

No 2493560 2
0
2
2 **Himachal Government Judicial Paper**
BEFORE

**HIMACHAL PRADESH ELECTRICITY REGULATORY
COMMISSION, SHIMLA**

**PETITION FOR
APPROVAL OF CAPITAL COST ALONG WITH
ADDITIONAL CAPITALIZATION AND
DETERMINATION OF TARIFF FOR
SAWRA KUDDU HYDRO ELECTRIC PROJECT
(3 X 37 MW)
FROM COD TO FY 2023-24**

FILED BY



HIMACHAL PRADESH POWER CORPORATION LIMITED

Dy. General Manager (SoP)
HPPCL, Himach Building
BCS, New Shimla-171000

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

BEFORE THE HIMACHAL PRADESH ELECTRICITY REGULATORY
COMMISSION, SHIMLA

Filing No.....

Petition No.....

IN THE MATTER OF

FILING OF PETITION FOR APPROVAL OF CAPITAL COST AS ON COD TAKING IN CONSIDERATION THE ADDITIONAL CAPITAL EXPENDITURE AND DETERMINATION OF TARIFF FROM COD TO FY 2023-24 FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW), OF HIMACHAL PRADESH POWER CORPORATION Ltd. (HPPCL) UNDER THE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS FOR DETERMINATION OF HYDRO GENERATION TARIFF) REGULATIONS, 2011 AND ITS AMMENDMENTS THERAFTER AND UNDER SECTION-62 READ WITH SECTION 86 OF THE ELECTRICITY ACT 2003.

THE HIMACHAL PRADESH POWER CORPORATION LIMITED, HIMFED BUILDING,
BCS, NEW SHIMLA, SHIMLA -9.

PETITIONER

VERSUS

THE HIMACHAL PRADESH STATE ELECTRICITY BOARD LIMITED, HPSEBL,
VIDYUT BHAWAN, SHIMLA-171004.

RESPONDANT

ATTESTED

Vijay Kumar Sakshani
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

Dy. General Manager (S&P)
HPPCL, Himfed Building
BCS, New Shimla-171008

2
0
2
2

No 2493562 Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

TABLE OF CONTENTS

Sr. No.	PARTICULARS	PAGE No.
1	EXECUTIVE SUMMARY	8
1.1	PREAMBLE	8
1.2	PETITION STRUCTURE	8-9
2	INTRODUCTION	10
2.1	BACKGROUND	10
2.2	SAWRA KUDDU HEP AT A GLANCE	11
2.3	SALIENT FEATURES OF THE PROJECT	11-14
2.4	APPROACH FOR FILING THE PETITION	14
2.5	PROVISIONS OF LAW	14-16
3	CAPITAL COST	17
3.1	CAPITAL COST AS PER DPR	17-20
3.2	CAPITAL COST AS ON COD	20-23
3.3- 3.11.6	ADDITIONAL CAPITALIZATION (ACE) & REASONS FOR VARIATION OF COST & TIME OVERRUN	23-78
4	ANNUAL FIXED COST	79
4.1	COMPONENTS OF ANNUAL FIXED COST	79
4.2	OPERATIONS & MAINTENANCE EXPENSES	79-82
4.3	DEPRECIATION	82-83
4.4	INTEREST ON LOANS	83-85
4.5	INTEREST ON WORKING CAPITAL	85-86
4.6	RETURN ON EQUITY	87-88
4.7	SUMMARY OF ANNUAL FIXED CHARGES	88
5	OPERATIONAL NORMS	89
5.1	PERFORMANCE TARGETS	89
5.2	NORMATIVE ANNUAL PROJECT AVAILABILITY FACTOR (NAPAF)	89-90
5.3	AUXILIARY ENERGY CONSUMPTION	90-91

ATTESTED
Vijay Kumar Saluja
Advocate
Yash Bhatnagar
Shimla (H.P.)

No 2493563 ²/₀/₂/₂ Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

6	CAPACITY CHARGES	92
6.1	CAPACITY CHARGES AND ENERGY CHARGES	92-93
7	PRAYERS TO COMMISSION	94-95
8	AFFIDAVIT	96-97
9	ANNEXURE	
9.1	ANNEXURE-P-1 TO P-66	98 - 4401
9.2	HPERC STANDERD FORMATS	4402 - 4435
9.3	ANNUAL REPORTS	4436 ONWARDS

Signature

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

ATTESTED

Vijay Kumar Sahasrani
Advocate cum Notary Public
Yashwanth, Vileer Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

