

**Approval of Capital Cost and determination of tariff for 33/132 kV, GIS Sub-Station at Pandoh along with LILO of one circuit of 132 kV D/C Kangoo-Bajaura Transmission line (Asset-1) and Additional 33/132 kV, 31.5 MVA Transformer with associated GIS at 33/132 kV at Pandoh (Asset-2) for the period from COD to FY 2023-24**

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



**Himachal Pradesh Electricity Regulatory  
Commission  
September 28, 2022**

**BEFORE THE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION AT  
SHIMLA  
PETITION NO: 30/2022**

CORAM

**Sh. DEVENDRA KUMAR SHARMA  
Sh. BHANU PRATAP SINGH  
Sh. YASHWANT SINGH CHOGAL**

In the matter of:

Approval of capital cost and determination of tariff for 33/132 kV, GIS Sub-Station at Pandoh along with LILO of one circuit of 132 kV D/C Kangoo-Bajaura Transmission line (Asset-1) and Additional 33/132 kV, 31.5 MVA Transformer with associated GIS at 33/132 kV at Pandoh (Asset-2) for the period from COD to FY 2023-24 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 a 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 33/132 kV, GIS Sub-Station at Pandoh along with LILO of one circuit of 132 kV D/C Kangoo-Bajaura Transmission line (Asset-1) and Additional 33/132 kV, 31.5 MVA Transformer with associated GIS at 33/132 kV at Pandoh (Asset-2) for the period from COD to FY 2023-24 under the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011 and subsequent amendments (hereinafter referred to as 'HPERC Transmission Tariff Regulations, 2011') 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 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 the assets 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 Tariff) Regulations, 2019 and Regulations framed by the Commission. Details of prudence check and approach adopted by the Commission with regard to approval of capital cost and ARR for sub-station and transmission line are summarized in the detailed Order.

It is also to be highlighted that the Petitioner took significant time in responding to the clarifications and queries raised by the Commission. On several occasions, the information provided was either incomplete or did not address the query of the commission adequately. As a result, even post the written submissions, clarifications were sought verbally from the Petitioner. The delay in submission and lack of complete information remained a major bottleneck which resulted in delay of this Tariff Order.

Sd/-

**(YASHWANT SINGH CHOGAL)**  
Member

Sd/-

**(BHANU PRATAP SINGH)**  
Member

Sd/-

**(DEVENDRA KUMAR SHARMA)**  
Chairman

**Shimla**

**Dated: September 28, 2022**

# Table of Contents

|     |   |    |
|-----|---|----|
| 1.  | INTRODUCTION .....  | 6  |
| 1.1 | Himachal Pradesh Electricity Regulatory Commission .....  | 6  |
| 1.2 | Himachal Pradesh Power Transmission Corporation Ltd. .... | 7  |
| 1.3 | Multi Year Tariff Framework.....                          | 8  |
| 1.4 | Interaction with the Petitioner .....                     | 8  |
| 1.5 | Public Hearings .....                                     | 9  |
| 2.  | STAKEHOLDER OBJECTIONS.....                               | 11 |
| 2.1 | Introduction .....  | 11 |
| 3.  | APPROVAL OF CAPITAL COST .....                            | 16 |
| 3.1 | Introduction .....  | 16 |
| 3.2 | HPPTCL Current Infrastructure.....                        | 17 |
| 3.3 | Summary of the Project .....                              | 20 |
| 3.4 | Energy flow and Nature of Asset .....                     | 24 |
| 3.5 | Capital Cost.....   | 25 |
| 3.6 | Overheads (IDC and Departmental Charges) .....            | 32 |
| 3.7 | Project Funding.....                                      | 38 |
| 3.8 | Additional Capitalisation.....                            | 40 |
| 4.  | APPROVAL OF ARR AND TARIFF .....                          | 43 |
| 4.1 | Background.....   | 43 |
| 4.2 | Depreciation.....   | 43 |
| 4.3 | Interest on Loan .....                                    | 46 |
| 4.4 | Return on Equity .....                                    | 50 |
| 4.5 | O&M Expenses.....   | 52 |
| 4.6 | Interest on Working Capital (IoWC).....                   | 55 |
| 4.7 | Aggregate Revenue Requirement .....                       | 58 |
| 4.8 | Transmission Charges.....                                 | 59 |

# List of Tables

|   |    |
|---|----|
| Table 1: Communication with the Petitioner.....                               | 9  |
| Table 2: List of Newspapers for Public Hearing .....                          | 9  |
| Table 3: List of Newspapers for Public Notice by Commission .....             | 9  |
| Table 4: Details of existing Transmission lines .....                         | 18 |
| Table 5: Asset Details .....  | 19 |
| Table 6: Capital Cost claimed by Petitioner – Asset-1.....                    | 26 |
| Table 7: Capital Cost claimed by Petitioner – Asset-2.....                    | 28 |
| Table 8: Commission’s analysis of Contract Value and Amendments .....         | 29 |
| Table 9: DPR vs Awarded vs Capital Cost (INR Cr).....                         | 29 |
| Table 10: Hard Cost for Asset -1 (INR Cr) .....                               | 30 |
| Table 11: Commission’s analysis of Contract Value and Amendments .....        | 31 |
| Table 12: DPR vs Awarded vs Capital Cost for Asset -2 (INR Cr) .....          | 31 |
| Table 13: Hard Cost (INR Cr).....   | 32 |
| Table 14: IDC and Departmental charges claimed by Petitioner (INR Cr.).....   | 32 |
| Table 15: Reasons for time overrun.....                                       | 33 |
| Table 16: Revised Benchmark IDC – Asset-1 .....                               | 36 |
| Table 17: Revised Benchmark IDC – Asset-2 .....                               | 36 |
| Table 18: Approved IDC (INR Cr.).....   | 37 |
| Table 19: Approved DC (INR Cr.) .....   | 37 |
| Table 20: Approved Capital Cost (INR Cr) .....                                | 37 |
| Table 21: Project funding proposed by Petitioner – Asset-1 .....              | 38 |
| Table 22: Project funding proposed by Petitioner – Asset-2 .....              | 39 |
| Table 23: Project Funding approved vis-à-vis claimed .....                    | 40 |
| Table 24: Additional Capitalisation – Asset-1 (INR Cr).....                   | 40 |
| Table 25: Approved Additional Capitalisation (INR Cr).....                    | 41 |
| Table 26: Depreciation claimed by Petitioner (INR Lakh) .....                 | 43 |
| Table 27: Depreciation approved by Commission (INR Lakh) .....                | 45 |
| Table 28: Interest on Loan claimed by Petitioner (INR Lakh) .....             | 47 |
| Table 29: Interest on Loan approved by Commission (INR Lakh).....             | 49 |
| Table 30: RoE claimed by Petitioner (INR Lakh) .....                          | 50 |
| Table 31: RoE approved by Commission (INR Lakh) .....                         | 51 |
| Table 32: O&M Expenses claimed by Petitioner (INR Lakh) .....                 | 53 |
| Table 33: Normative O&M Expenses .....  | 54 |
| Table 34: O&M Expenses approved by Commission (INR Lakh) .....                | 54 |
| Table 35: Interest on Working Capital claimed by Petitioner (INR Lakh) .....  | 56 |
| Table 36: Interest on Working Capital approved by Commission (INR Lakh) ..... | 57 |
| Table 37: Summary of ARR claimed by Petitioner (INR Lakh).....                | 58 |
| Table 38: Summary of Consolidated ARR approved by Commission (INR Lakh).....  | 58 |

# 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 is also empowered under the Electricity Act, 2003 to 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 Through notification No. MPP-A-(1)-4/2006-Loose dated 3<sup>rd</sup> December, 2008 read with the GoHP's earlier notification dated 31<sup>st</sup> October, 2008, 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 notified were amended as (First Amendment) Regulations, 2013 on 1<sup>st</sup> November, 2013 and (Second Amendment) Regulations, 2018 on 22<sup>nd</sup> November, 2018 (The Regulations and its subsequent amendments combined shall be herein after referred to as 'HPERC Transmission 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 2014-15 to FY 2015-16 and Mid Term Review for Third Control Period FY 2016-17 to FY 2018-19. Thereafter, 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).

### **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)-25/2021-2331-32 dated 25<sup>th</sup> Nov, 2021 directed the Petitioner to submit details regarding first set of deficiencies identified in the petition, which were submitted by the Petitioner vide M.A. No. 03/2022 dated 12<sup>th</sup> Jan, 2022. Subsequently, the Commission issued another set of deficiency letter whose replies were submitted by the Petitioner by 7<sup>th</sup> Mar, 2022, 2<sup>nd</sup> Jul, 2022 and 19<sup>th</sup> Jul, 2022 respectively. The Petitioner has also submitted the replies on the comments of HPSEBL vide MA No. 119/2022 dated 28<sup>th</sup> Jun, 2022.
- 1.4.3 Based on the detailed scrutiny of the petition, various clarifications/information were sought by the Commission from time to time. The following submissions made by the Petitioner in response there to, have been taken on record:

**Table 1: Communication with the Petitioner**

| Sl. | Submission of the Petitioner             | Date       |
|-----|--|------------|
| 1   | MA No. 03/2022                           | 12.01.2022 |
| 2   | MA No. 49/2022                           | 07.03.2022 |
| 3   | MA No. 121/2022                          | 02.07.2022 |
| 4   | MA No. 130/2022                          | 19.07.2022 |
| 5   | MA No. 119/2022 Reply on HPSEBL Comments | 28.06.2022 |

## 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 Tribune        | 08.05.2022          |
| 2.  | Amar Ujala         | 08.05.2022          |

- 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 (Chandigarh & Jalandhar Editions) | 13.05.2022          |
| 2.  | Dainik Bhaskar (Chandigarh & Himachal Editions)   | 13.05.2022          |

- 1.5.3 The stakeholders were requested to file their objections by 15<sup>th</sup> Jun, 2022 . HPPTCL was required to submit replies to the suggestions/ objections to the Commission by 22<sup>nd</sup> Jun, 2022 with a copy to the objectors on which the objectors were required to submit rejoinder by 30<sup>th</sup> June, 2022
- 1.5.4 The Commission decided to conduct public hearing and thereafter issued a public notice informing the public about the scheduled date of public hearing as 2<sup>nd</sup> Jul, 2022, which was extended to 4<sup>th</sup> Jul,2022 due to some administrative reasons. 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 4<sup>th</sup> July, 2022 for the Petition of approval of capital cost and determination of tariff for 33/132 kV, GIS Sub-station at Pandoh along with LILO of one circuit of 132 kV D/C Kangoo-Bajaura Transmission line (Asset-1) and Additional 33/132 kV, 31.5 MVA Transformer with associated GIS at 33/132 kV at Pandoh (Asset-2) for the period from COD to FY 2023-24
- 2.1.2 Accordingly, the public hearing was conducted on 4<sup>th</sup> July, 2022. HPSEBL submitted their comments/ suggestions before the Commission. Issues raised by HPSEBL in their written submission, along with replies given by the Petitioner and views of the Commission are summarized in the following paragraphs:

#### ***Stakeholders' Submission***

- 2.1.3 In the petition, HPSEBL has been stated to be the only beneficiary of the instant transmission asset. In this context, HPSEBL has submitted that as per the Detailed project Report (DPR), total hydro power potential in Pandoh valley was estimated to be of 54 MW . This 54 MW of power was to be evacuated by constructing 33/132 kV pooling Sub-station at Pandoh and then by looping in and looping out one circuit of 132 kV Bajaura- Kangoo D/C line at this station. In the first instant, only one number 33/132 kV, 1x31.5 MVA transformer was to be installed and later on as per the COD of other projects 2nd 31.5 MVA transformer was to be installed. This arrangement would take care of reliability and redundancy in the system to evacuate power in case of outage of any transmission line. Further in the DPR, it has been mentioned that recovery of transmission tariff will be from the generating companies and Transmission Service Agreement is being finalized and soon it would be executed between HPPTCL and the Generators. It is mutually decided that Generating Companies would be paying Annual Transmission Charges to HPPTCL as the beneficiaries for these generating stations are yet to be finalized. Therefore cash flow in HPPTCL for constructing and recovery of the transmission charges does not pose any apprehension. From the DPR it is amply clear that the instant Asset-1 & Asset-2 have been constructed by HPPTCL for giving connectivity to the Small Hydro Electric Plants (HEPs) in Pandoh valley awarded to various IPP's by HP Govt.

***Petitioner's Response***

- 2.1.4 The contents of Para 1 and 2 of the reply are matter of record and do not merit any reply.

***Commission's Observations***

- 2.1.5 The Petitioner's submissions regarding recovery of transmission charges and the requisite documents provided in support of its claim have been studied in detail by the Commission and appropriate treatment has been done as discussed in detail in Chapter 4 of this Order.

***Stakeholders' Submission***

- 2.1.6 Various transmission assets created/being created by HPPTCL are for evacuation of power from the various hydro generators in the State of Himachal Pradesh and drawl requirements of HPSEBL for meeting the power requirements of consumers have not been taken into consideration while carrying out the Load Flow Studies in respect of various transmission assets of HPPTCL. Thus, HPPTCL cannot claim that HPSEBL is the 100% beneficiary of above transmission assets created by HPPTCL. Moreover, no written requirement from HPSEBL for drawl of power from these Sub-stations are based upon the anticipated power evacuation requirements.

In respect of certain transmission assets, HPSEBL is de-facto beneficiary as the existing system of HPSEBL has been integrated at those Sub-stations. Also, most of the IPPs being integrated at those Sub-stations have long-term Power Purchase Agreements (PPAs) with HPSEBL and thus the responsibility beyond inter-connection point is with HPSEBL. Thus, in respect of such transmission assets, HPSEBL is the beneficiary of those assets to the extent of utilization of those assets. Therefore, in case of 33/132kV GIS Sub-station Pandoh along with associated 132kV transmission lines (Asset 1 & Asset 2), HPSEBL is beneficiary to the extent of utilization of these assets and tariff on account of these transmission assets shall be borne by HPSEBL to the extent of utilization.

***Petitioner's Response***

- 2.1.7 The Petitioner submitted that the averments made by the Stakeholder are denied and disputed as they are devoid of any merit. The instant asset is a part of the System Strengthening Scheme and has been designed to reduce the transmission losses and improve system stability and maintain the voltage profile of the HPSEBL System. Further, the said scheme was part of Master Transmission Plan developed by HPSEBL to which the Commission had accorded in-principle approval. HPPTCL submitted that once the generation in the Pandoh area picks up, the Sub-station shall also serve the purpose of evacuating power from other upcoming small HEPs in the Pandoh area which will be injecting power in 132/220 kV Sub-station (HPSEBL) at Kangoo through existing 132 kV Bajaura-Larji-Kangoo D/C line.

Presently, only HPSEBL is connected at Pandoh Sub-station and is the sole beneficiary of the said asset, therefore, entire Transmission Charges are to be borne by HPSEBL. However, as and when other beneficiaries start utilizing the said asset, the Transmission Charges will be shared between beneficiaries as per HPERC Transmission Tariff Regulations, 2011. The Petitioner has requested to the Commission to take an appropriate view in the matter.

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

2.1.8 The primary objective of project as per the DPR was to cater to overall generation capacity of ~54 MW to be evacuated in the Pandoh valley. The project was envisaged to evacuate power from Small HEPs in the valley along with additional capacity to be installed through Himurja. Further, the recovery of the transmission tariff was proposed from the generating companies who would be paying Annual Transmission Charges as the beneficiaries for the generating stations were not finalized.

As per the claim of the stakeholder i.e. HPSEBL, it had not provided any written requirement to the Petitioner. HPSEBL has also mentioned that in respect of certain transmission assets, it is de-facto beneficiary as the existing system has been integrated at those Sub-stations. However, it cannot be inferred from facts of the matter that HPSEBL shall be liable to pay 100% ARR.

Furthermore, the Petitioner itself has submitted that as and when other beneficiaries start utilizing the assets, the Transmission Charges will be shared between beneficiaries. Hence, the Petitioner is directed to recover the ARR under the POC mechanism in accordance with the HPERC Transmission Tariff Regulations, 2011 as submitted by the Petitioner.

The matter has been further discussed in detail in Chapter 4 of this Order.

