

**Approval of Capital Cost along with
Additional Capitalization and Determination
of Tariff for Sawra Kuddu Hydro Electric
Project (HEP) (3x37MW) from Date of
Commercial Operation (COD) to Financial
Year (FY) 2023-24**

**Himachal Pradesh Power Corporation
Limited
(HPPCL)**



**Himachal Pradesh Electricity Regulatory
Commission
June 05, 2024**

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

PETITION NO: 26/2024

CORAM

Sh. DEVENDRA KUMAR SHARMA

Sh. YASHWANT SINGH CHOGAL

Sh. SHASHI KANT JOSHI

In the matter of:

Approval of Capital Cost along with Additional Capitalization and Determination of Tariff for Sawra Kuddu Hydro Electric Project (HEP) (3x37MW) from COD to FY 2023-24 under the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its amendments thereafter and under Section-62 read with Section 86 of the Electricity Act 2003.

AND

In the matter of:

Himachal Pradesh Power Corporation Ltd. (HPPCL).....the Petitioner

ORDER

The Himachal Pradesh Power Corporation Limited (hereinafter called the 'HPPCL' or 'Petitioner' or 'Applicant') 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 Sawra Kuddu Hydro Electric Project (HEP) (3x37 MW) (hereinafter referred to as the 'Project' or 'SKHEP') from COD to FY 2023-24 under the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 as amended from time to time (hereinafter referred to as 'HPERC Hydro Tariff Regulation, 2011') and under Section-62 read with Section 86 of the Electricity Act 2003 (hereinafter referred to as the 'Act').

The Petitioner took significant time in responding to the clarification 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 Commission has heard the Applicant, interveners, stakeholders and stakeholder representatives through various representations. The Commission has also held formal

interactions with the officers of the HPPCL and having considered the documents available on record.

After considering the Petition filed by the Applicant, the facts presented by the Applicant in its subsequent filings, the responses of the Applicant to the objections and documents available on record, and in exercise of the powers vested in it under section 62,64 and 86 of the Electricity Act, 2003 accepts the application with modification, conditions and passes the following Order for determining the capital cost and tariff of Sawra Kuddu Hydro Electric Project(HEP) (3x37 MW) from COD to FY 2023-24.

The Commission has determined the Capital Cost and Aggregate Revenue Requirement (ARR) for Sawra Kuddu Hydro Electric Project (HEP) (3x37MW) from COD to FY 2023-24 under the 'HPERC Hydro Tariff Regulation, 2011' and under Section-62 read with Section 86 of the Electricity Act 2003. The approach adopted by the Commission with regard to approval of capital cost and ARR for Sawra Kuddu Hydro Electric Project (HEP) (3x37 MW) from COD to FY 2023-24 have been summarized in the detailed Order.

-Sd/-
(SHASHI KANT JOSHI)
Member

-Sd/-
(YASHWANT SINGH CHOGAL)
Member, Law

-Sd/-
(DEVENDRA KUMAR SHARMA)
Chairman

Shimla

Dated: 05th June 2024

Table of Contents

1.	INTRODUCTION	7
1.1	Himachal Pradesh Electricity Regulatory Commission	7
1.2	Himachal Pradesh Power Corporation Ltd.	8
1.3	Multi Year Tariff Framework.....	9
1.4	Interaction with the Petitioner	9
1.5	Public Hearings	10
2.	STAKEHOLDER OBJECTIONS.....	12
2.1	Introduction	12
3.	APPROVAL OF CAPITAL COST	19
3.1	Introduction	19
3.2	Summary of the Project	21
3.3	Project Implementation and Timeline.....	22
3.4	Date of Commercial Operations (COD).....	36
3.5	Capital Cost.....	36
3.6	Additional Capital Expenditure (ACE)	60
3.7	Arbitration/ Court Cases/ Other Cost	62
3.8	Project Funding.....	64
4.	APPROVAL OF ARR AND TARIFF	69
4.1	Background.....	69
4.2	Operation and Maintenance Expenses	69
4.3	Depreciation.....	71
4.4	Interest and Finance Charges on Loan	73
4.5	Interest on Working Capital.....	75
4.6	Return on Equity	77
4.7	Summary of Annual Fixed Charges.....	78
4.8	Operational Norms	78
4.9	Capacity and Energy Charges Payable by HPSEBL	81

List of Tables

Table 1: HPERC Communication with respect to (w.r.t) deficiencies to the Petitioner ...	10
Table 2: Petitioner response w.r.t deficiencies raised by the Commission	10
Table 3: List of newspapers for publication of Stakeholders comments	10
Table 4: List of Newspapers for Public Notice by Commission	10
Table 5: Sawra Kuddu HEP Cost and COD Details	21
Table 6: HPSEB approved DPR Cost (Rs. Cr.)	22
Table 7: Salient Features of the Project	22
Table 8: Details of different Project Packages	23
Table 9: Project Timelines	24
Table 10: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-I	25
Table 11: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-A	25
Table 12: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-B	25
Table 13: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-C	25
Table 14: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-D	25
Table 15: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-III	26
Table 16: Petitioner Submission w.r.t. Time Overrun in E&M Package	26
Table 17: Swara Kuddu all work Packages Date of Award, SCOD and ACOD	26
Table 18: Reasons for Time Overrun in Package-I as per the MoM of BOD of the Petitioner	29
Table 19: Reasons for Time Overrun in Package-II-A as per the MoM of BOD of the Petitioner	30
Table 20: Reasons for Time Overrun in Package-II-B as per BOD MoM of Petitioner	31
Table 21: Reasons for Time Overrun in Package-II-C as per the MoM of BOD of the Petitioner	32
Table 22: Reasons for Time Overrun in Package-III as per the MoM of BOD of the Petitioner	33
Table 23: Reasons for Time Overrun in E&M Package as per the MoM of BOD of the Petitioner	34
Table 24: Delay Condoned by the Commission against SKHEP Work Contract Packages	35
Table 25: Total approved delay by the Commission	35
Table 26: Project COD Details	36
Table 27: Project Cost Comparison between DPR and Claimed as on COD (Rs. Cr.)	36
Table 28: Hard Cost Comparison among DPR, Awarded and Actual Cost (Rs. Cr.)	37
Table 29: Cost break-up for Establishment Cost (Rs. Cr.)	39
Table 30: Redistribution of Cost claimed under Establishment Cost (Rs. Cr.)	39
Table 31: Modified Cost as on COD as per Documents (Rs. Cr.)	40
Table 32: Preliminary Cost - Claimed, Modified and Approved (Rs. Cr.)	41
Table 33: Land Acquisition: DPR and Actual	41
Table 34: Land Cost - Claimed, Modified and Approved (Rs. Cr.)	42
Table 35: Civil Packages awarded cost and COD Cost (Rs. Cr.)	42
Table 36: Reasons for Cost Variation in Package-I (Rs. Cr.)	43
Table 37: Cost Claimed and Approved by the Commission for Package-I (Rs. Cr.)	44
Table 38: Reasons for Cost Variation in Package-II (Rs. Cr.)	45
Table 39: Cost Claimed and Approved by the Commission for Package-II (Rs. Cr.)	48
Table 40: Reasons for Cost Variation in Package-III (Rs. Cr.)	49
Table 41: Cost Claimed and Approved by the Commission for Package-III (Rs. Cr.)	50
Table 42: Works & Power Plant Civil Works Cost- Claimed and Approved (Rs. Cr.)	51
Table 43: Building Cost - Claimed, Modified and Approved (Rs. Cr.)	51
Table 44: Miscellaneous Cost - Claimed, Modified and Approved	52
Table 45: Maintenance Cost - Claimed, Modified and Approved (Rs. Cr.)	52
Table 46: Communication Cost - Claimed, Modified and Approved (Rs. Cr.)	52

Table 47: E&E Cost - Claimed, Modified and Approved (Rs. Cr.)	53
Table 48: Establishment Cost - Claimed, Modified and Approved (Rs. Cr.)	54
Table 49: Tools & Plant Cost - Claimed, Modified and Approved (Rs. Cr.)	54
Table 50: Receipt and Recoveries approved by Commission.....	54
Table 51: Reasons for Cost Variation in E&M Package (Rs. Cr.)	55
Table 52: E&M Package Cost- Claimed and Approved (Rs. Cr.).....	57
Table 53: IDC Cost - Claimed and Approved (Rs. Cr.)	58
Table 54: LADF Cost - Claimed, Modified and Approved (Rs. Cr.)	59
Table 55: Project Cost Approved by the Commission (Rs. Cr.)	59
Table 56: Additional Capital Expenditure (ACE) (Rs. Cr.)	61
Table 57: Project Cost including ACE (Rs. Cr.)	61
Table 58: List of On-going Arbitration Matters.....	63
Table 59: Details of Debt Received (Rs. Cr.)	65
Table 60: Debt-Equity Ratio as on COD.....	65
Table 61: Debt-Equity Ratio including ACE (Rs. Cr.)	65
Table 62: Normative Debt-Equity ratio on the approved for Sawra Kuddu (Rs. Cr.)	67
Table 63: Debt, Grant and Equity on Approved Cost for Sawra Kuddu HEP (Rs. Cr.)	68
Table 64: Approved Project Cost by the Commission (Rs. Cr.)	69
Table 65: O&M Expense submitted by the Petitioner (Rs. Cr.)	70
Table 66: CPI-WPI-Escalation Factor.....	71
Table 67: O&M Expense for First Year (Rs. Cr.)	71
Table 68: O&M Expense approved by the Commission (Rs. Cr.)	71
Table 69: Depreciation Expense submitted by the Petitioner (Rs. Cr.)	71
Table 70: Opening GFA for Depreciation (Rs. Cr.).....	73
Table 71: Depreciation approved by the Commission (Rs. Cr.)	73
Table 72: Interest on Loan submitted by the Petitioner (Rs. Cr.)	74
Table 73: Interest on Loan approved by the Commission (Rs. Cr.)	75
Table 74: Interest on Working Capital submitted by Petitioner (Rs. Cr.)	75
Table 75: Interest on Working Capital approved by the Commission (Rs. Cr.)	76
Table 76: ROE submitted by the Petitioner (Rs. Cr.)	77
Table 77: ROE approved by the Commission (Rs. Cr.).....	77
Table 78: AFC submitted by the Petitioner (Rs. Cr.).....	78
Table 79: AFC approved by the Commission (Rs. Cr.)	78
Table 80: Monthly Energy from COD.....	79
Table 81: Auxiliary Energy Consumption Norms as per Regulation.....	79
Table 82: Annual Energy Generation Norms as per Regulations.....	80
Table 83: Plant Availability Factor (PAF)	81
Table 84: Approved Energy and Capacity Charges by Commission.....	82

1. INTRODUCTION

1.1 Himachal Pradesh Electricity Regulatory Commission

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

1.1.2 Functions of the Commission

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

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

- i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- j) fix the trading margin in the intra-state trading of electricity, if considered, necessary; and
- k) Discharge such other functions as may be assigned to it under this Act.

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

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

1.2 Himachal Pradesh Power Corporation Ltd.

1.2.1 The Himachal Pradesh Power Corporation Limited (HPPCL), was incorporated in December 2006 under the Companies Act, 1956, with the objective to plan, promote and organize the development of all aspects of hydroelectric power on behalf of Himachal Pradesh Government (GoHP) and Himachal Pradesh State Electricity Board (now HPSEBL). As per the Electricity Act, 2003 (hereinafter to be referred as the 'Act'), the duties of a generating company shall be to establish, operate and maintain generating stations, tie-lines, sub-stations and dedicated transmission lines connected therewith in accordance with the provisions of the Act or the rules or regulations made there under. As per Memorandum of Association and Articles of Association dated 05.12.2006 the GoHP has a 60%, and the HPSEB has a 40% shareholding in the HPPCL.

1.2.2 The GoHP has allocated 22 hydroelectric projects to the HPPCL for development under the State sector, with a combined installed capacity of 2817 MW. The HPPCL achieved a significant milestone by commissioning its first hydroelectric project on 01.09.2016. Currently, the corporation operates three hydro power stations with a total installed capacity of 276 MW and is actively involved in constructing three additional hydro projects, which will add up to 628 MW upon completion.

1.2.3 Moreover, there are 10 projects under the stage of investigation and pre-construction clearances, with a combined capacity of 1325 MW. Additionally, there are eight projects in the pre-feasibility stage, with a total capacity of 927 MW. The HPPCL is also serving as the nodal agency for the development of the Kishau Multipurpose Project (660 MW), which will be executed through a Special Purpose Vehicle involving the Governments of Himachal Pradesh and Uttarakhand. Himachal Pradesh has a 50% share in this project, bringing the total allotted potential to 3147 MW.

1.2.4 The HPPCL, apart from Hydro Power Development, intends to diversify its power development activities in other areas such as thermal, renewable sources of energy (mainly solar power) etc.

1.3 Multi Year Tariff Framework

- 1.3.1 The Commission follows the principles of Multi Year Tariff (MYT) determination, in line with the provisions of Section 61 of the Act.
- 1.3.2 The Commission has issued Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 vide notification dated 01.04.2011 as amended from time to time, (hereinafter referred to as "HPERC Hydro Tariff Regulation, 2011").
- 1.3.3 Subsequently, the Commission has made the following amendments to the above Regulations:
- a) HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) (First Amendment) Regulations, 2011 dated 30.07.2011.
 - b) HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) (Second Amendment) Regulations, 2013 dated 01.11.2013.
 - c) HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) (Third Amendment) Regulations, 2018 dated 22.11.2018.
- 1.3.4 In line with the provisions of the HPERC Hydro Tariff Regulations 2011 as amended from time to time, the Petitioner has filed this Petition on 06.06.2023 seeking approval of Capital cost along with additional capitalization and determination of tariff for Sawra Kuddu Hydro Electric Project (HEP) (3x37MW) from COD to FY 2023-24.
- 1.3.5 The Commission has analysed the Petition filed by the HPPCL and has finalised this Order based on the detailed examination of the information contained in the Petition, additional submissions in response to data gaps, necessary clarifications submitted by the Petitioner and views expressed by the Stakeholders.

1.4 Interaction with the Petitioner

- 1.4.1 The HPPCL has filed the application/Petition for approval of Capital cost along with additional capitalization and Determination of tariff for Sawra Kuddu Hydro Electric Project (HEP) (3x37MW) from COD to FY 2023-24, with the Commission on 06.06.2023. Based on various observations/deficiencies pointed out by Commission, the HPSEBL has submitted further details and clarifications subsequently.
- 1.4.2 Based on the preliminary scrutiny of the Petition, the Commission, through a letter dated 15.07.2023, directed the Petitioner to provide details regarding the first set of deficiencies identified in the Petition. The Petitioner submitted its reply on 14.09.2023. The Commission admitted the aforementioned Petition vide interim Order dated 05.02.2024. There have been a series of interactions between the HPPCL 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.
- 1.4.3 The Petitioner was asked to remove various deficiencies/ provide additional information vide the following HPERC communications:

Table 1: HPERC Communication with respect to (w.r.t) deficiencies to the Petitioner

S. No.	Submission of the Petitioner	Date
I	HPERC-F (1)-64/2023-1017-18	15.07.2023
II	HPERC-F (1)-64/2023-2010	12.10.2023
III	HPERC-F (1)-64/2023-2909	14.12.2023
IV	HPERC-F (1)-64/2023-3811	13.02.2024
V	Deficiencies post Technical Validation Session: HPERC-F (1)-64/2023-3944	22.02.2024

1.4.4 The queries raised by the Commission vide above mentioned letters with respect to the Petition were replied by the HPPCL. However, delay in submission and non-submission of the complete information remained a major bottleneck. The following submissions made by the Petitioner in response there to, have been taken on record:

Table 2: Petitioner response w.r.t deficiencies raised by the Commission

S. No.	Submission of the Petitioner	Date (dd.mm.yyyy)
I	Response to HPERC's Letter dated 15.07.2023	14.09.2023
II	Response to HPERC's Letter dated 12.10.2023	06.11.2023
III	Response to HPERC's Letter dated 14.12.2023	16.01.2024
IV	Response to HPERC's Letter dated 13.02.2024	27.02.2024
V	Deficiencies post Technical Validation Session: Response to HPERC's Letter dated 22.02.2024	15.03.2024

1.5 Public Hearings

1.5.1 The Petitioner published the salient features of the Petition by the way of a Public Notice in the following newspapers:

Table 3: List of newspapers for publication of Stakeholders comments

S. No.	Name of News Paper	Date of Publication
I	Dainik Baskar	18.02.2024
II	The Tribune	18.02.2024
III	Himachal Dastak	19.02.2024
IV	The Indian Express	19.02.2024

1.5.2 The Commission invited suggestions and objections from the public on the Petition filed by the Petitioner in accordance with Section 64(3) of the Electricity Act, 2003 subsequent to the publication of salient features by the Petitioner. The Public notice, issued by the Commission, inviting objections/ suggestions was published in the following newspapers:

Table 4: List of Newspapers for Public Notice by Commission

S. No.	Name of News Paper	Date of Publication
I	Dainik Bhaskar	23.02.2024
II	The Tribune	23.02.2024

1.5.3 Through the aforementioned publications, the interested parties/ stakeholders were asked to file their objections and suggestions on the Petition and rejoinders to the replies filed by the Petitioner for which dates were specified by the Commission in the publications.

- 1.5.4 The stakeholders were requested to file their objections by 21.03.2024. The HPPCL was required to submit replies to the suggestions/ objections to the Commission by 22.03.2024 with a copy to the objectors.
- 1.5.5 The Commission decided to conduct the public hearing and, therefore, issued a public notice informing the public about the scheduled date of public hearing as 23.03.2024. All the parties, who had filed their objections/ suggestions, were informed about the date, time and venue of the public hearing for presenting their case.
- 1.5.6 The Commission has considered the submissions made by the Petitioner and the various objections raised by stakeholders carefully for the purpose of issuance of this Order. Further, the received objections/ suggestions from the Stakeholders are discussed in subsequent chapter 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 23.03.2024 for the Petition for Approval of Capital Cost along with Additional Capitalization and Determination of Tariff for Sawra Kuddu Hydro Electric Project (HEP) (3x37 MW) from COD to FY 2023-24.
- 2.1.2 Accordingly, the public hearing was conducted on 23.03.2024 in the Commission. The Comments/Suggestions were received on the Petition from the Consumer representative, the Himachal Pradesh State Electricity Board Limited (HPSEBL) and the Himachal Pradesh Power Transmission Corporation Limited (HPPTCL). Issues raised by the stakeholders in their written submissions, along with replies given by the Petitioner and views of the Commission on the issues raised are summarized in the following paragraphs.

Stakeholders' Submissions

- 2.1.3 The Consumer Representative has pointed out that the Petition submitted by Petitioner for determination of capital cost and tariff from COD until FY 2023, as well as the request for approval of additional capitalization, lacks the necessary detail required under the HPERC Hydro Tariff Regulations, 2011. The Petition does not clearly determine the annual fixed charges from COD until FY 2023-24, and is therefore vague, providing very few details. The Petition does not appear to meet the requirements set out under the HPERC Hydro Tariff Regulations.

Petitioner's Response

- 2.1.4 The Petitioner has submitted that the Petition has been filed as per the relevant HPERC Regulations and procedures. Further, the Petitioner submitted that the detailed replies on queries from the Commission with respect to the Petition stands submitted.

Commission's Observations

- 2.1.5 The Commission partially concurs with observation of the stakeholder. The Commission while analyzing the Petition has raised multiple set of queries asking for requisite additional information and clarification required for processing the Petition and determining the Tariff for the respective years for the Sawra Kuddu HEP. The details of the information/clarification sought and submissions with respect to the same are covered as part of Chapter 3 and 4 of this Order.

Stakeholders' Submissions

- 2.1.6 The Consumer Representative has pointed out that the Petitioner in its Petition has submitted the detail of the capital costs, along with additional capitalization and tariff determination proposal based on the projections for the Control Period for FY 2023-24. The tariff projections seem to be based on projected capital and annual costs/charges under each year of Control Period including true-up period. Since the matter regarding water cess was finally decided by the Hon'ble High Court, the Petitioner needs to review the present Petition accordingly. A detailed tariff proposal regarding the category-wise tariff impact on the consumers based on increased proposed, should be submitted; otherwise, the utility may not be allowed to increase the tariff.

Petitioner's Response

- 2.1.7 The Petitioner has submitted that the needful will be done as per the directives of GoHP and water cess policy.

Commission's Observations

- 2.1.8 The Commission has noted down the comments of the stakeholders and has determined the capital cost of the project and tariff as per the provisions of the HPERC Hydro Tariff Regulations, 2011 and after doing required prudence check.

Stakeholders' Submissions

- 2.1.9 The Consumer Representative has highlighted that the annual fixed charges, capital costs, additional capitalization, etc., need to be prudently worked out by the Petitioner to facilitate effective determination of the tariff by the Commission.

Petitioner's Response

- 2.1.10 The Petitioner has submitted that the annual fixed charges, capital costs and additional capitalization etc., in respect of Sawra Kuddu Hydro Electric Project (HEP) have been worked out as per the relevant HPERC regulations & procedures.

Commission's Observations

- 2.1.11 The Commission has noted the submissions. The Commission has undertaken detailed review of the capital cost and additional capitalization of the project as discussed in the Chapter 3 of this Order. Further, the annual fixed charges and energy charges have been worked out based on the approved capital cost and 'HPERC Hydro Tariff Regulations, 2011' as discussed in Chapter 4 of this Order.

Stakeholders' Submissions

- 2.1.12 The Consumer Representative has pointed out that the Petitioner is required to devise an effective mechanism to address its losses for the Sawra Kuddu Hydro

Electric Project (HEP). It was also suggested that the Petitioner should submit a concrete proposal to the Commission for addressing the losses.

Petitioner's Response

- 2.1.13 The Petitioner has submitted that it has requested the Commission to devise a mechanism to overcome the loss/profit incurred since COD of the plant. It has also mentioned that the right to decide the same rests with the Commission.

Commission's Observations

- 2.1.14 The Commission has proposed to determine the tariff for the Sawra Kuddu hydroelectric power plant based on the PPA executed by the Petitioner with the HPSEBL. The Petitioner in the past had chosen to sell the power generated from the plant through power exchanges and/or through any other mechanism. Therefore, any power sold by the Petitioner prior to execution of the PPA was not under the current arrangement with HPSEBL and therefore does not fall under the purview of the existing PPA. The Commission is of the firm view that any profit/loss incurred prior to the date of supply of power under the PPA is to the account of the Petitioner and the consumers of the state cannot be burdened with any additional cost incurred prior to the effective date of PPA.