List of Tables

TABLE NO./DESCRIPTION	PAGE No.
TABLE 1: ENERGY AND REVENUE DETAILS FROM COD	12-13
TABLE 2: CAPITAL COST AS PER DPR	19
TABLE 3: IMPLEMENTATION OF THE PROJECT	19-20
TABLE 4: DETAILS OF ACTUAL CAPITAL COST TILL COD WITH RESPECT TO DPR	22-23
TABLE 5: ADDITIONAL CAPITALIZATION UPTO CUT-OFF DATE	23-24
TABLE 6: DETAIL OF TOTAL PROJECT COST ALONG WITH ACE	25
TABLE 7: ARBITRATION CASES AND LIABILITIES	25-27
TABLE 8: DETAILS OF SALE OF INFIRM POWER	27
TABLE 9: LOANS DETAILS)	28-29
TABLE 10: DEBT EQUITY RATIO CONSIDERED AS ON COD	29
TABLE 11: ABSTRACT OF FUNDING OF CAPITAL COST	30
TABLE 12: DETAILS OF EXPENDITURE AGAINST DIFFERENT COMPONENTS	32
TABLE 13: DETAILS OF COST OVERRUN OF CIVIL WORKS	35
TABLE 14: COST OVERRUN OF DBID PACKAGE	36-37
TABLE 15: COST OVERRUN FOR HRT PACKAGE	42-44
TABLE 16: COST OVERRUN FOR POWER HOUSE PACKAGE	47-48
TABLE 17: DETAILS OF EXTENTION OF TIME WITH RESPECT TO DBID PACKAGE	53
TABLE 18: DETAILS OF EXTENTION OF TIME WITH RESPECT TO HRT PACKAGE (AWARDED TO M/s ABAN-COSTAL JOINT VENTURE)	54-55
TABLE 19: DETAILS OF EXTENTION OF TIME WITH RESPECT TO HRT PACKAGE (AWARDED TO M/s HCC)	55-56
TABLE 20: DETAILS OF EXTENTION OF TIME WITH RESPECT TO ADDITIONAL ADIT OF HRT (AWARDED TO M/s PATEL ENGINEERING LTD.)	57
TABLE 21: DETAILS OF EXTENTION OF TIME WITH RESPECT TO POWER HOUSE PACKAGE (AWARDED TO M/s PATEL ENGINEERING LTD.)	58
TABLE 22: DETAILS OF EXPENDITURE OF ELECTROMECHANICAL WORK WITH RESPECT TO DPR.	59-60
TABLE 23: FINANCIAL CLAIMS IN RESPECT OF E&M PACKAGE	65-66
TABLE 24: DETAILS OF CHANGE ORDERS IN RESPECT OF E&M WORKS	68-69

ATTESTED

Vijay Kumar
Advocate cum
Wish Bhaswar
Sharma (H.P.)

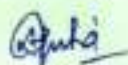
APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

TABLE 25: ADDITIONAL WORKS E&M PACKAGE	71-73
TABLE 26: EXPENCES INCURRED AGAINST MISCELLANEOUS CHARGES, E&M WORKS	73
TABLE 27: COST OVERRUN IN RESPECT OF E&M PACKAGE	73-74
TABLE 28: EXTENTION OF TIME IN RESPECT OF E&M PACKAGE	75-76
TABLE 29: DETAILS OF DATES OF WATER AVAILABILITY AND POWER EVACUATION SYSTEM	76
TABLE 30: COST OF TRANSMISSION WORKS	77-78
TABLE 31: DETAILS OF COST OF IDC & ESCLATION	78
TABLE 32: DETAILS OF IDC COST	78
TABLE 33: DETAILS OF AMOUNT RELEASED UNDER DIFFERENT GRANTS	80
TABLE 34: AMOUNT ISSUED AGAINST VARIOUS R&R SCHEMES	80-81
TABLE 35: CALCULATION OF ESCLATION FACTOR FOR O&M EXPENCES FROM 2021 TO FY 23-24	81
TABLE 36: O&M EXPENCES CONSIDERED	82
TABLE 37: DEPRECIATION EXPENCES SINCE COD	83
TABLE 38: INTEREST ON LOAN SINCE COD	85
TABLE 39: INTEREST ON WORKING CAPITAL BOOKED SINCE COD	86
TABLE 40: RETURN ON EQUITY	87
TABLE 41: ANNUAL FIXED CHARGES	88
TABLE 42: ENERGY DATA OF THE PROJECT	89-90
TABLE 43: GENERATION DETAILS AS PER DPR	91

ATTESTED

Vijay Kumar Saldent
Advocate cum Notary Public
Yash Bhaswari, Vikas Nagar
Shimla (H.P.)


Dy. General Manager (SOP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

ABBREVIATIONS

Sr. No	Abbreviations	Descriptions
1.	A&G	Administrative and General
2.	FY	Financial Year
3.	GFA	Gross Fixed Assets
4.	GoI	Government of India
5.	GoHP	Government of Himachal Pradesh
6.	HP	Himachal Pradesh
7.	HEP	Hydro Electric Project
8.	KV	Kilo Volt
9.	Kva	Kilo Volt Ampere
10.	MW	Mega Watt
11.	MYT	Multi Year Tariff
12.	NTPC	National Thermal Power Corporation
13.	O&M	Operation & Maintenance
14.	PFC	Power finance Corporation
15.	PPA	Power Purchase Agreement
16.	REC	Rural Electrification Corporation
17.	R&M	Repair and Maintenance
18.	ROE	Return on Equity
19.	Rs	Rupees
20.	SBI	State Bank of India
21.	HPSEBL	Himachal Pradesh State Electricity Board Limited
22.	HPERC	Himachal Pradesh Electricity Regulatory Commission
23.	HPPCL	Himachal Pradesh Power Corporation Limited
24.	HPPTCL	Himachal Pradesh Power Transmission Corporation Limited
25.	SLDC	State Load Dispatch Centre

1 EXECUTIVE SUMMARY

1.1 Preamble

1.1.1 The Himachal Pradesh Electricity Regulatory Commission (HPERC), in exercise of the powers conferred on it by section 181 of the Electricity Act 2003 (Act 36 of 2003) and all other powers, has issued HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 along with Amendments thereafter, hereinafter referred to as "MYT Regulations".

