval with respect to locations identified at forest land. The Petitioner provided the details of issues faced by HPPTCL while taking over forest land.

- 3.4.23 The Commission sought further details on the Stage I and Stage II process against which the Petitioner submitted that initially, it had submitted case for diversion of 30.6321 Ha. of forest land under FCA, 1980 for construction of instant line vide Proposal No. FP/HP/Trans/14716/2015 to MoEF, Gol and for approval of cutting of 135 No. trees. However, some queries regarding cost benefit analysis, land certificates, geo referencing details etc. were raised by the Department which were attended by HPPTCL by September 2017. Accordingly, MoEF, Gol accorded Stage-I approval vide letter dated 26<sup>th</sup> September, 2017 and Stage-II thereafter on 11<sup>th</sup> dec, 2018 with a permission to fell down the maximum of 135 trees. While carrying out check survey it was noticed that trees affected shall increase. Therefore, HPPTCL alongwith the Forest Department team enumerated total number of affected trees coming under alignment of Transmission line. Minimum 501 No. trees were required to be cut. Accordingly, proposal for revised approval of diversion of 30.6321 Ha. of forest land with permission to cut/fell 501 trees was submitted to MoEF. An amount of Rs 10.53 Cr was deposited on account of cost of trees and in-principle approval in this regard was received on 5<sup>th</sup> August 2019 and finally these trees were cut by DM Forest Corporation, Chamba. Considering that significant increase was observed in the number of trees to be cut, the compensation for the same had to be deposited with the Forest Department.
- 3.4.24 The Petitioner further submitted that while carrying out stringing work between Tower No. T-24 to T-27 and Tower No. T-46 to T-48, it was observed that additional 144 No. trees in the said spans were infringing the conductors of transmission line and were required to be cut in addition to already displaced 501 No. of trees. Case was again submitted to MoEF, Gol for additional displacement of 144 No. trees whose approval was received vide order dated 6<sup>th</sup> April, 2021.
- 3.4.25 The Commission has considered the submission of the Petitioner along with supporting documents such as correspondences, letters, orders etc.. The Commission directs the Petitioner to limit/avoid such expenses for future through proactive planning at the project commencement stage as the Petitioner is having significant experience in execution of similar projects and should anticipate such contingencies and need to factor the same at the inception stage.
- 3.4.26 With regards to the remaining components of capital cost such as land acquisition cost, tender & survey testing, damaged crop compensation etc., the Commission sought relevant supporting documents from the Petitioner which have been submitted. The Commission has undertaken detailed scrutiny of the documents and found them to be in order. Hence, the Commission approves the components in line with the submission of the Petitioner supported by the auditor certificate submitted for the project.

- 3.4.27 Accordingly, the following table provides the capital cost claimed by Petitioner, cost as per auditor certificate and now approved by the Commission excluding DC and IDC (discussed in subsequent section):

**Table 15: Hard Cost approved by Commission (Rs. Cr.)**

Particulars	Claimed	Audited	Approved
Supply	30.31	30.23	30.23
Services	35.82	32.58	32.58
Land Acquisition	1.00	1.05	1.05
Tender & Survey Testing	16.62	0.17	0.17
Damaged Crop Compensation		0.71	0.71
Forest Clearance		15.40	15.40
Line Shifting & Other Misc. Charges		0.17	0.17
<b>Total</b>	<b>83.75</b>	<b>80.30</b>	<b>80.30</b>

### 3.5 Overheads (IDC and Departmental Charges)

#### Petitioner's submissions

- 3.5.1 The Petitioner has submitted that due to various unavoidable reasons of time overruns, actual IDC and Departmental Charges have increased with respect to the cost envisaged in the DPR. The Petitioner submitted that actual IDC should not be compared with the provision of the IDC made in the DPR as IDC was computed based on the LIBOR interest rate of 4.64% as against the actual interest rate payable to GoHPat10%. Also, considering the actual hard cost being higher than the DPR due to time and cost overrun attributable to various force majeure conditions, IDC amount for the project has increased.
- 3.5.2 With regards to the Departmental Charges, the Petitioner has submitted that same have been considered as per actual based on provisional accounts.

#### Commission's Analysis

- 3.5.3 The Petition lacked the proper details, working and the basis for consideration of IDC and DC. Accordingly, the Commission sought relevant justifications on assumptions for consideration of DC and IDC in the Petition from the Petitioner through the deficiency letters. The Commission in order to verify the Petitioners claim also sought the detailed computation of IDC (Excel sheet) consisting of date of draw-down of debt, amount of debt, computation of IDC etc. However, despite several submissions, the Petitioner could not submit the detailed working of IDC as per the desired format.
- 3.5.4 The project was envisaged to be completed in 18 months as per the contract awarded by the Petitioner, however, the actual time taken is almost four years (from the date of award of contract) which is significantly higher. From the submissions of the Petitioner, the following are identified to be the major reasons for the time overrun:

**Table 16: Reasons for time overrun**

Sl.	Delay	Description
1	Delay on account of Handing over of site	<p>a) Delay in Handing Over Private Land: As per the approved L2 schedule, the private land was to be handed over by 26<sup>th</sup>March, 2018. However, the permission to start the work at few site locations could only be accorded to firm by 17<sup>th</sup>May, 2018 after the field visit of DFO along with HPPTCL official, in order to identify the locations to start the work, as the approval of Forest Clearance case was delayed. By May 2018, only 11 number locations (4 private land locations and 7 government land locations) out of 59 number of locations could be handed over to Contractor.</p> <p>b) Forest Land: As per the approved L2 schedule, the forest case was to be cleared by 26<sup>th</sup>March, 2018. The Stage-I approval of the forest case was received on 16<sup>th</sup>September, 2017 and Stage-II thereafter on 11<sup>th</sup> December, 2018 with a permission to fell down the maximum of 135 trees. The Forest clearance accorded was revoked by the Forest Department in response to GoHP letter dated 28<sup>th</sup>March, 2019 vide which permission to increase the maximum number of trees to be felled was sought for 501 No. and liberty was granted to resubmit the proposal along with justification. The final tree felling was completed in the month of August, 2021 due to which the work of 5 No. towers for erection as well as stringing could not be taken up.</p> <p>c) Delay due to court cases: The construction activity was hampered due to filing of Civil Suite Cases against HPPTCL by the land owners of Tower No. 10, 53, 58, 50 &amp; 51</p>
2	Increase/Deviation in Quantity	Delay on account of huge deviation in the quantity of RRM in revetment work from 2000 CU.M to 24030 CU.M.
3	Inclement weather conditions	Delay on account of limited working period as the transmission lines falls in snow zone and the working window is available only for a period of 8 months w.e.f. April to November.
4	Covid-19	Delay on account of COVID-19 pandemic which caused consecutive lockdowns in the state of Himachal Pradesh. The available manpower at sites was forced to stay in camps for months and all the construction activities came to a permanent halt for months.
5	Tower Locations No. 4,5,8 & 32 - change in Leg extensions	The initially approved leg extension combinations for location No. 4,5,8 & 32 was not feasible to execute on site as it did not meet minimum base/depth requirement of 1.2 Meters in mother soil towards valley/river side pits due to stiff slope. The build-up proposal was initially rejected by HPPTCL as proposed concrete padding were not economical in view of huge anticipated expenditure. The proposal was eventually approved on 15 <sup>th</sup> January, 2021. Thereafter, the firm placed the purchase order for leg extensions material to M/s Karamtara, Tarapur which reached at site on dated 27 <sup>th</sup> April, 2021 and hence delayed the foundation/erection of above-mentioned tower locations.
6	Damage to leg 'C' of Tower No. 38	Delay due to damage to Leg 'C' of the already erected tower No. 38 after a shooting boulder hit the leg with high momentum on 25 <sup>th</sup> August, 2021.
7	Local Hindrances	The work of the transmission line was hindered from time to time. The matter was also taken up with the Additional Chief Secretary (MPP Power) on 10 <sup>th</sup> September, 2021.

Sl.	Delay	Description
8	Insufficient electrical clearance	The electrical clearance was not sufficient at various locations with respect to conductors for circuit 1. Location no. 3 to 4, 5 to 6, 38 to 39 and 29 to 30 were impacted because of the issue.
9	Landslide at Tower Location 5 to 6	A massive landslide occurred on 1.11.2021 between the RoW of Tower No. 5 to 6, thus reducing the required vertical ground clearance and the same was required to be cleared before charging of line.

- 3.5.5 From fine reading of the submission of the Petitioner and the supporting documentary proofs, it may be stated that certain delay on account of factors such as delay in acquisition of land, delay due to deviation in quantity, proactiveness in replies provided and getting the forest clearance and change in design etc. which contributed to almost fifteen months of delay could have been very well averted by proper planning at the inception stage of the project by appropriately including the same in the DPR. The Petitioner having significant experience in construction of similar lines in difficult geographies such as in instant case should have anticipated such delays and included the same in the DPR stage. Based on the reasons stated by the Petitioner, part of the delay could be considered under force majeure or delay not attributable to the Petitioner, however, it would be unreasonable to consider that each individual activity led to the overall delay of almost two and half years in project execution. The Commission therefore, is of the view that ancillary activities could have been undertaken in parallel and the delay could have been shortened/ averted by proper planning and follow up at the Petitioner's end.
- 3.5.6 In addition, the details provided with respect to time overruns only mentioned various dates when issues emerged or activities were completed. However, it could not be established that how each activity had impacted the overall timeline of the project and whether other activities could have been planned in a manner where the delay could have been avoided. However, fact remains that there was delay on account of reasons such as COVID-19, local hindrances and forest clearances etc. which weren't in the control of the Petitioner. Hence, on detailed analysis, of each of the reasons of delay the Commission has calculated the IDC as discussed below.
- 3.5.7 As discussed in the previous section, the Petitioner had revised the capital cost of the project with major impact observed in IDC of the project in subsequent submissions. The IDC was changed to Rs. 5.30 Cr from Rs 9.54 Cr. claimed in the Petition as per the revised submission due to erroneous booking. The Petitioner has also submitted the Auditors certificate in support of its claim.
- 3.5.8 The Commission had also sought further justification from the Petitioner for the variation. The Petitioner in reply to the Second Deficiency letter dated 17<sup>th</sup> Feb, 2023 again revised the IDC claiming an additional amount of Rs. 2.83 Cr. citing reason that the IDC as per the Auditor certificate was erroneously considered due to issues in booking of cost in the Petitioner's SAP system. The Petitioner, has submitted the Auditor certificate in support of the revised submission of Rs.8.13 Cr. and accordingly, the same has been considered for the purpose of computing the approved IDC as detailed below.

- 3.5.9 With regards to the rate of interest, the Petitioner has submitted that in the DPR, the IDC was computed on the basis of LIBOR rate of 4.64%. However, actual interest rate of the loan is 10% which is to be paid to GoHP as per the loan agreement with GoHP. The Commission sought the supporting documentary proofs in support against which the Petitioner submitted the loan agreement signed between HPPTCL and GoHP specifying the rate of interest as 10%. Accordingly, the Commission has considered the rate of interest in line with the Petitioner's submission.
- 3.5.10 In view of revision in hard cost as well as rate of interest, the Commission has computed a revised benchmark for the IDC. A project duration of 18 months as per DPR has been considered to estimate the benchmark IDC.
- 3.5.11 The Commission has assumed 40% debt disbursement in first year and remaining 60% debt disbursement in the last six months of project execution in accordance with the DPR. The phasing of debt disbursement has been assumed in accordance with the disbursement observed in similar projects undertaken by Petitioner and the disbursement schedule provided in the DPR of the project.
- 3.5.12 The benchmark IDC for as computed is summarized as follows:

**Table 17: Revised Benchmark IDC – Asset-1**

Particulars	Unit	Year I	Year II *	Total
Debt disbursement	%	40%	60%	100%
Opening Debt (a)	INR Cr.	-	27.18	
Addition during the year (b)	INR Cr.	27.18	40.77	
Closing Debt (c)	INR Cr.	27.18	67.95	
Average Debt (d=(a+c)/2)	INR Cr.	13.59	47.56	
Interest rate (e)	%	10.00%	10.00%	
<b>Total IDC (f=d*e)</b>	<b>INR Cr.</b>	<b>1.36</b>	<b>2.38</b>	<b>3.74</b>

\*Considered for 6 months

- 3.5.13 Against the same, the Petitioner has claimed IDC of INR 8.13 Cr as on COD against which Auditor certificate has also been submitted.
- 3.5.14 As discussed in preceding paras, the Commission, commensurate to the delay on account of uncontrollable factors allows 50% of the excess IDC vis-à-vis claimed over and above the revised benchmark IDC computed assuming no time delay. The computation is provided as follows:

**Table 18: Approved IDC (INR Cr.)**

Particular	Benchmark	Actual/Claimed	Difference	Approved = Actual -50% of difference
Bajoli Holi line	3.74	8.13	4.39	5.93

- 3.5.15 With regards to the Departmental Charges, the Petitioner revised the same in its replies to the multiple deficiency letters shared by the Commission. In line

with the auditor certificate submitted against the revised claim, the Commission has considered the DC.

3.5.16 The following table provides IDC and DC submitted as per Petition, as per auditors certificate and now approved by Commission:

**Table 19: Approved IDC and Departmental Charges(Rs. Cr.)**

Particulars	Claimed- Petition	Audited	Approved
IDC	9.54	8.13	5.93
Departmental charges	4.30	4.36	4.36
<b>Total</b>	<b>13.85</b>	<b>12.49</b>	<b>10.30</b>

3.5.17 In line with the hard cost, IDC and DC amount approved in preceding sections, the approved project cost as on COD towards 220 kV D/C Bajoli Holi-Lahal transmission line is summarized in the following table:

**Table 20: Approved Capital Cost (Rs. Cr.)**

Cost Heads	Claimed	Audited	Approved
Supply	30.31	30.23	30.23
Services	35.82	32.58	32.58
Land/Cost acquisition	1.00	1.04	1.04
Tender and survey testing	16.62	0.16	0.16
Damaged Crop Compensation		0.70	0.70
Forest Clearance		15.40	15.40
Line Shifting & Other Misc. Charges		0.16	0.16
Departmental Charges (DC)	4.30	4.36	4.36
Interest During Construction (IDC)	9.54	8.13	5.93
<b>Total</b>	<b>97.60</b>	<b>92.79</b>	<b>90.60</b>

### 3.6 Project Funding

#### Petitioner Submissions

3.6.1 The Petitioner has quoted the Regulation 18 of the HPERC Transmission Regulations, 2011, which provides as follows:

**"18. Debt-equity ratio**

*For the purpose of determination of the tariff, the equity and outstanding debt as determined for the base year by the Commission shall be considered as given. However, for any fresh capitalization of assets, the Commission shall apply a debt equity ratio of 70:30 on the capitalised amount as approved by the Commission for each year of the control period:*

*Provided that where equity employed is in excess of 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. The interest rate applicable on the equity in excess of 30% treated as loan has been specified in regulation 20. Where actual equity employed is less than 30%, the actual equity shall be considered."*

- 3.6.2 As per the DPR, the scheme was originally envisaged to be funded with the debt equity ratio of 75:25 in the conceptualisation stage.
- 3.6.3 As per the Petition, the Petitioner has submitted that for the construction of the transmission line, the Petitioner has secured loan from Asian Development Bank (ADB) amounting to Rs.65.05 Cr. which is 66.66% of the project cost and has infused equity amounting to Rs.32.53 Cr., which corresponds to 33.34% of the project cost. As the equity infused is more than the prescribed limit of normative equity allowed under the HPERC, hence, the Petitioner has considered normative debt equity ratio of 70:30 for working out the components of Annual Revenue Requirement.
- 3.6.4 The following table provides the project funding of the project as proposed by the Petitioner:

**Table 21: Project Funding proposed by Petitioner (Rs. Cr.)**

Particulars	DPR	Actual	Claimed
Debt	75.00%	66.67%	70.00%
Equity	25.00%	33.33%	30.00%
<b>Total Project Cost</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

### Commission's Analysis

- 3.6.5 The Commission has examined the information and various documents submitted by the Petitioner with regards to the funding of the Bajoli Holi-Lahal transmission line. It is observed that although the loan for the line was secured from ADB, GoHP acts as the nodal agency. The loan granted by ADB to GoHP has been transferred to the Petitioner which is the designated implementing agency for the transmission projects.
- 3.6.6 The project was originally envisaged at a debt: equity ratio of 75:25 as provided in the DPR against which the Petitioner has claimed a higher equity infusion. In addition, the Commission sought the loan draw down schedule for the project to establish the actual loan draw down against the project.
- 3.6.7 The Commission believes that since the funding of the asset was secured in accordance with the DPR on which CEA has also accorded its approval, it is prudent to consider the debt equity ratio as per the original DPR. Accordingly, the Commission has considered the debt equity ratio of 75:25 for project funding and components of the ARR. Further, as per submissions of the Petitioner, there is no grant/consumer contribution received for the project.
- 3.6.8 It is important to note here that the Commission had sought information on source of funding of equity, date of infusion and amount along with documentary evidence for the equity infused in the project etc. which the Petitioner has failed to submit. The Petitioner has submitted that it receives

equity from Government of H.P (GoHP) on overall basis at firm level and not on individual projects basis and amount of equity received by HPPTCL is further allocated to various projects on requirement basis.