Stakeholders' Submissions

- 2.1.15 The Consumer Representative has highlighted that legal expenses in respect of the Court/arbitration cases in respect of the Civil, E&M and other works in Sawra Kuddu Hydro Electric Project(HEP)are quite high which are going to escalate in future as matters are stated to be sub-judice. The stakeholder has suggested that a focused strategy to expedite settlement/disposal of these cases is required to be devised to curtail capital cost of the project.

Petitioner's Response

- 2.1.16 The Petitioner has submitted that the suggestions of the stakeholder have been taken up with the management and is being complied.

Commission's Observations

- 2.1.17 The Commission takes note of the stakeholder's submissions with respect to the high cost under legal /arbitration cases. The Commission shall review the same based on the outcome and prudence check.

Stakeholders' Submissions

- 2.1.18 The Consumer Representative has mentioned that the Petitioner should explain its decision regarding the payment adjustment of permanent assets which have not been considered in the total capital cost of the project and left to be considered during true-up. The Petitioner should make serious effort to settle these amounts to submit a true capital cost for approval.

Petitioner's Response

- 2.1.19 The Petitioner has submitted that the suggestions of the stakeholder has been taken up with the management and is being complied.

Commission's Observations

- 2.1.20 The Commission has noted the submissions. Further, it is observed that any additional costs would further increase the tariff and scope for any hike is limited. The Petitioner should carefully examine the additional claim and reduce any further impact on the capital cost of Sawra Kuddu HEP.

Stakeholders' Submissions

- 2.1.21 The Consumer Representative has pointed out that the Petitioner may be allowed to avail the benefits of Hydro Purchases Obligations (HPO) / Renewal Purchase Obligations (RPO) as per mandate of CERC /HPERC /MoP Regulations/ Notifications etc., on the matter issued from time to time.

Petitioner's Response

- 2.1.22 The Petitioner has submitted that the suggestion of the stakeholder has been taken up with the management and is being complied.

Commission's Observations

- 2.1.23 The Commission has noted the submissions. The entitlements of the HPO are as per the provisions of the relevant regulations. Further, the decision shall be taken based on the proposal submitted by the Petitioner in this regard.

Stakeholders' Submissions

- 2.1.24 The Consumer Representative has pointed out that the Petitioner has not submitted the collection efficiency for each year of the Control Period. The Petitioner is also required to submit the category-wise collection efficiency during the previous control period, i.e., 4th Control Period.

Petitioner's Response

- 2.1.25 The Petitioner has submitted that the category-wise collection efficiency has no relevance with the Generating Stations.

Commission's Observations

- 2.1.26 The Commission has noted the submissions and agrees to the response submitted by the Petitioner.

Stakeholders' Submissions

- 2.1.27 The Consumer Representative has pointed out that efforts are required to be put up by the Petitioner to ensure maximum generation of power and sale thereof to increase revenue generation and review their performance at regular

intervals. An integrated approach is to be ensured for sale of power of the Sawra Kuddu Hydro Electric Project(HEP) to HPSEBL through Govt. and outside, in view of sufficient net saleable energy available with these projects after their commissioning. Free power to Govt. needs to be brought it to minimal to have more power for sale to make the Hydro Power Project self-sustaining by generating revenue and profits.

Petitioner's Response

- 2.1.28 The Petitioner has submitted that the needful will be done as per H.P Govt. directions / policy in this regard.

Commission's Observations

- 2.1.29 The Commission agree with the stakeholder regarding efficiency improvement by the Petitioner in the Plant to have maximum generation of Power. However, with regard to reducing free power quantum of the GoHP, the Commission is of the view that the free power falls under the domain of the GoHP. Further, the Commission has allowed the same in the tariff as per the provisions of the Regulations and the National Tariff Policy.

Stakeholders' Submissions

- 2.1.30 The Himachal Pradesh State Electricity Board Limited (HPSEBL) has submitted that the actual Capital cost claimed as on COD is very high as compared to the approved DPR cost. The Petitioner has shown the difference in this cost due to time over run as the scheduled commissioning as per contract was in March-2012, whereas the actual COD of the project was achieved on January-2021, which has escalated the capital cost of the project. The HPSEBL has further submitted that the time over run cost shall not be pass through in the tariff. The HPSEBL has prayed to carry out the prudence check for the expenditure incurred by the Petitioner as per the Regulations 11, 12 and 13 of the HPERCHydro Tariff Regulations, 2011 as amended from time to time.

Petitioner's Response

- 2.1.31 The Petitioner has submitted that the claim has been filed as per the provisions of the HPERC Regulations and, the detailed justification along with the supporting documents has been submitted with the main Petition and its subsequent replies against the queries raised by HPERC.

Commission's Observations

- 2.1.32 The Commission has taken note of the suggestions and has carried out the prudence check while passing the Order as discussed in the subsequent chapters.

Stakeholders' Submissions

- 2.1.33 The HPSEBL has submitted that at Para No. 3.3 of the Petition, Additional Capital Expenditure incurred 'upto Cut-off date' and 'beyond Cut-off date' may

be considered by the Commission as per Regulation 13 of the HPERC Hydro Tariff Regulations, 2011 as amended from time to time, after doing prudence check of expenditure for the cut off period applicable for Sawra Kuddu HEP.

Petitioner's Response

2.1.34 The Petitioner has submitted that the claim has been filed as per the provisions of the HPERC Regulations. Further, the detailed justification along with the supporting documents has been submitted with the main Petition and its subsequent replies against the queries raised by HPERC which are also available at HPPCL website.

Commission's Observations

2.1.35 The Commission has noted the submissions and has allowed the claim of the Petitioner for additional CAPEX after doing required prudence check as discussed in the subsequent chapters of this tariff order.

Stakeholders' Submissions

2.1.36 The HPSEBL has submitted that the Debt: Equity ratio has been claimed by the Petitioner as 70:30 on COD and project wise segregation of the equity is not maintained in the HPPCL accounts. Therefore, the Commission is requested for prudence check of the same and consider the same as per the Regulations.

Petitioner's Response

2.1.37 The Petitioner has submitted that the claim has been filed as per the provisions of the HPERC Regulations. Further, the detailed justification along with the supporting documents submitted with the main Petition and the subsequent replies against the queries raised by the HPERC which are also available at the HPPCL website.

Commission's Observations

2.1.38 The Commission agrees with the submissions of the stakeholder and has allowed the debt: equity ratio as per the provisions of the HPERC Regulations and as per the approved DPR/TEC of the Project as discussed in the subsequent chapters.

Stakeholders' Submissions

2.1.39 The HPPTCL has highlighted the para no. 2.3.8 of the Petition which states that *the power from the Project was sold in STOA through power traders upto 30.04.2022 and thereafter short term PPA was executed with the HPSEBL for a period of 01.05.2022 to 31.03.2022 at Rs. 3.40 per Unit*. Further, along term PPA has also been executed between the HPSEBL and the HPPCL on 29.03.2023 in respect of Sawra Kuddu HEP for period of useful life i.e., 40 years from COD and with effect from 01.04.2023. In this long-term PPA, it was agreed that HPSEBL would bear the liabilities on account of evacuation of power. In this regard, the HPPTCL has stated that the power from the Sawra Kuddu HEP is

being evacuated through their assets for which LTA has been executed between HPPTCL and HPPCL on dated 22.10.2020. The same has been operationalized on 30.10.2020 for a period of 25 years. Accordingly, HPPTCL could not raise the bill of transmission charges to the HPPCL because of pendency of Petition before the HPERC. However, the tariff order for 220kV Snail-Hatkoti D/C transmission line has been issued on 26.02.2024 and corresponding transmission charges bills shall be issued shortly as per prevailing HPREC regulations and LTA agreement executed. HPPTCL has clarified that it is not a party to the PPAs between HPPCL and HPSEBL, the transmission charges liability shall rests with the HPPCL.

Petitioner's Response

- 2.1.40 The Petitioner has submitted that the submissions regarding the same already stands submitted to the Commission and has requested the Commission to pass such order considering the interests of HPPCL.

Commission's Observations

- 2.1.41 The issue raised by the stakeholder is regarding payment of transmission charges by the Petitioner as per the LTA executed. This matter raised by the HPPTCL is not directly related to the current Petition which pertains to the determination of capital cost and tariff for the Sawra Kuddu hydro power project. The HPPTCL is advised to take up this issue separately, if required.

Stakeholders' Submissions

- 2.1.42 The HPPTCL has submitted that the Commission to consider the LTA between HPPTCL and HPPCL to be operative from 30.10.2020 to 30.10.2045 while devising the mechanism to overcome the loss/profit incurred to HPPCL since COD till 31.03.2023.

Petitioner's Response

- 2.1.43 The Petitioner submitted that the submission regarding the same already stands submitted to the Commission and has requested the Commission to pass such order considering the interests of HPPCL.

Commission's Observations

- 2.1.44 The Commission has noted the submissions. As discussed above, the issue of the transmission charges is not the subject matter of this Petition, and the recovery of the transmission charges shall be as per the provisions of the relevant Transmission Tariff Regulations.

3. APPROVAL OF CAPITAL COST

3.1 Introduction

- 3.1.1 The Petitioner has submitted the present Petition for the Approval of Capital Cost along with Additional Capitalization and Determination of Tariff for Sawra Kuddu Hydro Electric Project (HEP) (3x37MW) from COD (i.e., 21.01.2021) to FY 2023-24 under the 'HPERC Hydro Tariff Regulations, 2011 and its amendments and under Section-62 read with Section 86 of the Electricity Act 2003.
- 3.1.2 The Petitioner has submitted that the power from the instant was being sold on short-term basis through the power traders since COD. Subsequently, it was agreed between the HPPCL and the HPSEBL that sale/ purchase of power from the HPPCL Hydro Electric Projects i.e. Kashang (1X65 MW), Sawra Kuddu HEP (3X37 MW) and 50% generation from Sainj HEP (2X50 MW) shall be undertaken by the HPSEBL for useful life of the projects at ex-bus as per the HPERC determined tariff. A PPA has been executed with the HPSEBL for sale of 100% net saleable energy at ex-bus of Sawra Kuddu HEP. The PPA between the HPPCL and the HPSEBL was signed on 29.03.2023 post approval of the same by the Commission vide its Order dated 13.02.2023. This PPA has come into force from 01.04.2023 and shall be operative till the useful life of the project.
- 3.1.3 Para No.13 of the Commission Order dated 13.02.2023 with regard to approval of the PPA, states the following:
- "The Petition for capital expenditure and determination of tariff in respect of the above Projects is yet to be filed and would take a considerable time for disposal after its filing. Since, the Commission had permitted to sell the power of the two Projects, i.e., Kashang 65 MW and Sawra Kuddu 111 MW on a mutually agreed tariff of Rs.3.40 per unit for the year 2022-23 and the authorised representative of the HPPCL has also prayed for allowing the Petition on the basis of provisional tariff, it would be prudent to fix a provisional tariff of Rs.3.40 per unit in respect of Kashang 65 MW, Sawara Kuddu 111 MW and 50% generation of Sainj HEP, which would, however, be subject to revision on determination of the actual tariff in respect of the all the three Projects."*
- 3.1.4 The Commission has reviewed the Petition filed by the Petitioner for determination of Capital Cost and corresponding tariff from the date of COD till FY 2023-24 i.e., the end of the Control Period. As per the Order dated 13.02.2023, the Commission has agreed to determine the capital cost and tariff in line with the applicable Tariff Regulations notified by the Commission for determination of tariff. The Regulation 2(3) of the HPERC Hydro Tariff Regulation, 2011' specify the following:

"(3) Where a power purchase agreement has been executed between the generating company and the utility after existence of the Commission and the power purchase agreement has been approved by the Commission, the Commission shall determine such tariff in accordance with the terms and conditions of such approved power purchase agreement."

3.1.5 Accordingly, the Commission has decided to determine the tariff for Sawra Kuddu Hydro Electric Project (HEP) (3x37MW) based on the applicable 'HPERC Hydro Tariff Regulation, 2011'. Further, inline with the applicability of the PPA (i.e., for sale of Sawra Kuddu HEP power by the Petitioner from 01.04.2023 onwards), the Commission shall be determining the tariff for sale of power as per the date specified in the PPA and any power sale from the plant to the HPSEBL prior to the signing of the PPA does not form part of the tariff determination process.

3.1.6 With regard to the determination of capital cost, Regulation 11 of 'HPERC Hydro Tariff Regulations 2011' specifies the following:

"(1) 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 12;*
- c) *additional capital expenditure determined under regulation 13:*

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 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 the Commission may issue guidelines for vetting of capital cost of hydro-electric projects by independent agency or expert and in that event the capital cost as vetted by such agency or expert may also be considered by the Commission while determining the tariff for the hydro generating station:

Provided further that the Commission may issue guidelines for scrutiny and approval of commissioning schedule of the hydro-electric projects of a

developer (not being a State controlled or owned company) as envisaged in the tariff policy:

Provided further that in case the site of a hydro generating station is awarded to a developer (not being a State controlled or owned company) by the State Government, by following a two stage transparent process of bidding, any expenditure incurred or committed to be incurred by the project developer for getting the project site allotted shall not be included in the capital cost:....”

- 3.1.7 In line with the provisions of the 'HPERC Hydro Tariff Regulation, 2011', the Commission has reviewed the proposed capital cost for Sawra Kuddu Hydro Electric Project (HEP) (3x37MW) and the ARR proposed for each year by the Petitioner from COD to FY 2023-24. The information provided in the Petition was inadequate or lacked justification with respect to the capital cost, increase in actual cost vis-à-vis awarded cost, time and cost overrun, etc. Also, the Petition was deficient in terms of supporting documents and payment proofs against the various expense heads. In view of the above short comings, the Commission issued multiple set of deficiency letters for validation of the capital cost for the Sawra Kuddu Hydro Electric Project (HEP) (3x37MW).
- 3.1.8 The Commission has undertaken detailed prudence check and adequate assumptions, wherever required, for approving the capital cost for Swara Kuddu HEP. The scrutiny and prudence check undertaken by the Commission for approval of capital cost of Swara Kuddu HEP has been discussed in the following paragraphs.
- 3.1.9 The relevant details and configuration of the Project is tabulated as follows:

Table 5:Sawra Kuddu HEP Cost and COD Details

Name of the Project	Capacity (MW)	Cost as per DPR (Rs. Cr.)	Capital Cost as on COD (Rs. Cr.)	COD (Each Unit 37MW)
Sawra Kuddu HEP	111 MW (3x37 MW)	558.53	2203.87	21.01.2021 (For all three units)

3.2 Summary of the Project

Petitioner's Submissions

- 3.2.1 The Sawra Kuddu HEP is a run of the river scheme on the river Pabbar, which is a tributary of river Yamuna, in Rohru & Jubbal Tehsils at a distance of 130 Kms from Shimla.
- 3.2.2 The powerhouse site is located on the left bank of Pabbar river and is having 03 (three) generating units of 37 MW each. The project envisages utilization of water through average gross head of 213.50 m for generation of 111 MW of power in an underground powerhouse near village Snail, close to the border line with the State of Uttarkhand.
- 3.2.3 The project enables energy generation of 385.78 MUs in a 90% dependable year and 506.61 GWh or MUs in a 50% mean year pattern of flows.
- 3.2.4 The Petitioner has filed this petition for the approval of capital cost taking into consideration the additional capitalization and determination of tariff from COD (i.e., 21.01.2021) to FY 2023-24 for Sawra Kuddu HEP (3x37 MW).

- 3.2.5 The then HPSEB on 10.11.2004 accorded Techno Economic Clearance (TEC) to Sawra Kuddu HEP (3 x 37 MW) at an estimated cost of Rs. 558.53 Cr., including Interest During Construction (IDC) of Rs. 63.29 Cr., Escalation cost of Rs. 46.60 Cr., and Transmission Line cost of Rs. 38.09 Cr., based on the price level of March 2003 as detailed below:

Table 6: HPSEB approved DPR Cost (Rs. Cr.)

S. No.	Cost Component	Cost
I	Cost of Civil Works	290.15
II	Cost of E&M Works	120.40
III	Cost of Transmission Line	38.09
IV	Escalation	46.60
V	IDC	63.29
VI	Total Cost (Rs. Cr.)	558.53

Commission's Analysis

- 3.2.6 The Commission has observed that for Swara Kuddu HEP, the DPR and TEC was accorded by HPSEB on 10.11.2004, with a project cost of Rs. 558.53Cr. including an IDC amount of Rs. 63.29Cr. Further, it is observed that the approved DPR cost does not include the Local Area Development Fund (LADF) in accordance with the guidelines of the State Hydro Power Policy-2006 by GoHP which was notified subsequent to the approval of the DPR.
- 3.2.7 The salient features of the project in the DPR are outlined as below:

Table 7: Salient Features of the Project

Sawra Kuddu HEP (3x37 MW):	
Capacity	111 MW
Number of Unit	03 (Three)
Design Energy (in 90% dependable year)	386 MU
Gross Head	182.48 Meter
Diversion Structure	PK Wier type with 5 nos. gate (8.20m X 6.30m each)
Head Race Tunnel	11,232 m long, 5 m diameter, D- Shaped
Penstock/Pressure shaft	Steel lined (Underground), Circular Shape 1-No, Main PS (4m dia.) 3 Nos. Branch PS (2.30m dia.)
Powerhouse	Underground, 3 Nos. Vertical axis Francis Turbine (37 MW each)
DPR Approval Authority	HPSEB
Date of DPR Approval	10.11.2004
DPR Approved Cost (Rs. Cr.)	Rs 558.53 Crore (Including IDC Rs 63.29 Crore)

3.3 Project Implementation and Timeline

Petitioner's Submissions

- 3.3.1 The project comprises of Civil, Hydro-Mechanical (HM), Electrical & Mechanical (E&M) and other related works which were awarded by the Petitioner through competitive bidding process.
- 3.3.2 The Sawra Kuddu HEP comprises of 04 (four) main contract packages (03 for Civil and H&M Package and 01 for E&M Package) along with other small contract Packages for ancillary works. The detail of the main packages are as under:

Table 8: Details of different Project Packages

S. No.	Package No.	Package Scope and Details
I	Package-I	Construction of Diversion Barrage, Power Intake, Desilting Chamber & Hydro Mechanical Works.
II	Package-II	Construction of Head Race Tunnel and Adit.
III	Package-III	Construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT
IV	E&M Package	Complete E&M Package for all three units

- 3.3.3 The Package-I work for the Project was awarded on an EPC basis through a tendering process to M/s Patel Engineering Limited (PEL) on 25.08.2009 and the contract agreement was signed on 09.09.2009. The awarded contract amount was Rs. 284.02 Cr., with a stipulated completion period of 32 months, culminating on 07.06.2012.
- 3.3.4 The Package-II work for the Project was awarded on an EPC basis through a tendering process to M/s Aban Coastal JV on 18.06.2007. The awarded contract was Rs 115.92 Cr., with a stipulated completion period of 48 months from 30 days after issue of LOA, culminating on 17.07.2011. However due to the non-achievement of progress & dismal performance by the contractor M/s Aban Coastal JV, the work was terminated on 03.11.2014. The contractor had only executed works amounting to Rs. 53.42 Cr. against the total awarded amount of Rs. 115.92 Cr.
- 3.3.5 After the termination of contract from M/s Aban Coastal JV, the construction of the balance work was awarded to M/s HCC Ltd at risk and cost of M/s Aban Coastal JV through competitive bidding on 03.11.2014 for an accepted amount of Rs. 179.90 Cr. with a completion period of 24 months, culminating on 24.11.2016 against the amount of Rs. 62.50 Cr. (The balance amount of work which was to be executed by M/s Aban Coastal JV).
- 3.3.6 In addition, an intermediate Adit work between Adit-I and Adit-II of HRT was awarded as a separate contract to M/s Patel Engineering Limited (PEL) on 14.01.2013 and the contract agreement was signed on 08.02.2013 for an amount of Rs. 19.99 Cr. with a completion period of 15 months, culminating on 13.05.2014.
- 3.3.7 Further, an additional work for the construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP (+170m Length) was awarded to M/s Coastal Projects Ltd. On 19.03.2011 at an amount of Rs. 3.33 Cr. with a completion period of 09 months, culminating on 19.12.2011.
- 3.3.8 The Package-III work for the Project was awarded on an EPC basis through a tendering process to M/s Patel Engineering Limited (PEL) on 22.01.2009 and the contract agreement was signed on 10.02.2009. The awarded contract

amount was Rs 153.37 Cr., with a stipulated completion period of 39 months, culminating on 03.06.2012.