1.1.2 The Petitioner has declared the CoD of 3 X 37 MW Hydro Electric Project at Sawra Kuddu on 21.01.2021 (Unit # I,II &III) Annexure-P-1 and is submitting the petition for approval of capital cost taking into consideration additional capitalization and determination of tariff from COD to FY 2023-24 for 3 x 37 MW Sawra Kuddu Hydro Electric Project with due reference and tariff filing formats in **Annexure as mentioned in the MYT Regulations.**

1.2 Petition structure

1.2.1 The Petition includes the following Chapters:

- a) **Section 1** contains executive summary of the Petition
- b) **Section 2** contains introduction and overall approach to filing of the Petition
- c) **Section 3** contains brief of capital cost incurred for commissioning the Project
- d) **Section 4** contains annual fixed cost as derived from the labeled parameters in Regulations
- e) **Section 5** contains operational norms designed for the project as per HPERC Regulations
- f) **Section 6** contains computation of composite tariff detailing capacity charges & fixed charges for the project
- g) **Section 7** contains prayers to the Hon'ble Commission

1.2.2 HPPCL is filing this petition for approval of capital cost taking into consideration additional capitalization and determination of tariff from COD to FY 2023-24 for 3 x 37

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

MW Sawra Kuddu Hydro Electric Project as per HPERC Regulations on Terms and Conditions for Determination of Hydro Generation Tariff, 2011 and subsequent amendments thereafter.

1.2.3 This section highlights the summary of petition for capital cost and tariff approval from COD to FY 2023-24.

1.2.4 HPPCL submits this petition in compliance with the Regulations and subsequent amendments thereafter of the Hon'ble Commission along with the specified data formats for generating projects.



Dy. General Manager (SOP)
HPPCL, Himfed Building
BCS, New Shimla-171009

ATTESTED

Vijay Kumar Sekhri
Advocate cum Notary Public
Yash Showan, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

2 INTRODUCTION

2.1 Background

2.1.1 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) (Certificate of incorporation as Annex-P-2). As per Electricity Act 2003 section-10 (2) subject to the provisions of this 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 this Act or the rules or regulations made there under. As per MoA and AoA dt. 05.12.2006 the GoHP has a 60%, and HPSEB, a 40% shareholding in HPPCL (Annex-P-3).

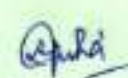
2.1.2 HPPCL is a fast upcoming power generating utility with all the Technical and Organizational capabilities at par with other generating companies like NTPC / SJVNL / NHPC. Efforts are afoot to further strengthen the respective departments with professionals of proven credentials and qualified technical manpower.

2.1.3 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. The basic idea is to have a long term corporate plan for planned implementation of power projects to meet the growing energy demand, ensuring environment and ecological balance for contributing towards the progress and prosperity of the State. HPPCL intends to meet the challenges of dynamically transforming business and environment to build a sustainable relationship with the stakeholders for maximum benefits and economic growth by achieving performance excellence.

2.1.4 Consequent to the enactment of the Electricity Act, 2003 (hereinafter referred to as the "Act"), the process of approval of proposed tariffs is vested with the State Commission. Pursuant to the provisions of Section 61, 62 and 64 of the Act, HPPCL is filing the current petition for approval of capital cost taking into consideration additional capitalization and determination of tariff from COD to FY 2023-24 for 3 x 37 MW Sawra Kuddu Hydro Electric Project.

ATTESTED

Vijay Kumar Sekhri
Advocate cum Notary Public
Yash Chawla, Vikas
Sharma (H.P.)


Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

2.2 SAWRA KUDDU HEP AT A GLANCE:-

- 2.2.1 Sawra Kuddu Hydro-electric Project is a run of the river development on the Pabbar river which is a tributary of river Yamuna, in Rohru & Jubbal Tehsils at a distance of 130 Kms from Shimla.
- 2.2.2 The power house site is located on the left bank of Pabbar river and is having 3 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 a underground power house near village Snail close to the border line with Uttaranchal.

2.3 SALIENT FEATURES OF THE PROJECT

- 2.3.1 The project comprises of a piano key weir, an intake structure to draw 78 cumecs discharge through three openings, surface gutter type de-silting arrangement divided into three portions, each 80 m long 19.5 m wide and 10.5 m deep for exclusion of silt particles down to 0.2 mm size. Water is further carried through water conductor system comprising 11.145 km long, 5 m diameter D-shaped Head Race Tunnel, 14 m diameter 82 m high underground restricted orifice type surge shaft, 4 m diameter steel lined pressured shaft, trifurcating in 2.30 m diameter branch shafts, to feed three 37 MW capacity each vertical axis Francis turbines, housed in an 90 m x 14 m x 39 m size underground power house cavity located on the left bank of the Pabbar river near Snail village.