### ***Stakeholders' Submission***

2.1.9 In the HPPTCL petition, there is no mention of upcoming Small HEPs being developed by Generating Companies (IPPs) in the Pandoh Valley for whom these assets (Asset 1 & Asset 2) have been created and commissioned on 24.08.2019 & 08.10.2020 respectively. The details of connectivity agreements, LTOA/ MTOA have not been provided by HPPTCL. As per the DPR, the instant assets have been constructed by HPPTCL for the evacuation of power of 54 MW envisaged from Small Hydro Projects in the Pandoh Valley in District Mandi. These assets were primarily planned by HPPTCL to cater to evacuation needs of upcoming generating stations. In the absence of details of other beneficiaries, the contention of HPPTCL to state that HPSEBL is the only beneficiary of the instant transmission assets is not correct. HPSEBL is beneficiary to the extent of utilization of these assets & in this regard signing of Supplementary TSA between HPPTCL & HPSEBL is in process. However, there is no clarity when the small hydro generating stations in Pandoh area will come. Therefore, HPPTCL may provide the latest data of the actual load flow on these assets to the Commission for scrutiny & assessment of beneficiaries of the Assets.

**Petitioner's Response**

- 2.1.10 With regard to details of actual load flow from the asset, the Petitioner has submitted the details of actual load flow from the asset w.e.f. COD to May, 2022 to HPSEBL.

**Commission's Observations**

- 2.1.11 The Petitioner has submitted that the quantum of 151 MU was wheeled from COD till 31st Mar, 2020 in FY 2019-20, 249 MU in FY 2020-21 and 196 MU in FY 2021-22 (From Apr- Nov 21).

With regards to recovery of ARR, the matter has been discussed in detail in Chapter 4 of this Order.

**Stakeholders' Submission**

- 2.1.12 The land for the construction of 33/132 kV GIS Sub-station at Pandoh has been acquired from BBMB and value of the said land is INR 3.46 Cr. which has to be paid by HPPTCL to BBMB. It is stated in the petition that INR 3.46 Cr. towards leasing of land cost from BBMB is to be incurred based on amount settlement with BBMB in FY 2021-22 and same has been claimed in Administrative & General Expenses (A&G) during FY 2021-22. It is submitted that land cost is capital in nature and same should form part of capital expenditure and HPPTCL should clarify and Commission may decide accordingly.

**Petitioner's Response**

- 2.1.13 The Petitioner submitted that the said expense is revenue expenditure which is to be borne towards the leasing of land from BBMB. Since the lease of any property including offices, land etc. are not capital in nature, the Petitioner has claimed it as A&G Expenses as the same are administrative in nature. The Petitioner has, therefore, requested the Commission to approve the Land Lease Expense of INR 3.46 Cr. as claimed by the Petitioner under A&G expenses considering the submissions made in the Petition.

**Commission's Observations**

- 2.1.14 The Commission has taken note of the submissions of the Stakeholder and the Petitioner and accordingly dealt with the matter in Chapter 4 of this Order.

**Stakeholders' Submission**

- 2.1.15 The Debt: Equity claimed is 75.06:24.94 for Asset 1. The funding of debt is from ADB loan granted to GoHP & further provided to HPPTCL for these assets. The capital cost of Asset-1 is INR 39.62 Cr. as on COD (24.08.2019), the corresponding debt portion is INR 29.74 Cr. & equity portion is INR 9.88 Cr. However, RoE has been claimed on the amount of INR 8.56 Cr. for FY 2019-20 & subsequent years. Net equity addition during the year is INR (-)

1.32 Cr. as per petition. HPPTCL should clarify and Commission may decide accordingly.

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

2.1.16 Regarding negative equity funding towards the Additional Capital Expenditure of INR 4.66 Cr during FY 2019-20, the Petitioner submitted that refinancing of equity has been carried out during FY 2019-20 and the Debt: Equity ratio with respect to Additional Capital Expenditure has been submitted on actual basis duly certified by the Auditor. The Petitioner has requested the Commission to approve the Debt: Equity ratio for FY 2019-20 as claimed.

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

2.1.17 The Commission has taken note of the submissions of the Stakeholders and the Petitioner and accordingly dealt with the matter of project funding in Chapter 3: Section 3.7 of this Order.

### ***Stakeholders' Submission***

2.1.18 The O&M expenses claimed for Asset 2 is on normative basis which are based on O&M Expenses norms as specified in the CERC (Terms and Conditions of Tariff) Regulations, 2019 which includes employee expenses whereas while claiming O&M expenses for Asset 1, it has been mentioned that HPPTCL has employed 9 officials in FY 2019-20 to carry out the operation at the site. The manpower strength had increased from 9 to 16 in FY 2020-21 and shall remain the same throughout the control period & accordingly actual employee expenses have been claimed for Asset 1. HPPTCL should clarify that O&M expenses for Asset 1 & Asset 2 are not common in nature and the Commission may decide accordingly.

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

2.1.19 The Petitioner submitted that for Asset-I, the actual O&M expenses for FY 2019-20 were available. These actual O&M expenses have been escalated by WPI and CPI index for projecting O&M expenses for remaining years of Control Period. The Petitioner further submitted that since the Scheme was commissioned on 08.10.2020, the Petitioner didn't have the actual O&M expenses at the time of filing the Petition. Therefore, the Petitioner in absence of any basis for projecting the O&M expenses has considered the norms for O&M Expenses as specified in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019. The Petitioner has requested the Commission to take an appropriate view in the matter.

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

2.1.20 The Commission has taken note of the submissions of the Stakeholders and the Petitioner and accordingly dealt with the matter of project funding in Chapter 4 of this Order.

## 3. APPROVAL OF CAPITAL COST

### 3.1 Introduction

3.1.1 HPPTCL has submitted a petition for approval of capital cost and determination of tariff for 4<sup>th</sup> Control Period from COD to FY 2023-24 for 33/132 kV, GIS Sub-station Pandoh along with LILO of one circuit of 132 kV D/C Kangoo-Bajaura Transmission line (Asset-1) and additional 33/132 kV, 31.5 MVA transformer with associated GIS at 33/132 kV, 1x31.5 MVA, GIS S/S at Pandoh (Asset-2)

3.1.2 As per the HPERC Transmission Tariff Regulations, 2011, deals with Capital Cost of the Project which reads 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 and ARR for each year by the Petitioner from COD until the end of the Control Period i.e. FY 2023-24. The Petitioner has submitted separate ARR for 33/132 kV, GIS Sub-station Pandoh along with LILO of one circuit of 132 kV D/C Kangoo-Bajaura Transmission line referred to as Asset-1 and additional 33/132 kV, 31.5 MVA transformer with associated GIS at 33/132 kV, 1x31.5 MVA, GIS S/S at Pandoh referred to as Asset-2.
- 3.1.4 Multiple set of deficiencies in the petition were shared with the Petitioner to realistically validate the reasons for cost and time overrun, the data submitted, beneficiary details, etc.
- 3.1.5 The original Petition lacks detailing and supporting information to validate the capital cost for each of the assets. Also, details such as justification for time and cost overrun, DPRs of assets, final auditors certificate, standard time period of construction, beneficiary details, etc. was not provided as part of the main petition. Information provided in the Petition was inadequate and the Commission had to seek additional submissions and supporting documents from the Petitioner through deficiency letters for reviewing the capital cost and ARR. With respect to few queries, 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 specifically for consideration of Interest During Construction (IDC) and Departmental Charges (DC).
- 3.1.6 The Commission has undertaken detailed prudence check and adequate assumptions, wherever required, for approving the capital cost of both the transmission assets. The scrutiny and prudence check undertaken by the Commission for approval of capital cost has been discussed in the following paragraphs.

## **3.2 HPPTCL Current Infrastructure**

- 3.2.1 During the unbundling of State power sector, only 15 numbers of Transmission Lines have been transferred to HPPTCL which were held by erstwhile Himachal Pradesh State Electricity Board (HPSEB). Whereas the line bays, sub-stations, C&R Panel, metering arrangement and other transmission related infrastructure were retained within the distribution entity i.e.

Himachal Pradesh State Electricity Board Limited (HPSEBL) which was formed post unbundling of HPSEB.

3.2.2 The Petitioner has provided the details of existing intra-state transmission infrastructure vested with HPPTCL as per notification no. MPP-A (3)-1/2001-iv dated 10<sup>th</sup> June, 2010 by the Government of Himachal Pradesh. In addition to the above, the transmission system of HPPTCL also has three inter-state transmission lines, the tariff of which is approved by Central Electricity Regulatory Commission (CERC). The details of the existing Intra-state and Inter-state Transmission system of the Petitioner is tabulated as follows:

**Table 4: Details of existing Transmission lines**

| Sl.      | Name of Existing lines                                    | Type        | Type of line AC/HVDC | S/C or D/C | Line length (km) | Date of Commercial Operation |
|----------|---|-------------|----------------------|------------|------------------|------------------------------|
| <b>A</b> | <b>220 KV Lines</b>                                       |             |                      |            |                  |                              |
| 1        | 220 kV D/C Bairasul - Pong Line (LILO portion at Jassure) | Intra-State | AC                   | D/C        | 0.24             | 09-1985                      |
| 2        | 220 kV S/C Jassure-Thein Line                             | Inter-State | AC                   | S/C        | 25.60            | 03-2001                      |
| 3        | 220 kV Dehar-Kangoo Line (S/C ckt. Line on D/C tower)     | Intra-State | AC                   | S/C        | 3.18             | 06-1999                      |
| 4        | 220 kV D/C Panchkula-Kunihar Line                         | Inter-State | AC                   | D/C        | 46.72            | 05-1989                      |
| 5        | 220 kV D/C Kodari-Majri Line                              | Inter-State | AC                   | D/C        | 35.02            | 09-1989                      |
| 6        | 220 kV D/C Nalagarh (PGCIL)-Nalagarh Line                 | Intra-State | AC                   | D/C        | 3.50             | 07-2010                      |
| <b>B</b> | <b>132 KV Lines</b>                                       |             |                      |            |                  |                              |
| 7        | 132 kV S/C Giri-Kulhal Line                               | Intra-State | AC                   | S/C        | 17.40            | 04-1978                      |
| 8        | 132 kV D/C Giri-Abdullapur Line                           | Intra-State | AC                   | D/C        | 16.22            | 08-1982                      |
| 9        | 132 kV S/C Kangra Tap Line                                | Intra-State | AC                   | S/C        | 0.14             | 02-1979                      |
| 10       | 132 kV S/C Dehar-Kangoo Line                              | Intra-State | AC                   | S/C        | 2.99             | 12-1998                      |
| 11       | 132 kV D/C Shanan-Bassi Line                              | Intra-State | AC                   | D/C        | 5.00             | 03-1970                      |
| <b>C</b> | <b>66 KV Lines</b>  |             |                      |            |                  |                              |
| 12       | 66 kV Shanan-Bijni Line                                   | Intra-State | AC                   | S/C        | 35.00            | 10-1969                      |
| 13       | 66 kV Pinjore-Parwanoo Line                               | Intra-State | AC                   | S/C        | 8.23             | 04-1956                      |
| 14       | 66 kV Pong-Sansarpur Terrace Line                         | Intra-State | AC                   | S/C        | 6.30             | 10-1990                      |
| 15       | 66 kV Bhakra-Goalthai-Rakkar Line                         | Intra-State | AC                   | S/C        | 16.72            | 12-1985                      |

3.2.3 In addition to the above infrastructure that was vested with HPPTCL, the Petitioner has commissioned the following schemes.

1. 220 kV D/C Kashang Bhaba Transmission Line
2. 220 / 66 kV Pooling station at Bhoktoo
3. 33/220kV, 80/100 MVA GIS Sub-Station Phozal along with 220kV D/C LILO Transmission line.

4. 220 kV D/C Charor-Banala Transmission line
5. 33/220 kV, 50/63 MVA GIS Sub-station Karian along with 220 kV D/C Karian Rajera line
6. 33/132 kV 31.5 MVA GIS Pooling Station Pandoh with 132 kV S/C of Kangoo-Bajaura line(Asset-1 under consideration)
7. Additional work of 33/132 kV 1x31.5 MVA Transformer with associated GIS at Pandoh S/S(Asset-2 under consideration)
8. 33/132 kV, 2\*31.5 MVA Sub-station at Chambhi with 132 kV S/C Kangra- Dehra line
9. 66/220/400 kV GIS Sub-Station (66/220 kV, 2x80/100 MVA+220/400 kV, 2x315 MVA) at Wangtoo.
10. 400/220kV Sub-Station at Gumma (Shimla)
11. 400kV LILO of Panchkula transmission line at Gumma
12. 220kV Hatkoti-Gumma transmission line
13. 220kV Snale-Hatkoti transmission line
14. 66kV Switching Sub-Station Urni( Kinnaur)
15. 220kV S/C on D/C Transmission Line from Lahal to Budhil
16. 400/220/33 kV Sub-Station at Lahal (Chamba)

3.2.4 HPPTCL has further been undertaking various transmission schemes since its formation in 2008 for evacuation of upcoming generation and system strengthening of transmission infrastructure in the State.

3.2.5 The Petitioner has now submitted this petition for approval of capital cost and determination of tariff from COD until FY 2023-24 for 33/132 kV, GIS Sub-Station Pandoh along with LILO of one circuit of 132 kV D/C Kangoo-Bajaura Transmission line referred to as Asset-1 and additional 33/132 kV, 31.5 MVA transformer with associated GIS at 33/132 kV, 1x31.5 MVA, GIS S/S at Pandoh referred to as Asset-2.

3.2.6 Relevant technical details and configuration of the assets as submitted by Petitioner have been provided as follows:

**Table 5: Asset Details**

| Asset   | Name of Sub-Station  | Type | Voltage level (kV) | No. of Bays   | COD                       |
|---------|--|------|--------------------|---|---------------------------|
| Asset-1 | 33/132 kV Pandoh S/S having 33 kV & 132 kV GIS Bay, 1*31.5 Three phase MVA Power Transformer and other S/S equipment and LILO of one circuit of 132 kV Bajaura-Kangoo Line | AC   | 132/33 kV          | 2 nos. of 132 kV Line Bays (1 incoming -1 outgoing), 1 no. Transformer bay (132 kV, HV Side), 1 no. Transformer bay (33 kV, LV Side) and 2 nos. 33 kV Line Feeder | 24 <sup>th</sup> Aug 2019 |
| Asset-2 | 33/132 kV ,31.5 MVA Additional transformer with associated GIS at 33/132kV Pandoh Sub-station  | AC   | 132/33 kV          | 1 no. Transformer Bay (132 kV, HV Side), 1 no. Transformer Bay (33 kV, LV Side) and 4 nos. 33 kV  | 8 <sup>th</sup> Oct 2020  |

| Asset | Name of Sub-Station | Type | Voltage level (kV) | No. of Bays | COD |
|-------|---------------------|------|--------------------|-------------|-----|
|       |                     |      |                    | Line Feeder |     |

### 3.3 Summary of the Project

#### Petitioner Submission

- 3.3.1 The Petitioner with regards to 33/132 kV GIS Sub-station at Pandoh with LILO of one circuit of 132 kV Kangoo-Bajaura Line submitted that earlier there were two S/C 33 kV Lines (Each 24 km Long) feeding HPSEBL 33 kV Pandoh Sub-station. One S/C line has been LILOed at 33 kV Soul Khad Sub-station of HPSEBL. Power of Patikari HEP (16 MW) is being sold to HPSEBL as Patikari HEP had signed Power Purchase Agreement (PPA) with HPSEBL. Earlier power of Patikari HEP was being evacuated through 24 km long line from Bijni Sub-station to Sunder Nagar, which is supplied in the Pandoh area.
- 3.3.2 The Petitioner further submitted that the transmission of power over long distance not only increases losses but also impacts the voltage profile of the system. LILO of other express 33 kV S/C line at HPPTCL Pandoh Sub-station has resulted in reduced power losses and improved voltage profile in the area by providing drawl point near to 33 kV Pandoh Sub-station. After the commissioning of the Pandoh Sub-station, the power from Patikari 16 MW HEP is being directly fed to 33 kV HPSEBL network in Pandoh area using this Sub-station and the transmission distance has reduced to mere 8 km from the earlier 24 km. Also, the system shall cater to future Small HEPs that may come up in the region.
- 3.3.3 The Petitioner further submitted that the sub-station is connected with HPSEBL feeders and power at 33 kV Pandoh feeder (HPSEBL) and 33 kV Bijni feeder (HPSEBL) will flow through this sub-station and both the feeder shall cater to a load of 12 MW each. This system shall ensure reliable power supply to Thunag and Siraj area.
- 3.3.4 Based on the reasons described as above, the asset shall not only lead to reduction in transmission losses but also improve system stability and maintain the voltage profile of the HPSEBL system. Further, HPSEBL shall be applying for connectivity to HPPTCL and this asset shall be included in the Transmission Services Agreement (TSA) by HPSEBL. Therefore, the scheme has been primarily developed as a system-strengthening scheme.
- 3.3.5 The Petitioner added that as Himachal Pradesh is predominantly hilly State and availability of land for sub-station is limited, GIS Sub-station has been constructed instead of AIS so as to reduce cost of development of land and civil works which forms a major part of capital cost in hilly terrain.
- 3.3.6 The Petitioner additionally submitted that the said scheme was part of Master Transmission Plan developed by HPSEB against which an in-principle approval was accorded by the Commission.