- 3.3.9 The Electro-Mechanical (E&M) work for the Project was awarded on an EPC basis through a tendering process to Joint Venture of M/s VA Tech Hydro India Pvt. Limited (Leader of Joint Venture) and VA TECH ESCHER WYSS FLOVEL PVT.LTD. (Partner of Joint Venture) (now known as M/s Andritz Hydro Private Limited) on 27.02.2009 and the effective date was decided as 28.04.2009. The award amount was Rs 180.54 Cr. with a stipulated completion period of 36 months for Unit-1, 37 months for Unit-2 and 38 months for Unit-3, from the effective date. The completion schedule for the different Units of the Project were as follows: Unit-1 on 28.04.2012, Unit-2 on 28.05.2012 and Unit-III on 28.06.2012.
- 3.3.10 The details for the above-mentioned points are shown below in the tabular format:

Table 9: Project Timelines

S. No.	Particulars	Date
I	DPR approval by HPSEB	10.11.2004
II	Date of Award of Package-I to M/s PEL	25.08.2009
III	Date of Award of Package-II-A to M/s Aban Coastal JV for Construction of HRT and Adit	18.06.2007
IV	Date of Award of Package-II-B to M/s HCC Ltd. For Construction of balance HRT work	03.11.2014
V	Date of Award of Package-II-C to M/s PEL for Construction of Additional Adit between Adit-I and Adit-II	14.01.2013
VI	Date of Award of Package-II-D to M/s Coastal Projects Ltd. for Construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP (+170m Length)	19.03.2011
VII	Date of Award of Package-III to M/s PEL for Construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT	22.01.2009
VIII	Date of Award of E&M Package to Joint Venture of M/s VA Tech Hydro India Pvt. Limited and VA TECH ESCHER WYSS FLOVEL PVT. LTD. (under Joint Venture) <i>(Now known as M/s Andritz Hydro Private Limited)</i>	27.02.2009
IX	Scheduled Commissioning as per contract awarded	28.04.2012 for Unit-1 28.05.2012 for Unit-2 and 28.06.2012 for Unit-3
X	Actual Commissioning of Project	03.11.2020 for Unit-1 17.11.2020 for Unit-2 and 09.12.2020 for Unit-3
XI	Actual COD of the project for Unit-I, Unit-II and Unit-III	21.01.2021

- 3.3.11 The Petitioner has submitted the reasons of time overrun in the civil, hydro-mechanical(HM) and E&M works in the project. Further, the Petitioner has submitted the reasons of Extension of Time (EOT) for time overrun from the Board of Directors (BOD) and Whole Time Director (WTD). As part of the submissions, it is indicated that the delay in E&M works was a direct

consequence of the civil works. The reasons and duration of time overrun, as claimed by the Petitioner, are summarized in the table below:

Table 10: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-I

S. No	Reasons for EOT in Civil Works-Package-I (Construction of Diversion Barrage and Hydro Mechanical Works.)	No. of Days
I	1st EOT approved by BOD (08.06.2012 to 23.09.2013): Delay occurred due to approval in construction drawings, power failure, rainfall, snowfall, and construction of 2nd stage coffer Dam.	473
II	2nd EOT approved by BOD (24.09.2013 to 03.06.2018): Delay in issuance of construction drawings, variation in work order, and other related miscellaneous works	1714
III	3rd and Final EOT from 04.06.2018 to 07.10.2021	Under approval

Table 11: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-A

S. No	Reasons for EOT in Civil Works-Package-II-A (Main HRT Work)	No. of Days
I	1st EOT approved by BOD (18.07.2011 to 09.01.2014): Delay due to slow work by the contractor (M/s Aban Coastal JV), termination of the contract agreement and re-award of work to M/s HCC Ltd.	907

Table 12: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-B

S. No	Reasons for EOT in Civil Works-Package-II-B (Balance HRT Work)	No. of Days
I	1st EOT approved by BOD (25.11.2016 to 01.08.2018): Delay in site handling process, encumbrance free land/site, stoppage of work by ex-employees of earlier contractor, delay in installation of transformer at Adit-II and other unforeseen geological conditions.	615
II	2nd EOT approved by BOD (02.08.2018 to 26.07.2019): Delay due to power failure, hindrance at site, geological conditions, execution of work of additional Adit, extra time in backfill of concrete.	359
III	Final EOT approved by WTD (25.11.2016 to 30.09.2020): Considering overall delay by accounting 1 st and 2 nd Extension	1406

Table 13: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-C

S. No	Reasons for EOT in Civil Works-Package-II-C (Additional Adit)	No. of Days
I	1st EOT approved by BOD (14.05.2014 to 31.12.2016): Delay due to site handover with other related activities and contractor mobilisation	962
II	Final EOT from 14.05.2014 to 30.09.2020	Under approval

Table 14: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-II-D

S. No	Reasons for EOT in Civil Works-Package-II-D (Construction of HRT from Adit-1 Junction to Intake of Project)	No. of Days
I	Provisional EOT granted (19.12.2011 to 11.05.2013):	510

Table 15: Petitioner Submission w.r.t. Time Overrun in Civil Works Package-III

S. No	Reasons for EOT in Civil Works-Package-III (Construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT)	No. of Days
I	1st Extension of Time approved by BOD (04.06.2012 to 28.12.2013): Delay due to Handing over of land as per the schedule timeline, Hindrance Caused by local Villagers, Changed Construction Methodology for Powerhouse & Transformer Caverns	573
II	2nd Extension of Time approved by BOD (29.12.2013 to 26.07.2018) Delay due to handing over of MIV makeup piece site for concreting by E&M agency for Unit-I & Unit-II, variation in work order, and others	1671
III	3rd and Final Extension of time from 27.07.2018 to 22.12.2020	Under approval

Table 16: Petitioner Submission w.r.t. Time Overrun in E&M Package

S. No	Reasons for EOT in Electro-Mechanical (E&M) Works	No. of Days
I	1 st Extension of Time approved by BOD (28.06.2012 to June-2014)	~793
II	2 nd Extension of Time approved by BOD (June-2014 to March-2017)	~1005
III	3 rd Extension of Time approved by BOD (March-2017 to April-2019)	~760
IV	4 th Extension of Time approved by BOD (April-2019 to June-2020)	~427
V	5 th Extension of Time approved by BOD (June-2020 to October-2020)	~123
VI	Final Extension of Time approval upto 21.01.2021	Under approval

3.3.12 As per the submissions, delay in E&M work was due to handing over of Civil work fronts in Powerhouse and Transformer Hall for the erection & commissioning of E&M equipment. Further, delay in test run of units occurred due to non- availability of water.

Commission's Analysis

3.3.13 The Commission observes that the HPSEB, in its Techno Economic Clearance (TEC) issued on 10.11.2004 for 111 MW(3x37 MW) Sawra Kuddu HEP had approved the Capital cost of Rs.558.53 Crores including IDC of Rs. 63.29 Crores at March 2003 price level.

3.3.14 The Commission has noted that the Petitioner awarded the work for Civil, Hydro-Mechanical and E&M through tendering process. According to the EPC contract agreement issued by the Petitioner, the commissioning schedule for the generating units were set at 36 months for Unit-I, 37 months for Unit-II and 38 months for Unit-III from the effective date (i.e., 28.04.2009).

3.3.15 The Commission has noted that the Petitioner has awarded total four (04) contract packages for the Civil, H&M and E&M works. The details of the contract agreements along with the schedule completion date and actual completion date are tabulated in the table below:

Table 17: Swara Kuddu all work Packages Date of Award, SCOD and ACOD

S. No.	Particulars	Date of Award	Schedule Completion Date (SCOD)	Actual Completion Date (ACOD)
I	Date of Award of Package-I to M/s PEL	25.08.2009	07.06.2012	07.10.2021

S. No.	Particulars	Date of Award	Schedule Completion Date (SCOD)	Actual Completion Date (ACOD)
	<i>(Construction of Diversion Barrage, Power Intake, Desilting Chamber & Hydro Mechanical Works)</i>			
II	Date of Award of Package-II-A to M/s Aban Coastal JV (Main HRT and Adit Work)	18.06.2007	17.07.2011	<i>Work terminated and re-awarded to M/s HCC Ltd.</i>
III	Date of Award of Package-II-B to M/s HCC Ltd. (Balance HRT work)	03.11.2014	24.11.2016	29.09.2020
IV	Date of Award of Package-II-C to M/s PEL (Additional Adit work)	14.01.2013	13.05.2014	30.09.2020
V	Date of Award of Package-II-D to M/s Coastal Projects Ltd. (Construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP)	19.03.2011	19.12.2011	<i>No details submitted</i>
VI	Date of Award of Package-III to M/s PEL (Construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT)	22.01.2009	03.06.2012	22.12.2020
VII	Date of Award of E&M Contract to 'JV of M/s VA Tech Hydro India Pvt. Limited and VA Tech Escher Wyss Flovel Pvt. Ltd.'	27.02.2009	28.04.2012 for Unit-1 28.05.2012 for Unit-2 and 28.06.2012 for Unit-3	03.11.2020 for Unit-1 17.11.2020 for Unit-2 and 09.12.2020 for Unit-3

- 3.3.16 The Commission has noted from the table above that the project's actual commissioning date was scheduled for 28.06.2012. However, due to the re-award of HRT work, additional Adit work and delays caused by various factors, the Petitioner was able to achieve commissioning of the project on 09.12.2020. Furthermore, as per the submissions of the Petitioner, the Commercial Operation Date (COD) was declared on 21.01.2021. Therefore, it is noted that there was an overall delay of 3129 days in the project implementation.
- 3.3.17 The Commission has reviewed all the contract agreements awarded by the Petitioner to various contractors and analysed the details in the following paras.
- 3.3.18 The Package-I work for Construction of Diversion Barrage, Power Intake, Desilting Chamber & Hydro Mechanical Works were awarded to M/s PEL (L-1 Bidder) at a cost of Rs. 283.49 Cr. on 25.08.2009 with a completion time was 32 months, culminating on 07.06.2012. Further, the scope of work was enhanced and an additional work worth Rs. 0.52 Cr. was awarded for Geo-technical instrumentation, resulting in revision of the contract value to approximately Rs. 284.02 Cr.
- 3.3.19 The Package-II work for construction of Head Race Tunnel (HRT) and Adit was awarded to M/s Aban Coastal JV(L-1 Bidder) at a cost of Rs. 115.92 Cr. on

- 18.06.2007 with a completion time of 48 months, culminating on 17.07.2011. As per the submissions of the Petitioner, it is noted that the contract was terminated on 03.11.2014 due to non-achievement of milestone as per the schedule, and the Contractor's dismal performance. The contractor had completed approximately 46% of the awarded work against which an amount of Rs. 53.42 Cr. was paid to the contractor.
- 3.3.20 Post termination, the balance work was awarded to M/s HCC Ltd. (L-1 Bidder) through tendering process at risk & cost of M/s Aban Coastal JV for a cost of Rs. 179.90 Cr. on 25.11.2014. The completion period was 24 months with expected completion date as 24.11.2016.
- 3.3.21 The Petitioner also awarded construction of Additional Intermediate Adit work between Adit-I and Adit-II of HRT to M/s PEL (L-1 Bidder) at a cost of Rs. 19.99 Cr. on 14.01.2013 and the completion time was 15 months, estimated to be complete on 13.05.2014. Another additional work for the Construction of HRT from Adit-1 junction to intake of project was awarded to M/s Coastal Project Ltd. (L-1 Bidder) at a cost of Rs. 3.33 Cr. on 19.03.2011 and the completion time was 9 months, with an expected completion date as 19.12.2011.
- 3.3.22 The Package-III work for Construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT was awarded to M/s PEL (L-1 Bidder) at a cost of Rs. 153.37 Cr. on 22.01.2009 and the completion time for the same was 39 months, with an expected completion date as 03.06.2012. Further, the scope of work was enhanced and an additional work worth Rs. 0.65 Cr. towards Geo-technical instrumentation and Rs. 1.20 Cr. for Earth Mat Work, resulting in revision of the contract value to approximately Rs. 155.23 Cr.
- 3.3.23 The Electro-Mechanical (E&M) Work was awarded to the Joint Venture of M/s VA TECH Hydro India Pvt. Ltd. and M/s VA TECH ESCHER WYSS FLOVEL Pvt. Ltd. (L-1 Bidder) at a cost of Rs. 180.54 Cr on 27.02.2009. As per the submissions of the Petitioner and contract agreement, it is noted that the scheduled completion period was considered for Unit-1 as 36 months, Unit-2 as 37 months, and Unit-3 as 38 months. Furthermore, the completion dates 28.04.2012 for Unit-1, 28.05.2012 for Unit-2 and 28.06.2012 for Unit-III were considered.
- 3.3.24 With regard to the delay in commissioning of the project, the Commission raised several queries for providing relevant details and supporting documents for substantiating the claim for the delay. In response, the Petitioner provided copies of Minutes of Meeting (MoM) of the Board of Directors (BOD) and Whole Time Director (WTD) for granting extension for time overrun.
- 3.3.25 The Commission has reviewed the submissions of the Petitioner with regard to the various reasons of time overrun. Further, the Commission has analysed the submissions and documents provided by the Petitioner against each delay claimed in the Petition. The detailed observations of the Commission in this regard are covered in the following paras.
- 3.3.26 **Civil Works Package-I:** The Petitioner has cited a delay from 08.06.2012 to 07.10.2021 in execution of package I, for which two extensions were approved by the BOD up to 03.06.2018. It has also been submitted that the approval for the period from 04.06.2018 to 07.10.2021 is currently under review by the

BOD. In support of the two extensions, the Petitioner has submitted the minutes of meeting (MoM) of the 39th BOD meeting dated 25.04.2013 and 65th BOD meeting dated 30.06.2018, containing detail the reasons for the delay and the attribution of the delay. Upon reviewing the submitted BOD minutes, the Commission has identified the following reasons for the claimed delay:

Table 18: Reasons for Time Overrun in Package-I as per the MoM of BOD of the Petitioner

S. No.	Reasons for Time Overrun in Package-I	Delay Attribute to (from BOD MoM)	No. of Days
Extension of Time vide 39th and 65th BOD Meeting (08.06.2012 to 07.10.2021)			
I	Delay in issuance of construction drawings to the Contractor for execution of work	HPPCL	410
II	Introduction of additional works to the Contractor which were not in original scope of work	HPPCL	16
III	Delay due to rain/Snow fall	None	47
IV	Delay due to power failure	Contractor	43
V	Delay due to late commencement of work by the Contractor after issuance of directives for construction of 2 nd Stage Cofferdam	Contractor	27
VI	Delay due to issuance of construction drawings for Diversion Barrage curtain grouting to the contractor for execution of work	HPPCL	891
VII	Delay due to variation in order/extra/deviated/substituted/additional Work	Contractor	307
VIII	Miscellaneous work beyond original scope of work (Like: Construction of Check Post and Approach Road)	HPPCL	31
IX	Delay in issuance of drawings and instruction for execution of work within the original scope of work	HPPCL	485
X	Extension from 04.06.2018 to 07.10.2021	Under approval	-

The Commission noted that the delay which occurred during the period from 08.06.2012 to 07.10.2021 was primarily due to the issuance of construction drawings to the contractor for execution of work as at multiple stages, the project drawings were revised due to complete change in design of the barrage necessitated by site requirement and high flood conditions. The total delay has aggregated to approximately 1800 days (as per S.No. I, VI & IX). Furthermore, the additional work beyond the scope of work given to the Contractor caused a delay of approximately 354 days (as per Sr.No. II, VII & VIII). The Commission also noted that the delays on account of power failure, snowfall, and the delay in the commencement of work could have been avoided by proper coordination and planning by the Petitioner and the Contractor. Additionally, the Commission noted that as per 'Sr.No.-X', the extension of time from the BOD is still under approval for which no details have been provided by the Petitioner. In the absence of plausible reasons the Commission has not condoned the delay on this account. **Further, with regard to pending BOD approval as mentioned in 'Sr. No.-X', the Commission directs the Petitioner to submit the details of future liquidated damages (LD) occurred due to the BOD's final approval. The Commission shall consider the same in subsequent tariff period.**

Further, the Commission noted that the BOD has attributed the delays either to the Contractor or to the Petitioner. In view of all the above-mentioned statements, the Commission concludes that the delays claimed by the Petitioner are of a general nature and could have been avoided by proper coordination and planning of work. Hence, the Commission, in view of the above and BOD recommendations, does not condone any delay for Package-I.

3.3.27 **Civil Works Package-II-A:** The Petitioner has stated that the HRT work, initially given to M/s Aban Coastal JV, was delayed from 18.07.2011 to 09.01.2014. The Petitioner terminated this work due to non-achievement of milestone as per the schedule, and the Contractor's dismal performance. The Petitioner has provided the MoM of the 50thBOD dated 02.03.2015, explaining the delay reasons and attribution. Upon reviewing these minutes, the Commission found the following reasons for the claimed delay:

Table 19: Reasons for Time Overrun in Package-II-Aas per the MoM of BOD of the Petitioner

S.No.	Reasons for Time Overrun in Package-II-A	Delay Attribute to (from BOD MoM)	No. of Days
Extension of Time vide 50th BOD Meeting (18.07.2011 to 09.01.2014)			
I	Delay in Handing over of Land	HPPCL	45
II	Delay in Providing Electrical Connection	HPPCL	457
III	Delay due to formation of Cavityat site during work execution	None	35
IV	Delay due to removal of muck and backfilling with concrete	None	6
V	Extra time for backfill concrete	None	5
VI	Delay due to work taken over by HPPCL from the Contractor	None	80
VII	Delay due to slow progress, Labour strike, and bad weather	Contractor.	279

The Commission noted that the delay from 18.07.2011 to 09.01.2014 was primarily due to the delay in providing the electrical connection, which delayed the project by approximately 457 days (S. No. II). According to the Terms and Conditions of the Contract Agreement awarded to M/s Aban Coastal JV, it was the responsibility of the Petitioner to arrange the supply of power. However, no rationale has been provided by the Petitioner for the delay caused in this regard. Therefore, the Commission, in view of the BOD recommendations has accounted the delay on account of the Petitioner and has, therefore, not condoned the delay.

Furthermore, the delay of 45 days (S. No. I) in handing over land has been attributed to HPPCL by the BOD. The Commission in view of BOD recommendations does not condone the delay, as it was the Petitioner's prime duty to arrange encumbrance-free land before awarding the LOA to the Contractor. The delay of 279 days (S. No. VII) due to slow progress and labour strikes could have been averted through proper coordination and compliance to the award timelines and therefore is not condoned.

Additionally, the reasons for the delay of 46 days (as per S. No.-III, IV & V) due to the formation of a cavity due to geological outbreaks are plausible and such delay is condonable. However, the delay of 80 days (as per S.No.-VI) is

not condoned, as the work was rescinded and taken over by the HPPCL. However, no rationale has been provided by the Petitioner in this regard. Therefore, the Commission has attributed it to the HPPCL.

Accordingly, considering the above statements, the Commission concluded that the delays claimed by the Petitioner could have been avoided through proper coordination and planning as per the approved schedule. The Commission based on the above discussions and taking into consideration the BOD recommendations, has condoned 46 days of delay due to geological outbreaks for Package-II-A.

- 3.3.28 **Civil Works Package-II-B:** The Petitioner stated that following the termination of work by M/s Aban Coastal JV, the remaining HRT work was awarded to M/s HCC Ltd. However, this work encountered delays from 25.11.2016 to 30.09.2020. The Petitioner has submitted the MoM's of the 63rd and 70th BOD meetings as well as that of the 1st and 14th Whole Time Director (WTD) meetings in which the detailed reasons for the delay and its attribution have been discussed. Upon reviewing these minutes, the following reasons for the claimed delay have been identified:

Table 20: Reasons for Time Overrun in Package-II-B as per BOD MoM of Petitioner

S. No.	Reasons for Time Overrun in Package-II-B	Delay Attributed to the Agency	No. of Days
Extension of Time vide 63rd & 70th BOD and 1st& 14th WTM (25.11.2016 to 30.09.2020)			
I	Delay in handing over of the site and existing job facility	HPPCL	27
II	Non availability of encumbrance free possession and access to site	HPPCL	93
III	Strike by workers	Contractor	37
IV	Delay in installation of transformer at Adit-II	HPPCL	137
V	Variation in geological condition & Unforeseen geological Condition due to Cavity formation at Face-I & Face-II	None	475
VI	Local vested interests, stoppage by Ex-employees of earlier contractor/Trade Union CITU	Contractor	88
VII	Hindrance on account of frequent power fluctuations	Contractor	46
VIII	Time for removal of muck generated from un-accepted over break	Contractor	12
IX	Non-availability of access to site due to hindrance caused by the agency deployed by HPPCL	HPPCL	27
X	Delay due to execution of work of additional Adit from Adit-1 face	HPPCL	7
XI	Extra time for deviated quantity as per original BOQ	HPPCL	357
XII	Delay due to slow progress, strike and other factor	Contractor/HPPCL	100

The Commission observed that the delay from 25.11.2016 to 30.09.2020 was caused by various factors, as outlined in the table above. The Commission has approved the 475days delay resulting from unforeseen geological conditions

due to formation of cavity at the site as an uncontrollable factor (S.No. V). However, the delays attributed to land handover, encumbrance-free land availability, worker and local strikes, quantity variations, and slow progress (S.No. I to IV and S.No. VI to XII) were not condoned by the Commission. These delays, deemed general in nature, could have been mitigated through proper planning and coordination following the approved work schedule.

Additionally, both the BOD and WTM attributed these delays to both the Petitioner and the Contractor. Therefore, the Commission, in accordance with the above and recommendations from the BOD and WTM, condoned 475 days of delay resulting due to geological outbreaks for Package-II-B.

- 3.3.29 **Civil Works Package-II-C:** The Petitioner has cited a delay in the work from 14.05.2014 to 30.09.2020, for which the Petitioner obtained the extension upto 21.11.2016. The final BOD approval upto 30.09.2020 is currently under review by the BOD. Additionally, the Petitioner has submitted documents with regard to the grant of time extensions, which detail the reasons for the delay and the attribution of the delay. Upon reviewing the submitted documents, the Commission has identified the following reasons for the claimed delay:

Table 21: Reasons for Time Overrun in Package-II-C as per the MoM of BOD of the Petitioner

S.No.	Reasons for Time Overrun in Package-II-C	Delay Attributed to the Agency	No. of Days
Extension of Time (14.05.2014 to 30.09.2020)			
I	Late submission of baseline schedule and Delay in Mobilisation by the Contractor	Contractor	15
II	Delay in issuance of construction drawings to the contractor	HPPCL	31
III	Hindrance by Local People	None	773
IV	Work executed during day shift	None	37
V	Period under Litigation (NGT Stay)	None	237
VI	Mobilisation period	Contractor	101
VII	Balance construction work period	None	144
VIII	Extension upto 30.09.2020	Under approval	-

The Commission noted that the delay from 14.05.2014 to 21.11.2016 was primarily due to hindrances by local people, delaying the project by approximately 773 days (S.No. III). The Commission does not condone this delay, as it is the Petitioner's duty to provide encumbrance-free land to the Contractor before issuing the LOA. Furthermore, the Commission condones the delay of approximately 237 days (S.No. V) caused due to litigation in the NGT. The Commission has noted that delays due to the issuance of construction drawings to the contractor for work execution, delay in submitting the work schedule, delay in mobilization, and balance work period could have been avoided by proper coordination and planning between the Petitioner and the Contractor. Further, the Petitioner has not provided any details with regard to the delay claimed under balance work period.

Additionally, the Commission noted that as per 'S.No.-VIII', the extension of time from the BOD is still under approval for which no details have been provided by the Petitioner. In the absence of any details, the Commission has

not condoned the delay on this account. **Further, with regard to pending BOD approval as mentioned in 'S. No.-VIII', the Commission directs the Petitioner to submit the details of any future liquidated damages (LD) occurred due to the final BOD's approval. The Commission shall consider the same in subsequent tariff period.**

Hence, in view of all the above-mentioned statements, the Commission only condones 237 days of delay on account litigation and stay by NGT as per 'S. No.-V'. Further, no other delay has been condoned by the Commission as claimed in table no.21 due to lack of proper planning, administrative failure in providing encumbrance free land and in the absence of adequate supporting documents.