- 2.3.2 The vertical shaft, Francis turbine of 37 MW capacity with a rated synchronous speed of 500 rpm has been found to be suitable in view of the overall economy of the power house. Each turbine is provided with suitable oil pressure unit, electronic hydraulic governor and other requisite control equipments.

- 2.3.3 Each generator is of vertical shaft, salient pole type synchronous generator directly coupled to the hydraulic turbine and having a rated output of 41.11 MVA with 0.9 lag power factor. The generator bearing arrangement is of conventional type i.e. suspended type. The generators are equipped with dynamic braking in addition to the friction brakes. The generator have Class-F insulation in line with modern practice and temperature restricted-Class-B insulation.

- 2.3.4 3 Nos. Indoor generator transformers of 45 MVA, 11/220 KV, Three phase, 50 Hz rating is provided and placed in the Transformer Cavern of Power House.

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- 2.3.5 The GIS switch yard has 3 generator transformer bays, one bus coupler bay, and two feeder bays. The connection of the Pothead Yard with the underground GIS Switchyard has been made via 245 KV, 630 mm² 1 core , XLPE cables which is routed through a cable tunnel.
- 2.3.6 The power generated from Sawra-Kuddu project is being evacuated through STU/HPPTCL system, 220 KV D/C line Snail to Hatkoti - 220/400 kV, 2X315 MVA S/S at Pragati Nagar, Gumma & LILO of both Ckts. of 400 kV Jakhri- Abdullapur D/C Line of PGCIL.
- 2.3.7 The project will be able to generate 385.78 GWH & 506.61 GWH of electrical energy in 90% dependable year & 50% mean year respectively.

2.3.8 STATUS OF SALE OF POWER OF SAWRA KUDDU HEP

- i. As per CMM (Consultative Committee Meeting), GoHP decision dt. 05.12.2013 the matter regarding sale of power of HPPCL projects was taken up with different utilities all over the region, but no beneficiaries/utilities have shown their willingness/consent for purchasing of power from HPPCL.
- ii. As a result, due to non availability of buyer for purchasing power from HPPCL Projects on CERC/SERC determined tariff throughout India, power traders were approached for selling power of HPPCL projects. Accordingly, the power of Sawra Kuddu Hydro Electric Project was being sold on short term basis through Power Trader since CoD till 30.04.2022. Further, the power was sold to HPSEBL through Short term PPA signed on dt. 28.04.2022 b/w HPPCL & HPSEBL @ Rs. 3.40/unit valid from 01.05.2022 to 31.03.2023 (Annex-P-4). This long term PPA signed on dated 29.03.2023 has come into force from 01.04.2023 and shall remain operative till the useful life of the project (Annex-P-5). Accordingly, the power of Sawra Kuddu HEP is being supplied to HPSEBL as per the Long Term PPA.

Table 01: The detail of revenue earned from Sale of Power of Sawra Kuddu HEP from CoD of the Project till FY 22-23 is tabulated as below (trail balance sheet attached as

Annexure-P-6):-

[Signature]

Dy. General Manager (SOP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

FY	Gross Generation in MU	Net Saleable Energy in MU (87% share of HPPCL)	Net Revenue Realized in Crs against 87% share of HPPCL
2020-21	17.23	14.74	6.32
2021-22	322.45	276.44	132.47
2022-23	324.02	278.55	107.61

- iii. Meanwhile CEA had been regularly seeking the status of untied capacity from HPPCL commissioned project. Hence a meeting for the review of hydro projects with untied capacity was held under the chairmanship of Hon'ble Minister of Power and New & Renewable Energy on 07.09.2021, vide which CEA highlighted that out of 8 projects with untied capacities throughout the nation, 03 were that of HPPCL i.e. Integrated Kashang HEP (195 MW), HEP (100 MW) and Sawra Kuddu HEP (111 MW). Accordingly after reviewing the issue it was decided that, Ministry of Power would take up the matter of procurement of power from Integrated Kashang, and Sawra Kuddu HEPs by HPSEB with Govt. of Himachal Pradesh.
- iv. Consequently, meetings were conducted between HPPCL and HPSEBL and initially it was decided in the meeting held on 19.02.2022 that, HPSEBL will purchase the power of Kashang HEP (65 MW) and Sawra Kuddu HEP (111 MW) on short term basis for a period of one year i.e. during FY 2022-23 at Ex-Bus and the deliberations for purchase of power of HPPCL projects on long term basis shall continue.
- v. Further on the basis of meeting held on 19.02.2022, subsequent meetings were held in the Chairmanship of the Managing Director HPPCL on 29.06.2022 and 26.07.2022. After detailed deliberations it has been agreed between both HPPCL and HPSEBL for sale/purchase of power from HPPCL Hydro Electric Projects viz-a-viz Kashang HEP Stage I (1X65 MW), Sawra Kuddu HEP (3X37 MW) and 50% generation of HPPCL share of power from Sainj HEP (2 X 50MW) for useful life of these projects at Ex-Bus on HPERC determined tariff.
- vi. Accordingly, a joint petition was submitted at HPERC for the approval of Power Purchase Agreements to be executed between HPPCL and HPSEBL here-to for sale of power by Himachal Pradesh Power Corporation Limited to Himachal Pradesh State

No 2493573 2
0
2 Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Electricity Board Limited from Kashang HEP (1X65 MW), Sainj HEP (2X50 MW) and Sawra Kuddu HEP (3X37 MW). The HPERC vide its order dt. 13.02.2023 had approved these PPAs with minor amendments. The approved PPAs were signed between HPPCL and HPSEBL on dt. 29.03.2023.