- 3.3.7 With regards to additional 33/132 kV 31.5 MVA Transformer with associated GIS at 33/132 kV 1x31.5 MVA GIS S/S at Pandoh, the Petitioner submitted that as the generation in Pandoh area shall come in phases and till the time generation comes, the proposed additional sub-station of 31.5 MVA at Pandoh shall serve as a hot spare [(n-1) Contingency] and shall provide reliability under contingency conditions resulting in reduced system downtime, reduced system losses, improved voltage profile and system stability. Once the generation in the area picks up, the sub-station shall also serve the purpose to evacuate power from other upcoming small HEPs in the Pandoh area.
- 3.3.8 This arrangement shall also help in evacuating power from upcoming Small Hydel power plants by injecting it in to 132/220 kV Sub-station (HPSEBL) at Kangoo through existing 132 kV Bajaura-Kangoo D/C line.
- 3.3.9 The Petitioner further submitted that the scheme was added to the earlier Master Transmission Plan by HPPTCL after carrying out review of the same through technical assistance/Grant and HPSEBL is the only beneficiary of both the assets.
- 3.3.10 Subsequent to BoD of the Petitioner and CEA approvals, the project execution for Asset-1 was awarded to M/s. Shyam Indus Power Solution Pvt. Ltd. on turnkey basis for Design Engineering, Manufacturing, Fabrication, Testing at Manufacturing works, transportation at site, Insurance, Loading/Unloading storage, testing and commissioning of 33/132 GIS S/S at Pandoh in Mandi District of Himachal Pradesh.
- 3.3.11 The tentative cost as per DPR was INR 41.86 Crore including IDC and DC of INR 1.34 Cr and INR 3.88 Cr respectively.
- 3.3.12 The Petitioner has claimed the capital expenditure as on COD of the scheme as INR 39.62 Cr, which is well within the DPR cost, and that at the end of FY 2019-20 as INR 44.43 Cr which is slightly higher than the DPR cost.
- 3.3.13 With regards to Asset-2, the DPR for the scheme with capital cost of INR 25.00 Cr was presented before the BoD for approval in its meeting dated 28<sup>th</sup> Dec, 2016 where the DPR was approved. Subsequently, the scheme received approval from CEA.
- 3.3.14 After conducting due competitive bidding process, the project execution for Asset-2 was awarded to M/s. New Northeast Electric Group High Voltage Switchgear Co. Ltd. on turnkey basis for Design, Engineering, Manufacturing, Fabrication, Testing at Manufacturing works, transportation at site, Insurance, Loading/Unloading storage, testing and commissioning of 33/132 KV, 31.5 MVA GIS S/S at Pandoh in Mandi District of Himachal Pradesh.
- 3.3.15 The Petitioner has claimed a capital expenditure of INR 15.26 Cr as on COD and INR 15.56 Cr. as at the end of FY 2020-21 which is also well within the awarded cost.

### Commission's Analysis

- 3.3.16 The Petitioner in its petition has sought approval for capital cost and ARR of two assets referred to as Asset-1 and Asset-2. The Commission in this regards sought justification from the Petitioner for considering two different assets and submitting capital cost and ARR separately even though only an additional transformer has been deployed as part of Asset-2 to the existing Sub-station.
- 3.3.17 In response, the Petitioner clarified that the two assets were awarded separately and the debt for the projects were funded by two different agencies Therefore, the petition has been prepared considering 33/132kV, GIS Sub-station Pandoh along with LILO of one circuit of 132kV D/C Kangoo-Bajaura Transmission line as Asset-1 and additional 33/132 kV, 31.5 MVA Transformer with associated GIS at 33/132 kV, 1x31.5 MVA, GIS S/S at Pandoh as Asset-2.
- 3.3.18 The Commission has reviewed the Petitioner's submission in detail and agrees to the point of view of the Petitioner that since individual contracts were awarded for the two assets and funding was also secured from different agencies it is prudent to determine capital cost, ARR and tariff separately owing to the different terms and conditions of the contracts. Hence, for the purpose of this order the Commission has also considered the same terminology as referred to by the Petitioner with 33/132kV, GIS sub-station at Pandoh along with LILO of one circuit of 132kV D/C Kangoo-Bajaura Transmission line referred to as Asset-1 and additional 33/132 kV, 31.5 MVA Transformer with associated GIS at 33/132 kV, 1x31.5 MVA, GIS S/S at Pandoh referred to as Asset-2.
- 3.3.19 The Petitioner in its 15<sup>th</sup> BoD meeting held on 22<sup>nd</sup> May, 2012 got approval for implementation of Asset-1 vide agenda item No. 15.07. Similarly, Asset-2 was approved by BoD in its meeting held on 28<sup>th</sup> Dec, 2016 vide agenda item No. 32.05. Copies of BoD Resolutions were submitted along with the petition. Further, copy of CEA approval was also submitted by the Petitioner for both the assets.
- 3.3.20 The BoD approved the capital cost of Asset-1 at an estimated cost of INR 48.90 Cr. as against the tentative cost of INR 41.86 Cr. in the DPR which included IDC and DC.
- 3.3.21 From the submissions of the Petitioner, it is observed that project execution for Asset-1 was awarded to M/s. Shyam Indus Power Solution Pvt. Ltd. on turnkey basis post conducting a competitive bidding process. The Petitioner had awarded the work through tender no. 13/SS/ADB/HPPTCL/33/132kV GIS Pandoh for Design, Engineering, Manufacturing, Fabrication, Testing at Manufacturing works, Transportation at site, Insurance, Loading/Unloading storage, Testing and Commissioning of 33/132 GIS S/S at Pandoh. The work was awarded to M/s Shyam Indus Power Solution Pvt. Ltd. at the cost of INR 31.27 Cr. + USD 8,13,950 which included the Supply Contract of INR 23.15 Cr. + USD 7,98,950 and Services & Civil Work Contract of INR 8.12 Cr.+ USD 15,000. Asset-1 achieved COD on 24<sup>th</sup> Aug, 2019 against which the Petitioner



- has submitted the letter of intimation to the contractor on completion, commissioning and energising of asset.
- 3.3.22 The Petitioner has also submitted details of the three contract amendments which lead to an overall impact of amendment resulted in reduction of contract value by 4.06% (~INR 1.27 Cr).
- 3.3.23 The audited actual cost claimed by the Petitioner is INR 39.62 Cr as on COD and completed capital cost as INR 44.27 Cr. which is slightly higher than the DPR cost. The Petitioner submitted that the completed cost is higher than the capital cost as on COD due to additional payments made post the COD of the project.
- 3.3.24 Asset-1 was envisaged at a debt-equity ratio of 80:20. HPPTCL had secured funding for the project from Asian Development Bank (ADB).
- 3.3.25 With regards to Asset-2, the capital cost as per the DPR was INR 25.00 Cr. From the scrutiny of the supporting documents submitted by the Petitioner, it was observed that the DPR was submitted to CEA for approval, however, approval of only INR 19.62 Cr was received against the DPR cost of INR 25.00 Cr. On further clarifications received from the Petitioner, it was concluded that the cost approved was lower vis-à-vis DPR cost on account of omittance of USD component in the CEA approval. The Petitioner discussed the matter with CEA and a revised approval was accorded for INR 19.11 Cr. + USD 1,32,253 vide letter No. I/12346/2020/369-371 dated 12<sup>th</sup> Mar, 2018 after taking into account the variation in the quantity during execution for MNRE grant.
- 3.3.26 The execution for Asset-2 was awarded to M/s. New Northeast Electric Group High Voltage Switchgear Co. Ltd. on turnkey basis against the tender no. 08-SS/KfW/HPPTCL/33/132 kV for Design, Engineering, Manufacturing, Fabrication, Testing at Manufacturing works, Transportation at Site, Insurance, Loading/Unloading storage, Testing and Commissioning of 33/132 KV, 31.5 MVA GIS S/S at Pandoh in Mandi District of Himachal Pradesh. The work was awarded on 22<sup>nd</sup> Feb, 2018 at a cost of INR 19.62 Cr. + USD 1,32,253 which included the supply contract of INR 14.12 Cr. + USD 1,32,253 and Services Contract of INR 5.51 Cr.
- 3.3.27 The awarded contract was first amended on 1<sup>st</sup> Jul, 2019 due to change in quantity of Supplies and Services (Installation & Civil works) during the execution of work at site. Subsequently, the second amendment was issued on 30<sup>th</sup> Mar, 2021 due to deviation on account of enhancement in specifications of the equipment deployed. The net impact of amendments resulted in reduction of contract value by INR 3.86 Cr.
- 3.3.28 The capital expenditure submitted as on COD of Asset-2 is INR 15.26 Cr. with the completed cost as INR 15.56 Cr. which is well within the awarded cost.
- 3.3.29 Asset-2 was envisaged at grant, debt and equity ratio of 37%:37%:26% with grant received from MNRE-NCEF and debt secured from KfW.
- 3.3.30 The Petitioner submitted that evacuation of power from various SHPs is to be done through the project with the primary beneficiary being HPSEBL.

- 3.3.31 It is observed that the Petitioner has not undertaken capital investment approval for the transmission schemes as per the requirement of HPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011. Absence of scheme-wise capital investment approval for the transmission works results in difficulties in determining reasonable capital cost and applicability of transmission charges. The Petitioner is directed to undertake scheme-wise approval for such capital investments for all future schemes.
- 3.3.32 The Commission has reviewed the Petition and supporting annexures in detail and found several deficiencies in the information provided. In order to undertake in-depth analysis, the Commission in its various discrepancy letters sought additional information and supporting documents such as approvals of BoD/competent agencies, details of awards/ contracts, correspondences, documents against project funding, details and justifications regarding amendments to contracts and time and cost overrun, payments made to contractors, and COD certificate etc.

### **3.4 Energy flow and Nature of Asset**

#### **Petitioner Submission**

- 3.4.1 The Petitioner submitted that the Pandoh Sub-Station is connected with HPSEBL feeders namely 33 kV Pandoh and 33 kV Bijni and power will flow through the sub-station of HPPTCL and both the above feeders shall cater to a load of 12 MW each. The system shall ensure reliable power supply to Thunag and Siraj area.

#### **Commission's Analysis**

- 3.4.2 The Asset-1 with 31.5 MVA Three Phase Power Transformer and LILO of one circuit of 132 kV Bajaura-Kangoo Line and Asset-2 with 31.5 MVA additional transformer have been developed to evacuate power from Pandoh Valley.
- 3.4.3 The Commission, in one of the deficiency letters sought updated details from the Petitioner on the current and future beneficiaries of the project. The Petitioner in reply submitted that the only beneficiary of both the assets is Himachal Pradesh State Electricity Board Limited (HPSEBL). In this regard, signing of TSA is under process.
- 3.4.4 The Petitioner further submitted that no future beneficiaries are identified so far. In case, beneficiaries are identified in the future, the Commission shall be apprised accordingly.
- 3.4.5 The Petitioner with regards to flow of power through the assets submitted that a quantum of 151 MU was wheeled in FY 2019-20 and 249 MU in FY 2020-21.
- 3.4.6 From the review of the DPR, it is inferred that both the assets were envisaged for evacuation of generation capacity of ~54 MW in the Pandoh valley. By creating the pooling sub-station it was envisaged that the mesh of wire shall be avoided and the power after pooling at Pandoh shall be wheeled through a single corridor. Further, the project was envisaged to evacuate power from



Small HEPs in the valley along with additional capacity to be installed through Himurja. The DPR further stipulated that the generating stations shall be paying the Annual Transmission Charges as the beneficiaries for the generating stations were not finalized.

- 3.4.7 Presently, HPSEBL is the only beneficiary of both the assets. However, more beneficiaries are expected to join as can be inferred from the Petitioner's response to stakeholders query wherein it has been communicated that once the generation in the Pandoh area picks up, the sub-station shall also serve the purpose of evacuating power from other upcoming small HEPs in the Pandoh area. As and when other beneficiaries start utilizing the said asset, the Transmission Charges will be shared between beneficiaries as per HPERC Transmission Tariff Regulations, 2011.
- 3.4.8 Therefore, it can be ascertained from the DPR and Petitioner's reply that the system was created to cater to multiple beneficiaries as and when they join.
- 3.4.9 The matter of recovery of ARR by the Petitioner has been discussed in detail in Chapter 4 of this Order.

### **3.5 Capital Cost**

#### **Petitioner's submission**

- 3.5.1 The Petitioner submitted that subsequent to the BoD and CEA approvals, the works for implementation of Asset-1 was awarded to M/s. Shyam Indus Power Solution Pvt. Ltd. on turnkey basis for Design, Engineering, Manufacturing, Fabrication, Testing at Manufacturing works, transportation at site, Insurance, Loading/Unloading storage, testing and commissioning of 33/132kV, GIS S/S at Pandoh.
- 3.5.2 The contractor was notified about the supplies (First Contract) vide notification no. HPPTCL/Contracts/ADB/132 kV GIS Pandoh/2014-15-3043-50 dated 20<sup>th</sup> Aug, 2015 and about the Services & Civil Works (Second Contract) vide notification no. HPPTCL/Contracts/ADB/132 kV GIS Pandoh/2014-15-3043-58 dated 20<sup>th</sup> Aug, 2015.
- 3.5.3 The effective date of the contracts (First & Second Contract) as per Contract Agreement was notified to M/s. Shyam Indus Power Solution Pvt. Ltd. vide letter no. HPPTCL/Contracts/ADB/132kV GIS Chambi/2014-15-5999-6003 dated 16<sup>th</sup> Nov, 2016 as 15<sup>th</sup> Jun, 2016.
- 3.5.4 The scheduled construction period for Asset-1 was 18 months. However, due to delay on account of factors such as additional requirement of equipment, implementation of GST, establishment of telemetry system etc. the COD got delayed and was finally achieved on 24<sup>th</sup> Aug, 2019.
- 3.5.5 The contract was first amended on 5<sup>th</sup> Apr, 2018 to include the GST impact and the contract price was revised to INR 26.31 Cr. + USD 7,98,950 (Supply Contract) & INR 8.15 Crore + USD 17,700 (Service Contract). The contract was amended for the 2<sup>nd</sup> time on 5<sup>th</sup> Mar, 2019 due to variation in the quantity with revised price of INR 26.35 Cr. + USD 7,98,950 (Supply Contract) & INR 8.15 Cr. + USD 17,700 (Service Contract). The contract was

amended for the 3<sup>rd</sup> time on 1<sup>st</sup> Jun, 2019 to include the cost of erection of SF6 termination kits based on the actual progress and requirement at site and the contract amount was finalised as INR 23.15 Cr. + USD 7,98,950 (Supply Contract) & INR 8.12 Cr. + USD 17,700 (Service Contract). The net impact of amendments led to net reduction of Contract value by 4.06% i.e. INR 1.27 Cr.