- 3.6.9 The Commission upon scrutiny of the loan agreement, sanction letter, actual disbursement, etc., observed that the debt received against the asset is much higher than claimed thereby affecting the debt: equity ratio. In absence of relevant submissions with regards to equity, the Commission is bound to consider the debt equity ratio as 75:25 at which the original funding was approved at DPR stage. The approved funding towards the Bajoli Holi-Lahal transmission line is summarized as follows:

**Table 22: Project Funding approved by Commission**

Particulars	Claimed		Approved	
	Capital Cost (Rs. Cr)	% of Funding	Total Cost (Rs. Cr)	% of Funding
Capital Cost as on COD	97.60	-	90.60	-
<b>Total Project Cost</b>	<b>97.60</b>	<b>-</b>	<b>90.60</b>	<b>-</b>
<i>Debt</i>	68.32	70%	67.95	75%
<i>Equity</i>	29.28	30%	22.65	25%

- 3.6.10 Accordingly, based on the project financing approved in the table above, the Commission has determined the Annual Revenue Requirement (ARR) for each year of the control period starting from COD as discussed in the next chapter.

### 3.7 Additional Capital Expenditure

#### Petitioner Submissions

- 3.7.1 The Petitioner submitted that there is no additional capital expenditure in FY 2021-22. As regards to the additional capital expenditure for the period from FY 2022-23 to FY 2023-24, the additional capital expenditure estimated to be incurred in FY 2022-23 is Rs. 1.60 Cr. and there is no additional capital expenditure projected for FY 2023-24.
- 3.7.2 The Petitioner has claimed additional capitalisation of Rs. 1.60 Cr. with breakup provided as follows:

**Table 23: Year wise additional capital expenditure (Rs. Cr.)**

Particulars	Capital Cost as on CoD	FY 21-22	FY 22-23	Total
220 kV Bajoli Holi-Lahal Line	97.60	0.00	1.60	99.19

#### Commission's Analysis

- 3.7.3 To verify the claim of additional capitalisation proposed for FY 2020-21, FY 2022-23 and FY 2023-24, the Commission in its deficiency letters sought



details and nature of additional capex and its further classification under supply, services etc. In reply, the Petitioner has submitted that, as on 31<sup>st</sup>October, 2022 work expenditure amounting to Rs. 1.37 Cr. was done against proposed works of Rs. 1.60 Cr. However, bills amounting to Rs. 1.05 Cr. were processed by HPPTCL during FY 2022-23. The Petitioner has further submitted that estimate of Rs 1.60 Cr is on provisional basis and shall be incurred till FY 2023-24 as per submissions and may be approved.

- 3.7.4 The Petitioner in reply to 1<sup>st</sup> Deficiency letter dated 16<sup>th</sup> Nov, 2022 submitted that the proposed additional capitalisation is part of the original contract along with subsequent amendments. The Commission has considered the same and accordingly approves the additional capital expenditure in line with submissions of the Petitioner. The same shall be reviewed based on submission of actual bills at the time of true-up. The following table provides breakup of additional capital expenditure as claimed and approved by the Commission.

**Table 24: Additional Capital Expenditure (Rs. Cr.)**

Description	Amount
Civil Works	1.43
Electrical Works (Services)	0.007
With-held Amount	0.15
<b>Total</b>	<b>1.60</b>

- 3.7.5 The funding of the approved additional capital expenditure has been considered in line with the overall approved funding of the project in debt equity ratio 75:25 approved as above.

## 4. APPROVAL OF ARR AND TARIFF

### 4.1 Background

4.1.1 The Petitioner has proposed projections for FY 2019-20 to FY 2023-24, the 4<sup>th</sup> Control Period as per the HPERC Transmission Regulations, 2011 as amended from time to time. As per the submission of the Petitioner, ARR for each year of the Control Period has been divided into following elements:

- O&M Expenses;
- Depreciation;
- Interest and Financing Charges;
- Interest on Working Capital;
- Return on Equity

4.1.2 The Commission has examined the Petition and the subsequent submissions made by the Petitioner in response to the deficiency letters for the purpose of approving the elements of ARR for the period from COD to FY 2023-24. The Commission has considered the provisions of HPERC Transmission Regulations 2011, Audited Annual Accounts, CERC Tariff Regulations, 2019 and approved capital expenditure and funding plan for 220kV D/C Bajoli Holi-Lahal transmission line for the purpose of ARR projections for each year.

4.1.3 In this chapter, the Commission has detailed the methodology for computing each component of the ARR for 220 kV D/C Bajoli Holi HEP - Lahal Transmission line of HPPTCL including O&M expenses, interest on loan, depreciation, return on equity, working capital requirement, etc. for approving the total ARR for each year of the Control Period from COD till FY 2023-24. The methodology followed and approved values for each component of the ARR is detailed in the subsequent sections.

4.1.4 Further, the Petitioner has not provided the revised submissions of various component of ARR in light of submissions of revised capital cost. In absence of the same, the Commission has approved the various components of ARR based on the approved capital cost and additional capital expenditure approved.