3.3.30 **Civil Works Package-III** (Construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT): The Petitioner has stated that the Package-III work was awarded to M/s PEL. Further, the package-III works was delayed from 04.06.2012 to 22.12.2020, for which the Petitioner obtained the extension upto 26.07.2018 from the BOD. The Petitioner has provided the MoM of the 39th and 63rd BOD meetings, which explained the reasons of delay and its attribution to the Agency responsible. Upon reviewing these minutes, the Commission find the following reasons for the claimed delay:

Table 22: Reasons for Time Overrun in Package-III as per the MoM of BOD of the Petitioner

S. No.	Reasons for Time Overrun in Package-III	Delay Attribute to (from BOD MoM)	No. of Days
Extension of Time vide 39th and 63rd BOD Meeting (04.06.2012 to 22.12.2020)			
I	Delay due to handing over of land & hindrance caused by local villagers	HPPCL/Contractor	5
II	Delay in issuance of drawings and extra time allowable for completion of transition & surge shaft	HPPCL	426
III	Delay on account of changed construction methodology for powerhouse & transformer caverns	None	145
IV	Delay due to Power failure	Contractor	51
V	Delay due to workers strike	Contractor	11
VI	Delay in handing over of MIV makeup piece site for concreting by E&M Agency for Unit-I, II & III	HPPCL	611
VII	Delay in handing over of miscellaneous works and drawings	HPPCL	47
VIII	Delay in availability of water for testing of underwater components	HPPCL	850
IX	Labour strike	Contractor	98
X	Extension upto 22.12.2020	Under approval	-

The Commission has noted that the delay from 04.06.2012 to 22.12.2020 was caused by various factors, as outlined in the table above. The Commission observed that the delay of approximately 1500 days (as per S.No. VI, VII & VIII) in Package-III was a direct consequence of the delays in the previous packages (i.e., Package-I & II). However, the delays attributed to late land handover, hindrance by local villagers, delay in the issuance of construction

drawings, changes in construction methodology, power failures, worker strikes, etc. (S.No. I to V and S.No. IX), are of the nature of operational issues which are common to projects of similar nature and the responsibility of which clearly remains with the Petitioner. Therefore, the Commission does not condone any delay claimed in execution of Package-III.

Additionally, the Commission noted that as per 'S. No.-X', the extension of time from the BOD is still under approval for which no details have been provided by the Petitioner. In the absence of any details, the Commission has not condoned the delay on this account. **Further, with regard to pending final BOD approval as mentioned in 'S. No.-X', the Commission directs the Petitioner to submit the details of any future liquidated damages (LD) which occurred due to the final BOD's approval. The Commission shall consider the same in subsequent tariff period.**

- 3.3.31 **E&M Works Package:** The Petitioner has mentioned delay in E&M Package works occurred from 28.06.2012 to 09.12.2020. Further, the COD of all the three units were declared on 21.01.2021. The Petitioner has taken multiple approvals from the BOD with regard to the delay occurred in the E&M works. The delay reasons and attribution of delay is shown below in the table:

Table 23: Reasons for Time Overrun in E&M Package as per the MoM of BOD of the Petitioner

S.No.	Reasons for Time Overrun in E&M Package	Delay Attribute to (from BOD MoM)	No. of Days
Extension of Time vide 37th 50th 64th and 70thBOD Meeting 28.06.2012 to 09.12.2020			
I	Delay in handing over of Civil work fronts in Powerhouse, transformer hall, water availability for the erection and commission of E&M equipment	HPPCL	<i>Delay included in 'S. No. II'</i>
II	Delay in water availability at Main Inlet Valve (MIV) and Delay in availability of power evacuation system (31.03.2012 to 02.11.2020)	HPPCL	3138

The Commission has noted that the period of delay claimed for E&M works i.e., 28.06.2012 to 09.12.2020 has already been covered in the Civil works and for which the Commission has already condoned the delay after prudence check. Further, it is important to note that the implementation of the hydro power project includes civil, mechanical, electrical, and other related works, all of which are planned to proceed in parallel. As a result, all activities are interlinked, with delays in one area potentially affecting others. Therefore, the Commission, in view of the above discussed points, has not considered the delay of E&M activities separately as the delay in handing over of civil works has only postponed the execution of E&M works.

- 3.3.32 Therefore, as per the above-mentioned tables, the Commission after scrutinizing documents and BOD approval has condoned only 758 days of delay. The same is tabulated as below:

Table 24: Delay Condoned by the Commission against SKHEP Work Contract Packages

S. No	Details of Packages	Period claimed by the Petitioner	No. of days for the delay	Delay Condone	Delay not condone
I	Civil Works Package-I	08.06.2012 to 07.10.2021	3409	0	3409
II	Civil Works Package-II-A	18.07.2011 to 09.01.2014	907	46	861
III	Civil Works Package-II-B	25.11.2016 to 30.09.2020	1406	475	931
IV	Civil Works Package-II-C	14.05.2014 to 30.09.2020	2332	237	2095
V	Civil Works Package-II-D	<i>No Details submitted</i>	-	-	-
VI	Civil Works Package-III	04.06.2012 to 22.12.2020	3124	0	3124
VII	E&M Package	28.06.2012 to 09.12.2020	3087	0*	3087
	Total (Days)	-	-	758	-

*The delay in E&M works is not considered separately, as both Civil and E&M work activities are planned to proceed concurrently. Any delay in the E&M works is already accounted for in the Civil works schedule. Consequently, no additional delay is considered specifically for E&M activities.

3.3.33 The Commission has examined the submissions of the Petitioner along with the observations and recommendations of the Board of Directors (BOD) on time overrun. The Commission noticed that various factors were responsible for the time overrun in commissioning of the project like non-availability of access road, delay in handing over of working site, delay in finalisation of construction drawings, change in construction methodology, hindrance by local people, NGT stay due to litigation, labour strike, variation in design and order, geological outbreaks and many other factors.

3.3.34 The Commission has allowed total time overrun of 758 days considering the NGT stay and geological outbreak events as uncontrollable factor/force majeure conditions which were not within the control of Petitioner and the EPC contractor.

3.3.35 Therefore, based on the Schedule Commissioning Date of the Project (i.e., 28.06.2012), and the Actual Commissioning Date (i.e., 21.01.2021) a total delay of 3129 days is ascertained of which 758 days has been approved as delay condoned on account of uncontrollable aspects and remaining delay is disallowed. The details of delay condoned, and delay not approved is outlined in the table below:

Table 25: Total approved delay by the Commission

Schedule Commissioning Date (SCOD)	Actual Commissioning Date (ACOD)	Total Delay in Days	Total Approved Delay in Days
28.06.2012	21.01.2021	3129	758

3.4 Date of Commercial Operations (COD)

Petitioner's submissions

- 3.4.1 The Petitioner has claimed COD for all the three Units (i.e., Unit-I, Unit-II & Unit-III) on 21.01.2021. Further, the Petitioner has provided the letter issued by the MD-HPPCL as a supporting document for the claimed COD for all the three Units along with the Petition.

Commission's Analysis

- 3.4.2 The Petitioner has claimed COD of all the three units of Sawra Kuddu HEP as on 21.01.2021 in its Petition. However, the claim is not supported by any COD certificate from the SLDC or any other competent agency. In response to the query of the Commission, the Petitioner has submitted a copy of the approval issued by the Directorate of Energy for the COD of all the three units.
- 3.4.3 In view of the above clarifications and COD as certified by the Directorate of Energy (DoE) (GoHP), the Commission has considered 21.01.2021 as the COD for all the three units of Sawra Kuddu HEP as also mentioned in table below:

Table 26: Project COD Details

Unit	Schedule COD	COD as submitted in the Petition	COD allowed by the DoE	COD approved by the Commission
Unit-I(37 MW)	28.04.2012	21.01.2021	21.01.2021	21.01.2021
Unit-II(37 MW)	28.05.2012	21.01.2021	21.01.2021	21.01.2021
Unit-III(37 MW)	28.06.2012	21.01.2021	21.01.2021	21.01.2021

3.5 Capital Cost

Petitioner's submissions

- 3.5.1 The Petitioner has claimed actual project cost of Rs. 2203.86 Cr. incurred towards Sawra Kuddu HEP as on the COD against the HPSEB approved DPR (hereinafter referred to as "DPR") cost of Rs. 558.53 Cr. The table below presents a comparative analysis between the DPR cost (as was also approved by HPSEB) vis-à-vis the claimed capital cost by the Petitioner.

Table 27: Project Cost Comparison between DPR and Claimed as on COD (Rs. Cr.)

S. No	Particulars	DPR Cost	Claimed Cost	Variation (Claimed – DPR)
1	DIRECT COST (Only for Civil Works)			
I	Works			
A	Preliminary	3.18	0.00	(3.18)
B	Land (Incl. R&R)	2.85	288.72	285.87
C	Works (Diversion and other related structures)	218.65	841.05	622.40
J	Power Plant Civil Works			
K	Buildings	13.47	27.95	14.48
M	Plantation	0.25	0.00	(0.25)
O	Miscellaneous	8.67	6.60	(2.07)
P	Maintenance during construction	2.53	0.00	(2.53)

S. No	Particulars	DPR Cost	Claimed Cost	Variation (Claimed – DPR)
Q	Special T&P	4.97	0.00	(4.97)
R	Communications	2.15	10.97	8.82
X	Environment and Ecology	10.14	14.68	4.54
Y	Losses on stock	0.65	0.00	(0.65)
TOTAL: I-WORKS		267.51	1,189.97	922.46
II	Establishment	21.4	242.96	221.56
III	Tools and Plants	2.68	1.02	(1.66)
IV	Suspense	0.00	0.00	0.00
V	Receipt and Recoveries	(4.16)	0.00	4.16
TOTAL(A): 1. DIRECT COST		287.43	1,433.95	1,146.52
2	INDIRECT COST (Only for Civil Works)			
i	Capitalization of Abatement of Land Revenue	0.05	0.00	(0.05)
ii	Audit and Account Charges	2.68	0.00	(2.68)
TOTAL(B): 2. INDIRECT COST		2.72	0	(2.72)
TOTAL (A+B)		290.15	1,433.95	1,143.80
3	Electro-Mechanical Works	120.40	252.94	132.54
4	Interest During Construction	63.29	530.79	467.50
5	Transmission System works	38.09	0.00	(38.09)
6	Escalation	46.60	0.00	(46.60)
7	Resettlement & Rehabilitation, R&R	0.00	2.30	2.30
8	Sale of Infirm Power and other earnings during construction	0.00	(16.12)	(16.12)
Total Cost(Rs. Cr.)		558.53	2,203.86	1,645.33

3.5.2 The Petitioner has submitted the total cost overrun of Rs. 1645.33 Cr. in the completed cost of the Swara Kuddu HEP.

Commission's Analysis

3.5.3 The Commission observes that the HPSEB, in its Techno Economic Clearance (TEC) issued on 10.11.2004 for 111 MW (3x37 MW) Sawra Kuddu HEP has approved the Capital cost of Rs. 558.53 Cr., including IDC of Rs. 63.29 Cr. at March 2003 price level. Further, it is observed that the approved DPR cost does not include the Local Area Development Fund (LADF) in accordance with the guidelines of the State Hydro Power Policy-2006 by GoHP.

3.5.4 Based on the claim of the Petitioner, significant cost variations are observed in the completed cost of Sawra Kuddu HEP with respect to the DPR cost. The cost claimed by the Petitioner is approximately four times of the approved capital cost as per the DPR approved by HPSEB with significant cost differences in civil works, E&M works, IDC and contingency. A comparison of the hard cost in terms of DPR cost, awarded cost and actual cost is summarized below:

Table 28: Hard Cost Comparison among DPR, Awarded and Actual Cost (Rs. Cr.)

S. No.	Particulars	DPR Cost	Contract Award Cost	Actual Cost on COD
I	Civil Work	218.65	695.91	841.05

S. No.	Particulars	DPR Cost	Contract Award Cost	Actual Cost on COD
II	E&M Work	120.40	180.54	252.94
III	Total Hard Cost	339.05	876.45	1,093.99

3.5.5 The Commission observes variation in the DPR cost, contract award cost and actual claimed cost as on COD. The Commission raised queries regarding justification for increase in cost along with BOD approval for the same. In response, the Petitioner has submitted the following rationale substantiating its claim for higher cost vis-à-vis the DPR cost:

- i. The HPSEB has approved the cost at March-2003 price level while the award of Civil and E&M works through tendering process was started from 2009 onwards and completed in the month of Nov-2014. Revisions in market rates resulted in price variation in between the DPR and awarded cost.
- ii. The Civil work awarded in different packages and all the work was awarded through International Competitive Bidding process in which the L-1 Bidders was selected. The total awarded amount towards all the civil work packages was Rs. 695.91 Cr. resulting in variation vis-à-vis the DPR cost of Rs. 218.65 Cr.
- iii. The DPR had a provision for one Adit only. But during detailed design before the tendering process, it was observed that the length of HRT was approximately 11.3km which required more number of Adits. Therefore, additional five Adits were introduced along with approach road due to which the cost of the Civil works has increased.
- iv. The civil work awarded at Rs. 695.91 Cr. to the L1-bidder includes whole infrastructure works, additional Adit works and related miscellaneous works against the DPR cost of Rs. 218.65 Cr.
- v. The E&M work awarded through international competitive bidding process in which the L1 bidder quoted Rs 180.54 Cr. Further, the price variation between the contract award cost and actual cost as on COD incurred because of change in scope of work, additional work, delay due to uncontrollable factors, price variation, price escalation, and change in FERV.

3.5.6 The Commission observes that there was significant difference in the awarded cost vis-à-vis the DPR cost. Since international competitive bidding was followed and necessary Board approvals have been submitted by the Petitioner, the Commission has considered the awarded cost as the base cost for reviewing the claimed cost against civil and E&M works.

3.5.7 Review of the DPR for the Sawra Kuddu HEP indicates that the detailed estimate of cost was based on the planning and preliminary designs of various components of works after review of site conditions, detailed field studies etc. Also, the provisions under various sub-heads were prepared based on "Guidelines for Preparation of estimates for river valley projects" issued by Central Water Commission (CWC) in March 1997.

3.5.8 It is observed that the above-mentioned Guidelines provides a detailed framework for concurrence of the various elements of capital cost for a

hydroelectric project. The Commission has used the approved DPR as the basis for approval of the various cost elements for Sawra Kuddu HEP.

- 3.5.9 While reviewing the various cost elements claimed by the Petitioner, the Commission has compared the same with the DPR and awarded cost. Also, the Commission has validated the various expenses based on the documents and payment proofs submitted by the Petitioner along with auditor certificate and necessary BOD approvals.
- 3.5.10 While undertaking the item-wise review of the cost elements, it has been observed that the Petitioner had booked few expenses under incorrect expense heads and, therefore, the Commission has reclassified such expense items in line with the DPR before undertaking the prudence of such heads.
- 3.5.11 Based on the examination, an expense of Rs. 242.96 Cr. was observed to be booked under 'Establishment Cost'. The Commission sought detailed break-up of this cost along with supporting documents and payment proofs. In response, the Petitioner has submitted the details as provided below:

Table 29: Cost break-up for Establishment Cost (Rs. Cr.)

S. No.	Particular	Cost
i	Employee Cost	84.39
ii	Vehicle Expenses	5.23
iii	Office & Admin. Expenses	7.03
iv	Repair & Maintenance	1.07
v	Investigation & Survey	8.25
vi	Consultancy Charges	3.34
vii	LADF	30.02
viii	Common Cost AUC (HO & SNR)	78.63
ix	Depreciation Expense	20.44
x	Other Expenses	4.56
xi	Total Cost (Rs. Cr.)	242.96

- 3.5.12 It is observed that few of the above heads cannot form part of Establishment cost and need to be classified under the expense heads as mentioned in the DPR. The Commission after prudence check, has reclassified the Rs. 242.96 Cr. booked under 'Establishment Cost' by the Petitioner in line with the DPRs given in the following table below:

Table 30: Redistribution of Cost claimed under Establishment Cost (Rs. Cr.)

S. No.	Particular (As defined in the DPR)	Cost
I	Preliminary (A)	11.59
II	Miscellaneous (O)	5.23
III	Maintenance during construction (P)	1.07
IV	Establishment (II)	195.05
V	LADF (Local Area Development Fund)	30.02
VI	Total Cost (Rs. Cr.)	242.96

- 3.5.13 After detailed examination of the various cost elements and alignment with the sub-heads as per the CEA Guidelines, the Commission has reallocated the cost heads claimed by the Petitioner as on COD of the project and the reclassified costs as on COD is summarized below:

Table 31: Modified Cost as on COD as per Documents (Rs. Cr.)

S. No	Particulars	DPR Cost	Claimed Cost	Modified Cost
1	DIRECT COST (Only for Civil Works)			
I	Works			
A	Preliminary	3.18	0.00	11.59
B	Land (Incl. R&R)	2.85	288.72	291.02
C	Works (Diversion and other related structures)	218.65	841.05	841.05
J	Power Plant Civil Works			
K	Buildings	13.47	27.95	27.94
M	Plantation	0.25	0.00	0.00
O	Miscellaneous	8.67	6.60	11.83
P	Maintenance during construction	2.53	0.00	1.07
Q	Special T&P	4.97	0.00	0.00
R	Communications	2.15	10.97	10.97
X	Environment and Ecology	10.14	14.68	14.68
Y	Losses on stock	0.65	0.00	0.00
TOTAL: I-WORKS		267.51	1,189.97	1,210.15
II	Establishment	21.4	242.96	195.05
III	Tools and Plants	2.68	1.02	1.02
IV	Suspense	0.00	0.00	0.00
V	Receipt and Recoveries	(4.16)	0.00	(16.12)
TOTAL(A): 1. DIRECT COST		287.43	1,433.95	1,390.11
2	INDIRECT COST (Only for Civil Works)			
I	Capitalization of Abatement of Land Revenue	0.05	0.00	0.00
Ii	Audit and Account Charges	2.68	0.00	0.00
TOTAL(B): 2. INDIRECT COST		2.72	0.00	0.00
TOTAL (A+B)		290.15	1,433.95	1,390.11
3	Electro-Mechanical Works	120.40	252.94	252.94
4	Interest During Construction	63.29	530.79	530.79
5	Transmission System works	38.09	0.00	0.00
6	Escalation	46.60	0.00	0.00
7	LADF	0.00	0.500	30.02
8	Resettlement & Rehabilitation, R&R	0.00	2.30	0.00
9	Sale of Infirm Power and other earnings during construction	0.00	(16.12)	0.00
Total Cost (Rs. Cr.)		558.53	2,203.86	2,203.86

3.5.14 The Commission after revising the claimed capital cost as on COD in accordance with the submitted documents has considered the submitted DPR for approving the final capital cost of the Plant. The item or head-wise cost approval methodology, is outlined as follows:

3.5.15 **Preliminary (A):** The Petitioner has submitted Nil expense under Preliminary cost as against the DPR approved cost of Rs. 3.18 Cr. Further, while scrutinizing the details of expenditure, an amount of Rs. 11.59 Cr. was booked under Establishment cost (as per Table No. 29). However, the Petitioner provided

payment proofs for Rs 3.34 Cr. only against Rs. 11.59 Cr. Therefore, the Commission only approved Rs. 3.34 Cr. under this head as summarized below:

Table 32: Preliminary Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	0.00	-
II	Modified Cost by the Commission	11.59	As per reclassification of cost by the Commission
III	Approved Cost (Rs. Cr.)	3.34	As per supporting documents provided

3.5.16 **Land (B):** The Petitioner has claimed Rs. 291.02 Cr. (Rs. 288.72 Cr. for Land and Rs. 2.30 Cr. for Resettlement & Rehabilitation, R&R) as expenses under the Land cost, which was higher than the DPR approved cost of Rs. 2.85 Cr. Further, the Commission sought clarification with regard to the higher cost claimed by the Petitioner along with the land acquired and claimed in the DPR.

3.5.17 In response, the Petitioner has submitted the details of land acquired and copy of judgement of the Hon'ble High Court of HP with regard to the payment made by the Petitioner against land acquisition. The Commission has reviewed the documents submitted by the Petitioner and noted that in the DPR, total 6.95 Ha of land was proposed, but in actual approximately 99 Ha of land was acquired which included around 54 Ha of Government land and 45 Ha of private land. The details of land are outlined in the table below:

Table 33: Land Acquisition: DPR and Actual

S. No	Particular	Hectare (Ha)	Remarks
I	Land as per the DPR	6.95	Include Government, Forest, and Private Land
II	Land as per Actual	~99 Ha	Government Land: 54 Ha Private Land: 45 Ha Forest Land: Nil

3.5.18 The Commission has noted that as per the DPR, only one (01) Adit was proposed for the entire project while total six (06) Adit were required to be constructed as per the site requirements. As a result, the overall land acquisition for the Project had increased due to construction of additional 5 Adits along with associated approach road to each Adit. This change in scope has led to an increase in the total land requirement beyond what was originally envisaged in the DPR.

3.5.19 With the corresponding increase in land requirement, the cost towards land acquisition also increased. Also, the Petitioner submitted that initially an amount of Rs. 45.78 Cr. was paid against ~45 Ha of private land but subsequently as per the judgement of the Hon'ble High Court of Himachal Pradesh, it had to pay enhanced compensation towards the land acquisition resulting in total amount paid of Rs. 288.72 Cr.

3.5.20 The Commission also noted that the payments made towards acquisition of land were in accordance with the rules and regulations mentioned under sections 18 and 28-A of the Land Acquisition Act, 1894, and as per the judgment of the Hon'ble High Court of Himachal Pradesh. The Commission in view of the supporting documents including payment proofs for the acquired land, Hon'ble High Court judgment, and auditor certificate, approves an

amount of Rs. 291.02 Cr. (Rs. 288.72 Cr. for Land and Rs. 2.30 Cr. for R&R) towards land expenses. The approved expense under this head is summarized below:

Table 34: Land Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	291.02	Rs. 288.72 Cr. as Land Cost and Rs.2.30 Cr. as R&R Cost
II	Modified Cost by the Commission	291.02	-
III	Approved Cost (Rs. Cr.)	291.02	In view of supporting document i.e., payment proofs against the land acquired, Court Judgement and Auditor Certificate

3.5.21 **Works & Power Plant Civil Works (C&J):** The Petitioner has submitted Rs. 841.05 Cr. expense under 'Works & Power Plant Civil Works' as against the DPR approved cost of Rs.218.65 Cr. Based on the submissions of the Petitioner, the contract for 'Works & Power Plant Civil Works' was awarded in three (03) different packages totalling to an amount of Rs. 695.91 Cr. However, the Petitioner has claimed an amount of Rs.841.05 Cr. for the same as on COD. The Commission has sought break-up of higher costs along with justification for increased cost vis-à-vis the awarded cost.

3.5.22 In response, the Petitioner submitted that the Sawra Kuddu HEP Civil Works comprises of three main contract packages. Further, the Petitioner has provided the details of various packages and break-up for the differential cost for each package vis-à-vis the contracted amount. The details are as follows:

Table 35: Civil Packages awarded cost and COD Cost (Rs. Cr.)