- 3.5.6 The audited capital cost as per Auditor's Certificate as on COD is INR 39.62 Cr. and as on 31<sup>st</sup> Mar, 2020 is INR 44.43 Cr. In this regard, the Petitioner submitted that while finalizing the Annual Audited accounts for FY 2019-20, the actual O&M expenses (Employee and A&G expenses) of INR 0.15 Cr, which were revenue expenditure incurred after COD were booked under the "Departmental Charges" head thereby additional Departmental Charges of INR 0.15 Cr. erroneously forms part of additional capitalization from COD to 31<sup>st</sup> Mar, 2020.
- 3.5.7 The Petitioner in order to rectify the above while working out the ARR computations has reduced the same from Departmental Charges head in Capital Cost and has considered it as part of actual O&M expenses while claiming the same for FY 2019-20.
- 3.5.8 Further, the Additional Capital Expenditure (ACE) claimed for FY 2019-20 has been adjusted by INR 0.15 Cr. The Petitioner further added that the Petitioner has taken land of 17-00-00 Bighas from BBMB for construction of 33/132kV Pandoh Sub-station. As per the communication dated 3<sup>rd</sup> Aug, 2018, BBMB has informed that the value of this land is INR 3.46 Cr which has to be paid additionally by HPPTCL and hence the Petitioner has kept a provision of additional expenditure of INR 3.46 Cr. on account of cost towards land leased from BBMB.
- 3.5.9 The Petitioner submitted that the completed capital cost of Asset-1 as on 31<sup>st</sup> Mar, 2020 is INR 36.27 Cr. which excludes IDC of INR 5.68 Cr. and Departmental Charges of INR 2.33 Cr. vis-à-vis the approval received from CEA of INR 36.63 Cr. (excluding IDC of INR 1.34 Cr. and DC of INR 3.88 Cr.) and awarded value of INR 37.40 Cr. Since, the cost is well within the approved limit of INR 36.63 Cr. by CEA (excluding IDC & DC) and Contract awarded value of INR 37.40 Cr., the Petitioner has therefore requested the Commission to approve the final capital cost of the project in the petition.
- 3.5.10 The following table provides the capital cost of Asset- 1 as claimed by the Petitioner:

**Table 6: Capital Cost claimed by Petitioner – Asset-1**

| Name of the Asset   | Cost as per DPR | Contract Value               | Actual Cost as on CoD | Add. Cap. from COD till 31.03.2020 | Project Cost as on 31.03.2020 |
|---|-----------------|------------------------------|-----------------------|------------------------------------|-------------------------------|
| 33/132 kV of 1x31.50 MVA pooling S/S at Pandoh & LILO of 132 kV D/C Bajaura-Kangoo line | 36.63           | INR 32.06 Cr. + USD 8,13,950 | 33.14                 | 3.13                               | 36.27                         |

| Name of the Asset            | Cost as per DPR | Contract Value                              | Actual Cost as on CoD | Add. Cap. from COD till 31.03.2020 | Project Cost as on 31.03.2020 |
|------------------------------|-----------------|---|-----------------------|------------------------------------|-------------------------------|
| Interest During Construction | 1.34            | -   | 4.15                  | 1.53                               | 5.68                          |
| Departmental Charges         | 3.88            | -   | 2.33                  | -                                  | 2.33                          |
| <b>Total</b>                 | <b>41.86</b>    | <b>INR 32.06 Cr.<br/>+ USD<br/>8,13,950</b> | <b>39.62</b>          | <b>4.66</b>                        | <b>44.27</b>                  |

- 3.5.11 With regards to Asset-2, subsequent to BoD and CEA approvals, the contract was awarded to M/s. New Northeast Electric Group High Voltage Switchgear Co. Ltd. on turnkey basis for Design, Engineering, Manufacturing, Fabrication, Testing at Manufacturing works, transportation at site, Insurance, Loading/Unloading storage, testing and commissioning of 33/132 KV, 31.5 MVA GIS S/S at Pandoh in Mandi District of Himachal Pradesh.
- 3.5.12 The contractor was notified of the contract award vide letter no. HPPTCL/Contracts/KfW/132kV additional Pandoh/2017-18-18375-82 dated 22<sup>nd</sup> Feb, 2018.
- 3.5.13 The effective date of the contract as per Contract Agreement was notified to M/s. New Northeast Electric Group High Voltage Switchgear Co. Ltd. vide letter no. HPPTCL/Contracts/KfW/Additional Pandoh 2018/2300 dated 23<sup>rd</sup> May, 2018 as 2<sup>nd</sup> June, 2018.
- 3.5.14 The scheduled construction period Asset-2 was 18 months. However, due to delay on account of factors such as delay in inspection and approval, COVID-19 and delay due to approval of shutdown for charging, the COD got delayed and was finally achieved on 8<sup>th</sup> Oct, 2020.
- 3.5.15 As per the original DPR, the estimated project cost for Asset-2 was INR 25.00 Cr. including Interest during Construction (IDC) of INR 1.67 Cr. and Departmental Charges (DC) of INR 2.24 Cr. The same was submitted before the CEA for approval by the Petitioner vide letter no. HPPTCL/KfW/2017/19440 dated 6<sup>th</sup> Mar, 2018. CEA vide its Order dated 12<sup>th</sup> Mar, 2018 accorded the approval for Asset-2 at an awarded cost of INR 19.62 Cr. Subsequently, the contract value was revised to INR 19.62 Cr. + USD 1,32,252.55 to include the USD component of the supplies contract post CEA approval
- 3.5.16 The contract was awarded to M/s New Northeast Electric Group High Voltage Switchgear Co. Ltd. on turnkey basis after conducting due competitive bidding process.
- 3.5.17 The tender was awarded on 22<sup>nd</sup> Feb 2018 at INR 19.62 Cr. + USD 1,32,252.55 which included the Supply Contract of INR 14.12 Cr. + USD 1,32,253 and Services Work Contract of INR 5.51 Cr.
- 3.5.18 The following table provides the capital cost of Asset- 2 as claimed by the Petitioner:

**Table 7: Capital Cost claimed by Petitioner – Asset-2**

| Name of the Asset   | Cost as per DPR | Original Award Cost                     | Actual Cost as on CoD | Add. Cap. from COD till 31.03.2021 | Project cost as on 31.03.2021 |
|---|-----------------|---|-----------------------|------------------------------------|-------------------------------|
| 33/132 kV of 1x31.50 MVA pooling S/S at Pandoh & LILO of 132 kV D/C Bajaura-Kangoo line | 21.09           | <b>INR 19.62 Cr.+<br/>USD 1,32,253</b>  | 14.13                 | -                                  | 14.13                         |
| Interest During Construction  | 1.67            | -                                       | 0.49                  | 0.24                               | 0.73                          |
| Departmental Charges  | 2.24            | -                                       | 0.64                  | 0.05                               | 0.69                          |
| <b>Total</b>  | <b>25.00</b>    | <b>INR 19.62 Cr. +<br/>USD 1,32,253</b> | <b>15.26</b>          | <b>0.29</b>                        | <b>15.55</b>                  |

3.5.19 Two amendments were issued against the contract, the first on 1st Jun, 2019 due to change in quantity of Supplies and Services (Installation & Civil works) during the execution of work at site and second on 30<sup>th</sup> Mar, 2021 due to change in equipment specifications. The net impact of amendment resulted in reduction of contract value by INR 3.86 Cr.

#### **Commission's Analysis**

3.5.20 The Commission has undertaken scrutiny of the various components of the capital cost. As part of the prudence check, the Commission sought additional information and supporting documents including auditor certificate, approvals of BoD, reasons for price variation, details of awards/ contracts, correspondences, payments made to contractors, COD certificate etc. The Petitioner was also asked to submit the relevant approvals taken for the project from the Commission.

3.5.21 Based on the DPR submitted by the Petitioner, the capital cost of Asset-1 is INR 41.86 Cr inclusive of Departmental Charges (DC) and Interest During Construction (IDC). The scheme for construction of Asset-1 at Pandoh was approved in the 15<sup>th</sup> BoD Meeting of the Petitioner held on 22<sup>nd</sup> May, 2012. Subsequently, the CEA accorded its approval on Asset-1 on 5<sup>th</sup> June, 2012

3.5.22 As per the copy of contracts provided by the Petitioner, the Supplies and Services contract for Asset-1 was awarded to M/s. Shyam Indus Power Solution Pvt. Ltd. on turnkey basis.

3.5.23 Post the award of contract, three no. of amendments were issued against the contract on account of multiple reasons. A summary of the amendments based on the review of the amendment documents has been provided as follows:

**Table 8: Commission's analysis of Contract Value and Amendments**

| Sl. | Particulars               | Date of Notification | Supply Contract             | Services Contract         | Total                       | Reason for Amendment  |
|-----|---------------------------|----------------------|-----------------------------|---------------------------|-----------------------------|---|
| 1   | Initial Award Price       | 20.08.2015           | INR 24.51 Cr<br>+USD 798950 | INR 7.55 Cr<br>+USD 15000 | INR 32.06 Cr<br>+USD 813950 |   |
| 2   | 1 <sup>st</sup> Amendment | 05.04.2018           | INR 26.31 Cr<br>+USD 798950 | INR 8.15 Cr<br>+USD 17700 | INR 34.46 Cr<br>+USD 816650 | • Implementation of GST                                     |
| 3   | 2 <sup>nd</sup> Amendment | 05.03.2019           | INR 23.15 Cr<br>+USD 798950 | INR 8.12 Cr<br>+USD 17700 | INR 31.27 Cr<br>+USD 816650 | • Hardware fitting of towers<br>• Increase in qty of cables |
| 4   | 3 <sup>rd</sup> Amendment | 01.06.2019           | INR 23.20 Cr<br>+USD 798950 | INR 6.87 Cr<br>+USD 17700 | INR 30.07 Cr<br>+USD 816650 | • Erection cost of SF6 termination kits                     |

3.5.24 From the review of the supporting documents provided in respect of the various amendments, it was observed that first amendment to the contract was issued with respect to impact of GST implementation. Subsequently, the second amendment was issued due to variation in quantity of additional hardware and cables to be deployed for the project.

3.5.25 The third and the last amendment was issued on account of use of SF6 plug in type end termination kits in place of heat shrinkable termination kit. The components of cost considered in all the three amendments were not envisaged in the original award and hence there was a need to include these amendments in the final scheme of things.

3.5.26 The capital cost further includes an additional amount of INR 0.43 Cr paid as entry tax thereby enhancing the overall completion cost of the project. Further, the hard cost also include INR 0.18 Cr towards Forest clearance expenses, Miscellaneous expenses, Tender expenses etc. which do not form part of awarded cost . Also, training expenses of INR 0.24 Cr. for training of employees till COD and post COD. The various cost elements have been scrutinised based on the Auditor certificate towards capital cost of Asset 1 submitted by the Petitioner.

3.5.27 On further clarifications sought from the Petitioner, the Petitioner submitted that SCADA and PLCC system have been deployed and the cost towards the same is part of the hard cost.

3.5.28 The following table shows the comparison of original DPR cost, awarded cost and capital cost as on COD for Asset-1 based on the documentary proofs submitted by the Petitioner in support of its claim:

**Table 9: DPR vs Awarded vs Capital Cost (INR Cr)**

| S. No. | Particulars | Capital Cost - DPR | Awarded Cost (Post 3rd Amendment) | Capital Cost - Auditor Certificate (As on COD) | Capital Cost - Auditor Certificate (As on 31.03.2020) |
|--------|-------------|--------------------|-----------------------------------|--|---|
| 1)     | Hard Cost   | 36.63              | INR 30.07 Cr<br>+USD 816650       | 33.14  | 36.26   |

| S. No. | Particulars          | Capital Cost - DPR | Awarded Cost (Post 3rd Amendment)   | Capital Cost - Auditor Certificate (As on COD) | Capital Cost - Auditor Certificate (As on 31.03.2020) |
|--------|----------------------|--------------------|-------------------------------------|--|---|
| a)     | Supply               |                    | INR 23.20 Cr<br>+USD 798950         | 28.41  | 28.54   |
| b)     | Services             |                    | INR 6.87 Cr<br>+USD 17700           | 3.95   | 6.86  |
| c)     | Entry Tax            |                    |                                     | 0.43   | 0.43  |
| d)     | Training Expenses    |                    |                                     | 0.19   | 0.24  |
| e)     | Misc. Expenses       |                    |                                     | 0.15   | 0.18  |
| 2)     | IDC                  | 1.34               |                                     | 4.15   | 5.68  |
| 3)     | Departmental Charges | 3.88               |                                     | 2.33   | 2.33  |
|        | <b>Total</b>         | <b>41.85</b>       | <b>INR 30.07 Cr<br/>+USD 816650</b> | <b>39.62</b>                                   | <b>44.27</b>  |

3.5.29 Based on comparison of completed hard cost (towards supply and services) as on COD (along with additional capitalization towards payment made to contractors post COD) with the contracted value (after conversion of dollar denominated value as per the exchange rate applicable), it is observed that the actual cost claimed by the Petitioner is in line with the contracted value.

3.5.30 Therefore, based on the review of the submissions of the Petitioner supported by Auditor certificate, the Commission approves the actual hard cost for Asset-1 as on COD as detailed below:

**Table 10: Hard Cost for Asset -1 (INR Cr)**

| S. No. | Particulars       | Awarded*     | Claimed      | Approved     |
|--------|-------------------|--------------|--------------|--------------|
| a)     | Supply            | 28.43        | 28.54        | 28.54        |
| b)     | Services          | 6.98         | 6.86         | 6.86         |
| c)     | Entry Tax         | -            | 0.43         | 0.43         |
| d)     | Training Expenses | -            | 0.24         | 0.24         |
| e)     | Misc. Expenses    | -            | 0.18         | 0.18         |
|        | <b>Total</b>      | <b>35.41</b> | <b>36.26</b> | <b>36.26</b> |

3.5.31 For Asset-2, based on the DPR submitted by the Petitioner, the capital cost was INR 25.00 Cr inclusive of Departmental Charges (DC) and Interest During Construction (IDC). The scheme for construction of Asset-1 at Pandoh was approved in the BoD Meeting of the Petitioner held on 28<sup>th</sup> Dec, 2016. Subsequently, the CEA accorded its approval on Asset-2 on 12<sup>th</sup> Mar, 2018.

3.5.32 As per the copy of contracts provided by the Petitioner, the Supplies and Services contract of the sub-station was awarded to M/s New Northeast Electric Group High Voltage Switchgear Co. Ltd. on turnkey basis.

3.5.33 Post the award of contract, two no. of amendments were issued against the contract on account of multiple reasons. A summary of the amendments as per the submissions of the Petitioner has been provided as follows:

**Table 11: Commission's analysis of Contract Value and Amendments**

| Sl. | Particulars               | Date of Notification | Total (Supply+Services)  | Reason for Amendment  |
|-----|---------------------------|----------------------|--------------------------|---|
| 1   | Initial Award Price       | 23.05.2018           | INR 19.62 Cr +USD 132253 |   |
| 2   | 1 <sup>st</sup> Amendment | 01.06.2019           | INR 19.11 Cr +USD 132253 | Due to change in quantity of Supplies and Services (Installation & Civil works) |
| 3   | 2 <sup>nd</sup> Amendment | 30.03.2021           | INR 19.62 Cr +USD 120036 | Deviation on account of enhancement in specifications of the equipment deployed |

3.5.34 From the review of the supporting documents provided in respect of the various amendments, it was observed that first amendment to the contract was issued to include the variation on account of change in quantity of items under Supplies and Services contract both. A second amendment was further issued which accounted for the deviation on account of enhancement in specifications of the equipment.