### 4.2 O&M Expenses

#### Petitioner Submissions

4.2.1 The Petitioner has submitted that as per HPERC Transmission Regulations, 2011, Operation and Maintenance Expenses are computed considering the following methodology:

*"(3) The O&M expenses for the nth year of the control period shall be approved based on the formula given below:-*

*O&M<sub>n</sub> = R&M<sub>n</sub> + EMP<sub>n</sub> + A&G<sub>n</sub> : Where -*

*'EMP<sub>n</sub>' = [(EMP<sub>n-1</sub>) × (1+G<sub>n</sub>) × (CPI<sub>Inflation</sub>)] + Provision (Emp);*

$'A\&G_n' = [(A\&G_{n-1}) \times (WPI_{inflation})] + Provision(A\&G);$

$'R\&M_n' = K \times (GFA_{n-1}) \times (WPI_{inflation});$

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

'CPIinflation' - is the average increase in the Consumer Price Index (CPI) for immediately preceding three years before the base year;

'WPIinflation' - is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years before the base year;

'EMP<sub>n</sub>' - employee's cost of the transmission licensee for the nth year (employee cost for the base year would be adjusted for provisions for expenses beyond the control of the licensee and one-time expected expenses, such as recovery/ adjustment of terminal benefits, implication of pay revisions, arrears and interim relief.);

'Provision (Emp)'- Provision corresponding to clauses (iii), (iv) and (v) of sub regulation (1-a) of regulation 13, duly projected for relevant year for expenses beyond control of the Transmission Licensee and expected one-time expenses as specified above;

'A&G<sub>n</sub>' - administrative and general costs of the transmission licensee for the nth year;

'Provision(A&G)'-Cost for initiatives or other one-time expenses as proposed by the Transmission licensee and approved by the Commission after prudence check;"

'R&M<sub>n</sub>' - Repair and Maintenance costs of the transmission licensee for the nth year;

'GFA<sub>n-1</sub>' - Gross Fixed Asset of the transmission licensee for the n-1th year;

'G<sub>n</sub>' - is a growth factor for the nth year. Value of G<sub>n</sub> shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate;

Provided that, repair and maintenance expenses determined shall be utilized towards repair and maintenance works only;

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

- 4.2.2 The Petitioner has further submitted that the project has achieved commercial operation in FY 2021-22 and, therefore, there is no reliable cost data available for the project, post COD. In line with Order dated 24<sup>th</sup> August, 2021 issued by Himachal Pradesh Electricity Regulatory Commission (HPERC) for the "Approval of Capital Cost and determination of tariff for 220 kV D/C Bajoli Holi-Lahal transmission line for the period from CoD to FY 2023-24 for HPPTCL" the Commission has adopted the same methodology for determination of O&M for the subject asset. The Petitioner has benchmarked the O&M expenses per km of line length of existing lines of HPPTCL to arrive upon the O&M projections for each year.
- 4.2.3 Further, the Petitioner has also considered cost towards insurance, training of manpower, Petition filing and consultancy as part of the O&M expenses.
- 4.2.4 The following table provides the O&M expenses claimed by the Petitioner:

**Table 25: O&M Expenses claimed by Petitioner (Rs. Lakh)**

Particulars	FY22	FY23	FY24
O&M Expenses - Double Circuit (Twin & Triple Conductor) (Rs. Lakh per Km.)	0.94	0.98	1.01
Line Length	18.34	18.34	18.34
<b>Total O&amp;M Expenses</b>	<b>17.31</b>	<b>17.92</b>	<b>18.54</b>

**Commission's Analysis**

- 4.2.5 The Commission has analysed the submissions of the Petitioner carefully. In the absence of actual audited O&M expenses for sufficient years to ascertain the O&M trends, the Commission has relied upon the normative O&M expenses prescribed in the CERC Tariff Regulations, 2019. As the said regulations provide for O&M expense based on voltage, circuit and conductor, the following norms have been considered as per the technical details of Bajoli Holi-Lahal transmission line for computation of O&M expense as per CERC Tariff Regulations, 2019:

**Table 26: Normative O&M Expenses**

Item	Unit	FY22	FY23	FY24
Double Circuit (Single Conductor)	Rs. Lakh/Km	0.944	0.977	1.011

- 4.2.6 Accordingly, the Commission has approved the O&M expenses for each year of the Control Period. Any variation in O&M expenses shall be reviewed and considered at the time of true-up.
- 4.2.7 The following table provides the O&M expenses approved by the Commission for the Control Period:

**Table 27: O&M Expenses approved by Commission (Rs. Lakh)**

Particulars	FY22	FY23	FY24
Normative O&M Expense (Rs. Lakh/Km)	0.944	0.977	1.011

Particulars	FY22	FY23	FY24
Line Length (km)	18.34	18.34	18.34
<b>O&amp;M Expenses</b>	<b>6.26</b>	<b>17.92</b>	<b>18.54</b>

O&M Expense pro-rated for FY2021-22 based on approved COD (19<sup>th</sup> Nov, 2021)

4.2.8 The CERC norms for O&M expenditure do not provide for any additional provision for expenditure towards insurance, Petition filing, consultancy and manpower training. Hence, no additional expense towards these aspects have been considered. However, any charges incurred shall be considered as per actual within normative parameters as applicable at the time of true-up.

### 4.3 Depreciation

#### Petitioner Submissions

4.3.1 The Petitioner has submitted the depreciation for each year of the control period in accordance with the Regulation 23 of the HPERC Transmission, Regulations, 2011 as amended from time to time.

4.3.2 In accordance with the above Tariff Regulations, 2011 the depreciation for the Control Period has been estimated as shown in the following table:

**Table 28: Depreciation claimed by Petitioner (Rs. Lakh)**

Particulars	FY 22	FY 23	FY 24
Opening GFA	9,759.63	9,759.63	9,919.20
Net Opening GFA	9,759.63	9,759.63	9,919.20
Addition	-	159.57	-
Net Closing GFA	9,759.63	9,919.20	9,919.20
Average GFA	9,759.63	9,839.41	9,919.20
Less: Land under full ownership	99.92	99.92	99.92
GFA excluding land	9,659.71	9,739.49	9,819.28
Depreciation rate	4.56%	4.57%	4.57%
<b>Depreciation</b>	<b>440.54</b>	<b>444.75</b>	<b>448.96</b>

#### Commission's Analysis

4.3.3 The Commission has approved the depreciation in line with provisions of the Regulation 23 of the HPERC Transmission Regulations, 2011 which reads as follows:

**"23. Depreciation**

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

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

(3)(2-a) The salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the transmission system:

Provided that, 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.