S. No.	Package No.	Package Scope and Details	Award Cost	Cost as on COD
I	Package-I	Construction of Diversion Barrage, Power Intake, Desilting Chamber & Hydro Mechanical Works to M/s PEL	284.02	347.86
II	Package-II-A	Construction Head Race Tunnel and Adit to M/s Aban Coastal JV	53.42*	64.53
III	Package-II-B	Balance HRT work to M/s HCC Ltd. Including miscellaneous works	179.90	227.22
IV	Package-II-C	Additional intermediate Adit work between Adit-I and Adit-II of HRT to M/s PEL	19.99	6.05
V	Package-II-D	Construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP (+170m Length) to M/s Coastal Projects Ltd.	3.34	4.03
VI	Package-III	Construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT to M/s PEL	155.23	191.36
VII	-	Total Cost (Rs. Cr.)	695.91**	841.05

*The actual awarded amount to M/s Aban Coastal JV was Rs. 115.92 Cr. However, the actual amount work done by the Contractor till termination of the contract was Rs. 53.42 Cr. after which the balance work was awarded to M/s HCC Ltd at risk and cost of M/s Aban Coastal JV. Hence, the actual work done cost has been considered as awarded amount. The same discussed in para no. 3.3.19

** The total contract cost claimed by the Petitioner included the cost of amount paid to M/s Aban Coastal and balance HRT work reward cost to M/s HCC Ltd.

3.5.23 **Package-I was awarded** to M/s PEL at an amount of Rs. 284.02 Cr. The Petitioner has claimed an amount of Rs. 347.86 Cr. as on COD. The reasons for cost variation are tabulated below:

Table 36: Reasons for Cost Variation in Package-I (Rs. Cr.)

S. No	Reasons for Cost Variation in Package-I	Cost as on COD
I	Contract Award Cost	284.02
II	Diversion Barrage: Change in design and Bill of Quantities (BOQ) with additional work	0.17
III	Power Intake: Change in design and Bill of Quantities with additional work	2.83
IV	Desanding Arrangements: Change in design and reduction in Bill of Quantities	(9.13)
V	Hydro Mechanical works (Gates & Hoisting arrangements): Introduce one number of additional gate on right bank, change in BOQ item, and additional scope of work	7.71
VI	Price Escalation	46.34
VII	Additional work awarded for Trash Rack Cleaning Machine (TRCM) to M/s GMW.	5.38
VIII	Service tax	5.02
IX	Differential Amount of GST	0.24
X	Other Miscellaneous Works	5.28
XI	Total Cost (Rs. Cr.)	347.86

3.5.24 The Petitioner has provided the following justification for the increased cost under 'Package-I' vis-à-vis the awarded cost.

- I. According to the conditions of contract agreement, variation in quantity of material as well as extra items etc. has been allowed and to be paid as per the actual to the Contractor. In this regard, the price variation of amount of Rs. 1.58 Cr. (as per S. No. II to V) paid to the contractor was as per the site requirements.
- II. According to the conditions of contract agreement, price escalation was permissible to accommodate change in labour and material components etc. during the execution of the contract. Price escalation of Rs. 46.34 Cr. (as per S. No. VI) was paid to the contractor after approval by the Engineer-in-charge.
- III. Additional work order with regard to Trash Rack Cleaning Machine (TRCM) has been placed as per the requirement as the same has not been the part of the original contract agreement. As on COD, Rs. 5.38 Cr. has been claimed for TRCM (as per S. No. VII).
- IV. The variation amounting to Rs. 5.26 Cr. was paid to the Contractor against the Entry Tax, change in rates of Service Tax etc. (as per S. No. VIII & IX)
- V. An amount of Rs. 5.28 Cr. (as per S. No. X) has been paid against multiple miscellaneous work which was awarded as per the site requirement.

3.5.25 With regard to the cost variations in the Package-I cost, the Commission has reviewed the submissions of the Petitioner along with the relevant documents including award of contract, provisions with regard to price variation, approval

of competent authority, etc. Accordingly, the Commission has approved the following deviations:

- The cost variation with respect to the DPR has been allowed considering that an international competitive bidding process was adopted and the contract was awarded to L-1 bidder post approval by the BOD of the Petitioner.
- The claimed cost towards price variation amounting to Rs. 1.58 Cr. (as per S. No. II to V) has been allowed by the Commission as the same is in accordance with the terms and conditions of the contract agreement.
- With regard to the price escalation of Rs. 46.34 Cr. (as per S. No. VI), the Commission observes that the contract awarded to M/s PEL provided for escalation on account of labour and material during the period of execution. Therefore, the Commission has approved the amount of price escalation incurred during the original contract period and the balance amount has been pro-rated based on the delay condoned as against the total delay in execution of the project (as per Table No.24).
- With regard to the payment made towards tax and duties, the Commission observes that an amount of Rs. 5.26 Cr. was paid as per S. No. VIII and IX. The Commission after prudence check of the submitted documents has approved the amount of Rs. 5.26 Cr. paid towards tax and duties.
- The Commission after prudence check of the payment proofs and work order has approved the amount of Rs. 5.38 Cr. claimed towards additional work awarded for Trash Rack Cleaning Machine (TRCM) (S. No. VII), considering that the additional scope of work was approved by the competent authority and pertains to the necessary technical requirement as per the site conditions and was an essential activity for commissioning the project.
- The Commission further observes that the Petitioner had awarded multiple miscellaneous works related to barrage work, bush cutting, construction of retaining wall, arbitration fees, procurement of stationery and boots etc., amounting to Rs. 5.28 Cr. as per S.No. X. The Petitioner was asked to provide supporting documents in form of work orders and payment proof against such additional works. In response, the Petitioner was unable to submit any of the required supporting documents and instead provided a tabular statement for the claimed amount reflecting the details of payment made against the work. Therefore, in the absence of the requisite documents, the Commission has not approved any cost claimed towards miscellaneous works.
- The Commission has allowed Rs. 315.73 Cr. against the claim of Rs. 347.86 Cr. towards Package-I works as summarized in table below:

Table 37: Cost Claimed and Approved by the Commission for Package-I (Rs. Cr.)

S. No	Reasons for Cost Variation in Package-I	Claimed Cost	Approved Cost
I	Contract Award Cost	284.02	284.02

S. No	Reasons for Cost Variation in Package-I	Claimed Cost	Approved Cost
II	Diversion Barrage: Change in design and BOQ item with additional work	0.17	0.17
III	Power Intake: Change in design and BOQ item with additional work	2.83	2.83
IV	Desanding Arrangements: Change in design and reduction in BOQ item	(9.13)	(9.13)
V	Hydro Mechanical works (Gates & Hoisting arrangements): Introduce one number of additional gates on right bank, change in BOQ item, and additional scope of work	7.71	7.71
VI	Price Escalation	46.34	19.49
VII	Additional work awarded for Trash Rack Cleaning Machine (TRCM) to M/s GMW.	5.38	5.38
VIII	Service tax	5.02	5.02
IX	Differential Amount of GST	0.24	0.24
X	Other Miscellaneous Works	5.28	0.00
XI	Total Cost (Rs. Cr.)	347.86	315.73

3.5.26 **The Package-II** work was initially awarded to M/s Aban Coastal JV for Rs. 115.91 Cr. However, due to the poor progress and performance of the contractor, the work was terminated on 03.11.2014. The Petitioner submitted that it had made payment of Rs. 53.42 Cr. towards the part of work completed against the awarded amount. Also, the Petitioner submitted that it had paid an amount of Rs. 11.11 Cr. as price escalation to M/s Aban Coastal JV before the termination of the contract. Therefore, the total amount paid to M/s Aban Coastal JV upto COD was Rs. 64.53 Cr. Following the termination, the Petitioner had awarded the work to M/s HCC Ltd through competitive bidding at a cost of Rs. 179.90 Cr., which was at the risk and cost of M/s Aban Coastal JV. The cost paid to M/s HCC Ltd as on COD was Rs. 227.22 Cr., which includes variations and deviations from the originally awarded contract.

3.5.27 In Package-II, two additional works were awarded. The first work was awarded to M/s Coastal Projects Ltd. for the construction of HRT from Adit-1 junction to intake of Swara Kuddu HEP (+170m Length) at a cost of Rs. 3.34 Cr. The amount claimed as on COD was Rs. 4.03 Cr. The second work was awarded to M/s PEL for the construction of an intermediate Adit between Adit-I and Adit-II at a cost of Rs. 19.99 Cr. The amount claimed by the Petitioner as on COD against the contract is Rs. 6.05 Cr. The details are summarized in the table below:

Table 38: Reasons for Cost Variation in Package-II (Rs. Cr.)

S. No.	Reasons for Cost Variation in Package-II	Cost as on COD
I	Initial Award of Work to M/s Aban Coastal JV	115.91
II	Executed Work by M/s Aban Coastal JV before contract termination	53.42
III	Price Escalation paid to M/s Aban Coastal JV	11.11
IV	A: Sub Total of M/s Aban Coastal JV (Rs. Cr.) (II+III)	64.53*
V	Balance HRT Work awarded to M/s HCC Ltd	179.90
VI	Price Escalation paid to M/s HCC Ltd	7.45

S. No.	Reasons for Cost Variation in Package-II	Cost as on COD
VII	Price Variation in rates and BOQ item for Balance work of HRT awarded to M/s HCC limited	35.69
VIII	Miscellaneous Expenditure	6.16
IX	Instrumentation (Awarded as separate contract for the entire project) Amount considered for HRT Package on for the work executed	0.26
X	Differential amount of GST (paid to M/s HCC)	7.27
XI	Amount recovered from HCC	(9.51)
XII	B: Sub Total of M/s HCC Ltd (Rs. Cr.)	227.22
XIII	Construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP (+170m Length) to M/s Coastal Projects Ltd.	3.34
XIV	Price variation against the change in BOQ item	0.69
XV	C: Sub Total of M/s Coastal Projects Ltd (Rs. Cr.)	4.03
XVI	Additional intermediate Adit work between Adit-I and Adit-II of HRT to M/s PEL	19.99
XVII	Price Variation due to change in BOQ item	(14.02)
XVIII	Price Escalation Paid to M/s PEL	0.08
XIX	D: Sub Total of M/s PEL (Rs. Cr.)	6.05
XX	Total Cost (Rs. Cr.) (IV+XII+XV+XIX)	301.83

**Instead claiming the original contract awarded value of Rs. 115.91 Cr. The Petitioner only claimed the amount paid to M/s Aban Coastal as per the executed work along with the price escalation before termination of the contract.*

3.5.28 The Petitioner has provided the following justification for the increased cost under 'Package-II' vis-à-vis the awarded cost.

- I. The contract work was awarded at an amount of Rs.115.91 Cr. to M/s Aban Coastal JV. However, the actual work executed before termination of the contract amounted Rs. 53.42 Cr. (as per S.No.II), and price escalation amount of Rs. 11.11 Cr. (as per S.No.III) to accommodate change in labour and material components etc. during the execution of the Contract was paid.
- II. Post termination of the contract awarded to M/s Aban Coastal JV, the balance work was awarded to M/s HCC Ltd at an amount of Rs. 179.90 Cr. (as per S. No. V). The price escalation paid to the contractor M/s HCC Ltd. was Rs. 7.45 Cr. (as per S. No. VI). Further, Rs. 39.87 Cr. paid against the price variation, miscellaneous expenditure, tax payment, and others to the contractor M/s HCC Ltd (as per S. No. VII to XI).
- III. Additional work for the construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP (+170m Length) was awarded to M/s Coastal Projects Ltd at an amount of Rs. 3.34 Cr. (as per S. No. XIII). Further, the price variation of Rs. 0.69 Cr. (as per S. No. XIV) paid to the Contractor.
- IV. Additional work for the construction of intermediate Adit between Adit-I and Adit-II of HRT was awarded to M/s PEL at an amount of Rs.19.99 Cr. (as per S. No. XVI). Further, the price variation as on COD claimed as Rs. (14.02) Cr. (as per S. No. XVII) and Price Escalation claimed as Rs. 0.08 Cr. (as per S. No. XVIII).

3.5.29 With regard to the cost variations in the Package-II the Commission has reviewed the submissions of the Petitioner along with the relevant documents including award of contract, provisions with regard to price variation, approval of competent authority, etc. Accordingly, the Commission has approved the following:

- The Commission has noted that the work for Package-II was initially awarded to M/s Aban Coastal JV at an amount of Rs. 115.91 Cr. However, due to non-performance, the work was terminated and re-awarded to M/s HCC Ltd. at the risk and cost of M/s Aban Coastal JV. While the work, re-awarded to M/s HCC was required to be undertaken at the risk and cost of M/s Aban Coastal JV, the Petitioner has claimed the amount paid to M/s Aban Coastal as well as M/s HCC resulting in significantly large amount claimed towards this activity. Also, the Petitioner in its submissions has mentioned that an arbitration with the contractor is still in progress in the High Court as the Contractor has challenged the decision of Arbitrator which is currently sub-judice.
- In view of the submissions of the Petitioner, the Commission is of the view that the contractor M/s Aban Coastal JV is required to bear the cost of execution of balance works which was awarded to M/s HCC post the termination. However, the arbitration between the Petitioner and M/s Aban Coastal is sub-judice in the Hon'ble High Court resulting in delay in recoveries. The recoveries from the original contractor would enable lower incidence of total amount as against the amount claimed by the Petitioner towards payment to both the contractors for common scope of work. Given the uncertainty in this regard, the Commission feels it prudent to allow the payments made to M/s HCC now. However, the Commission shall consider the payment to M/s Aban Coastal JV post the final decision of the Court and on the basis of the recovery made by the Petitioner from the performance guarantee and other claimed amounts.
- Accordingly, based on the tender for the balance HRT work which was awarded to M/s HCC, the Commission has considered the awarded contract amount of Rs. 179.90 Cr. (as per S. No. V). Further, price escalation (as per S. No. VI and VII) has been considered in view of the overall delay of the project. The claimed cost towards price variation amounting to Rs. 35.69 Cr. (as per S. No. VII) which has been allowed by the Commission as the same is in accordance with the terms and conditions of the contract agreement. For the balance price escalation beyond the original time period (S.No. VI), the amount has been pro-rated based on the delay condoned as against the total delay in the execution of the project. Therefore, the Commission has allowed an amount of Rs. 1.85 Cr. against the claimed amount Rs. 7.45 Cr.
- With regard to Miscellaneous expenditure and Instrumentation work (As per S. No. VIII and IX), the Petitioner has claimed an amount of Rs. 6.42 Cr. Further, the Commission has not been able to find any payment proofs and work orders copy. In response to the queries, the Petitioner was unable to submit any of the required supporting documents and instead provided a tabular statement for the claimed amount reflecting the details of payment made against the work. Therefore, in the absence of the requisite

documents, the Commission has not approved any cost claimed towards miscellaneous works and Instrumentation work (as per S. No. VIII and IX) which amount to Rs. 6.42 Cr.

- With regard to the variation in taxes and duties (as per S. No. X), the Petitioner has claimed an amount of Rs. 7.27 Cr. which was paid toward GST amount. The Commission has reviewed the payment proofs and submitted documents and allowed the same amount as claimed by the Petitioner. Therefore, the Commission allowed an amount of Rs. 7.27 Cr.
- The Commission has approved the claimed amount of Rs. (9.51) Cr. (as per S. No. XI) as the amount was recovered from the contract M/s HCC Ltd.
- Additional work for the construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP (+170m Length) was awarded to M/s Coastal Projects Ltd (as per S. No. XIII) at an amount of Rs. 3.34 Cr. Further, price variation of an amount Rs. 0.69 Cr. was paid during the work as per the site requirements (as per S. No. XIV). The Commission after prudence check of the contract award and price variation has allowed both the cost totalling to an amount of Rs. 4.03 Cr.
- Additional work for construction of Adit between Adit-I and Adit-II of HRT was awarded to M/s PEL (as per S. No. XVI) at an amount of Rs. 19.99 Cr. The Petitioner has submitted that due to variation in design and BOQ, the amount of Rs. 14.02 Cr. was reduced from the awarded amount (as per S. No. XVII). Further, the Petitioner has claimed an amount of Rs. 6.05 Cr. as on COD which includes price escalation of Rs. 0.08 Cr. (as per S. No. XVIII). Based on the submissions, the Commission after prudence check has noted that the price escalation was paid beyond the original contract period which the Commission pro-rated based on the delay condoned against the total delay in execution of the project. Therefore, the Commission has approved a total amount of Rs. 5.99 Cr. against the claim of Rs. 6.05 Cr. as on COD.

3.5.30 Therefore, the Commission has allowed Rs. 225.22 Cr. against Rs. 301.83 Cr., which has been shown below:

Table 39: Cost Claimed and Approved by the Commission for Package-II (Rs. Cr.)

S. No.	Reasons for Cost Variation in Civil Works- Package-II	Claimed Cost	Approved Cost
I	Initial Award of Work to M/s Aban Coastal JV	115.91	0.00
II	Executed Work by M/s Aban Coastal JV before contract termination	53.42	0.00
III	Price Escalation paid to M/s Aban Coastal JV	11.11	0.00
IV	A: Sub Total of M/s Aban Coastal JV (Rs. Cr.)	64.53	0.00
V	Balance HRT Work awarded to M/s HCC Ltd	179.90	179.90
VI	Price Escalation paid to M/s HCC Ltd	7.45	1.85
VII	Price Variation in rates and BOQ item for Balance work of HRT awarded to M/s HCC limited	35.69	35.69
VIII	Miscellaneous Expenditure	6.16	0.00
IX	Instrumentation (Awarded as separate contract for the entire project) Amount considered for HRT Package on for the work executed	0.26	0.00

S. No.	Reasons for Cost Variation in Civil Works- Package-II	Claimed Cost	Approved Cost
X	Differential amount of GST (paid to M/s HCC)	7.27	7.27
XI	Amount recovered from HCC	(9.51)	(9.51)
XII	B: Sub Total of M/s HCC Ltd (Rs. Cr.)	227.22	209.69
XIII	Construction of HRT from Adit-1 Junction to Intake of Swara Kuddu HEP (+170m Length) to M/s Coastal Projects Ltd.	3.34	3.34
XIV	Price variation against the change in BOQ item	0.69	0.69
XV	C: Sub Total of M/s Coastal Projects Ltd (Rs. Cr.)	4.03	4.03
XVI	Additional intermediate Adit work between Adit-I and Adit-II of HRT to M/s PEL	19.99	19.99
XVII	Price Variation due to change in BOQ item	(14.02)	(14.02)
XVIII	Price Escalation Paid to M/s PEL	0.08	0.02
XIX	D: Sub Total of M/s PEL (Rs. Cr.)	6.05	5.99
XX	Total Cost (Rs. Cr.) (IV+XII+XV+XIX)	301.83	225.22

3.5.31 **The Package-III work** was awarded to M/s PEL for the construction of Power-House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT at a cost of Rs. 155.23 Cr. including additional work worth Rs. 0.65 Cr. towards Geo-technical instrumentation and Rs. 1.20 Cr. toward Earth mat work. The Petitioner has claimed an amount of Rs. 191.36 Cr. as on COD. The reasons for the cost variation are tabulated below:

Table 40: Reasons for Cost Variation in Package-III (Rs. Cr.)

S. No.	Cost Variation Reasons for Civil Works-Package-III	Cost
I	Contract Award Cost	155.23
II	Surge shaft: Change in design and BOQ items	(2.19)
III	Pressure Shaft: Change in design and BOQ items	1.40
IV	Powerhouse & Transformer Hall: Change in design and BOQ items	14.67
V	MAT, TRT & Adits: Change in design and BOQ items	(12.79)
VI	Price Escalation due to change in rates	17.36
VII	Other Miscellaneous works	17.22
VIII	Provisioned for 91st RA bill	0.46
IX	Total Cost (Rs. Cr.)	191.36

3.5.32 As per the claim, the Petitioner has claimed an amount of Rs. 191.36 Cr. as against the awarded cost of Rs.155.23 Cr. Further, based on reasoning sought by the Commission, the Petitioner has provided the following justification for the increased cost under 'Package-III' vis-à-vis the awarded cost.

- I. The price variation amounting to Rs. 1.09 Cr. was paid to the Contractor. For S.No. II to V, as per the site requirements.
- II. The price escalation amounting to Rs. 17.36 Cr. was paid to the Contractor after approving by the Engineer-in-charge (as per S.No. VI).
- III. The amount of Rs. 17.68 Cr. was paid against the miscellaneous work awarded to different contractors apart from the original contract. (as per S.No. VII & VIII)

3.5.33 With regard to the cost variations in Package III, the Commission has reviewed the submissions of the Petitioner along with the relevant documents including award of contract, provisions with regard to price variation, approval of competent authority, etc. Accordingly, the Commission has approved the following deviations:

- The cost variation with respect to the DPR has been allowed considering the award was based on international competitive bidding process and was approved by the BODs of the Petitioner.
- The claimed cost towards price variation amounting to Rs. 1.09 Cr. (as per S. No. II to V) has been allowed by the Commission as the same is in accordance with the terms and conditions of the contract agreement.
- With regard to the price escalation of Rs. 17.36 Cr. (as per S. No. VI), the Commission observes that the contract awarded to M/s PEL provided for escalation on account of labour and material during the period of execution. Therefore, the Commission has approved the amount of price escalation incurred during the original contract period and the balance amount has been pro-rated based on the delay condoned as against the total delay in execution of the project (as per Table No.24). Therefore, the Commission has allowed an amount of Rs. 10.51 Cr. against the claimed amount of Rs. 17.36 Cr.
- The Commission observes that the Petitioner had awarded multiple miscellaneous works related to removal of boulder, earth works, drilling, geological works and others in addition to the Original Contract agreement, amounting to Rs. 17.22 Cr. (as per S.No. VII). In response to a query, the Petitioner only submitted a tabular statement for the claimed amount without providing any work order or payment proofs corresponding to the miscellaneous works. Therefore, in the absence of the supporting documents, the Commission has not approved any cost claimed towards miscellaneous works.
- For S.No. VIII, the Petitioner has made a provision of Rs. 0.46 Cr. against 91st RA bill. Considering that the amount has not been paid and merely a provision has been created by the Petitioner, the Commission has not considered the amount.

3.5.34 In view of the discussions above, the Commission has allowed Rs. 166.83 Cr. against Rs. 191.36 Cr. for Package-III works as shown in table below:

Table 41: Cost Claimed and Approved by the Commission for Package-III (Rs. Cr.)