2.4 APPROACH FOR FILING THE PETITION

- 2.4.1 The key aspects of the approach to the filing related to Multi-Year Tariff framework are below:
- 2.4.2 Section 61 of the EA 2003, empowers the State Electricity Regulatory Commission to set the terms and conditions for determination of tariff. Further, it also lists down certain guiding principles which have to be considered while determining the terms and conditions of tariff. One of the key guiding factors is that the Commission shall adopt Multi Year Tariff (MYT) principles and other principles that reward efficiency in performance.
- 2.4.3 Accordingly the Commission had notified HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2007 which was thereafter repealed by publishing HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 on 2nd April 2011 and its further amendments.
- 2.4.4 Pursuant to the provisions of the Electricity Act, 2003 and the MYT Regulations'2011 and its amendments, HPPCL hereby submits this petition for consideration of the Hon'ble Commission along with the specified formats for providing information on various parameters.

2.5 PROVISIONS OF LAW

- 2.5.1 The Hon'ble Commission had published HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 in the Rajpatra, Himachal Pradesh dated 2nd April 2011 and its amendments thereafter.

ATTESTED

Vijay Kumar Sakherwal
Advocate cum Notary Public
Yash Bhaswani, Vikas Tandon
Shimla (H.P.)

The scope of the Regulations is read as under:

"2. Scope and application

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

(1) These regulations shall apply in all cases where tariff for a generating station or a unit thereof is to be determined by the Commission under section 62 of the Act, read with section 86 thereof.

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

(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.

(4) Where tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government, the Commission shall adopt such tariff in accordance with the provisions of the Act."

2.5.3 Provision in Clause 35 of filing MYT:-

"35. Multi-Year Fillings for the control period

(1) "For the Approval of the Commission, the multi-year ARR and tariff filing for each year of the control period consistent with the business plan, shall be done by the petitioner generator not less than 120 days before the commencement of the first year of the control period or such other date as may be directed by the Commission, in such form and in such manner as may be laid down by the Commission by an order and also as per the provisions of the Conduct of Business Regulations.

ATTESTED

Vijay Kumar, Sakshi
Advocate cum Notary Public
Yash Bhatnagar, Vikas
Bhatnagar, H.P.

(2) The applicant shall also submit the multi-year ARR and tariff filing in electronic format to the Commission...."

2.5.4 Provisions in Clause 37 for ARR for the control period and respective tariff filing:-

" (1) The generator /generating company shall file not less than 120 days before the commencement of the first year of the control period or such other date as may be directed by the Commission, an application for approval of multi-year Aggregate Revenue Requirement (ARR) and determination of tariff for each year of the control


APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

period.....

(4) The generator/generation company shall furnish to the Commission, such additional information, particulars and documents as the Commission may require from time to time after such filing of revenue calculations and tariff proposals.

(5) The generator/generation company shall publish, for the information of the public, the contents of the application in an abridged form in such manner as the Commission may direct and shall host the complete copy of the filing on its website and shall also provide copies of the documents filed with the Commission to any person at a price not exceeding normal photocopying charges. "



Dy. General Manager (S&P)
HPPCL, Himfed Building
BCS, New Shimla-171002

ATTESTED

Vijay Kumar Saktani
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

3 CAPITAL COST

3.1 CAPITAL COST AS APPROVED IN DPR

TECHNO-ECONOMIC CLEARANCE (TEC)

The Techno-economic Clearance (TEC) of Sawra Kuddu HEP at an estimated cost of Rs. 558.53 Crore {Civil Works Rs. 290.15 Crore + P. Production Rs. 120.40 Crore +T-Transmission Rs. 38.09 crore (March 2003 Price Level) + escalation Rs. 46.60 crore + interest during construction Rs. 63.29 Crore}, was accorded by HPSEB vide office order No. HPSEB (Sectt.)401/Sawra Kuddu/04-83917-27 Dated 10.11.2004. As per TEC, the normal Operation life of the Hydro Power Project shall be as provision of the Sixth schedule of Electricity (Supply) Act 1948 repeated by Electricity Act 2003. Further as per TEC, the project shall be completed within 54 months after award of main civil works. (Annex-P-7).

DETAILED PROJECT REPORT

The TEC was accorded under section -8 of Electricity Act by the authority and no separate BoD approval is required for DPR (Annex-P-8).