3.5.35 The following table provides the comparison of original DPR cost, awarded cost and capital cost as on COD for Asset-2 based on auditor's certificate:

**Table 12: DPR vs Awarded vs Capital Cost for Asset -2 (INR Cr)**

| S. No. | Particulars          | Capital Cost - DPR | Awarded Cost (Post 2 <sup>nd</sup> Amendment) | Capital Cost - Auditor Certificate (As on COD) | Capital Cost - Auditor Certificate (As on 31.03.2020) |
|--------|----------------------|--------------------|---|--|---|
| 1)     | Hard Cost            | 21.09              | INR 19.62 Cr +USD 120036                      | 14.13  | 14.13   |
| a)     | Supply               |                    |   | 11.19  | 11.19   |
| b)     | Services             |                    |   | 2.94   | 2.94  |
| 2)     | IDC                  | 1.67               |   | 0.49   | 0.73  |
| 3)     | Departmental Charges | 2.24               |   | 0.64   | 0.69  |
|        | <b>Total</b>         | <b>25.00</b>       | <b>INR 19.62 Cr +USD 120036</b>               | <b>15.26</b>                                   | <b>15.55</b>  |

3.5.36 It is observed from the documents submitted by the Petitioner that the awarded hard cost (post 2<sup>nd</sup> amendment) including supply and services contracted was Rs. 20.41 Cr. (based on conversion of USD contract as per applicable exchange rate). The claimed hard cost by the Petitioner towards Asset 2 is INR 14.13 Cr. which is lower than the contract value. On clarifications sought from the Petitioner regarding the difference. The Petitioner submitted that all the works have been completed on ground and



Petitioner has been able to optimise the cost with efficient project management.

- 3.5.37 Accordingly, based on the analysis of the submissions of the Petitioner, the Commission approves the actual hard cost for Asset-2 as follows:

**Table 13: Hard Cost (INR Cr)**

| S. No. | Particulars  | Awarded*     | Claimed      | Approved     |
|--------|--------------|--------------|--------------|--------------|
| a)     | Supply       | 20.41        | 11.19        | 11.19        |
| b)     | Services     |              | 2.94         | 2.94         |
|        | <b>Total</b> | <b>20.41</b> | <b>14.13</b> | <b>14.13</b> |

### 3.6 Overheads (IDC and Departmental Charges)

#### Petitioner's submission

- 3.6.1 The Petitioner submitted that the IDC and Departmental Charges have been claimed based on actuals.
- 3.6.2 The Petitioner submitted that while preparing the DPR for Asset-1, the IDC was computed based on the ADB loan interest rate of 4.64% as against the actual interest rate payable to GoHP as 10%. Hence, IDC as per the DPR was on a lower side.
- 3.6.3 The IDC was enhanced on account of various uncontrollable factors which led to an increase in the implementation schedule of the project.
- 3.6.4 The construction of Asset-1 was delayed on account of unavoidable factors such as deviation in the quantities and introduction of GST, requirement of SF-6 termination kits and establishment of telemetry system.
- 3.6.5 Similarly, for Asset-2, the Petitioner submitted that the IDC and Departmental Charges have been claimed based on actuals.
- 3.6.6 The IDC for Asset-2 was enhanced on account of various uncontrollable factors viz. delay in inspection and approval from Chief Electrical Inspector, delay due to onset of COVID-19 and delay due to approval of shutdown for charging.
- 3.6.7 The rate of interest for calculation of IDC for both Asset-1 and Asset-2 have been considered in accordance with rate of interest applicable on the respective projects.

#### Commission's Analysis

- 3.6.8 The following table provides the IDC and Departmental Charges as per original DPR and as claimed by Petitioner as on COD for Asset-1 and Asset-2:

**Table 14: IDC and Departmental charges claimed by Petitioner (INR Cr.)**

| Particulars    | DPR  | Claimed |
|----------------|------|---------|
| <b>Asset-1</b> |      |         |
| IDC            | 1.34 | 5.68    |



| Particulars          | DPR         | Claimed     |
|----------------------|-------------|-------------|
| Departmental charges | 3.88        | 2.33        |
| <b>Total</b>         | <b>5.22</b> | <b>8.01</b> |
| <b>Asset-2</b>       |             |             |
| IDC                  | 1.67        | 0.73        |
| Departmental charges | 2.24        | 0.69        |
| <b>Total</b>         | <b>3.91</b> | <b>1.42</b> |

3.6.9 The Commission asked the Petitioner to quantify the time delay on account of the various factors as submitted. Accordingly, as per the submission of the Petitioner, the major reasons of time overrun included the following:

**Table 15: Reasons for time overrun**

| Sl.            | Reason for Delay   | Time Period  | Description  |
|----------------|--|--------------|--|
| <b>Asset-1</b> |  |              |  |
| 1              | Deviation in the quantities and introduction of GST              | ~10.5 months | <ul style="list-style-type: none"> <li>Additional requirement of M.S Electrode (35mm diameter) and M.S Rod (40 mm dia.) required for earth-mat of Sub-station.</li> <li>Implementation of GST: Till the amendment in the Contract, no payment could be released to the firm resulting in delay in supply as well as execution of works.</li> </ul>   |
| 2              | Requirement of SF-6 Termination Kits                             | ~4 months    | <ul style="list-style-type: none"> <li>In the BOQ, provision to supply the Heat Shrinkable Type Termination outdoor kits for the 33 kV Cables were added.</li> <li>During, engineering it was noticed that SF-6 Termination kits were required for termination at GIS end.</li> </ul>  |
| 3              | Establishment of telemetry system                                | Not Provided | <ul style="list-style-type: none"> <li>At the time of commissioning of the Sub-station, it was found that existing PLCC panels installed at Larji and Bijni end of existing 132 kV Larji-Bijni line were not compatible with the panels installed at Pandoh end.</li> <li>In order to expedite the commissioning works, it was decided to shift PLCC panels of the same specifications available with HPPTCL at other site and install the same at Larji and Bijni ends which led to delay.</li> </ul> |
| <b>Asset-2</b> |  |              |  |
| 1              | Delay in inspection and approval from Chief Electrical Inspector | 86 days      | <ul style="list-style-type: none"> <li>The electrical works got completed before 24.02.2020 and HPPTCL had applied for inspection of installation to Chief Electrical Inspector by 24.02.2020 but approval was delayed and finally received on 19.05.2020.</li> </ul>  |
| 2              | COVID-19 Impact  | 193 days     | <ul style="list-style-type: none"> <li>Due to COVID restrictions various activities such</li> </ul>  |

| Sl. | Reason for Delay                               | Time Period | Description   |
|-----|--|-------------|---|
|     |  |             | as testing, manpower relocation at sites etc. were affected. Further, no vendors were ready for institutional quarantine which was mandatory as per the guidelines of H.P Govt. |
| 3   | Delay due to approval of shutdown for charging | 7 days      | <ul style="list-style-type: none"> <li>There was a delay for approval of shutdown for charging of Sub-Station from HPSEBL on Larji Bijni line.</li> </ul>                       |

- 3.6.10 As per the original DPR, the time period of construction was envisaged to be of 18 months each for Asset-1 and Asset-2.
- 3.6.11 The Commission with respect to Asset-2 sought justification for considering the 18 months as scheduled construction period when the deployment of an additional transformer takes much less time as per industry standards. Necessary documents in support of its claims were sought from the Petitioner.
- 3.6.12 The Petitioner in reply submitted that Asset-2 was not limited to deployment of transformer but also included engagement of contractor to Design, Engineering, Manufacture, Fabrication, Testing of Manufacturers Works, Transportation to site, Insurance, Storage, Erection, Testing and Commissioning of Additional 33/132kV, 31.5MVA Transformer with associated GIS at 33/132kV, 31.5MVA GIS Sub-station at Pandoh.
- 3.6.13 The Petitioner further submitted that while preparation of DPR for installation of additional 33/132kV Transformer at Pandoh, time period has been considered as 2 years and same has been approved by CEA (Central Electricity Authority). However, as per standard practice, 18 months of completion period was considered in the contract for additional work after approval by the funding agency i.e. KfW.
- 3.6.14 The Commission further sought clarification from the Petitioner that the DPR stipulates the time period of 24 months for the complete transmission system that consists of various components viz. construction of sub-station for Tangnu- Romal HEP, const. of sub-station at Dehan etc. and why the Petitioner has considered 18 months as completion period for the current asset.
- 3.6.15 The Petitioner in reply submitted that DPR was prepared for a number of transmission projects including Asset-2 of the Pandoh Scheme. For said schemes commissioning schedule of 24 months was considered in DPR keeping in view the difficult hilly terrain of Himachal Pradesh. Further, while finalizing commissioning schedule of 24 months, reliance was placed on then prevalent CERC (Terms and Conditions of Tariff) Regulations, 2009 vide Appendix-II under Regulation 15 of 2009 that stipulated the ideal completion timeline for execution of upto 220 kV A/C sub-station in plain areas as 18 months, in hilly terrain as 21 months and in snow bound area/very difficult terrain as 24 months. However, with respect to Asset-2, 18 months was considered as completion period as the asset could be completed early.

- 3.6.16 Inferring from the submissions of the Petitioner, the Commission believes that the activities listed by the Petitioner were to be executed prior to the actual inception of the project. As such the scheduled construction period for similar projects may be much lower. Further, it still cannot be established from the submissions of the Petitioner that period of 24 months as stipulated in the DPR was for each component of the scheme or the overall time period. Hence, based on the facts of the matter and for the purpose of determination of IDC, the Commission has considered a realistic time period of 6 months for deployment of additional transformer at the site in line with time period observed for similar projects.
- 3.6.17 The actual time taken to complete the project was ~4 years with delay of ~30 months for Asset-1 and more than 2 years with delay of ~1.5 years for Asset-2.
- 3.6.18 The Petitioner with regards to the delay in works by the contractor submitted a record of the communications taken place internally between the Petitioner and the contractor along with supporting documents against each of the reasons for delay submitted by the Petitioner.
- 3.6.19 With regards to Asset-1, out of the overall delay, a majority part (~11 months) is attributable towards deviation in the quantities and introduction of GST. This is considerable delay which could have been avoided or at least decreased. Also, issues with respect to BoQ, SF-6 termination kits, non-compatibility of telemetry system were also avoidable in case of proper planning at the end of Petitioner. Therefore, the delay in COD of Asset 1 cannot be completely treated as uncontrollable.
- 3.6.20 For Asset-2 majority part of delay is on account of inspection and approval by Electrical Inspector along with lockdown and restricted movement due to onset of COVID-19.
- 3.6.21 Based on reasons stated by the Petitioner, it can be inferred that part of the delay could be treated as delay not attributable to the Petitioner. However, it would be unreasonable to consider that each individual activity led to the overall delay of ~30 months with respect to Asset-1 and ~1.5 years with respect to Asset-2 in project execution. The Commission is of the view that other activities could be undertaken in parallel and the delay could have been shortened/ averted by proper planning and follow up at the Petitioner end. In this regard, the Commission directs the Petitioner to build a strong project management team to oversee such projects with proper mechanisms in place to flag delays at each milestone and take corrective actions for the same. Accordingly, the Commission feels it appropriate to allow sharing of excess amount of IDC and DC between the Petitioner and beneficiaries in equal ratio (50:50).
- 3.6.22 In view of revision in hard cost as well as rate of interest, the Commission has computed a revised benchmark for the IDC. For assessing the benchmark IDC for Asset-1, with project duration of 18 months, the Commission has assumed 40% debt disbursement in first year and remaining 60% debt disbursement in the last six months of project execution.

- 3.6.23 Similarly, for assessing the benchmark IDC for Asset-2, with project duration finalised as 6 months, the Commission has assumed 40% debt disbursement in first quarter and remaining 60% debt disbursement in the second quarter of project execution.
- 3.6.24 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.
- 3.6.25 The benchmark IDC for Asset-1 as computed is summarized as follows:

**Table 16: Revised Benchmark IDC – Asset-1**

| Particulars                  | Unit           | Year I      | Year II *   | Total       |
|------------------------------|----------------|-------------|-------------|-------------|
| Debt disbursement            | %              | 40%         | 60%         | 100%        |
| Opening Debt (a)             | INR Cr.        | -           | 12.35       |             |
| Addition during the year (b) | INR Cr.        | 12.35       | 18.52       |             |
| Closing Debt (c)             | INR Cr.        | 12.35       | 30.87       |             |
| Average Debt (d=(a+c)/2)     | INR Cr.        | 6.17        | 21.61       |             |
| Interest rate (e)            | %              | 10.00%      | 10.00%      |             |
| <b>Total IDC (f=d*e)</b>     | <b>INR Cr.</b> | <b>0.62</b> | <b>1.08</b> | <b>1.70</b> |

\*Considered for 6 months

- 3.6.26 Against the same, the Petitioner has claimed IDC of INR 4.15 Cr as on COD of Asset-1. The Petitioner has submitted its computation and the Auditor certificate of the asset in this regard.
- 3.6.27 The benchmark IDC for Asset-2 as computed is summarized as follows:

**Table 17: Revised Benchmark IDC – Asset-2**

| Particulars                  | Unit           | Q1          | Q2          | Total       |
|------------------------------|----------------|-------------|-------------|-------------|
| Debt disbursement            | %              | 40%         | 60%         | 100%        |
| Opening Debt (a)             | INR Cr.        | -           | 2.94        |             |
| Addition during the year (b) | INR Cr.        | 2.94        | 4.42        |             |
| Closing Debt (c)             | INR Cr.        | 2.94        | 7.36        |             |
| Average Debt (d=(a+c)/2)     | INR Cr.        | 1.47        | 5.15        |             |
| Interest rate (e)            | %              | 10.00%      | 10.00%      |             |
| <b>Total IDC (f=d*e)</b>     | <b>INR Cr.</b> | <b>0.04</b> | <b>0.13</b> | <b>0.17</b> |

- 3.6.28 Against the same, the Petitioner has claimed IDC of INR 0.49 Cr as on COD of Asset-2. The Petitioner has submitted the computation and the auditors certificate in this regard.
- 3.6.29 As discussed in preceding paras, the Commission has allowed 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 |
|------------|-----------|----------------|------------|--------------------------------------|
| Asset-1    | 1.70      | 4.15           | 2.49       | 2.92                                 |
| Asset-2    | 0.17      | 0.49           | 0.32       | 0.33                                 |

3.6.30 The Commission while approving the Departmental Charges has considered the minimum of the actual departmental charges and normative charges determined in accordance with the standard provisions of DPR (11% of hard cost). Accordingly, the Departmental Charges for both the assets are approved as follows:

**Table 19: Approved DC (INR Cr.)**

| Particular | Normative<br>(11% of Hard Cost - A) | Claimed/Actual<br>as on COD<br>(B) | Approved<br>(Min. of A&B) |
|------------|-------------------------------------|------------------------------------|---------------------------|
| Asset-1    | 3.99                                | 2.33                               | 2.33                      |
| Asset-2    | 1.55                                | 0.64                               | 0.64                      |

3.6.31 In line with the Hard Cost, IDC and Departmental Charges approved in preceding sections, the approved project cost as on COD vis-à-vis the project cost claimed by the Petitioner for Asset-1 and Asset-2 is summarized in the following table:

**Table 20: Approved Capital Cost (INR Cr)**

| S. No. | Particulars          | Claimed      | Approved     |
|--------|----------------------|--------------|--------------|
|        | <b>Asset-1</b>       |              |              |
| 1)     | <b>Hard Cost</b>     | <b>33.14</b> | <b>33.14</b> |
| a)     | Supply               | 28.41        | 28.41        |
| b)     | Services             | 3.95         | 3.95         |
| c)     | Entry Tax            | 0.43         | 0.43         |
| d)     | Training Expenses    | 0.19         | 0.19         |
| e)     | Misc. Expenses       | 0.15         | 0.15         |
| 2)     | IDC                  | 4.15         | 2.92         |
| 3)     | Departmental Charges | 2.33         | 2.33         |
|        | <b>Total</b>         | <b>39.62</b> | <b>38.39</b> |
|        | <b>Asset-2</b>       |              |              |
| 1)     | <b>Hard Cost</b>     | <b>14.13</b> | <b>14.13</b> |
| a)     | Supply               | 11.19        | 11.19        |
| b)     | Services             | 2.94         | 2.94         |

| S. No. | Particulars          | Claimed      | Approved     |
|--------|----------------------|--------------|--------------|
| 2)     | IDC                  | 0.49         | 0.33         |
| 3)     | Departmental Charges | 0.64         | 0.64         |
|        | <b>Total</b>         | <b>15.26</b> | <b>15.09</b> |

### 3.7 Project Funding

#### Petitioner Submission

3.7.1 The Petitioner has quoted the Regulation 18 of the HPERC Transmission Tariff 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."*

3.7.2 For Asset-1, the Petitioner submitted that the asset has been financed from mix of debt and equity with debt sourced from ADB with the disbursement being done by GoHP. Total debt of INR 29.74 Cr. is 75.06% of the cost and total equity amounting to INR 9.88 Cr. corresponding to 24.94% of the project cost has been utilized to fund Asset-1 as on COD. As the equity infused by the Petitioner is well within the normative equity of 30% allowed under the HPERC Transmission Tariff Regulations, 2011, the Petitioner has considered actual Debt:Equity ratio of 75.06:24.94 for computing the components of ARR. The Debt: Equity ratio considered is as under:

**Table 21: Project funding proposed by Petitioner – Asset-1**

| Particulars         | Capital Cost<br>(As per DPR)<br>(INR Cr) | Actual Debt:<br>Equity Ratio | Actual Debt:<br>Equity Ratio<br>considered | Capital Cost<br>(As on COD)<br>(INR Cr) |
|---------------------|--|------------------------------|--|---|
| Debt                | 29.30                                    | 75.06%                       | 75.06%                                     | 29.74                                   |
| Equity              | 12.56                                    | 24.94%                       | 24.94%                                     | 9.88                                    |
| <b>Project Cost</b> | <b>41.85</b>                             | <b>100.00%</b>               | <b>100.00%</b>                             | <b>39.62</b>                            |

3.7.3 With regards to Asset-2, the Petitioner submitted that the project is funded through loan from KfW, grant from MNRE-NCEF and equity.