S. No.	Reasons for Cost Variation in Civil Works- Package-III	Claimed Cost	Approved Cost
I	Contract Award Cost	155.23	155.23
II	Surge shaft: Change in design and BOQ items	(2.19)	(2.19)
III	Pressure Shaft: Change in design and BOQ items	1.40	1.40
IV	Powerhouse & Transformer Hall: Change in design and BOQ items	14.67	14.67
V	MAT, TRT & Adits: Change in design and BOQ items	(12.79)	(12.79)
VI	Price Escalation due to change in rates	17.36	10.51

S. No.	Reasons for Cost Variation in Civil Works- Package-III	Claimed Cost	Approved Cost
VII	Other Miscellaneous works	17.22	0.00
VIII	Provisioned for 91st RA bill	0.46	0.00
IX	Total Cost (Rs. Cr.)	191.36	166.83

3.5.35 Based on the consolidation of the above packages, the Commission has allowed Rs. 707.78Crore as against the claimed amount of Rs. 841.05 Crore for complete Civil and Hydro-Mechanical works (i.e., Package-I, II and III). The details of the claim and approved cost is shown below:

Table 42: Works & Power Plant Civil Works Cost- Claimed and Approved (Rs. Cr.)

S. No	Particular	Petitioner Claimed	Approved	Remarks
I	Approved Cost for Package-I	347.86	315.73	As per Table No.36
II	Approved Cost for Package-II	301.83	225.22	As per Table No.38
III	Approved Cost for Package-III	191.36	166.83	As per Table No.40
IV	Total Approved Cost (Rs. Cr.)	841.05	707.78	-

3.5.36 **Buildings (K):**The Petitioner has claimed a cost of Rs. 27.95 Cr. towards 'Buildings' cost as against the DPR approved cost of Rs. 13.47 Cr. However, the Commission has not been able to find the supporting documents for justification of the claimed cost. In response to a query of the Commission, the Petitioner has submitted the copy of Contract agreement awarded, ledger statement and auditor certificate. Following scrutiny of the documents, the Commission has approved Rs. 27.94 Cr. The summary of expense towards buildings is summarized below:

Table 43: Building Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	27.95	-
II	Modified Cost by the Commission	27.94	As per the payment proof, contract agreement and auditor certificate.
III	Approved Cost (Rs. Cr.)	27.94	-

3.5.37 **Plantation (M):**The Petitioner has claimed Nil cost towards 'Plantation' cost as against the DPR approved cost of Rs.0.25 Cr.Since Nil expense is claimed against this head, the Commission has considered the same as Nil.

3.5.38 **Miscellaneous (O):**The Petitioner has claimed Rs. 6.60 Cr. towards 'Miscellaneous' costs as against the DPR approved cost of Rs. 8.67 Cr. The Commission on scrutiny of the supporting documents found that an amount of Rs. 5.23 Cr. has been claimed against vehicle expense which pertains to miscellaneous cost head and was wrongly booked under Establishment cost head. The Commission has reclassified the expenditure (as per Table No. 29) towards 'Miscellaneous Cost'. In the absence of supporting documents, the Commission raised query to the Petitioner and sought necessary details and supporting documents. In response to the query, the Petitioner has submitted the payment proofs, work order copies, ledger statement and auditor certificate. Following scrutiny of the supporting documents, the Commission has approved Rs. 11.83 Cr.Therefore, the Commission has approved expense under this head as summarized below:

Table 44: Miscellaneous Cost - Claimed, Modified and Approved

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	6.60	-
II	Modified Cost by the Commission	11.83	As per reclassification of cost by the Commission
III	Approved Cost (Rs. Cr.)	11.83	As per the payment proof, contract agreement and auditor certificate.

3.5.39 **Maintenance during construction (P):**The Petitioner has claimed Nil cost towards 'Maintenance during construction' as against the DPR approved cost of Rs. 2.53 Cr. The Commission during scrutiny of the supporting documents found that an amount of Rs. 1.07 Cr. which pertains to 'Maintenance during construction' was wrongly booked under Establishment cost head. The Commission has reclassified the expenditure (as per Table No. 29). In response to the query for providing supporting documents with respect to the claimed amount, the Petitioner has submitted the payment statement and auditor certificate. Accordingly, the Commission has approved Rs. 1.07 Cr. under this head as summarized below:

Table 45: Maintenance Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	0.00	-
II	Modified Cost by the Commission	1.07	As per reclassification of cost by the Commission
III	Approved Cost (Rs. Cr.)	1.07	As per the payment proof and auditor certificate.

3.5.40 **Special T&P (Q):**The Petitioner has claimed Nil cost towards 'Special T&P'. Therefore, the Commission has not considered any cost against the same.

3.5.41 **Communications (R):**The Petitioner has claimed Rs. 10.97 Cr. towards 'Communications' as against the DPR approved cost of Rs.2.15 Cr. It was observed that the communication cost primarily included the expense towards the approach road to access different sites of the project. In response to the queries, the Petitioner submitted that these works were awarded through tendering process and also provided copy of work awarded, payment proofs statements, and auditor certificate with respect to the same. Following scrutiny of the documents submitted, the Commission has approved Rs. 10.97 Cr. towards construction of approach road. Therefore, the approved expense under this head is summarized below:

Table 46: Communication Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	10.97	-
II	Modified Cost by the Commission	10.97	-
III	Approved Cost (Rs. Cr.)	10.97	As per the payment proof, contract agreement and auditor certificate.

3.5.42 **Environment and Ecology (X):**The Petitioner has claimed Rs. 14.68 Cr. towards 'Environment and Ecology' costs as against the DPR cost of Rs. 10.14

Cr. The Commission sought information and details of expenditure against this head from the Petitioner. In response to the query, the Petitioner has submitted the payment proofs to the State Pollution Control Board, Catchment area treatment (CAT) plan and Forest Department (Himachal Pradesh) along with the auditor certificate. Following scrutiny of the submitted payment vouchers, the Commission has accordingly approved Rs. 14.68 Cr. based on the documents submitted as summarized below:

Table 47: E&E Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	14.68	-
II	Modified Cost by the Commission	14.68	-
III	Approved Cost (Rs. Cr.)	14.68	As per the payment proof and auditor certificate.

- 3.5.43 **Losses on stock (Y):** The Petitioner has claimed Nil cost towards 'Losses on Stock' cost which has been considered by the Commission.
- 3.5.44 **Establishment (II):** The Petitioner has claimed Rs. 242.96 Cr. as 'Establishment' costs, against provision of Rs.21.40 Cr. in the DPR. However, during the scrutiny of expenditure details, it was observed that an amount of Rs.47.91 Cr. was booked corresponding to various other expenses i.e., preliminary expense, maintenance expense, LADF and miscellaneous expenses, which do not form part of Establishment cost and, therefore, these expenses have been excluded from the Establishment cost and booked under respective cost heads in line with the DPR cost heads (as per Table no. 29).
- 3.5.45 The Commission sought details of the manpower deployed in head office, design office, and other hired manpower. In response to the queries, the Petitioner has submitted year-wise list of manpower deployed at the site along with the salary structure and designation. Additionally, the payment against Head Office and Design Office costs was also included under this head. The Petitioner has submitted that due to delay in the project, the cost towards establishment increased. An Auditor certificate in support of the same was submitted by the Petitioner.
- 3.5.46 The DPR stipulates that Establishment' expenses should be the sum of '8% of Civil Cost' excluding Land cost (limited to Rs. 60 Cr. in case of civil works cost is upto Rs. 1000 Cr.) and '6% of E&M works' (limited to Rs. 45 Cr. for E&M works upto Rs. 750 Cr.). As per Table No. 31, the Civil cost excluding land is Rs. 919.13 Cr. and 8% of the same is Rs. 73.53 Cr., but as per the guidelines maximum upto Rs 60 Cr. can be allowed under this head. So, only Rs. 60 Cr. allowed. Further, the E&M cost as per Table No. 31 is Rs. 252.94 Cr. and 6% of the same is Rs. 15.18 Cr. which is allowed as per the guidelines. However, after scrutiny of the establishment charges, it is observed that the expenses booked under this head are significantly high and does not have any rationale. Therefore, after scrutinizing the submitted documents, the Commission has approved the amount limited to Rs. 75.18 Cr. in line with the framework prescribed in the DPR summarized below:

Table 48: Establishment Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	242.96	-
II	Modified Cost by the Commission	195.05	As per reclassification of cost by the Commission
III	Approved Cost (Rs. Cr.)	75.18	Limit as per DPR

3.5.47 **Tools and Plants (III):**The Petitioner has claimed Rs. 1.02 Cr. towards 'Tools and Plants' cost as against the DPR approved cost of Rs.2.68 Cr. The Petitioner was unable to provide any supporting documents corresponding to the claimed amount under this head. Therefore, in absence of any supporting documents, the Commission does not approve any expense under this head as summarized below:

Table 49: Tools & Plant Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	1.02	-
II	Modified Cost by the Commission	1.02	-
III	Approved Cost (Rs. Cr.)	0.00	No payment proofs submitted

3.5.48 **Receipt and Recoveries (V):**The Petitioner has claimed Nil cost towards 'Receipt and Recoveries' cost. Further, while scrutinizing the documents, the Commission identified that the Petitioner has adjusted an amount of Rs. 16.12 Cr. towards income from sale of infirm power and other earnings during construction. In line with the details provided and Auditor certificate against the claimed amount, the Commission has approved an amount of Rs. 16.12 Cr. which shall be reduced from the approved capital cost.

Table 50: Receipt and Recoveries approved by Commission

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	0.00	-
II	Modified Cost by the Commission	(16.12)	As per the documents provided with the Petition
III	Approved Cost (Rs. Cr.)	(16.12)	-

3.5.49 **Indirect Cost (2):**The Petitioner has claimed Nil cost towards 'Indirect Cost'. Therefore, the Commission has not considered any cost against the same.

3.5.50 **Electro-Mechanical Works (3):**The Petitioner has claimed an amount of Rs. 252.94 Cr. against 'E&M Works'. Based on the submissions, it is observed that the contract for E&M Works was awarded to Joint Venture of M/s VA TECH Hydro India Pvt. Ltd & M/s VA TECH ESCHER WYSS FLOVEL Pvt. Ltd. (L-1 Bidder) at a cost of Rs. 180.54 Cr on 27.02.2009.

3.5.51 The Commission sought break-up of the costs claimed along with justification for increased cost vis-à-vis the awarded cost. In response, the Petitioner has provided the following details:

Table 51: Reasons for Cost Variation in E&M Package (Rs. Cr.)

S. No	Cost Variation Reasons for E&M Package	Cost
I	Contract Award	180.54
II	Cost Overrun due to Price Variation applicable for Electro-Mechanical package	21.36
III	Cost Overrun due to Taxes & Duties applicable for Electro-mechanical package	4.86
IV	Cost Overrun due to Financial Claims against Various Extension of Time of E&M package	28.18
V	Cost Overrun due to Financial Claim against expenses incurred for extension of bank Guarantees under E&M package	1.01
VI	Cost Overrun due to Financial Claim against expenses incurred for extension of Erection All Risk Insurance Policy under E&M package	2.05
VII	Cost Overrun due to Expenses incurred on Preservation of E&M equipment installed under E&M package	3.64
VIII	Cost Overrun due to Expenses incurred on Preservation under HPPCL scope of E&M equipment installed under E&M package	1.33
IX	Cost Overrun due to various Change orders for different E&M activities/ equipment issued under E&M package	1.01
X	Cost Impact due to variation in exchange rates of foreign (FERV) currency under E&M package	(0.20)
XI	Cost Impact due to Changes/implication of Statutory levies under E&M package	6.33
XII	Cost Impact due to expenses incurred on facilitating the shipment of heavy equipment under E&M package	0.72
XIII	Cost Impact due to various additional works other than E&M package	1.99
XIV	Cost Impact due to Miscellaneous Charges	0.12
XV	Total Cost (Rs. Cr.)	252.94

3.5.52 The Petitioner has provided the following justification for the increased cost under 'E&M Works' vis-à-vis the awarded cost:

- I. The Petitioner submitted that the Contract was awarded to L-1 bidder at an amount of Rs.180.54 Cr. through bidding process.
- II. According to the contract agreement for E&M Work, price variation was allowed. The total price variation claimed as on COD amount Rs. 21.36 Cr. against supply and services of E&M equipment which has been paid to the Contractor (as per S. No. II).
- III. As per the provisions of the contract agreement, taxes, duties and levies shall be required to be paid as per actual. An amount of Rs. 4.86 Cr. was paid to the Contractor towards CST/Service Tax/GST against the supply and services under E&M package (as per S. No. III).
- IV. The financial claims totalling Rs. 28.18 Cr. have been claimed as of the COD due to delays in commissioning the project. The original completion schedule for the project was in June 2012. However, due to delays in handing over civil work fronts, various costs increased in the E&M works, which were beyond the control of the E&M contractor. Therefore, the financial claims under various heads of the E&M works for the aforementioned amount were paid to the Contractor (as per S. No. IV).

- V. The cost amounting to Rs. 1.01 Cr. was incurred due to the extension of the 'Bank Guarantee', and Rs. 2.05 Cr. was incurred due to the extension of the 'Risk Insurance Policy'. The reason for extending these policies was occurred due to the delay in the project. While the Scheduled Commercial Operation Date (SCOD) of the project was initially set for June 2012, the Actual Commercial Operation Date (ACOD) was eventually achieved in January 2021. Consequently, costs were incurred for extending these policies. (as per S. No. V and VI)
 - VI. The costs amounting to Rs. 3.64 Cr. and Rs. 1.33 Cr. were incurred due to the preservation of E&M equipment that was part of the E&M package. The project's delay beyond the contract period necessitated the preservation of installed E&M equipment to ensure the health of the components and avoid any potential issues. Therefore, the aforementioned costs were incurred due to the delay in the Civil work fronts. (as per S. No. VII and VIII)
 - VII. The costs amounting to Rs. 1.01 Cr. were incurred due to various change in orders for different E&M equipment. The delay in the availability of Civil work fronts led to the aforementioned cost. Change in orders were made for HT & LT cables, Bus duct, passenger lift, welding of pressure shaft with related equipment, valves, OPU, and system protection units. The claimed amount was paid to the Contractor (as per S. No. IX).
 - VIII. The claimed amount towards FERV was Rs. (0.20) Cr. (as per S. No. X).
 - IX. An amount of Rs. 6.33 Cr. has been claimed towards entry tax which was introduced subsequent in April 2010 by the HP Government (as per S. No. XI).
 - X. An amount of Rs. 0.72 Cr. was claimed towards upgradation of road by Public Works Department (PWD) of the HP Government for transportation of heavy E&M equipment (as per S. No. XII).
 - XI. Additional work of an amount Rs. 1.99 Cr. was placed against Early Warning Systems, LT panels, Steel Structures, ABT meters, illumination systems, power cables, NRVs, transceivers, EPBAX, and FCT, which were necessary as per site requirements (as per S. No. XIII).
 - XII. An amount of Rs. 0.12 Cr. was claimed against expenses under miscellaneous heads such as Dispute Board members' fees, Advocate fees, and Electrical Inspector fees for Powerhouse clearance (as per S. No. XIV).
- 3.5.53 With regard to the cost variations in the E&M cost, the Commission has reviewed the submissions of the Petitioner along with the relevant documents including award of contract, provisions with regard to price variation, approval of competent authority, supplementary order, etc. Accordingly, the Commission has approved the following deviations:
- The Commission observes that the main contract was for Rs. 180.54 Cr. and an additional amount of Rs. 72.40 Cr. has been claimed by the Petitioner on account of delays, against the price and cost variations.

- The Commission has pro-rated the costs for S. No. II, IV, VII, VIII, and XI according to the delay condoned as against the total delay in execution of the project.
- Further, the Commission has pro-rated the costs incurred for the extension of bank guarantees, risk insurance policy and miscellaneous charges as per S. No. V, VI, and XIV as per the above methodology. However, the Commission has noted that these costs would not have been incurred, if the project implemented as per the scheduled timeframe. Therefore, the Commission has pro-rate the claimed cost.
- The Commission has accordingly approved the costs incurred for additional work awarded, change in order, FERV, Taxes and duties and shipment of equipment as per S. No. III, IX, X, XII, and XIII. A summary of the various cost claimed and approved under the E&M package is summarized below:

Table 52: E&M Package Cost- Claimed and Approved (Rs. Cr.)

S. No	Cost Variation Reasons for E&M Package	Claimed Cost	Approved Cost
I	Contract Award	180.54	180.54
II	Cost Overrun due to Price Variation applicable for Electro-Mechanical package	21.36	5.17
III	Cost Overrun due to Taxes & Duties applicable for Electro-mechanical package	4.86	4.86
IV	Cost Overrun due to Financial Claims against Various Extension of Time of E&M package	28.18	6.83
V	Cost Overrun due to Financial Claim against expenses incurred for extension of bank Guarantees under E&M package	1.01	0.24
VI	Cost Overrun due to Financial Claim against expenses incurred for extension of Erection All Risk Insurance Policy under E&M package	2.05	0.50
VII	Cost Overrun due to Expenses incurred on Preservation of E&M equipment installed under E&M package	3.64	0.88
VIII	Cost Overrun due to Expenses incurred on Preservation under HPPCL scope of E&M equipment installed under E&M package	1.33	0.32
IX	Cost Overrun due to various Change orders for different E&M activities/ equipment issued under E&M package	1.01	1.01
X	Cost Impact due to due to variation in exchange rates of foreign (FERV) currency under E&M package	(0.20)	(0.20)
XI	Cost Impact due to Changes/implication of Statutory levies under E&M package	6.33	1.53
XII	Cost Impact due to expenses incurred on facilitating the shipment of heavy equipment under E&M package	0.72	0.72
XIII	Cost Impact due to various additional works other than E&M package	1.99	1.99
XIV	Cost Impact due to Miscellaneous Charges	0.12	0.00
XV	Total Cost (Rs. Cr.)	252.94	204.40

3.5.54 **Interest During Construction (IDC) (4):** The Petitioner has claimed Rs. 530.79 Cr. towards 'IDC,' compared to the DPR approved cost of Rs. 63.29 Cr. During the documents review, the Commission noted that the Petitioner had obtained a loan from GoHP at 10% interest rate. However, the loan was received under a tri-partiate agreement between Government of India (GoI),

GoHP and Asian Development Bank (ADB) under the Himachal Pradesh Clean Energy Development Investment Programme (HPCEDIP) being funded by ADB. Since the state of Himachal Pradesh is a special category state, the entire multilateral funding from the GoI has been provided to GoHP as 90% grant and 10% as loan. However, the entire amount was further provided by GoHP to the Petitioner at an interest rate of 10% per annum without any conversion to grant.

- 3.5.55 The Commission is of the view that the arrangement of GoHP with GoI regarding the loan should be implemented with the Petitioner in order to avoid any unreasonable cost as part of tariff determination. **The Petitioner is directed to take up the matter with the GoHP and ensure that the terms and conditions with respect to availing the loan should be replicated under the agreement with the HPPCL. The Commission has provisionally considered the amount of IDC claimed as part of the capital cost and shall consider any changes in subsequent Control Period based on final decision from GoHP.**
- 3.5.56 Further, the Petitioner has also submitted that it had availed loans from other agencies i.e. PFC and UCO bank. The loan from PFC was availed by HPSEBL for a total quantum of Rs. 453 Cr. of which Rs. 28.02 Cr. was transferred to the Petitioner for the Sawra Kuddu Project. However, the Petitioner has submitted that the loan amount has been paid in full prior to the COD of the project. Also, the Petitioner submitted that it had availed an additional loan of Rs. 20.83 Cr. from UCO Bank which was also repaid completely as on 31.03.2023.
- 3.5.57 Further, it is observed that detail with respect to working of IDC was not provided by the Petitioner in spite of repeated queries. In one of responses, the Petitioner submitted year-wise IDC amount booked without any working with respect to the same. During technical validation session, the Petitioner has clarified that adequate records for past period were unavailable, but all records and the IDC is certified as per the Auditor certificate. In absence of any further details, the Commission has considered the IDC amount as per the Auditor certificate and has pro-rated the amount claimed vis-à-vis the approved cost and delay condoned to arrive at the approved IDC against the project. Accordingly, the Commission approves an amount of Rs. 189.96 Cr. for IDC as summarised as under:

Table 53: IDC Cost - Claimed and Approved (Rs. Cr.)

S. No	Particular	Method	Cost	Remarks
I	IDC Claimed by the Petitioner	-	530.79	As per the documents submitted with the Petition.
II	Total Project Cost Claimed by the Petitioner	-	2203.86	Including IDC of 530.79 Cr.
III	Project cost (excluding IDC)	(II-I)	1673.07	-
IV	Approved Project Cost (excluding IDC)	-	1340.46	As per Table No.55
V	Total Contract Period (in Days)	-	1156	As per Table No 18

S. No	Particular	Method	Cost	Remarks
VI	Total Delay (in Days)	-	3129	As per Table No 18
VII	Total Delay Condoned (Days)	-	758	As per Table No 18
VIII	Approved IDC Cost (Rs. Cr.)	[I *(IV/III)] * [(V+VII)/(V+VI)]	189.96	On Pro-rata basis

3.5.58 **Local Area Development Fund (LADF) (5):** The Petitioner has claimed Rs. 30.02 Cr. cost towards the 'Local Area Development Fund (LADF)' as the DPR does not have any provision for this cost. Since the DPR was approved in 2004 and GoHP introduced the LADF policy in the year 2006, the cost against LADF was not included in the DPR. Further, the LADF expenses are governed under the State Hydro Policy, 2006 notified by the GoHP. This Policy mandates that project developers to allocate 1.5% of the final cost for projects above 5 MW capacity and 1% for projects up to 5 MW capacity towards the LADF.

3.5.59 Based on the review of the Petition and information submitted, the Commission found that the Petitioner has booked an amount of Rs. 30.02 Cr. toward LADF (Rs. 8.38 Cr. paid as on COD and Rs.21.64 Cr. provisioned post COD). No payment proof was submitted by the Petitioner. In response to a query of the Commission, the Petitioner submitted a payment statement indicating that the payment was made to the 'Deputy Commissioner-LADC, GoHP' as per the State Hydro Policy-2006 of GoHP, along with an auditor certificate. After scrutinizing the payment statement and auditor certificate, the Commission has approved Rs.8.38 Cr. paid as on COD in accordance with the State Hydro Policy-2006 of GoHP. Since the amount paid towards LADF is within the prescribed limit as per the approved cost, the Commission approves the actual amount paid by the Petitioner as summarized below:

Table 54: LADF Cost - Claimed, Modified and Approved (Rs. Cr.)