The Detailed Project Report (DPR) of Sawra Kuddu HEP was prepared by HPSEB, so that the scheme can be taken up for execution during 10th five year plan and completed in the beginning of 11th year plan. The project envisages the diversion of water of Pabbar river by construction a barrage +-15.50 m high at village Hatkoti, a reservoir, a intake structure, desilting tank, and +-11.30 Km long tunnel along the other appurtenant structures like surge shaft, pressure shaft and underground Power House (3x36.67 MW) etc. thus utilizing the design discharge of 65 cumecs and gross head of 213.50m for generating 385.78 million units in 90% dependable year, in an underground Power House near village Snail on left bank of Pabbar River. The Hatkoti i.e. Dam site is approachable from Shimla by all weather paved road conditions along the pabbar river down to snail i.e. Power House Site further into Utranchal, is the added advantage, which will not help to cut down the infrastructure cost but also curtain gestation period. The total cost of the Project has been estimated amounting to Rs. 558.53 Crore {Civil Works Rs. 290.15 Crore + P. Production Rs. 120.40 Crore +T-Transmission Rs. 38.09 crore (March 2003 Price Level) + escalation Rs. 46.60 crore + interest during construction Rs. 63.29 Crore}. The average cost of generation has been worked out as Rs. 2.34 per unit at Power House Bus Bar (90% mean year study) after taking into account interest during construction, which is quite comparable from other sources in the region. The project was planned for completion within Four and half year

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

including one year for infrastructural activities like land acquisition, statutory clearances from various agencies, construction of buildings, roads, adits etc.

The Detailed Project Report Comprising of two volumes.

- Volume -I- General and Design Aspects
- Volume -II- Cost Estimate

As per DPR, feasibility level investigations for the project comprising the following basic investigations have been carried out/completed.

- TOPOGRAPHICAL SURVEYS

- Project area has been marked on the topographical sheets of S.O.I in scale 1:50000 with 40 m contour interval
- Project area surveys at 1:10000 scale with 5 m contour interval have been done exceeding upto the pabbar river between Chirgaon and Snail
- Detailed surveys for project components conducted departmentally in 1:1000 scale with 2m contour interval.

- HYDROMETROLOGICAL DATA

- Discharge data at Sawra bridge is available from 1978-83 and 1993-98 and for the missing data, the data at guage and discharge site at Sawra bridge have been drawn from longer available (1978-2000) discharge data at Mandley Discharge Site by W.B. langbein's Long Deviation Method.
- Rain fall data is available at Rohru, Jubbal and Khadrara rainfall station from 1951.
- Temperature Data is available.
- Suspended sediment load has been measured at Mandly for the period 1979-87 and at Andra Khad for the period 1976-87.

- GEOLOGICAL AND GEO-TECHNICAL STUDIES

- Geological mapping at Dam site and three potential power house sites.
- Seven vertical Drill Holes at Dam Site.
- One inclined Drill Hole at Power House Site.
- Seismic refraction survey at three potential Dam Sites.

Besides above additional geological investigation shall also have to be done for the proper planning/execution of the project.

- Construction Material

ATTESTED

Vijay Kumar Salhotra
Advocate with History Profile
Vishal Sharma, Vikas Tattar
Sharma (LLM)


Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

PROJECT COST APPROVED IN DPR

Table 02: Capital Cost as per DPR

S. No	Cost Component	Cost (INR Crores)
1	Cost of Civil Works	Rs. 290.15
2	Cost of E&M Works	Rs. 120.40
3	Cost of Transmission Works	Rs. 38.09
4	Escalation	Rs. 46.60
5	Interest during construction (IDC)	Rs. 63.29
6	Total Cost	Rs. 558.53

3.1.1 Implementation of the Project

The approval of DPR & TEC of the project was accorded by HPSEB on dated 10.11.2004. Accordingly the different packages of construction activities of Sawra Kuddu HEP were awarded. The detail of different contracts awarded to different contractual activities against major packages are detailed as under :

Table 03: Implementation of the Project

Particulars	Approved by/Awarded to	Dates
DPR/TEC approval	HPSEB	10.11.2004
Date of Award Civil Contract		
Head Race Tunnel	M/s Aban Coastal (JV) for (HRT)	18.06.2007
	Hindustan Construction Company	03.11.2014
Additional Adit of HRT	M/s Patel Engg. Limited	14.01.2013
Diversion Barrage , Intake	M/s Patel Engineering Limited	25.08.2009
Desilting		
Lower House	M/s Patel Engineering Limited	22.01.2009
Date of Award of E&M Contract	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)	27.02.2009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Scheduled Commissioning as per contract awarded		Unit #1 : 28.04.2012 Unit #2 : 28.05.2012 Unit#3 : 28.06.2012
Actual Commissioning as per contract awarded		Unit #1 : 03.11.2020 Unit #2 : 17.11.2020 Unit#3 : 09.12.2020
Actual CoD of the project		21.01.2021 (All three Units)

3.2 CAPITAL COST AS ON COD

3.2.1 Regulation 11 (1) (a) of Himachal Pradesh Electricity Regulatory Commission (HPERC) (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 read along with its amendments specifies as under:

"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."