(5) For transmission project 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.

(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.

(7) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."

4.3.4 The Commission has examined the depreciation proposed by the Petitioner in detail. The Commission has arrived on Gross Fixed Assets (GFA) for each year based on the approved capitalization for each year in the previous Chapter.

4.3.5 The Commission has determined the effective weighted average depreciation rate based on asset wise depreciation rate prescribed as per the applicable regulations. Further, the cost of land has been reduced while applying depreciation.

4.3.6 The depreciation expenses approved from FY 2021-22 to FY 2023-24 is summarized in table below:

**Table 29: Depreciation approved by Commission (Rs. Lakh)**

Particulars	FY22	FY23	FY24
Net Opening GFA	-	8,954.79	9,114.79
GFA Addition during the year	9,059.51	160.00	-
Freehold Land	104.72		
Depreciable Value	8,954.79	9,114.79	9,114.79
Rate of Depreciation (%)	4.56%	4.56%	4.56%
<b>Depreciation</b>	<b>147.69</b>	<b>412.04</b>	<b>415.69</b>

Depreciation Expense pro-rated for FY2021-22 based on approved COD (19<sup>th</sup> Nov, 2021)

#### 4.4 Interest on Loan

##### Petitioner Submissions

4.4.1 The Petitioner has submitted the interest on loan in accordance with the Regulation 20 of the HPERC Transmission Regulations, 2011, as amended from time to time.

4.4.2 For the purpose of working out the Interest on Loan, the Petitioner has considered the opening value of loan as on CoD as actual loan amounting to 70% of the total Project cost i.e., Rs. 97.60 Cr. and additional loan of Rs. 1.12 Cr. for additional capitalization during FY 2022-23. The Petitioner has considered the interest rate of 10% as per the terms and conditions of loan agreed between GoHP and HPPTCL of the ADB Loan. The computation of Interest on Loan has been provided as follows:

**Table 30: Interest on Loan claimed by Petitioner (Rs. Lakh)**

Particulars	FY22	FY23	FY24
Opening Balance	6,831.74	6,391.20	6,058.15
Addition	-	111.70	-
Repayment	440.54	444.75	448.96
Closing Balance	6,391.20	6,058.15	5,609.18
Rate of Interest (%)	10%	10%	10%
<b>Interest on Loan</b>	<b>661.15</b>	<b>622.47</b>	<b>582.37</b>

### Commission's Analysis

4.4.3 The Commission has considered the loan amount in line with the project funding approved for Bajoli Holi-Lahal Line as discussed in the previous chapter.

4.4.4 Regulation 20 of the HPERC Transmission Regulations, 2011 , as amended from time to time stipulates the following:

#### **"20. Interest and Finance Charges**

*(1) Interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the schedule of repayment in accordance with the terms and conditions of relevant agreements of loan, bond or non-convertible debentures. Exception can be made for the existing or past loans which may have different terms as per the agreements already executed if the Commission is satisfied that the loan has been contracted for and applied to identifiable and approved projects.*

*(2) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*

*Provided further that if the transmission licensee does not have actual loan then the weighted average rate of interest of the transmission licensee as a whole shall be considered.*

*Provided further that if the Transmission Licensee as a whole does not have actual loan, then one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant*

*Year plus 200 basis points shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.*

*(3) The interest rate on the amount of equity in excess of 30% treated as notional loan shall be the weighted average rate of the loans of the respective years and shall be further limited to the rate of return on equity specified in these regulations:*

*Provided that all loans considered for this purpose shall be identified with the assets created:*

*Provided further that the interest and finance charges of re-negotiated loan agreements shall not be considered, if they result in higher charges:*

*Provided further that the interest and finance charges on works in progress shall be excluded and shall be considered as part of the capital cost:*

*Provided further that neither penal interest nor overdue interest shall be allowed for computation of tariff.*

*(4) In case any moratorium period is availed of in any loan, depreciation provided or in the tariff during the years of moratorium shall be treated, as notional repayment of loan during those years and interest on loan capital shall be calculated accordingly.*

*(5) The transmission licensee shall make every effort to refinance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such refinancing shall be borne by the transmission customers and any benefit on account of refinancing of loan and interest on loan shall be shared in the ratio of 2:1 between the transmission licensee and the transmission customers. Refinancing may also include restructuring of debt.*

*(6) In respect of foreign currency loans, variation in rupee liability due to foreign exchange rate variation, towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of such foreign exchange rate variation and is not attributable to the transmission licensee or its suppliers or contractors.*

*(7) The above interest computation shall exclude the interest on loan amount, normative or otherwise, to the extent of capital cost funded by consumer contribution, deposit work, capital subsidy or grant, carried out by transmission licensee."*

4.4.5 The Commission has approved the Interest on Loan in accordance with the above transmission Regulations. Further, normative repayment equivalent to the depreciation worked out for the respective year has been considered in line with the provisions of HPERC Transmission Regulations 2011 along with subsequent amendments for computing the opening and closing loan balances for each year.