S. No	Particular	Cost	Remarks
I	Claimed Cost by the Petitioner	30.02	-
II	Modified Cost by the Commission	8.38	As per reclassification of cost by the Commission.
III	Approved Cost (Rs. Cr.)	8.38	As per the Payment receipts

3.5.60 Hence, the Capital Cost approved by the Commission as on COD for the Project is detailed below:

Table 55: Project Cost Approved by the Commission (Rs. Cr.)

S. No	Particulars	DPR Cost	Actual Cost	Modified Cost	Approved Cost
1	DIRECT COST (Only for Civil Works)				
I	Works				
A	Preliminary	3.18	0.00	11.59	3.34
B	Land (Incl. R&R)	2.85	288.72	291.02	291.02
C	Works (Diversion and other related structures)	218.65	841.05	841.07	707.78
J	Power Plant Civil Works				
K	Buildings	13.47	27.95	27.94	27.94
M	Plantation	0.25	0.00	0.00	0.00

S. No	Particulars	DPR Cost	Actual Cost	Modified Cost	Approved Cost
O	Miscellaneous	8.67	6.60	11.83	11.83
P	Maintenance during construction	2.53	0.00	1.07	1.07
Q	Special T&P	4.97	0.00	0.00	0.00
R	Communications	2.15	10.97	10.97	10.97
X	Environment and Ecology	10.14	14.68	14.68	14.68
Y	Losses on stock	0.65	0.00	0.00	0.00
TOTAL: I-WORKS		267.51	1,189.97	1,210.15	1,068.63
II	Establishment	21.4	242.96	195.05	75.18
III	Tools and Plants	2.68	1.02	1.02	0.00
IV	Suspense	0.00	0.00	0.00	0.00
V	Receipt and Recoveries	(4.16)	0.00	(16.12)	(16.12)
TOTAL(A): 1. DIRECT COST		287.43	1,433.95	1,390.11	1,127.69
2	INDIRECT COST (Only for Civil Works)				
i	Capitalization of Abatement of Land Revenue	0.05	0.00	0.00	0.00
ii	Audit and Account Charges	2.68	0.00	0.00	0.00
TOTAL(B): 2. INDIRECT COST		2.72	0.00	0.00	0.00
TOTAL (A+B)		290.15	1,433.95	1,390.11	1,127.69
3	Electro-Mechanical Works	120.40	252.94	252.94	204.40
4	Interest During Construction	63.29	530.79	530.79	189.96
5	Transmission System works	38.09	0.00	0.00	0.00
6	Escalation	46.60	0.00	0.00	0.00
7	LADF	0.00	0.00	30.02	8.38
8	Resettlement & Rehabilitation, R&R	0.00	2.30	0.00	0.00
9	Sale of Infirm Power and other earnings during construction	0.00	(16.12)	0.00	0.00
Total Cost (Rs. Cr.)		558.53	2,203.86	2,203.86	1,530.42

3.5.61 Therefore, the Commission approved Rs 1,530.42 Cr. Capital cost as on COD, including Interest During Construction (IDC) of Rs. 189.96 Cr.

3.6 Additional Capital Expenditure (ACE)

Petitioner Submissions

3.6.1 The Petitioner in the Petition has proposed additional capital expenditure up to 'Cut-off Date' amounting to Rs. 8.30 Crore.

3.6.2 Accordingly, the Petitioner has claimed additional capital expenditure as per the petition with breakup as follows:

Table 56: Additional Capital Expenditure (ACE) (Rs. Cr.)

Particulars	FY-21	FY-22	FY-23	FY-24 (Upto Cut-Off Date)
Land – Leasehold	0.00	0.03	0.00	0.00
Land – Freehold	0.00	-9.80	0.03	0.00
Residential Buildings	0.00	0.17	0.00	0.00
Temporary Sheds/Erections	0.00	0.00	0.00	0.00
Project Civil Works	0.00	4.80	0.61	8.00
Project Electro Mechanical Works	0.00	1.30	0.36	2.50
Plant (Currently For Water Treatment)	0.00	0.00	0.00	0.00
Office Machinery (Like: Lab, Fire, Safety Equipment)	0.00	0.00	0.00	0.00
Electronics & Electrical Items	0.00	0.08	0.00	0.00
Furniture & Fixtures	0.00	0.14	0.00	0.00
Computers & Data Processing Machines	0.00	0.09	0.04	0.00
Software	0.00	0.00	0.00	0.00
Vehicles	0.00	-0.06	0.00	0.00
Kitchen Items	0.00	0.00	0.00	0.00
Fire -Fighting Equipment	0.00	0.00	0.00	0.00
Small Office Items	0.00	0.00	0.00	0.00
Roads	0.00	0.00	0.00	0.00
Infrastructure Development Construction Power	0.00	0.00	0.00	0.00
Building – Investment Property	0.00	0.00	0.00	0.00
Sub-Total (Rs. Cr.)	0.00	-3.24	1.04	10.50
Total Cost (Rs. Cr.)	8.30			

3.6.3 The Petitioner has submitted the details of the total project cost along with the ACE in the following table below:

Table 57: Project Cost including ACE (Rs. Cr.)

DPR Cost	Capital Cost	Capital Cost including ACE 'Up to Cut-Off Date'
558.53	2203.86	2212.16

Commission's Analysis

3.6.4 In accordance with Regulation 13 of the 'HPERC Hydro Tariff Regulations, 2011' as amended from time to time, the Commission has verified the claimed 'Additional Capital Expenditure'. Further, the regulations provide for the same as follows:

1) *The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date, may be admitted by the Commission, subject to prudence check, :-*

- a) *Undischarged liabilities;*
- b) *Works deferred for execution;*

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

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

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

- a) *liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- b) *change in law;*
- c) *any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation:*

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

3.6.5 The Commission raised deficiency letters to seek details and nature of 'Additional Capital Expenditure' and its further classification as per the regulations. In reply, the Petitioner has submitted that an expenditure of Rs. 8.30 Cr. was incurred up to 'cut-off date' on account of land, civil works, E&M works, buildings, and others for which an auditor certificate was submitted by the Petitioner.

3.6.6 The Petitioner did not submit the copy of work orders, payment proofs, classification of work and other related information for prudence check. Following a prudent review, the Commission in the absence of documentary proofs has not allowed the claimed ACE. **The Commission directs the Petitioner to submit all necessary details / documents with regard to ACE in the subsequent tariff filing.**

3.7 Arbitration/ Court Cases/ Other Cost

Petitioner Submissions

3.7.1 The following cases related to construction stage of Sawra Kuddu HEP are pending in Tribunals/Courts of Law. Further, the cases and the cost involved is

sub-judice. Therefore, above cost has not been considered in the total cost of the project and same shall be considered during true up based on the decision of Hon'ble AT/ Hon'ble High Court.

Table 58: List of On-going Arbitration Matters

Sr. No	Description	Claimed Amount/ Counter Claimed Amount (Rs. Cr.)		Arbitral Award amount in Favour of (Rs. Cr.)		Present Status
		By Contractor	By HPPCL	Contractor	HPPCL	
Different Civil Packages						
I	HPPCL Vs Coastal project Ltd in respect of Main HRT of Sawra-Kuddu HEP	305.57	965.73	-	311.77	Execution petition has been filed by HPPCL in High Court to recover the said amount & The Contractor has also challenged the decision of the Arbitrator in High Court. The matter is Sub- Judice.
II	HPPCL Vs Coastal project Ltd in respect of Face-0 of Sawra-Kuddu HEP	4.91	-	1.06	-	HPPCL has challenged the Arbitration award in High Court and amount has been deposited & Matter is sub Judice
III	HPPCL Vs Patel Engineering Ltd in respect of Powerhouse Package	9.19	-	4.97	-	HPPCL has challenged the Arbitration award in High Court and amount has been deposited & Matter is sub Judice
IV	HPPCL Vs KSR infrastructure Pvt. Ltd in respect of Powerhouse Package	1.38	-	0.41	-	HPPCL has challenged the Arbitration award in High Court and amount has been deposited & Matter is sub Judice
V	HPPCL Vs Patel Engineering Ltd. in respect of DBID Package	103.34	0.84	62.71	-	HPPCL has challenged the Arbitration award in High Court and amount has been deposited &

Sr. No	Description	Claimed Amount/ Counter Claimed Amount (Rs. Cr.)		Arbitral Award amount in Favour of (Rs. Cr.)		Present Status
		By Contractor	By HPPCL	Contractor	HPPCL	
						Matter is sub Judice
VI	HPPCL Vs M/s HCC Ltd in respect of Balance work of HRT Package	211.40	168.20	-	-	The matter is in Arbitration
VII	HPPCL Vs M/s PMT Ltd in respect of Instrumentation works	1.77	-	-	-	The matter is in Arbitration
VIII	Total (Rs. Cr.)	637.56	1,134.76	69.16	311.77	-
E&M package						
IX	HPPCL Vs M/s Andritz Hydro Ltd in respect of Entry Tax matter of E&M package	4.62	-	-	-	The matter is in Arbitration
X	Total (Rs. Cr.)	4.62	-	-	-	-
XI	Grand Total (A+B) (Rs. Cr.)	642.18	1,134.76	69.16	311.77	

Commission's Analysis

3.7.2 The Commission has noted the submissions of the Petitioner with regard to arbitration and legal matters as well as additional costs. It shall review the cost aspects of the project at the time of true-up.

3.8 Project Funding

Petitioner Submissions

3.8.1 The Petitioner has cited Regulation 16 of 'HPERC Hydro Tariff Regulations 2011', as amended in support of its claim that the Project funding has been made as per the Regulations.

3.8.2 The Petitioner has submitted that the HPSEB availed a loan from PFC of an amount Rs. 453.00 Cr., of which Rs. 28.02 Cr. was transferred to the Petitioner for the Sawra Kuddu Project, and the full amount was repaid by the Petitioner before COD. The Petitioner also availed an additional loan from UCO Bank, which was repaid. Additionally, the Petitioner availed a loan from the Government of Himachal Pradesh (GoHP). The total loan availed by the Petitioner is mentioned in the following table no. 59.

3.8.3 The Petitioner has submitted that the Government of India (GoI) received a loan from the Asian Development Bank (ADB) to finance the implementation of the Sawra Kuddu HEP as part of the Himachal Pradesh Clean Energy

Development Investment Programme (HPCEDIP). This multilateral loan was channelized through the GoHP to the HPPCL i.e., the Petitioner. The loan was provided by the GoI to GoHP was at 90% grant and 10% loan. Further, the loan was provided by the GoHP to the HPPCL at an annual interest rate of 10%. The total debt received from GoHP and from other banks for the Sawra Kuddu HEP is tabulated as under:

Table 59: Details of Debt Received (Rs. Cr.)

Financial Year	Debt Amount Received	Remarks
2006-07	28.02	PFC Loan availed by the HPSEB and further transferred partial amount to the Petitioner
PFC Loan	28.02	Fully Paid as on COD
2019-20	20.83	Term Loan availed from UCO Bank by the Petitioner. Rs. 20.83 as Loan
-	(2.76)	Paid before COD
UCO Bank Loan	18.07	Fully Paid as on 31.03.2023
2011-12 (Opening)	236.32	Loan availed from GoHP by the Petitioner
2012-13	155.45	-
2013-14	91.40	-
2014-15	37.89	-
2015-16	47.41	-
2016-17	39.06	-
2017-18	28.00	-
GoHP Loan	635.53	Not paid any amount against the loan, the GoHP deferred the loan repayment up to FY-21.

3.8.4 The Petitioner has not maintained project wise segregation of the equity in the accounts. However, an amount of Rs 1,550.26 Cr has been used for Sawra Kuddu HEP from Equity and own resources.

3.8.5 Debt Equity ratio claimed by the Petitioner is tabulated as under:

Table 60: Debt-Equity Ratio as on COD

Particulars	Debt:Equity as per DPR (Rs. Cr.)	Debt:Equity as per DPR in %	Debt:Equity as per Actual (Rs. Cr.)	Debt:Equity as per Actual in %	Funding Claimed (Rs. Cr.)	Normative Debt : Equity
Debt	390.94	70%	653.60	29.66%	1542.70	70%
Equity	167.56	30%	1550.26	70.34%	661.16	30%
Total	558.53	100%	2203.86	100	2203.86	100%

3.8.6 Total completion project cost including ACE considered by the Petitioner is shown as under:

Table 61: Debt-Equity Ratio including ACE (Rs. Cr.)

Particulars	Capital cost as on COD	ACE 'Up to Cut-off Date'			Proposed ACE	Project Cost as on COD (Rs. Cr.)
		FY 21	FY 22	FY 23	FY 24	
Debt	1542.70	0.00	(2.27)	0.73	7.35	1548.51
Equity	661.16	0.00	(0.97)	0.31	3.15	663.65
Total	2203.86	0.00	(3.24)	1.04	10.50	2212.16

Commission's Analysis

- 3.8.7 The Commission has observed that as per the approved DPR by the HPSEB, the scheme was originally envisaged to be funded with the debt and equity ratio of 70:30.
- 3.8.8 The Commission observes that ADB has sanctioned a multilateral financing loan of \$800 million to the Government of India (GoI) under the Himachal Pradesh Clean Energy Development Investment Programme (HPCEDIP). The proposed Program combines physical investments in hydroelectric power generation in the state of Himachal Pradesh (HP) with nonphysical interventions in capacity development. The scope includes construction of four medium to large hydropower projects, the Sawra Kuddu (111 MW), Integrated Kashang (195MW), Sainj (100 MW) and Shongtong-Karcham (450 MW). All proposed hydropower projects for the Program are run-of-the-river design. As the name of the scheme itself implies that the financing support by the ADB is to promote the generation of clean energy in the State. Further, Himachal Pradesh being a special category state, the loan was received by Government of Himachal Pradesh (GoHP) from the GoI as 90% grant and 10% loan. However, the GoHP has provided the entire amount as loan to the HPPCL at an interest rate of 10% per annum.
- 3.8.9 In this specific instance, it is noted that the multilateral agency i.e., the ADB, is funding this project in collaboration with the GoI and the GoHP. However, the GoHP has amended the terms and conditions of the financial assistance for extending it to the HPPCL. The Commission is of the view that the GoHP should refrain itself from assuming the role of a financial institution and instead have ensured that the grant received under this arrangement was extended to the HPPCL for the benefit of the Consumers of the State as well as to promote clean energy in the State.
- 3.8.10 As per the submission of the Petitioner, actual loan drawn from GoHP, PFC and UCO bank is Rs.653.60 Cr. i.e., ~29.66% of project cost as on COD. Further, the equity amounting to Rs. 1550.26 Cr. which is approximately 70.34% of the project cost has been considered by the Petitioner.
- 3.8.11 To verify the Debt and Equity claimed by the Petitioner, the Commission vide deficiency letters sought details of Debt-Equity received, Loan Agreement, Tripartite agreement, Sanctioned Letters, Board of Director (BOD) approval and other relevant documents. In response to the query, the Petitioner submitted additional details and documents.
- 3.8.12 The Petitioner was unable to provide any specific details of the equity amount availed from the GoHP towards the said project and instead provided the lumpsum amount of Rs. 2321.12 Cr. of equity received from GoHP towards various projects.
- 3.8.13 The Commission after review of the documents noted that due to financial constraints, the Petitioner sought deferment of loan repayment, which was approved by the GoHP until FY 2020-21. Further, the Commission noted that as on COD no amount against the loan was repaid by the Petitioner to GoHP. However, the loans availed from UCO bank and PFC has been repaid by the Petitioner and does not have any outstanding as on 01.04.2023.

3.8.14 In accordance with Regulation 16 of the 'HPERC Hydro Tariff Regulations 2011', the Commission has followed the Debt-Equity ratio and the same is detailed below:

"2) New Stations:

(a) For new stations, the normative debt-equity ratio shall be considered to be 70:30 for determination of tariff.

(b) In case of a generating station where equity employed is more than 30%, the amount of equity for determination of tariff shall be limited to 30% and the balance amount shall be considered as the normative loan.

(c) In case of a generating station where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff:

Provided that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment."

3.8.15 The Commission is of the view that since the funding of the Sawra Kuddu HEP was secured in accordance with the DPR on which the HPSEB has also accorded its approval, it is prudent to consider the debt and equity ratio as per the original DPR (i.e., 70:30). In line with the same, the debt:equity ratio is arrived against the approved capital cost for Sawra Kuddu HEP as below:

Table 62: Normative Debt-Equity ratio on the approved for Sawra Kuddu (Rs. Cr.)

Particulars	Debt:Equity (Approved Cost)	Debt:Equity % (Approved Cost)
Normative Debt	1,071.30	70%
Normative Equity	459.13	30%
Total	1,530.42	100%

3.8.16 Based on the scrutiny of the loan details, it is observed that the Petitioner is not making any repayment of loan or interest against the loan from GoHP. The Petitioner has also provided a copy of the loan documents including loan scheme agreement between GoHP and the HPPCL, tripartite agreement among ADB-GoI-GoHP, and various loan sanction letters. It has also submitted that the State of HP is a special category State, therefore, the entire multilateral funds were received by the State from Govt. of India in the ratio of 90% grant and 10% loan. However, the entire loan proceeds were extended by GoHP to the Petitioner as loan carrying interest rate of 10% per annum. The Petitioner has also submitted that the GoHP had allowed deferment of loan till 31.03.2021 and further deferment of loan has been sought by the Petitioner from GoHP and the decision in this regard is awaited.

3.8.17 The Commission takes serious note against consideration of the amount which is available as grant (90% of overall amount) to the State as loan which shall unnecessarily burden the consumers of the State due to such treatment. It is also observed that the Petitioner is already facing financial challenges and has been unable to service the loans against which deferment has been sought time and again. The Commission feels that it would be prudent that the Petitioner takes up the matter with the GoHP regarding restructuring of the loan amount availed against the project on same terms and conditions as envisaged under the original scheme of funding i.e., 90% of the amount to be converted to grant. This would be in interest of the utility as well as the

consumers of the State which would have to bear the burden of the additional interest cost and repayment of such loan which has been provided as grant.

- 3.8.18 Accordingly, the Commission has provisionally considered the debt amount availed under the ADB scheme as 90% grant and 10% debt. Further, after reducing such amount of grant from the total approved capital cost, the Commission has consider debt:equity as 70:30 for the balance amount in line with Regulation 10(C) of the HPERC Tariff Regulations, 2011 which specify the following:

"(b) the debt to equity ratio shall be considered in accordance with Regulation 16, after deducting the amount of financial support provided through consumer contribution, deposit work, capital subsidy or grant;"

- 3.8.19 The details of the same is tabulated below:

Table 63: Debt, Grant and Equity on Approved Cost for Sawra Kuddu HEP (Rs. Cr.)

S. NO.	Particulars	Approved Cost	Remarks
I	Total Project Cost Approved	1530.42	As per Table No. 41
II	Normative Debt	1071.30	As per Table No. 49
III	Actual Debt	653.60	As per Table No. 47
IV	Grant (90% of the ADB Scheme Loan)	588.24	Minimum (II and III) x 90%
V	Balance Requirement	942.18	(I-IV)
VI	Debt (70%)	659.53	(V x 70%)
VII	Equity (30%)	282.65	(V x 30%)
VIII	Total	1530.42	(IV+VI+VII)

- 3.8.20 In case of ADB loans availed by HPPTCL, the Commission has been considering these as loans and allowing depreciation as well as interest for servicing of such loans. This treatment has been undertaken in view of limited information available to the Commission in this regard. However, the Commission has directed the Petitioner to re-negotiate with GoHP and align the terms and conditions in line with the tri-patriate agreement. The Commission shall take appropriate decision with regard to the treatment of such ADB loans during truing-up. Further, in case of funding through similar loan facility from ADB, the Commission has preferred to consider the availability of 90% of ADB loan as grant in line with the submission of the Petitioner and given the special category status to the State of Himachal Pradesh.
- 3.8.21 The Commission is of the view that the GoHP shall consider the transferring of Grant as availed from the Government of India to HPPCL for the benefit of the Consumers of the State instead of considering the loan as generally done by the Financial Institution.

4. APPROVAL OF ARR AND TARIFF

4.1 Background

- 4.1.1 The Petitioner has undertaken Annual Fixed Cost projections for Sawra Kuddu HEP in line with 'HPERC Hydro Tariff Regulation, 2011' for each of the component
- Operation and Maintenance (O&M) Expenses;
 - Depreciation;
 - Interest and Finance Charges on Loan;
 - Interest on Working Capital;
 - Return on Equity (ROE).
- 4.1.2 The Commission has examined the submissions including additional submissions and clarifications made by the Petitioner in response to the query letters for the purpose of approving the elements of ARR for the period from COD to Financial Year (FY) 2023-24.
- 4.1.3 The Commission has approved the Capital Cost as on COD for Sawra Kuddu HEP as Rs. 1,530.42 Cr. after detailed examination as discussed in the previous Chapter. The same has been tabulated below:

Table 64: Approved Project Cost by the Commission (Rs. Cr.)

Capital Cost as per DPR	Claimed Capital Cost as on COD	Approved Capital Cost as on COD
558.53	2203.86	1530.42

- 4.1.4 The Commission has considered the approved capital cost for the purpose of determination of Annual Fixed Charges in line with the provisions of the 'HPERC Hydro Tariff Regulations 2011', as amended from time to time.
- 4.1.5 In this chapter, the Commission has detailed the methodology for computing each component of the ARR for each year from COD till FY 2023-24 for Sawra Kuddu HEP of the HPPCL including O&M expenses, Interest on Loan, Depreciation, Return on Equity, Working Capital requirement, etc. The methodology followed and approved values for each component of the ARR is detailed in the subsequent sections.

4.2 Operation and Maintenance Expenses

Petitioner's Submissions

- 4.2.1 The Petitioner has cited Regulation 22 of the 'HPERC Hydro Tariff Regulations 2011' for the computation of O&M Expense.

- 4.2.2 Further, the Petitioner has claimed actual O&M expenses for FY21 to FY23 and projected O&M expenses for FY23 and FY24 as tabulated below:

Table 65: O&M Expense submitted by the Petitioner (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Total O&M Expenses	6.57	25.86	27.19	28.80

- 4.2.3 The Petitioner has further submitted that the account of FY 23 and FY 24 is yet to be audited and therefore, the actual O&M expense for FY22 has been considered for projection after applying escalation factor.

Commission's Analysis

- 4.2.4 In accordance with Regulation 22 of the 'HPERC Hydro Tariff Regulations 2011', the Commission has computed the O&M Expense based on the approved capital cost. The above-mentioned regulation for the computation of O&M Expenses provides as under:

"(4) In case of hydro generating stations, which have been in commercial operation for less than 5 years as on 31 March 2018, the operation and maintenance expenses shall be fixed at 2% of the original project cost, excluding cost of rehabilitation and resettlement works, and shall be escalated in accordance with the escalation principles specified in sub regulation (6).