- 3.7.4 The KfW debt amounts to INR 5.65 Cr. which is 37.04% of the project cost and equity amounting to INR 3.95 Cr., which corresponds to 25.90% of the project cost has been utilized to fund the asset as on COD.
- 3.7.5 In addition to above, the Petitioner has received grant from MNRE-NCEF of INR 5.65 Cr till CoD. As the equity infused is well within the normative equity range of 30% allowed under the HPERC Transmission Tariff Regulations, 2011, the Petitioner has considered actual debt and equity amount for computing the components of ARR for Asset-2. The Debt, Equity and grant component in the Capital Cost considered is as under:

**Table 22: Project funding proposed by Petitioner – Asset-2**

| Particulars         | Capital Cost<br>(As per DPR)<br>(INR Cr) | Actual Debt:<br>Equity Ratio | Actual Debt:<br>Equity Ratio<br>considered | Capital Cost<br>(As on COD)<br>(INR Cr) |
|---------------------|--|------------------------------|--|---|
| Grant               | 10.00                                    | 40.00%                       | 37.05%                                     | 5.65                                    |
| Debt                | 10.00                                    | 40.00%                       | 37.05%                                     | 5.65                                    |
| Equity              | 5.00                                     | 20.00%                       | 25.90%                                     | 3.95                                    |
| <b>Project Cost</b> | <b>25.00</b>                             | <b>100.00%</b>               | <b>100.00%</b>                             | <b>15.26</b>                            |

**Commission's Analysis**

- 3.7.6 The Commission has examined the information and various documents submitted by the Petitioner with regards to the funding of both the assets. It is observed that although the loan for Asset-1 was secured from ADB and for Asset-2 from KfW, GoHP acts as the nodal agency. The loan granted by both the agencies to GoHP has been transferred to the Petitioner which is the designated implementing agency for the transmission projects.
- 3.7.7 The Asset-1 was originally envisaged at a debt: equity ratio of 80:20 as provided in the DPR against which the Petitioner has claimed a higher equity infusion. 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 80:20 for Asset -1 for computation of IDC and components of the ARR. Further, as per submission of the Petitioner no grant has been provided for Asset-1.
- 3.7.8 With regards to Asset-2, the Petitioner has sourced debt from KfW with the disbursement being done by GoHP. Further, the Petitioner has received MNRE-NCEF grant for the asset. Balance amount has been reflected as equity by the Petitioner.
- 3.7.9 The Commission upon scrutiny of the loan agreement, sanction letter, actual disbursement, etc., observed that the grant and debt received against the asset is much higher than claimed thereby affecting the debt: equity ratio. As per the documents submitted by the Petitioner in response to the clarifications in this regard, a total grant of Rs. 6.98 Cr. was received by the Petitioner from

MNRE while a total debt amount of Rs. 7.36 Cr. was availed from KfW towards the asset.

- 3.7.10 The Commission sought justification for the same from the Petitioner. In absence of satisfactory response received on this account, the Commission is relying upon the documentary proofs submitted and approves the project funding as follows:

**Table 23: Project Funding approved vis-à-vis claimed**

| Particulars       | Claimed<br>(As on COD) |                | Approved<br>(As on COD) |                |
|-------------------|------------------------|----------------|-------------------------|----------------|
|                   | Capital Cost           | % of Funding   | Capital Cost            | % of Funding   |
| <b>Asset-1</b>    |                        |                |                         |                |
| Grant             | -                      | -              |                         |                |
| Debt              | 29.74                  | 75.06%         | 30.72                   | 80.00%         |
| Equity            | 9.88                   | 24.94%         | 7.68                    | 20.00%         |
| <b>Asset-2</b>    | <b>39.62</b>           | <b>100.00%</b> | <b>38.39</b>            | <b>100.00%</b> |
| Grant             | 5.65                   | 37.05%         | 6.98                    | 46.24%         |
| Debt              | 5.65                   | 37.05%         | 7.36                    | 48.76%         |
| Equity            | 3.95                   | 25.90%         | 0.76                    | 5.01%          |
| <b>Total Cost</b> | <b>15.26</b>           | <b>100.00%</b> | <b>15.09</b>            | <b>100.00%</b> |

- 3.7.11 Further, the Petitioner has claimed payments made post COD as additional capitalisation as discussed in next section. The Commission has considered the same as part of the capital cost and derived the overall capital cost as on 31.03.2020 and not as part of the additional capex due to its inherent nature.

### 3.8 Additional Capitalisation

#### Petitioner Submission

- 3.8.1 The Petitioner submitted that, in Asset-1, additional capitalization of INR 4.66 Cr has been incurred post COD till 31<sup>st</sup> Mar, 2020 considered as completed capital cost of the Asset-1. These works are majorly related to Civil works, training expenses, testing charges, supporting material supplies, IDC and Departmental Charges as shown in the following table:

**Table 24: Additional Capitalisation – Asset-1 (INR Cr)**

| Particulars               | Additional Capitalization from<br>COD till 31.03.2020 |
|---------------------------|---|
| Erection/Civil Works      | 2.91  |
| Material Supplies         | 0.13  |
| Training Expenses         | 0.05  |
| Testing Charges           | 0.03  |
| IDC                       | 1.53  |
| <b>Total project Cost</b> | <b>4.66</b>   |



- 3.8.2 Further with respect to Asset-2, the Petitioner submitted that additional capitalization of INR 0.29 Cr has been incurred post COD till 31<sup>st</sup> Mar, 2021. This increase is on account of IDC (INR 0.24 Cr) and Departmental Charges (INR 0.05 Cr).
- 3.8.3 The Petitioner further submitted that an additional capitalization of INR 2.04 Cr is proposed towards Asset-2 in FY 2021-22 towards payment of tentative pending bills of contractor.

### Commission's Analysis

- 3.8.4 The Commission in order to approve the additional capitalisation for each year sought relevant documents from the Petitioner in support of its claim.
- 3.8.5 With regards to Asset-1, the additional capex/capitalisation proposed in FY 2019-20 is towards the balance payments made to the contractors against the original scope of work. With regards to IDC, the Commission believes that the Petitioner's claim of IDC post COD is unwarranted as IDC as the name suggests, is applicable during the time of construction until the time of COD of the project. Hence, the Commission disallows the Petitioner's claim of IDC post COD as part of additional capitalisation. The IDC approved for the project has been discussed above in the relevant section of this Order.
- 3.8.6 Similarly for Asset-2, additional capitalisation claimed is on account of IDC and Departmental charges from COD till 31<sup>st</sup> Mar, 2020. The same has not been allowed and the overall IDC and DC for Asset-2 has been considered as per computation in relevant section of this order. Further, the Commission believes that the balance payments to contractor has not been made till date. The same shall be undertaken at the time of true-up based on actual expenditure and prudence check.
- 3.8.7 The following table summarises the additional capitalisation claimed and now approved by the Commission for both the assets.

**Table 25: Approved Additional Capitalisation (INR Cr)**

| Particulars                                | Claimed     | Approved    |
|--|-------------|-------------|
| <b>Asset-1</b>                             |             |             |
| Erection/Civil Works                       | 2.91        | 2.91        |
| Material Supplies                          | 0.13        | 0.13        |
| Training Expenses                          | 0.05        | 0.05        |
| Testing Charges                            | 0.03        | 0.03        |
| IDC  | 1.53        | -           |
| <b>Additional Capitalisation – Asset-1</b> | <b>4.66</b> | <b>3.12</b> |
| <b>Asset-2</b>                             |             |             |
| IDC  | 0.24        | -           |
| Departmental Charges                       | 0.05        | -           |
| <b>Additional Capitalisation – Asset-2</b> | <b>0.29</b> | -           |

- 3.8.8 The funding of the above approved additional capitalization for Asset-1 has been considered as per the overall approved funding of the project i.e. 80:20 debt: equity ratio 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 in accordance with the HPERC Transmission Tariff Regulations, 2011 and its subsequent amendments. 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 Tariff Regulations, 2011, Capital cost certificate by statutory auditor, CERC (Terms and Conditions of Tariff) Regulations, 2019 and approved capital expenditure and funding plan for the both Asset-1 and Asset-2 and accordingly approved the ARR for each year.

4.1.3 In this chapter, the Commission has discussed the methodology for computing each component of the ARR including O&M expenses, interest on loan, depreciation, return on equity, working capital requirement and interest, etc. for approving the total ARR for each year from COD till FY 2023-24. The methodology followed and approved values for each component of the ARR is detailed in the subsequent sections.

### 4.2 Depreciation

#### Petitioner Submission

4.2.1 The Petitioner has submitted the depreciation for each year of the control period for both Asset-1 and Asset-2 in accordance with the Regulation 23 of the HPERC Transmission Tariff Regulations, 2011 and its subsequent amendments based on the actual capital cost.

4.2.2 In accordance with the Regulations, the depreciation for each year has been estimated as shown in the following table:

**Table 26: Depreciation claimed by Petitioner (INR Lakh)**

| Particulars    | FY20 | FY21 | FY22 | FY23 | FY24 |
|----------------|------|------|------|------|------|
| <b>Asset-1</b> |      |      |      |      |      |

| Particulars          | FY20           | FY21          | FY22          | FY23          | FY24          |
|----------------------|----------------|---------------|---------------|---------------|---------------|
| Opening GFA          | 3,962.18       | 4,428.08      | 4,428.08      | 4,428.08      | 4,428.08      |
| Addition             | 465.90         | -             | -             | -             | -             |
| Less: Grant          | -              | -             | -             | -             | -             |
| Closing GFA          | 4,428.08       | 4,428.08      | 4,428.08      | 4,428.08      | 4,428.08      |
| Average GFA          | 4,195.13       | 4,428.08      | 4,428.08      | 4,428.08      | 4,428.08      |
| Less: Freehold Land  | -              | -             | -             | -             | -             |
| Depreciable Value    | 4,195.13       | 4,428.08      | 4,428.08      | 4,428.08      | 4,428.08      |
| Rate of Depreciation | 5.10%          | 5.11%         | 5.11%         | 5.11%         | 5.11%         |
| <b>Depreciation</b>  | <b>129.17*</b> | <b>226.22</b> | <b>226.22</b> | <b>226.22</b> | <b>226.22</b> |
| <b>Asset-2</b>       |                |               |               |               |               |
| Opening GFA          |                | 1,525.59      | 1,555.74      | 1,759.73      | 1,759.73      |
| Addition             |                | 30.15         | 203.99        | -             | -             |
| Less: Grant          |                | 565.20        | 565.20        | 565.20        | 565.20        |
| Closing GFA          |                | 990.54        | 1,194.53      | 1,194.53      | 1,194.53      |
| Average GFA          |                | 975.47        | 1,092.54      | 1,194.53      | 1,194.53      |
| Less: Freehold Land  |                | -             | -             | -             | -             |
| Depreciable Value    |                | 975.47        | 1,092.54      | 1,194.53      | 1,194.53      |
| Rate of Depreciation |                | 4.91%         | 4.95%         | 4.98%         | 4.98%         |
| <b>Depreciation</b>  |                | <b>22.97*</b> | <b>54.10</b>  | <b>59.48</b>  | <b>59.48</b>  |

\*Asset-1: Depreciation pro-rated for FY 2019-20 based on COD (24<sup>th</sup> Aug, 2019)

Asset-2: Depreciation pro-rated for FY 2020-21 based on COD (8<sup>th</sup> Oct, 2020)

### Commission's Analysis

4.2.3 The Commission has approved the depreciation in line with provisions of the Regulation 23 of the HPERC Transmission Tariff Regulations, 2011 read 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."*

4.2.4 The Commission has examined the depreciation proposed by the Petitioner in detail for each year. The Commission has arrived on Gross Fixed Assets (GFA) for each year based on the capital cost and year wise capitalisation approved in the previous Chapter.

4.2.5 The Commission has determined the weighted average depreciation rate for both the assets based on the asset wise breakup provided by the Petitioner. Accordingly, the weighted average depreciation rate has been considered for the purpose of estimation of depreciation for each year. The actual depreciation shall be allowed at the weighted average depreciation rates as per norms approved in the HPERC Transmission Tariff Regulations, 2011 at the time of true-up.

4.2.6 The yearly depreciation approved from COD to FY 2023-24 is summarized in the table below:

**Table 27: Depreciation approved by Commission (INR Lakh)**

| Particulars                   | FY20           | FY21          | FY22          | FY23          | FY24          |
|-------------------------------|----------------|---------------|---------------|---------------|---------------|
| <b>Asset-1</b>                |                |               |               |               |               |
| Opening GFA                   | 3,839.49       | 4,151.49      | 4,151.49      | 4,151.49      | 4,151.49      |
| Addition                      | 312.00         | -             | -             | -             | -             |
| Less: Grant                   | -              | -             | -             | -             | -             |
| Less: Freehold Land           | -              | -             | -             | -             | -             |
| Depreciable Value             | 4,151.49       | 4,151.49      | 4,151.49      | 4,151.49      | 4,151.49      |
| Rate of Depreciation          | 5.10%          | 5.10%         | 5.10%         | 5.10%         | 5.10%         |
| <b>Depreciation – Asset-1</b> | <b>122.94*</b> | <b>211.56</b> | <b>211.56</b> | <b>211.56</b> | <b>211.56</b> |
| <b>Asset-2</b>                |                |               |               |               |               |
| Opening GFA                   |                | 1,509.50      | 811.54        | 811.54        | 811.54        |

| Particulars                   | FY20          | FY21          | FY22          | FY23          | FY24          |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|
| Addition                      |               | -             | -             | -             | -             |
| Less: Grant                   |               | 697.96        | -             | -             | -             |
| Less: Freehold Land           |               | -             | -             | -             | -             |
| Depreciable Value             |               | 811.54        | 811.54        | 811.54        | 811.54        |
| Rate of Depreciation          |               | 4.91%         | 4.91%         | 4.91%         | 4.91%         |
| <b>Depreciation – Asset-2</b> |               | <b>9.55*</b>  | <b>39.82</b>  | <b>39.82</b>  | <b>39.82</b>  |
| <b>Total Depreciation</b>     | <b>122.94</b> | <b>221.10</b> | <b>251.38</b> | <b>251.38</b> | <b>251.38</b> |

\*Asset-1: Depreciation expense pro-rated for FY 2019-20 based on COD (i.e. 24<sup>th</sup> Aug, 2019)

\*Asset-2: Depreciation expense pro-rated for FY 2020-21 based on COD (i.e. 8<sup>th</sup> Oct, 2020)