- 4.4.6 The rate of interest has been considered based on the Petitioner's submission and interest rates agreed upon by ADB/GoHP with HPPTCL based on the loan documents shared.
- 4.4.7 It is observed that the rate of interest charged from the Petitioner by the GoHP is 10% which is higher than the rate of interest agreed with the ADB. The Petitioner was questioned on the terms and conditions of the loan and the applicable rate of interest. In response, the Petitioner has submitted that the GoHP levies interest rate at 10% on all loans funded by ADB as per the agreement entered by the GoHP with HPPTCL. Since, the ADB provides loan to GoHP which is transferred to the Petitioner for implementation, the rate of interest of 10% is applicable as per the agreement of the Petitioner with GoHP. The Commission is of the view that the rate of 10% is competitive as compared with the rates applicable on other transmission assets of HPPTCL and borrowings by similar utilities in other states from various sources and therefore, approves the same for tariff determination.
- 4.4.8 However, considering that the lending agency may be charging at lower rate, the Commission directs the Petitioner to negotiate with GoHP and align the interest rate in line with the rate of interest agreed by GoHP with ADB. Any efforts in this direction will not only lead to better cost optimisation in the form of lower interest costs, but also benefit the Consumers of Himachal Pradesh as a whole.
- 4.4.9 The following table provides the Interest on Loan approved by the Commission for the Control Period:

**Table 31: Interest on Loan approved by Commission (Rs. Lakh)**

Particulars	FY22	FY23	FY24
Opening Balance	-	6,646.94	6,354.90
Addition	6,794.63	120.00	-
Repayment	147.69	412.04	415.69
Closing Balance	6,646.94	6,354.90	5,939.21
Rate of Interest (%)	10.00%	10.00%	10.00%
<b>Interest on Loan</b>	<b>243.05</b>	<b>650.09</b>	<b>614.71</b>

*Interest on Loan pro-rated for FY2021-22 based on approved COD (19<sup>th</sup> Nov, 2021)*

## 4.5 Interest on Working Capital

### Petitioner Submissions

- 4.5.1 The Petitioner has computed interest on working capital as per Regulation 21 and 22 of the HPERC Transmission Regulations, 2011 and its subsequent amendments thereof.
- 4.5.2 The Petitioner has calculated the interest on working capital considering prevalent SBI MCLR as on FY 2021-22 plus 300 basis points. In accordance with the above Regulations the interest on working capital claimed is shown as follows:

**Table 32: Interest on Working Capital claimed by Petitioner (Rs. Lakh)**

Particulars	FY22	FY23	FY24
O&M Expenses for 1 month	1.44	1.49	1.55
Maintenance Spares (at 15% monthly O&M Expenses)	0.22	0.22	0.23
Receivables for 2 months on projected Annual Transmission Charges	266.61	261.50	256.32
<b>Total Working Capital</b>	<b>268.27</b>	<b>263.22</b>	<b>258.10</b>
Interest Rate (%)	10%	10%	10%
<b>Interest on Working Capital</b>	<b>26.83</b>	<b>26.32</b>	<b>25.81</b>

**Commission's Analysis**

4.5.3 Based on the approved O&M expenses and expected receivables, the Commission has approved the working capital requirements and interest on working capital for the Control Period in accordance with regulations 21 & 22 of the HPERC Transmission Regulations 2011.

4.5.4 The relevant clause of the regulations 21 and 22 is reproduced as follows:

*"21. Working Capital- The Commission shall calculate the working capital requirement for the transmission licensee containing the following components: -*

*(a) O&M expenses for 1 month;*

*(b) receivables for two months on the projected annual transmission charges; and*

*(c) maintenance spares @ 15% of repair and maintenance expenses for one month.*

*"22. Interest Charges on Working Capital- Rate of interest on working capital to be computed as provided hereinafter in these regulations shall be on normative basis and shall be equal one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 300 basis points. The interest on working capital shall be payable on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures."*

4.5.5 According to the revised provision for computation of interest on working capital, the Commission has considered the rate of interest on working capital as SBI MCLR as on 1<sup>st</sup>April, 2021 plus 300 basis points. The same shall be trued-up based on the actual rates as on 1st April of relevant financial year and the HPERC Transmission Regulations 2011. The computation for approved working capital requirement and interest on working capital is shown in the table as follows:

**Table 33: Interest on Working Capital approved by Commission (Rs. Lakh)**

Particulars	FY22	FY23	FY24
O&M Expenses for 1 month	0.52	1.49	1.55
Maintenance Spares (at 15% monthly O&M Expenses)	0.08	0.22	0.23
Receivables for 2 months on projected Annual Transmission Charges	88.82	243.11	238.98
<b>Total Working Capital</b>	<b>89.42</b>	<b>244.83</b>	<b>240.76</b>
Interest Rate (%)	10.00%	10.00%	11.50%
<b>Interest on Working Capital</b>	<b>8.94</b>	<b>24.48</b>	<b>27.69</b>

Interest on Working capital pro-rated for FY2021-22 based on approved COD (19<sup>th</sup> Nov, 2021)

#### 4.6 Return on Equity

##### Petitioner Submissions

4.6.1 The Petitioner has submitted that an equity amounting to Rs.29.27 Cr has been utilised as on CoD of the project. The RoE proposed by the Petitioner for the Control Period is summarised in the table as follows:

**Table 34: RoE claimed by Petitioner (Rs. Lakh)**

Particulars	FY22	FY23	FY24
Opening Equity	2,927.89	2,927.89	2,975.76
Equity Addition during the year	-	47.87	0
Closing Equity	2,927.89	2,975.76	2,975.76
RoE (%)	15.50%	15.50%	15.50%
<b>Return on Equity</b>	<b>453.82</b>	<b>457.53</b>	<b>461.24</b>

##### Commission's Analysis

4.6.2 Regulation 19 of the HPERC Transmission Regulations 2011 stipulates the following:

*"19. Return on Equity*

*(1) Return on equity shall be computed on the equity determined in accordance with regulation 18 and on pre-tax basis at the base rate of 15.5% to be grossed up as per sub-regulation (3) of this regulation:*

*(2) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate applicable to the concerned transmission licensee company:*

*Provided that return on equity with respect to the actual tax rate applicable to the transmission licensee in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be tried up separately for each year of the tariff period along with the tariff Petition filed for the next tariff period.*

*(3) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:-*

(a) Rate of pre-tax return on equity = Base rate / (1-t)

(b) Where t is the applicable tax rate in accordance with sub-regulation (2) of this regulation.”

4.6.3 Equity corresponding to the capital cost has been approved by the Commission in the previous Chapter under the section 'Project funding'. The Commission has considered the approved equity against the scheme for approving the return on equity.