(6) O&M expenses determined in sub-regulations (3) and (4), shall be escalated for subsequent years to arrive at the O&M expenses for the control period by applying the Escalation factor (EFk) for a particular year (Kth year) which shall be calculated using the following formula

$$\textbf{"EFk = 0.20 x WPI}_{Inflation} + 0.80 \textbf{x CPI}_{Inflation}"$$

Provided that, out of the O&M expenses so determined based on the above regulations, at least 30% shall be spent towards repair and maintenance activities:

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

- 4.2.5 The Commission in para 3.5.20 has approved an amount of Rs. 2.30 Crore under the R&R works.
- 4.2.6 For the purpose of computation of escalation fact or the "WPI Inflation" and "CPI Inflation", the provisions of the 'HPERC Hydro Tariff Regulations 2011' (Second Amendment), is required to be considered as below:
- CPI_{Inflation} – is the average increase in the Consumer Price Index (CPI) for the three years immediately preceding the base year.
 - WPI_{Inflation} – is the average increase in the Wholesale Price Index (WPI) for the three years immediately preceding the base year.
- 4.2.7 Thus, in line with the provisions of the 'HPERC Hydro Tariff Regulations 2011', the Commission has worked out the escalation rate as provided below:

Table 66: CPI-WPI-Escalation Factor

Particulars	FY21	FY22	FY23
CPI Factor	338.69	356.06	377.62
CPI Inflation (%)		5.13%	6.05%
WPI Factor	123.38	139.41	152.53
WPI Inflation (%)		13.00%	9.41%
Escalation factor (EFk)		6.70%	6.72%

4.2.8 The Commission has approved Rs. 1,530.42 Cr. as Capital Cost of the Sawra Kuddu HEP. Further, as per the 'HPERC Hydro Tariff Regulations 2011', the Rehabilitation and Resettlement Work Cost should be deducted from the Capital Cost before working out the O&M Expenses for first year. The computation of O&M expenses for first year is tabulated below:

Table 67: O&M Expense for First Year (Rs. Cr.)

Particulars	Details
Approved Capital Cost (Rs. Cr.)	1,530.42
Less: Rehabilitation and Resettlement Work (Rs. Cr.)	2.30
Net Capital cost for O&M (Rs. Cr.)	1,528.12
O&M @ 2% of Project Cost (Approved)	2%
O&M (FY-2020-2021 Level) (Rs. Cr.)	30.56

4.2.9 The Commission for FY 2020-21 has calculated the O&M Expense on pro-rata basis considering that the plant was operation for part year i.e., COD of 21.01.2021 upto 31.03.2021. Therefore, the O&M calculated for FY 2020-21 is only for 69 days. For the subsequent years, full year O&M expenses has been considered after providing for escalation as detailed above. Therefore, the O&M expense approved for each year post COD of the plant upto FY 2023-24 is tabulated below:

Table 68: O&M Expense approved by the Commission (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Approved O&M Expense	5.78*	32.61	34.80	36.86

*O&M Expense corresponding to the period from COD to end of the financial year

4.3 Depreciation

Petitioner's Submissions

4.3.1 The Petitioner has worked out the depreciation as per Regulation 20 of 'HPERC Hydro Tariff Regulations 2011' and its subsequent amendments. The Petitioner has submitted that it has considered depreciation rate as per Annexure I of the 'HPERC Hydro Tariff Regulations 2011' for the first 12 years in line with the provisions of the regulations.

4.3.2 The depreciation booked in the project since COD and its projection is tabulated as below:

Table 69: Depreciation Expense submitted by the Petitioner (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Opening GFA	91.45	2203.87	2200.63	2201.67

Particulars	FY21	FY22	FY23	FY24
Addition during the Year	2112.42	-3.24	1.03	10.50
Less Grant Received	0	0	0	0
Closing GFA	2203.87	2200.63	2201.67	2212.17
Average GFA	1147.66	2202.25	2201.15	2206.92
Less: Freehold Land	288.72	278.95	278.98	278.98
Average GFA excluding Land	858.94	1923.30	1922.17	1927.94
WAROD (%)	2.16%	4.71%	4.71%	4.73%
Depreciation	18.57	90.56	90.58	91.11

Commission's Analysis

4.3.3 In accordance with Regulation 20 of the 'HPERC Hydro Tariff Regulation, 2011', as amended from time to time, the Commission has computed the Depreciation based on the approved capital cost by the Commission. The regulation 20 of the HPERC Hydro Tariff Regulations for the computation of Depreciation is detailed below:

"(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:

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable:

Provided also that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

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

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the asset.

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

after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the asset.

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

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

- 4.3.4 The Commission based on the submissions of the Petitioner has considered the asset-wise weighted average rate of depreciation (WAROD) as 4.80% from COD to FY 2023-24 for the calculation of depreciation. Further, as per 'HPERC Hydro Tariff Regulations 2011', land cost amounting Rs. 288.72 Cr. is deducted from the Capital Cost for calculating the Depreciation.

Table 70: Opening GFA for Depreciation (Rs. Cr.)

Particulars	Details
Approved Capital Cost (Rs. Cr.)	1,530.42
Less: Land Cost (Rs. Cr.)	288.72
Less: Grant (Rs. Cr.)	588.24
Net Capital cost for Depreciation or Opening GFA (Rs. Cr.)	653.46
WAROD (%)	4.80%

- 4.3.5 Based on the WAROD above, the Commission has approved the depreciation for each year from the date of COD upto FY 2023-24. Further, the depreciation for FY 2020-21 has been pro-rated based on the number of days of operation during the first year. The approved depreciation for each year from the date of COD to FY 2023-24 is summarized below:

Table 71: Depreciation approved by the Commission (Rs. Cr.)

Particular	FY21	FY22	FY23	FY24
Opening GFA	653.46	653.46	653.46	653.46
Addition during the year	-	-	-	-
Closing GFA	653.46	653.46	653.46	653.46
Depreciation	5.93*	31.37	31.37	31.37

* Depreciation corresponding to the period from COD to end of the financial year

4.4 Interest and Finance Charges on Loan

Petitioner's Submissions

- 4.4.1 Interest and Finance Charges on loans is calculated based on the capital expenditure planned for the Control Period. The Petitioner has considered a Debt:Equity ratio of 70:30 for Sawra Kuddu HEP. The Petitioner has cited Regulation 17 of the 'HPERC Hydro Tariff Regulations, 2011' and its subsequent amendments, for the computation of Interest on Loan.
- 4.4.2 Accordingly, the Petitioner has computed interest on loan as shown in table given below:

Table 72: Interest on Loan submitted by the Petitioner (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Opening balance	1,542.71	1,524.14	1,431.31	1,341.47
Addition	0	-2.27	0.73	7.35
Repayment	18.57	90.56	90.58	91.11
Closing Balance	1,524.14	1,431.31	1,341.47	1,257.71
Interest and Financing Charges	154.27	152.41	143.13	134.15

Commission's Analysis

4.4.3 In accordance with Regulation 17 of the 'HPERC Hydro Tariff Regulations 2011' and its amendments, the Commission has computed the Interest and Finance Charges on Loan based on the approved capital cost by the Commission. The regulations for the computation of Interest and Finance Charges on Loan is detailed below:

"17. 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 generating station, does not have actual loan, then the weighted average rate of interest of the generating company as a whole shall be considered:

Provided further that if the generating company 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 300 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.....

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

4.4.4 In the previous Chapter, the Commission has approved the project funding through a mix of debt, grant and equity. The loan amount from GoHP along with the normative loan has been considered for the purpose of computation of interest on loan and an interest rate of 10% has been considered in line with the agreement between GoHP and the Petitioner with regard to the payment of interest on the loans. The Commission as per para no. 3.8.19 above and 'HPERC Hydro Tariff Regulation, 2011', as amended from time to time, has considered the repayment of loan equal to depreciation and has computed the Interest on Loan from COD to FY 2023-24. The approved Interest on Loan for each year from the date of COD to FY 2023-24 is summarized below:

Table 73: Interest on Loan approved by the Commission (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Opening Loan	659.53	653.60	622.23	590.87
Repayment	5.93	31.37	31.37	31.37
Addition	-	-	-	-
Closing Loan	653.60	622.23	590.87	559.50
Rate of Interest	10%	10%	10%	10%
Interest Cost	12.41*	63.79	60.65	57.52

*Interest corresponding to the period from COD to end of the financial year

4.5 Interest on Working Capital

Petitioner's Submissions

- 4.5.1 The Petitioner has cited Regulations 18 and 19 of the 'HPERC Hydro Tariff Regulations 2011' as amended from time to time for the computation of Interest on Working Capital.
- 4.5.2 The Petitioner has calculated the interest on working capital considering prevalent SBI MCLR as on 01.04.2023 respectively plus 300 basis points. Further, the Petitioner has calculated Rate of Interest on working capital @ 11.50 percent (SBI Prime Lending Rate) in accordance with the above Regulations.
- 4.5.3 The interest on working capital, thus, computed by the Petitioner as per the 'HPERC Hydro Tariff Regulation, 2011' is given in the table below:

Table 74: Interest on Working Capital submitted by Petitioner (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Operation & Maintenance Expenses for 1 Month	2.82	2.14	2.27	2.40
Maintenance Spares Equivalent to 15% of O&M	0.99	3.85	4.08	4.32
Receivable Equivalent of 2 Months of Fixed Cost	6.10	24.34	25.53	28.42
Total Working Capital Requirement	9.91	30.33	31.88	35.14
Interest on Working Capital %	11.50%	11.50%	11.50%	11.50%
Interest on Working Capital	1.14	3.49	3.67	4.04

Commission's Analysis

4.5.4 In accordance with Regulations 18 and 19 of the 'HPERC Hydro Tariff Regulations 2011' as amended from time to time, the Commission has computed the Interest on Working Capital based on the approved capital cost by the Commission. The substance of the above regulations for the computation of Interest on Working Capital is detailed below:

"The Commission shall calculate the working capital requirement for hydroelectric power stations containing the following components: -

(a) Operation & Maintenance (O&M) expenses for 1 month;

(b) Maintenance spares equivalent to 15% of O&M;

(c) Receivables equivalent to two months of fixed cost

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 generating company has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures."

4.5.5 The Commission has adopted the approach for calculation of interest on working capital as per above-mentioned 'HPERC Hydro Tariff Regulations 2011'.

4.5.6 The Commission has calculated the interest on working capital considering prevalent SBI MCLR as applicable for one (1) Year period, as may be applicable as on 1st April of every financial year (FY) from FY21 to FY 24 respectively by adding 300 basis points as per the 'HPERC Hydro Tariff Regulations 2011' (3rd Amendment).

4.5.7 Therefore, the Commission based on the above 'HPERC Hydro Tariff Regulations 2011' and methodology, has computed the Interest on Working Capital from COD to FY 2023-24. The approved interest on working capital for each year from the date of COD to FY 2023-24 is summarized below:

Table 75: Interest on Working Capital approved by the Commission (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Operation & Maintenance Expenses for 1 Month	2.55	2.72	2.90	3.07
Maintenance Spares Equivalent to 15% of O&M	4.58	4.89	5.22	5.53
Receivable Equivalent of 2 Months of Fixed Cost	29.22	29.21	29.06	28.98
Total Working Capital Requirement	36.35	36.82	37.18	37.58
<i>Interest on Working Capital %</i>	<i>10.75%</i>	<i>10.00%</i>	<i>10.00%</i>	<i>11.50%</i>
Interest on Working Capital	0.74*	3.68	3.72	4.32

**Working Capital corresponding to the period from COD to end of the financial year*

4.6 Return on Equity

Petitioner's Submission

- 4.6.1 The Petitioner has cited Regulation 21 of 'HPERC Hydro Tariff Regulation, 2011' as amended from time to time, in support of the claim.
- 4.6.2 The Return on Equity as per the Regulation is provided in the table given below:

Table 76: ROE submitted by the Petitioner (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Opening balance	661.16	661.16	660.19	660.50
Addition	0.00	-0.97	0.31	3.15
Closing Balance	661.16	660.19	660.50	663.65
Average	661.16	660.68	660.35	662.08
Rate of RoE	15.5%	15.5%	15.5%	15.5%
ROE	102.48	102.40	102.35	102.62

Commission's Analysis

- 4.6.3 In accordance with Regulation 21 of the 'HPERC Hydro Tariff Regulations 2011' as amended from time to time, the Commission has computed the Return on Equity based on the approved capital cost by the Commission. The above regulation for the computation of Return on Equity is detailed below:

"(1) Return on Equity shall be computed on the equity determined in accordance with regulation 16 and on pre-tax basis at the base rate of 15.50% 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 as per latest available audited accounts of the generating company:

Provided that in line with the provisions of the relevant Finance Acts of the respective year, the return on equity with respect to the actual tax rate applicable to the generating company during the years of the control period shall be trued up separately for each year during the mid-term performance review and at the end of the control period along with the tariff petition filed for the next control period."

- 4.6.4 The Commission has noted that as of now, the Petitioner has not incurred any income tax liability due to continuous losses since its incorporation. Accordingly, the Commission as per the 'HPERC Hydro Tariff Regulations 2011' has considered the ROE at 15.50 %.
- 4.6.5 The Commission in Chapter 03, para no. 3.8 (Project Funding) has detailed the working of debt and equity. The Commission as per para no. 3.8.19 of chapter 3 and 'HPERC Hydro Tariff Regulations 2011', as amended from time to time, has computed the ROE from COD to FY 2023-24. The approved ROE for each year from the date of COD to FY 2023-24 is summarized below:

Table 77: ROE approved by the Commission (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Opening Equity	282.65	282.65	282.65	282.65
Addition	-	-	-	-

Particulars	FY21	FY22	FY23	FY24
Closing Equity	282.65	282.65	282.65	282.65
RoE (%)	15.50%	15.50%	15.50%	15.50%
RoE	8.28	43.81	43.81	43.81

*ROE corresponding to the period from COD to end of the financial year

4.7 Summary of Annual Fixed Charges

Petitioner's Submissions

4.7.1 The summary of annual fixed charges as computed with the above components by the Petitioner is presented in the table below:

Table 78: AFC submitted by the Petitioner (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
Operation & Maintenance Charges	6.57	25.68	27.19	28.80
Interest on Loan	154.27	152.41	143.13	134.15
Depreciation	18.57	90.56	90.58	91.11
Interest on Working Capital	1.14	3.49	3.67	4.04
Return on Equity	102.48	102.40	102.35	102.62
Total (Rs. Cr.)	283.03	374.54	366.92	360.72

Commission's Analysis

4.7.2 Based on the above deliberation on the ARR parameters, the summary of annual fixed charges approved from COD of the plant to FY 23-24 is summarised below:

Table 79: AFC approved by the Commission (Rs. Cr.)

Particulars	FY21	FY22	FY23	FY24
O&M expense	5.78	32.61	34.80	36.86
Depreciation	5.93	31.37	31.37	31.37
Interest & Finance charges	12.41	63.79	60.65	57.52
Interest on working capital	0.74	3.68	3.72	4.32
Return on equity	8.28	43.81	43.81	43.81
Annual Fixed Cost (Crore)	33.14	175.26	174.35	173.87

*AFC corresponding to the period from COD to end of the financial year

4.8 Operational Norms

Petitioner's Submission

4.8.1 The Petitioner has cited Regulation 23 of the 'HPERC Hydro Tariff Regulations 2011' and its subsequent amendments for the Operational Norms.

4.8.2 The Petitioner has submitted the design energy data of the project in the following table:

Table 80: Monthly Energy from COD

Month	Period (Every 10 Day)	Design Energy (MU)
Jan	I	6.75
	II	6.34
	III	6.12
Feb	I	5.52
	II	5.60
	III	4.35
Mar	I	5.19
	II	5.41
	III	6.10
Apr	I	5.88
	II	6.33
	III	7.81
May	I	8.20
	II	9.34
	III	11.34
Jun	I	10.06
	II	9.32
	III	9.64
Jul	I	10.34
	II	14.41
	III	27.68
Aug	I	26.40
	II	26.40
	III	27.77
Sep	I	15.72
	II	15.07
	III	14.68
Oct	I	10.41
	II	10.00
	III	9.52
Nov	I	8.43
	II	8.17
	III	7.98
Dec	I	7.89
	II	7.70
	III	7.89

4.8.3 **Auxiliary Energy Consumption:** The Petitioner has cited Regulation 23 (b) of 'HPERC Hydro Tariff Regulations 2011' and its subsequent amendments in this regard which specifies as under:

Table 81: Auxiliary Energy Consumption Norms as per Regulation

S. No.	Particular	System Type	Percentage
I	Surface hydroelectric power generating station	With rotating exciters mounted on the generator shaft	0.70%
II		With static excitation system	1.00%
III	Underground hydroelectric power generating station	With rotating exciters mounted on the generator shaft	0.90%
IV		With static excitation system	1.20%

- 4.8.4 The Petitioner has submitted that Sawra Kuddu HEP is an underground hydroelectric power generating station with static excitation system and accordingly, the Petitioner has requested to approve an auxiliary consumption of 1.20%.

Commission's Analysis

- 4.8.5 The Commission has noted that HPSEB while granting Techno-Economic Clearance of the project has approved the Design Energy (DE) of 385.78 MU.
- 4.8.6 The Commission, in accordance with the 'HPERC Hydro Tariff Regulations 2011', as amended, has considered the Auxiliary Energy Consumption as 1.20% for Sawra Kuddu HEP, given its underground hydroelectric power generating station with a static excitation system. Furthermore, based on the Design Energy (DE) approved by the HPSEB, the Commission has finalized the Net Saleable Energy (MU) for Sawra Kuddu HEP as tabulated below:

Table 82: Annual Energy Generation Norms as per Regulations

Annual Energy Generation (MU)	
Design Energy / Gross Generation (MU)	385.78
Auxiliary Energy Consumption (%)	1.20%
Net Generation (MU)	381.15
Free Energy to State (FEHS) (%)	13%
Net Saleable Energy (MU)	331.60

- 4.8.7 The Commission noted the Regulation 23 of 'HPERC Hydro Tariff Regulations 2011, as amended, for the determination of NAPAF. The Regulations mentioned as below:

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

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

(ii) storage and pondage type plants with head variation between FRL and MDDL of more than 8%, where plant availability is not affected by silt: Plant-specific allowance to be provided in NAPAF for reduction in MW output capability as reservoir level falls over the months. As a general guideline the allowance on this account in terms of a multiplying factor may be worked out from the projection of annual average of net head, applying the formula:

(Average head / Rated head) + 0.02

Alternatively in case of a difficulty in making such projection, the multiplying factor may be determined as:

(Head at MDDL/Rated head) x 0.5 + 0.52

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

(iv) run-of-river type plants: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant;"

- 4.8.8 The Commission observes that the DPR for Swara Kuddu HEP (3x37MW) mentions the following:

"The Sawra Kuddu HEP is a run of the river scheme on river Pabbar with a gross head of ~213.50 m for generation of 111 MW of power in underground powerhouse."

- 4.8.9 The Commission has observed that Swara Kuddu HEP is a run of the river scheme. NAPA of such stations as per Regulation 23 of 'HPERC Tariff Regulations 2011' is to be determined plant-wise based on 10 days design energy data, moderated by past experience, where available/relevant. Further, the Commission noted that the Petitioner has not provided any details in this regard. The Commission sought details for the same, the Petitioner in response, provide the details of actual PAF as below. The Petitioner has submitted the following information highlighting that the same has been sent for certification by SLDC.

Table 83: Plant Availability Factor (PAF)

Month	FY21	FY22	FY23	FY24
April	-	32.33	67.61	68.67
May	-	38.92	65.56	72.26
June	-	66.67	66.67	76.94
July	-	66.67	71.18	64.71
August	-	75.27	79.57	68.49
September	-	78.00	72.96	71.75
October	-	79.57	65.29	69.76
November	-	72.02	66.67	72.91
December	-	70.55	66.77	71.64
January	11.83	71.26	66.67	71.75
February	33.33	72.99	66.17	75.69*
March	33.33	74.16	52.42	N.A
Average	26.16	66.53	67.29	70.89

- 4.8.10 It is observed that the plant has been able to achieve close to 70% PAF in FY24. However, no specific details and certificate has been submitted by the Petitioner. Therefore, due to lack of information regarding the PAF for past years, the Commission is approving NAPA of 85% for FY 2023-24 in line with the NAPA approved by the CERC for similar hydro stations.

4.9 Capacity and Energy Charges Payable by HPSEBL

Petitioner's Submission

- 4.9.1 The Petitioner has cited Regulation 26 of 'HPERC Hydro Tariff Regulations 2011' and its subsequent amendments for the computation of Capacity and Energy Charges in support of the submissions.

Commission's Analysis

- 4.9.2 The Commission has noted that a PPA has been signed between the Petitioner (HPPCL) and HPSEBL on 29.03.2023 for 100% of Net-Saleable Energy at Ex-Bus. The PPA has come into force from 01.04.2023 and shall remain operative till the useful life of the project. Therefore, the Petitioner is required to recover

100% of the fixed charges approved for the total plant from HPSEBL as well as energy charges corresponding to 100% of the net saleable energy supplied to HPSEBL as tabulated in Table No. 84 below.

- 4.9.3 The Commission, in accordance with the 'HPERC Hydro Tariff Regulations 2011' as amended from time to time and the signed PPA between the Petitioner and HPSEBL, as mentioned in para no. 4.9.2, has calculated the Capacity and Energy charges for FY 2023-24. The Commission has approved the Annual Fixed Cost in para no. 4.7.2. The detail of approved Capacity and Energy Charges for FY 2023-24 is tabulated below:

Table 84: Approved Energy and Capacity Charges by Commission

S. No.	Particulars	-	FY 2023-24	Unit
a)	Approved Annual Fixed Cost		173.87	(Rs. Cr.)
b)	Net Saleable Energy		331.60	(MU)
c)	Energy Charge	$(a*50\%/b)$	2.62	(Rs. /kWh)
d)	Capacity Charge	$(a*50\%/12)$	7.24	(Rs. Cr./Month)

- 4.9.4 Since the Petitioner is having diurnal storage available in the Plant and the cost of the same has also been allowed by the Commission, therefore, the Petitioner shall ensure that the plant is operated during the peak hours as per the requirement of the HPSEBL.

-Sd/-

(SHASHI KANT JOSHI)
Member

-Sd/-

(YASHWANT SINGH CHOGAL)
Member, Law

-Sd/-

(DEVENDRA KUMAR SHARMA)
Chairman

Shimla

Dated: 05th June 2024.