### 4.3 Interest on Loan

#### Petitioner Submission

- 4.3.1 The Petitioner has submitted the interest on loan in accordance with the Regulation 20 of the HPERC Transmission Tariff Regulations, 2011 and its subsequent amendments.
- 4.3.2 The Petitioner for calculation of tariff of Asset-1 has considered the opening value of loan as on COD as actual loan amounting to 75.06% of the total project cost i.e. INR 29.73 Cr and actual loan addition of INR 6.14 Cr during the period from COD till 31<sup>st</sup> Mar, 2020.
- 4.3.3 The Petitioner has considered the interest rate of 10% as per the ADB Loan Agreement read with lending agreement with GoHP.
- 4.3.4 Further with respect to repayment of the loan, the Petitioner vide letter dated 25<sup>th</sup> Mar, 2021 has requested the GoHP for deferment of payment of principal and of interest of loan amount and extension of moratorium period by 5 years. In the absence of any actual repayment, for the purpose of working out the Interest on Loan, the repayment has been considered equal to Depreciation charged during each year of the Control Period for calculation of Interest on Loan.
- 4.3.5 For Asset-2, the Petitioner has considered the opening value of loan as on COD as actual loan amounting to 37.05% of the total project cost i.e. INR 5.65 Cr and normative loan addition of INR 1.43 Cr during FY 2021-22.
- 4.3.6 The Petitioner has considered the interest rate of 10% as per the KfW Loan Agreement read with lending agreement with GoHP.
- 4.3.7 The Petitioner has considered repayment of loan equivalent to the depreciation proposed for the year. The computation of Interest on Loan for both the assets has been provided in the following table:

**Table 28: Interest on Loan claimed by Petitioner (INR Lakh)**

| Particulars             | FY20           | FY21          | FY22          | FY23          | FY24          |
|-------------------------|----------------|---------------|---------------|---------------|---------------|
| <b>Asset-1</b>          |                |               |               |               |               |
| Opening Balance         | 2,973.99       | 3,358.45      | 3,132.22      | 2,906.00      | 2,679.78      |
| Addition                | 598.38         | -             | -             | -             | -             |
| Repayment               | 213.92         | 226.22        | 226.22        | 226.22        | 226.22        |
| Closing Balance         | 3,358.45       | 3,132.23      | 2,906.00      | 2,679.78      | 2,453.56      |
| Rate of Interest (%)    | 10.00%         | 10.00%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Loan</b> | <b>191.18*</b> | <b>324.53</b> | <b>301.91</b> | <b>279.29</b> | <b>256.67</b> |
| <b>Asset-2</b>          |                |               |               |               |               |
| Opening Balance         |                | 565.20        | 538.39        | 627.08        | 567.64        |
| Addition                |                | 21.11         | 142.79        | -             | -             |
| Repayment               |                | 47.92         | 54.10         | 59.48         | 59.48         |
| Closing Balance         |                | 538.41        | 627.12        | 567.64        | 508.15        |
| Rate of Interest (%)    |                | 10.00%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Loan</b> |                | <b>26.46*</b> | <b>58.27</b>  | <b>59.73</b>  | <b>53.79</b>  |

\*Asset-1: Interest on Loan pro-rated for FY 2019-20 based on COD (24<sup>th</sup> Aug, 2019)

Asset-2: Interest on Loan pro-rated for FY 2020-21 based on COD (8<sup>th</sup> Oct, 2020)

### Commission's Analysis

4.3.8 The Commission has considered the loan amount in line with the funding approved for the project in the previous chapter.

4.3.9 Regulation 20 of the HPERC Transmission Tariff Regulations, 2011 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."*



- 4.3.10 The Commission has approved the Interest on Loan in accordance with the HPERC Transmission Tariff Regulations, 2011. Further, normative repayment equivalent to the depreciation worked out for the respective year has been considered in line with the provisions of HPERC Transmission Tariff Regulations, 2011 for computing the opening and closing loan balances for each year.
- 4.3.11 The rate of interest has been considered based on the Petitioner's submission and interest rates agreed upon by ADB/KfW/GoHP with HPPTCL based on the loan documents shared.
- 4.3.12 It is observed that the rate of interest charged from the Petitioner by the GoHP is 10% and is higher than the rate of interest agreed with the ADB/KfW for Asset-1. The Petitioner against this submitted that the GoHP levies interest rate at 10% on all loans funded by ADB/KfW as per the agreement entered by the GoHP with HPPTCL. The ADB/KfW provides loan to GoHP which is further 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 other domestic sources and therefore approves the same for tariff determination.
- 4.3.13 The lending rates being charged by the agencies i.e. ADB and KfW for the transmission projects to GoHP has been much lower to that charged by GoHP to HPPTCL. 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/KfW. 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 the State of Himachal Pradesh as a whole.
- 4.3.14 The following table provides the Interest on Loan approved by the Commission for each year:

**Table 29: Interest on Loan approved by Commission (INR Lakh)**

| Particulars                       | FY20           | FY21          | FY22          | FY23          | FY24          |
|-----------------------------------|----------------|---------------|---------------|---------------|---------------|
| <b>Asset-1</b>                    |                |               |               |               |               |
| Opening Balance                   | 3,071.59       | 3,198.25      | 2,986.69      | 2,775.14      | 2,563.58      |
| Addition                          | 249.60         | -             | -             | -             | -             |
| Repayment                         | 122.94         | 211.56        | 211.56        | 211.56        | 211.56        |
| Closing Balance                   | 3,198.25       | 2,986.69      | 2,775.14      | 2,563.58      | 2,352.02      |
| Rate of Interest (%)              | 10.00%         | 10.00%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Loan – Asset-1</b> | <b>189.29*</b> | <b>309.25</b> | <b>288.09</b> | <b>266.94</b> | <b>245.78</b> |
| <b>Asset-2</b>                    |                |               |               |               |               |
| Opening Balance                   |                | 735.97        | 726.42        | 686.61        | 646.79        |
| Addition                          |                | -             | -             | -             | -             |
| Repayment                         |                | 9.55          | 39.82         | 39.82         | 39.82         |

| Particulars                       | FY20          | FY21          | FY22          | FY23          | FY24          |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|
| Closing Balance                   |               | 726.42        | 686.61        | 646.79        | 606.97        |
| Rate of Interest (%)              |               | 10.00%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Loan – Asset-2</b> |               | <b>35.06*</b> | <b>70.65</b>  | <b>66.67</b>  | <b>62.69</b>  |
| <b>Total Interest on Loan</b>     | <b>189.29</b> | <b>344.30</b> | <b>358.74</b> | <b>333.61</b> | <b>308.47</b> |

\*Asset-1: Interest on Loan pro-rated for FY 2019-20 based on COD (i.e. 24<sup>th</sup> Aug, 2019)

\*Asset-2: Interest on Loan pro-rated for FY 2020-21 based on COD (i.e. 8<sup>th</sup> Oct, 2020)

#### 4.4 Return on Equity

##### Petitioner Submission

4.4.1 The Petitioner has submitted that normative equity of INR 9.88 Cr has been infused till the CoD of Asset-1 and INR 3.65 Cr till COD of Asset-2 and the Petitioner has taken into account the refinancing of equity on actual basis with loan during the period from COD till 31 Mar, 2020. The Petitioner has not considered any income tax expense while claiming the RoE and has asked to consider the same as per actuals at the time of true-up.

4.4.2 The RoE proposed by the Petitioner for each year is summarised in the table as follows:

**Table 30: RoE claimed by Petitioner (INR Lakh)**

| Particulars             | FY20          | FY21          | FY22          | FY23          | FY24          |
|-------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Asset-1</b>          |               |               |               |               |               |
| Opening Equity          | 988.19        | 855.71        | 855.71        | 855.71        | 855.71        |
| Addition                | (132.48)      | -             | 103.94        | -             | -             |
| Closing Equity          | 855.71        | 855.71        | 959.65        | 855.71        | 855.71        |
| RoE (%)                 | 15.50%        | 15.50%        | 15.50%        | 15.50%        | 15.50%        |
| <b>Return on Equity</b> | <b>86.29*</b> | <b>132.64</b> | <b>140.69</b> | <b>132.64</b> | <b>132.64</b> |
| <b>Asset-2</b>          |               |               |               |               |               |
| Opening Equity          |               | 395.19        | 404.24        | 465.44        | 465.44        |
| Addition                |               | 9.05          | 61.20         | -             | -             |
| Closing Equity          |               | 404.24        | 465.44        | 465.44        | 465.44        |
| RoE (%)                 |               | 15.50%        | 15.50%        | 15.50%        | 15.50%        |
| <b>Return on Equity</b> |               | <b>29.70*</b> | <b>67.40</b>  | <b>72.14</b>  | <b>72.14</b>  |

\*Asset-1: Return on Equity pro-rated for FY 2019-20 based on COD (24<sup>th</sup> Aug, 2019)

Asset-2: Return on Equity pro-rated for FY 2020-21 based on COD (8<sup>th</sup> Oct, 2020)

##### Commission's Analysis

4.4.3 Regulation 19 of the HPERC Transmission Tariff 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 trued 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."

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

4.4.5 The Commission has considered the rate of return @15.50% for approval of RoE for the Control Period. In case of any extraordinary tax liability arising on the Petitioner during the Control Period, it may be recovered directly from the beneficiary at the effective tax rate applicable to the Petitioner at the end of the year with the detailed calculation to be submitted to the Commission. Nonetheless, the RoE shall be trued up at the end of Control Period based on effective tax rate/ liability.

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

**Table 31: RoE approved by Commission (INR Lakh)**

| Particulars                       | FY20          | FY21          | FY22          | FY23          | FY24          |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Asset-1</b>                    |               |               |               |               |               |
| Opening Equity                    | 767.90        | 830.30        | 830.30        | 830.30        | 830.30        |
| Addition                          | 62.40         | -             | -             | -             | -             |
| Closing Equity                    | 830.30        | 830.30        | 830.30        | 830.30        | 830.30        |
| RoE (%)                           | 15.50%        | 15.50%        | 15.50%        | 15.50%        | 15.50%        |
| <b>Return on Equity – Asset-1</b> | <b>74.79*</b> | <b>128.70</b> | <b>128.70</b> | <b>128.70</b> | <b>128.70</b> |
| <b>Asset-2</b>                    |               |               |               |               |               |
| Opening Equity                    |               | 75.57         | 75.57         | 75.57         | 75.57         |
| Addition                          |               | -             | -             | -             | -             |
| Closing Equity                    |               | 75.57         | 75.57         | 75.57         | 75.57         |

| Particulars                       | FY20         | FY21          | FY22          | FY23          | FY24          |
|-----------------------------------|--------------|---------------|---------------|---------------|---------------|
| RoE (%)                           |              | 15.50%        | 15.50%        | 15.50%        | 15.50%        |
| <b>Return on Equity – Asset-2</b> |              | <b>5.62*</b>  | <b>11.71</b>  | <b>11.71</b>  | <b>11.71</b>  |
| <b>Total Return on Equity</b>     | <b>74.79</b> | <b>134.31</b> | <b>140.41</b> | <b>140.41</b> | <b>140.41</b> |

\*Asset-1: Return on Equity pro-rated for FY 2019-20 based on COD (24<sup>th</sup> Aug, 2019)

Asset-2: Return on Equity pro-rated for FY 2020-21 based on COD (8<sup>th</sup> Oct, 2020)

## 4.5 O&M Expenses

### Petitioner Submission

4.5.1 The Petitioner submitted that as per HPERC Transmission Tariff Regulations, 2011, Operation and Maintenance Expense is 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>) × (CPIinflation)] + Provision (Emp);*

*'A&G<sub>n</sub>' = [(A&G<sub>n-1</sub>) × (WPIinflation)] + Provision(A&G);*

*'R&M<sub>n</sub>' = K × (GFA<sub>n-1</sub>) × (WPIinflation) ;*

*'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&Mn' – Repair and Maintenance costs of the transmission licensee for the nth year;*

*'GFAn-1' – Gross Fixed Asset of the transmission licensee for the n-1th year;*

*'Gn' - is a growth factor for the nth year. Value of Gn 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;*

- 4.5.2 The Petitioner has further submitted that the Asset-1 has achieved commercial operation in FY 2019-20 and actual O&M expenses as per audited accounts have been considered as O&M expenses for FY 2019-20. Further, R&M expenses have been considered based on the k factor submitted in the MYT petition of HPPTCL before the Commission and GFA as per actual cost of the project.
- 4.5.3 From FY 2020-21 onwards the Petitioner has used the actual expenses for FY 2019-20 as base and determined the Employee, A&G and R&M expenses in accordance with the HPERC Transmission Tariff Regulations, 2011.
- 4.5.4 In the FY 2021-22, the Petitioner has submitted that an additional expenditure of INR 3.46 Cr. towards leasing of land cost from BBMB, is to be incurred based on amount settlement with BBMB.
- 4.5.5 The Petitioner has further submitted that it is planning to comprehensively insure all the transmission infrastructure from all damages caused due to act of God, fire, theft etc. and intends to take comprehensive insurance of all the assets. And accordingly, the cost towards insurance has been considered as part of provisions.
- 4.5.6 The Petitioner also intends to train its manpower and therefore the training cost has been factored in based on the number of employees. The Petitioner has further included Tariff filing fees and Consultancy charges in the A&G Expenses for FY 2021-22.
- 4.5.7 For Asset-2, since the asset achieved COD in FY 2020-21 and in the absence of any actual O&M expenses available, the Petitioner has estimated the O&M expenses for each year of the control period in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2019.
- 4.5.8 The following table provides the O&M expenses claimed by the Petitioner:

**Table 32: O&M Expenses claimed by Petitioner (INR Lakh)**

| Particulars       | FY20  | FY21  | FY22  | FY23  | FY24  |
|-------------------|-------|-------|-------|-------|-------|
| <b>Asset-1</b>    |       |       |       |       |       |
| Employee Expenses | 24.74 | 76.74 | 80.85 | 85.17 | 89.73 |

| Particulars             | FY20          | FY21          | FY22          | FY23          | FY24          |
|-------------------------|---------------|---------------|---------------|---------------|---------------|
| A&G Expenses            | 0.3           | 79.33         | 81.68         | 84.09         | 86.58         |
| R&M Expenses            | 3.17          | 5.41          | 387.45        | 23.5          | 23.67         |
| <b>O&amp;M Expenses</b> | <b>28.21*</b> | <b>161.48</b> | <b>549.98</b> | <b>192.76</b> | <b>199.98</b> |
| <b>Asset-2</b>          |               |               |               |               |               |
| <b>O&amp;M Expenses</b> |               | <b>19.79*</b> | <b>42.74</b>  | <b>44.23</b>  | <b>45.80</b>  |

\*Asset-1: O&M expenses pro-rated for FY 2019-20 based on COD (24<sup>th</sup> Aug, 2019)

Asset-2: O&M expenses pro-rated for FY 2020-21 based on COD (8<sup>th</sup> Oct, 2020)

1. Expense towards Petition filing, insurance, training and consultancy included in A&G Expenses of Asset-1

### Commission's Analysis

4.5.9 The Commission has reviewed the submissions of the Petitioner. Considering that actual O&M expenses submitted are for partial year i.e. FY 2019-20 for Asset-1 and actual audited O&M expenses for sufficient number of years are not available for both Asset-1 and Asset-2, it is difficult to ascertain a realistic trend for O&M expenses for the upcoming years. In absence of any accurate benchmark, the Commission has relied upon the normative O&M expenses prescribed in the CERC (Terms and Conditions of Tariff) Regulations, 2019 for the purpose of year wise estimation of O&M expenses for the control period.

4.5.10 As the regulations provide for O&M expense based on voltage level, number of circuits and conductor size, the following norms have been considered as per the technical specifications of Asset-1 and Asset-2 for computation of O&M expense as per CERC (Terms and Conditions of Tariff) Regulations, 2019:

**Table 33: Normative O&M Expenses**

| Item             | Unit         | FY20  | FY21  | FY22  | FY23  | FY24  |
|------------------|--------------|-------|-------|-------|-------|-------|
| 400 kV           | INR Lakh/bay | 32.15 | 33.28 | 34.45 | 35.66 | 36.91 |
| 220 kV           | INR Lakh/bay | 22.51 | 23.30 | 24.12 | 24.96 | 25.84 |
| 132 kV and below | INR Lakh/bay | 16.08 | 16.64 | 17.23 | 17.83 | 18.46 |

4.5.11 Further, the CERC (Terms and Conditions of Tariff) Regulations, 2019 stipulates that O&M expenses for the GIS sub-station shall be allowed as worked out considering a factor of 0.70 over the normative O&M expenses for bays as provided in the table above.