3.2.2 Regulation 12 of Himachal Pradesh Electricity Regulatory Commission (HPERC) (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 read along with its amendments specifies as under:

"For hydro generating stations, initial spares shall be capitalised as a percentage of the original project cost, subject to the ceiling norm of 1.5%:

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Provided that the Commission, may for sufficient reasons to be recorded in writing, after exercising due diligence and applying prudence check, deviate from the above ceiling norm. "

3.2.3 Regulation 13 of Himachal Pradesh Electricity Regulatory Commission (HPERC) (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 read along with its amendments specifies as under:

"(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) Un-discharged 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, un-discharged 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

ATTESTED

Vijay Kumar Sakshi
Advocate cum Notary Putli
Yash Bhawan, Shimla
Shimla (H.P.)

(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

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation:

(d) any expenses to be incurred on account of need for higher security and safety of the capital asset as advised or directed by appropriate Government agencies or statutory authorities responsible for national security/internal security;

(e) any liability for works executed prior to the Cut-off Date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;

(f) any liability for works admitted by the Commission after the Cut-off Date to the extent of discharge of such liabilities by actual payments;

(g) any additional capital expenditure, which has become necessary for efficient operation of the plant. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology etc.;

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. bought after the cut-off date shall not be considered for additional capitalization for determination of tariff."

Table 04: Details of Actual Capital Cost till CoD w.r.t DPR

Sr. No.	Particulars	As per DPR (Rs. in Crores)	Total (Rs. in Crores)
1	Land & Preliminary including Development, Investigation and planning	6.08	288.72
2	Other Infrastructure Works including building roads, maintenance, Tools & plants	25.80	39.94
3	Environment & Ecology & Losses on stock	11.04	14.68
4	Establishment Charges and audit &	24.08	242.96

2
0
2
2

Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	accounts		
5	Other (Misc-O) including vehicles , construction power.	8.67	6.60
6	Civil Works	218.65	841.05
	Hydro Mechanical Works		
7	Electromechanical Works	120.40	252.94
8	Transmission work	38.09	0.00
9	IDC	63.29	530.79
10	Escalation	46.60	0
11	R&R Works	0.00	2.30
12	Receipt & Recoveries	-4.16	0.00
A	Total	558.53	2219.99
B	Infirm Power		1.43
C	Other Earnings during construction period		14.69
D	Total Capital cost of project after deduction of infirm power (A-B-C)		2203.87

3.3 Additional Capitalization (ACE) & Reasons for variation of Cost & Time Overrun

Table 05 : Additional Capitalization Rs. In Crs incurred upto cutoff date in the project is tabulated as below:-

Particulars	ACE during FY 2020-21	ACE during FY 2021-22	ACE during FY 2022-23	ACE during FY 2023-24 i.e. 31.03.2024 (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/IRRECTIONS	0.00	0.00	0.00	0.00
PROJECT CIVIL WORKS	0.00	4.80	0.61	8.00
PROJECT ELECTRO	0.00	1.30	0.36	2.50

ATTESTED

Vijay Kumar Sahasrani
Advocate cum Member, Himachal Pradesh
Bar Council, Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

MECHENICAL WORKS				
PLANT (CURRENTLY FOR WATER TREATMENT)	0.00	0.00	0.00	0.00
"OFFICE MACHINARY (LIKE LAB, FIRE ,SAFETY EQUIP)	0.00	0.00	0.00	0.00
ELECTRONICS & ELECTRICAL ITEMS	0.00	0.08	0.00	0.00
FURNITURES & 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 EQUIPMENTS	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
Total	0.00	-3.24	1.04	10.50
Net Total		8.30		

ATTENDED

Vijay Kumar Sharma
Accounts Officer, Public
Works Division, Himachal Pradesh
Shimla-171008

Dy. General Manager (SOP)
HPPCL, Himed Building
BCS, New Shimla-171008

2
0
2
2

No 2493584 Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

3.4 Total Project Cost

Table 06: The detail of total project cost in Crs along with the ACE is tabulated in the table below:-

Name of Project	Cost as per DPR (in Crores)	Capital Cost as on CoD (Rs. in Crores)*	ACE (in Crores)	Total Cost of the Project (Rs. in Crores) as on 31.03.2024
	1	2	3	4=2+3
Sawra Kuddu HEP	Rs. 558.53	Rs. 2203.87	Rs. 8.30	Rs. 2212.17

*Capital Cost is excluding Infirm Power

3.5 **Arbitration/Court Cases:-** The different sub-judice cases under arbitration & high court are tabulated as below :-

Table no:7 ARBITRATION CASES AND LIABILITIES

Sr. No	Description	Claimed Amount/ Counter Claimed Amount (In Crores)		Arbitral Award amount in Favour of (In Crores)		Present Status
		By Contractor	By HPPCL	Contractor	HPPCL	
Different Civil Packages						
	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.