4.6.4 Based on the above submissions, the Commission has considered rate of return @15.50% for approval of RoE for the Control Period. Any tax liability arising on the Petitioner during the Control Period shall be trued-up at the end of Control Period based on effective tax rate/ liability.

4.6.5 Based on the above, the return on equity approved by the Commission is summarised in the table below:

**Table 35: RoE approved by Commission (Rs. Lakh)**

Particulars	FY22	FY23	FY24
Opening Equity	-	2,264.88	2,304.88
Equity Addition during the year	2,264.88	40.00	-
Closing Equity	2,264.88	2,304.88	2,304.88
RoE (%)	15.50%	15.50%	15.50%
<b>Return on Equity</b>	<b>126.96</b>	<b>354.16</b>	<b>357.26</b>

RoE pro-rated for FY2021-22 based on approved COD (19<sup>th</sup> Nov, 2021)

## 4.7 Aggregate Revenue Requirement

### Petitioner Submissions

4.7.1 The table given below summarizes the proposed Aggregate Fixed Charges for the Control Period as claimed by the Petitioner.

**Table 36: Summary of ARR claimed by Petitioner (Rs. Lakh)**

Particulars	FY22	FY23	FY24
O&M Expenses	17.31	17.92	18.54
Depreciation	440.54	444.75	448.96
Interest on Loan	661.15	622.47	583.37
Interest on Working Capital	26.83	26.32	25.81
Return on Equity	453.82	457.53	461.24
<b>Aggregate Revenue Requirement</b>	<b>1,599.65</b>	<b>1,568.99</b>	<b>1,537.93</b>

ARR for FY2021-22 considered for full year. Pro-rated value for FY 2021-22 submitted as Rs 582.89 Lakhs

### Commission's Analysis

4.7.2 Based on the discussions in sections above, the summary of the Aggregate Revenue Requirement (ARR) approved by the Commission for each year is summarised in the table as follows:

**Table 37: Summary of ARR approved by Commission (Rs. Lakh)**

Particulars	FY22	FY23	FY24
O&M Expenses	6.26	17.92	18.54
Depreciation	147.69	412.04	415.69
Interest on Loan	243.05	650.09	614.71
Interest on Working Capital	8.94	24.48	27.69
Return on Equity	126.96	354.16	357.26
<b>Aggregate Revenue Requirement</b>	<b>532.91</b>	<b>1,458.69</b>	<b>1,433.88</b>

ARR pro-rated for FY2021-22 based on approved COD (19<sup>th</sup> Nov, 2021)

### 4.8 Carrying Cost

#### Petitioner Submissions

- 4.8.1 The Petitioner has sought approval to charge carrying cost due to delayed tariff recovery for 220 kV D/C transmission line.
- 4.8.2 The Petitioner has further submitted that as per regulation 10-A of HPERC (Terms and Conditions for Determination of Transmission Tariff) (Second Amendment) Regulations, 2018, the Commission has allowed carrying cost at the rate of one-year average MCLR + 300 basis points to be considered as carrying cost for delayed and differential recoveries.
- 4.8.3 The Petitioner has claimed that, due to delayed recoveries, it is facing financial hardship as the Petitioner is under strain in arranging working capital for ensuring smooth operations.

#### Commission's Analysis

- 4.8.4 The Commission has observed that the tariff Petition was filed in August 2022, as against the CoD of the asset as 19<sup>th</sup> November 2021, which is a delay of almost an year. Further, the Petitioner has also taken considerable time in responding to the various queries raised by the Commission resulting in further delays. To add, the Petitioner revised the capital cost of the project multiple times in its submissions with finally submitting the auditor certificate in support of the claimed capital cost only in the reply to the third deficiency letter i.e. on 17<sup>th</sup> August 2023. Since, the delay is attributable to the Petitioner, the Commission feels inappropriate to allow any carrying cost as part of the Order.

## 4.9 Transmission Charges

### Petitioner Submissions

4.9.1 The Petitioner has submitted that after the approval of tariff, it shall approach the Hon'ble CERC for inclusion of the asset in the PoC mechanism as per CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020.

### Commission's Analysis

4.9.2 As discussed in the section 'Energy Flow and Nature of the Asset' above, the 220 kV D/C Bajoli Holi-Lahal transmission line was originally planned to evacuate 431 MW of power from M/s GMR Bajoli Holi Hydro Power Pvt. Ltd. (Bajoli Holi HEP (3x60 MW) for which LTA has been executed dated 3rd September, 2015, Bara Bangal HEP (200 MW) and approx. 51 MW of small HEPs in Bharmour area. However, as per the submission of Petitioner, the Bara Bengal HEP allotted to M/s Malana Power Company Limited has been cancelled by GoHP at the request of developer.

4.9.3 Considering that the majority power flow in the transmission system is on account of the Bajoli Holi Hydro Power Plant, power of which is being evacuated to sell outside the State. Therefore, the nature of the transmission asset prima facie seems to be inter-state. The Petitioner should approach Hon'ble CERC for recovery of transmission charges through POC mechanism in line with CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020. Accordingly, the Petitioner is directed to file appropriate application before the CERC for recovery of ARR approved in this Order for the period from COD to FY 2023-24 under the CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020.

4.9.4 In line with the submission of the Petitioner, the Commission has approved the ARR of the transmission line. The Petitioner is directed to approach the Hon'ble CERC with the same for inclusion of the asset in the PoC mechanism. In the event the line is not declared as inter-state, appropriate application should be made before the Commission along with justification and evidence for recovery of transmission charges from respective beneficiaries.

-Sd-

**(SHASHI KANT JOSHI)**  
Member

-Sd-

**(YASHWANT SINGH CHOGAL)**  
Member

-Sd-

**(DEVENDRA KUMAR SHARMA)**  
Chairman

**Shimla**

**Dated: 17.11.2023**