4.5.12 Accordingly, the Commission has approved the O&M expenses for each year. Any variation in O&M expenses shall be reviewed and considered at the time of true-up.

4.5.13 The following table provides the O&M expenses approved by the Commission for each year:

**Table 34: O&M Expenses approved by Commission (INR Lakh)**

| Particulars                    | Unit | FY20 | FY21 | FY22 | FY23 | FY24 |
|--------------------------------|------|------|------|------|------|------|
| <b>Asset-1</b>                 |      |      |      |      |      |      |
| No. of Bays - 132 kV and below | No.  | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |

| Particulars                             | Unit             | FY20          | FY21          | FY22          | FY23          | FY24          |
|---|------------------|---------------|---------------|---------------|---------------|---------------|
| Bays norms                              | INR Lakh/bay     | 16.08         | 16.64         | 17.23         | 17.83         | 18.46         |
| GIS                                     | %                | 70%           | 70%           | 70%           | 70%           | 70%           |
| O&M Expenses - Sub Station (A)          | INR Lakhs        | 101.30        | 104.83        | 108.55        | 112.33        | 116.30        |
| Line Length                             | km               | 0.527         | 0.527         | 0.527         | 0.527         | 0.527         |
| Double Circuit (Single Conductor) Norms | INR Lakh/Km      | 0.38          | 0.39          | 0.40          | 0.42          | 0.43          |
| O&M Expenses – Line (B)                 | INR Lakhs        | 0.20          | 0.21          | 0.21          | 0.22          | 0.23          |
| <b>O&amp;M Expenses – Asset-1 (A+B)</b> | <b>INR Lakhs</b> | <b>61.29*</b> | <b>105.04</b> | <b>108.76</b> | <b>112.55</b> | <b>116.53</b> |
| <b>Asset-2</b>                          |                  |               |               |               |               |               |
| No. of Bays – 132 kV and below          | No.              |               | 2.00          | 2.00          | 2.00          | 2.00          |
| Bays norms                              | INR Lakh/bay     |               | 16.64         | 17.23         | 17.83         | 18.46         |
| Transformer Size – 132 kV and below     | MVA              |               | 31.50         | 31.50         | 31.50         | 31.50         |
| Norms                                   | INR Lakh/MVA     |               | 0.25          | 0.26          | 0.27          | 0.28          |
| GIS                                     | %                |               | 70%           | 70%           | 70%           | 70%           |
| <b>O&amp;M Expenses – Asset-2</b>       | <b>INR Lakhs</b> |               | <b>13.85*</b> | <b>29.92</b>  | <b>30.96</b>  | <b>32.06</b>  |
| <b>Total O&amp;M Expenses</b>           | <b>INR Lakhs</b> | <b>61.29</b>  | <b>118.89</b> | <b>138.68</b> | <b>143.51</b> | <b>148.59</b> |

\*Asset-1: O&M expenses pro-rated for FY 2019-20 based on COD (i.e. 24<sup>th</sup> Aug, 2019)

\*Asset-2: O&M Expenses pro-rated for FY 2020-21 based on COD (i.e. 8<sup>th</sup> Oct, 2020)

- 4.5.14 With regards to expenditure towards rent of leased land as proposed to be incurred in FY 2021-22, the Commission is of the view that the same shall be allowed at the time of true-up based on the actual expenditure incurred by the Petitioner and prudence check.
- 4.5.15 The CERC norms for O&M expenditure do not provide for any additional provision for expenditure towards insurance, consultancy charges, petition filing fees, manpower training, etc. Hence, no additional expenses pertaining to the same have been allowed.
- 4.5.16 The Petitioner is directed to undertake necessary insurance cover for the transmission line at the earliest. Any additional expenditure on account of the same shall be analysed at the time of true-up as per the submissions of the Petitioner and prudence check.

#### 4.6 Interest on Working Capital (IoWC)

##### Petitioner Submission

- 4.6.1 The Petitioner has computed interest on working capital as per Regulation 21 and 22 of the HPERC Transmission Tariff Regulations, 2011 and its subsequent amendments thereof.
- 4.6.2 The Petitioner has calculated the interest on working capital considering prevalent SBI MCLR as on 1<sup>st</sup> April, 2019, 1<sup>st</sup> April, 2020 and 1<sup>st</sup> April, 2021 for FY 2019-20, FY 2020-21 and FY 2021-22 plus 300 basis points. SBI MCLR as on 1<sup>st</sup> April 2021 has been considered for the remaining period.



4.6.3 In accordance with the above regulations the interest on working capital claimed is shown as follows:

**Table 35: Interest on Working Capital claimed by Petitioner (INR Lakh)**

| Particulars                                      | FY20          | FY21          | FY22          | FY23          | FY24          |
|--|---------------|---------------|---------------|---------------|---------------|
| <b>Asset-1</b>                                   |               |               |               |               |               |
| O&M Expenses for 1 month                         | 3.89          | 13.46         | 45.83         | 16.06         | 16.67         |
| Maintenance Spares (at 15% monthly O&M Expenses) | 0.01          | 2.02          | 6.87          | 2.41          | 2.50          |
| Receivables for 2 months                         | 122.46        | 143.66        | 206.10        | 141.15        | 138.55        |
| <b>Total Working Capital</b>                     | <b>126.36</b> | <b>159.14</b> | <b>258.80</b> | <b>159.62</b> | <b>157.72</b> |
| Interest Rate (%)                                | 11.55%        | 10.75%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Working Capital</b>               | <b>8.81*</b>  | <b>17.11</b>  | <b>25.88</b>  | <b>15.96</b>  | <b>15.77</b>  |
| <b>Asset-2</b>                                   |               |               |               |               |               |
| O&M Expenses for 1 month                         |               | 3.44          | 3.56          | 3.69          | 3.82          |
| Maintenance Spares (at 15% monthly O&M Expenses) |               | 0.52          | 0.53          | 0.55          | 0.57          |
| Receivables for 2 months                         |               | 35.09         | 37.78         | 40.00         | 39.26         |
| <b>Total Working Capital</b>                     |               | <b>39.05</b>  | <b>41.87</b>  | <b>44.24</b>  | <b>43.65</b>  |
| Interest Rate (%)                                |               | 10.75%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Working Capital</b>               |               | <b>2.01*</b>  | <b>4.19</b>   | <b>4.42</b>   | <b>4.37</b>   |

\*Asset-1: IoWC pro-rated for FY 2019-20 based on COD (i.e. 24<sup>th</sup> Aug, 2019)

\*Asset-2: IoWC pro-rated for FY 2020-21 based on COD (i.e. 8<sup>th</sup> Oct, 2020)

### Commission's Analysis

4.6.4 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 Tariff Regulations, 2011.

4.6.5 The relevant clause of the regulation is provided 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 @ 40% 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.”*

4.6.6 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 of each year plus 300 basis points for FY 2019-20, FY 2020-21, FY 2021-22 and FY 2022-23. For FY 2023-24, SBI MCLR as on 1<sup>st</sup> April, 2022 plus 300 basis points has been considered.

4.6.7 The computation for approved working capital requirement and interest on working capital is shown in the table as follows:

**Table 36: Interest on Working Capital approved by Commission (INR Lakh)**

| Particulars                                      | FY20         | FY21          | FY22          | FY23          | FY24          |
|--|--------------|---------------|---------------|---------------|---------------|
| <b>Asset-1</b>                                   |              |               |               |               |               |
| O&M Expenses for 1 month                         | 5.11         | 8.75          | 9.06          | 9.38          | 9.71          |
| Maintenance Spares (at 15% monthly O&M Expenses) | 0.77         | 1.31          | 1.36          | 1.41          | 1.46          |
| Receivables for 2 months                         | 76.30        | 128.23        | 125.11        | 122.17        | 119.27        |
| <b>Total Working Capital</b>                     | <b>82.18</b> | <b>138.30</b> | <b>135.53</b> | <b>132.96</b> | <b>130.43</b> |
| Interest Rate (%)                                | 11.55%       | 10.75%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Working Capital – Asset-1</b>     | <b>9.49*</b> | <b>14.87</b>  | <b>13.55</b>  | <b>13.30</b>  | <b>13.04</b>  |
| <b>Asset-2</b>                                   |              |               |               |               |               |
| O&M Expenses for 1 month                         |              | 1.15          | 2.49          | 2.58          | 2.67          |
| Maintenance Spares (at 15% monthly O&M Expenses) |              | 0.17          | 0.37          | 0.39          | 0.40          |
| Receivables for 2 months                         |              | 10.90         | 25.83         | 25.33         | 24.85         |
| <b>Total Working Capital</b>                     |              | <b>12.23</b>  | <b>28.70</b>  | <b>28.30</b>  | <b>27.92</b>  |
| Interest Rate (%)                                |              | 10.75%        | 10.00%        | 10.00%        | 10.00%        |
| <b>Interest on Working Capital – Asset-2</b>     |              | <b>1.31*</b>  | <b>2.87</b>   | <b>2.83</b>   | <b>2.79</b>   |
| <b>Total interest on Working Capital</b>         | <b>9.49</b>  | <b>16.18</b>  | <b>16.42</b>  | <b>16.13</b>  | <b>15.84</b>  |

\*Asset-1: IoWC pro-rated for FY 2019-20 based on COD (i.e. 24<sup>th</sup> Aug, 2019)

\*Asset-2: IoWC pro-rated for FY 2020-21 based on COD (i.e. 8<sup>th</sup> Oct, 2020)

## 4.7 Aggregate Revenue Requirement

### Petitioner Submission

4.7.1 The table given below summarizes the proposed Aggregate Revenue Requirement for each year from COD to FY 2023-24 as claimed by the Petitioner.

**Table 37: Summary of ARR claimed by Petitioner (INR Lakh)**

| Particulars                 | FY20           | FY21           | FY22           | FY23          | FY24          |
|-----------------------------|----------------|----------------|----------------|---------------|---------------|
| <b>Asset-1</b>              |                |                |                |               |               |
| Depreciation                | 129.17         | 226.22         | 226.22         | 226.22        | 226.22        |
| Interest on Loan            | 191.18         | 324.53         | 301.91         | 279.29        | 256.67        |
| Return on Equity            | 86.29          | 132.64         | 132.64         | 132.64        | 132.64        |
| O&M Expenses                | 28.21          | 161.48         | 549.97         | 192.77        | 199.98        |
| Interest on Working Capital | 8.81           | 17.11          | 25.88          | 15.96         | 15.77         |
| <b>ARR – Asset - 1</b>      | <b>443.67*</b> | <b>861.98</b>  | <b>1236.62</b> | <b>846.88</b> | <b>831.28</b> |
| <b>Asset-2</b>              |                |                |                |               |               |
| Depreciation                |                | 22.97          | 54.10          | 59.48         | 59.48         |
| Interest on Loan            |                | 26.46          | 58.27          | 59.73         | 53.79         |
| Return on Equity            |                | 29.70          | 67.40          | 72.14         | 72.14         |
| O&M Expenses                |                | 19.79          | 42.74          | 44.23         | 45.80         |
| Interest on Working Capital |                | 2.01           | 4.19           | 4.42          | 4.37          |
| <b>ARR – Asset - 2</b>      |                | <b>100.94*</b> | <b>226.70</b>  | <b>240.01</b> | <b>235.58</b> |

\*Asset-1: ARR pro-rated for FY 2019-20 based on COD (i.e. 24<sup>th</sup> Aug, 2019)

\*Asset-2: ARR pro-rated for FY 2020-21 based on COD (i.e. 8<sup>th</sup> Oct, 2020)

### Commission's Analysis

4.7.2 Based on the discussions in sections above, the summary of the Aggregate Revenue Requirement (ARR) consolidated for Asset-1 and Asset-2 combined approved by the Commission for each year is summarised in the table as follows:

**Table 38: Summary of Consolidated ARR approved by Commission (INR Lakh)**

| Particulars                 | FY20          | FY21          | FY22          | FY23          | FY24          |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|
| Depreciation                | 122.94        | 221.10        | 251.38        | 251.38        | 251.38        |
| Interest on Loan            | 189.29        | 344.30        | 358.74        | 333.61        | 308.47        |
| Return on Equity            | 74.79         | 134.31        | 140.41        | 140.41        | 140.41        |
| O&M Expenses                | 61.29         | 118.89        | 138.68        | 143.51        | 148.59        |
| Interest on Working Capital | 9.49          | 16.18         | 16.42         | 16.13         | 15.84         |
| <b>Total ARR</b>            | <b>457.81</b> | <b>834.79</b> | <b>905.63</b> | <b>885.03</b> | <b>864.68</b> |

## 4.8 Transmission Charges

### Petitioner Submission

- 4.8.1 The Petitioner has requested the recovery of ARR from HPSEBL along with carrying cost.
- 4.8.2 The Petitioner further submitted that in absence of any tariff, the Petitioner is facing financial hardship in the upkeep of the asset. Therefore, the Commission may approve an interim tariff @ 90% of the proposed annual transmission charges that can be recovered from the beneficiaries till the final tariff of the asset is issued by the Commission. The amount collected from the interim tariff for the said asset from the beneficiary will be adjusted after the issuance of the final tariff order. The above principle of approving interim tariff is in line with that adopted by Hon'ble CERC while approving interim tariff for transmission assets.

### Commission's Analysis

- 4.8.3 The Commission sought information with regards to existing and future beneficiaries of both the assets along with the signed TSAs as documentary evidence. In response, the Petitioner submitted that there is presently only one beneficiary of both the assets i.e. HPSEBL and signing of TSA is under progress. No reply was received regarding future beneficiaries of the system.
- 4.8.4 From the review of the DPR, it is inferred that both the assets were envisaged for evacuation of generation capacity of ~54 MW in the Pandoh valley. By creating the pooling sub-station, it was envisaged that the mesh of wire shall be avoided and the power after pooling at Pandoh shall be wheeled through a single corridor. Further, the project was envisaged to evacuate power from Small HEPs in the valley along with additional capacity to be installed through Himurja. The DPR further stipulated that the generating stations shall be paying the Annual Transmission Charges as the beneficiaries for the generating stations were not finalized.
- 4.8.5 In response to one of the stakeholders queries, the Petitioner has submitted that the instant asset is part of the System Strengthening Scheme with HPSEBL as the only beneficiary. Once the generation in the Pandoh area picks up, the sub-station shall also serve the purpose of evacuating power from other upcoming small HEPs in the Pandoh area which will be injecting power in 132/220 kV sub-station at Kangoo through existing 132 kV Bajaura-Larji-Kangoo D/C line. As and when other beneficiaries start utilizing the said asset, the transmission charges will be shared between beneficiaries as per HPERC Transmission Tariff Regulations, 2011.
- 4.8.6 It can be established from above that the DPR does not clearly specifies the beneficiaries of the system. The project was originally envisaged for power evacuation for multiple small HEPs from whom the recovery of transmission charges was to be done.
- 4.8.7 It is observed that the Petitioner has not signed any TSA with the beneficiaries and has been claiming that with other beneficiaries start utilizing the transmission asset, the Transmission Charges will be shared between

beneficiaries. The Petitioner should identify all the current and future beneficiaries rather than considering HPSEBL as the de-facto beneficiary of the system and sign Transmission Service Agreements (TSA) with them.

4.8.8 Further, the Commission observes that the Petitioner has been unable to sign relevant TSA with the beneficiary of the transmission asset even after its commissioning. This reflects poorly on the internal systems and planning of the Petitioner. The Petitioner is directed to identify all beneficiaries of the transmission asset and enter in TSA with them in a time bound manner and provide an update within six months of issuance of this Order.

4.8.9 Further, the Petitioner is directed to recover the transmission charges from the identified long-term /medium-term beneficiaries of the Transmission Asset as per the Regulation 33 of HPERC Transmission Tariff Regulations, 2011:

*"33. Allocation of Transmission Service Charge and Losses (1) The Annual Transmission Service Charge (ATSC) shall be shared between the long and medium term customers of the transmission system on monthly basis based on the allotted transmission capacity or contracted capacity, as the case may be."*

Sd/-

**(YASHWANT SINGH CHOGAL)**  
Member

Sd/-

**(BHANU PRATAP SINGH)**  
Member

Sd/-

**(DEVENDRA KUMAR SHARMA)**  
Chairman