 Dy. General Manager (SOP)
 HPPCL, Himfed Building
 BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

2	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 Judge
3	HPPCL Vs Patel Engg. Ltd in respect of Power House Package	₹ 9.19		₹ 4.97		HPPCL has challenged the Arbitration award in High Court and amount has been deposited & Matter is sub Judge
4	HPPCL Vs KSR infrastructure Pvt. Ltd in respect of Power House Package	₹ 1.38		₹ 0.41		HPPCL has challenged the Arbitration award in High Court and amount has been deposited & Matter is sub Judge
5	HPPCL Vs Patel Engg. 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 & Matter is sub Judge
6	HPPCL Vs M/s HPPCL Ltd in respect of Balance work of HRT Package	₹ 211.40	₹ 168.20			The matter is in Arbitration
7	HPPCL Vs M/s PMT Ltd in respect of Instrumentation works	₹ 1.77				The matter is in Arbitration

ATTESTED

Vijay Kumar Saklani
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

A	Total amount	₹ 637.56	₹ 1,134.76	₹ 69.16	₹ 311.77	
E&M package						
1	HPPCL Vs M/s Andritz Hydro Ltd in respect of Entry Tax matter of E&M package	₹ 4.62				The matter is in Arbitration
B	Total Amount	₹ 4.62	-	-	-	
C	Grand Total amount (A+B)	₹ 642.18	₹ 1,134.76	₹ 69.16	₹ 311.77	

#Note :- The impact of above arbitration cases/high court cases , if any arises in future , the same shall be considered in the true up accordingly.

3.6 Sale of Infirm Power:-

Regulation 15 of Himachal Pradesh Electricity Regulatory Commission (HPERC) (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 read along with its amendments specifies as under:

"Supply of infirm power shall be accounted as Unscheduled Interchange (UI) and paid for from the regional or State UI pool account at the applicable frequency-linked UI rate:

Provided that any revenue earned by the generating company from sale of infirm power shall be applied for reduction in capital cost."

Table 08: The detail of Sale of Infirm Power

Particulars	
Synchronization date	05.11.2020
COD	21.01.2021
Gross Infirm power generated (MU)	9.5
Net HPPCL share of Revenue from sale of infirm power in Crs. (Annex-P-9)	Rs. 1.43

ATTESTED

Vijay Kumar Sakhera
Advocate cum Notary, Punjab
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

Amal

Dy. General Manager (SOP)
HPPCL, Himed Building
BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

3.7 DEBT: EQUITY RATIO:-

Regulation 16 of Himachal Pradesh Electricity Regulatory Commission (HPERC) (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 read along with its amendments specifies as under:-

"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."

3.7.1 Background of funding Debt and equity participation:-

Debt:-

Asian Development Bank had sanctioned loan facility to Government of India for the execution of Sawra Kuddu HEP under Himachal Pradesh Clean Energy Development Investment Programme (HPCEDIP). This multilateral loan was routed to the Corporation, through Government of Himachal Pradesh for which the loan agreement was signed to loan funds to HPPCL at the interest rate of 10% per annum (Annex P-10).

ATTESTED
Vijay Kumar Sharma
Advocate cum Notary Public
Yash Chowdhry, Vikas Taneja
Bhimrao (H.P)

Table 09: Tabulated details of loans (Annexure-P-11)

FY	Funding Agency	Amount Received in Crs.
2006-07	PFC Loan (availed by erstwhile PVPCL)	28.02
Total PFC Loan (cleared before CoD)		28.02
2011-12 (Opening)	Govt. of Himachal Pradesh	236.32

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

2012-13		155.45
2013-14		91.40
2014-15		37.89
2015-16		47.41
2016-17		39.06
2017-18		28.00
ADB Total		635.53
2019-20	UCO Bank Loan	20.83
Repayment Paid before CoD		-2.76
Total UCO Bank Loan as on CoD		18.07


Equity:-

The project wise segregation of the equity is not maintained in the books of account. However an amount to Rs. 1550.27 has been used from equity for Sawra Kuddu HEP.

3.7.2 Table 10: Debt equity ratio considered as on COD is tabulated as under:-

Particulars	Debt: Equity ratio as per DPR (Rs. in Crore)	Debt: Equity ratio as per DPR in %	Actual Debt: Equity ratio (Rs. in Crore) as on CoD	Actual Debt: Equity ratio in %	Funding claimed in Crore (Rs. in Crore) as on CoD	Norm ative %
Debt	390.94	70%	653.60	29.66	1542.71	70
Equity	167.56	30%	1550.27	70.34	661.16	30
Total	558.53	100%	2203.87*	100%	2203.87	

*After deducting income from infirm power & others


Dy. General Manager (SOP)
HPPCL, Himfed Building
BCS, New Shimla-171003

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

**HPPCL,
Sawra
Kuddu
HEP**

3.7.3 Total completion project cost including ACE is shown as under:-

Table 11: Abstract of funding of capital cost (Rs. in Cr)

Particulars	Claimed Capital cost as on CoD	ACE				Total project cost
		2020-21	2021-22	2022-23*	2023-24**	
Debt	1542.71	0.00	-2.27	0.73	7.35	1548.52
Equity	661.16	0.00	-0.97	0.31	3.15	663.65
Total	2203.87	0.00	-3.24	1.04	10.50	2212.17

***Values/Accounts are yet to be finalized/audited**

**** Projected**

3.8 Local Area Development Fund (LADF):

The Hydro Power Policy 2006, provides that 1.5% of the final cost of the projects above 5 MW and 1% of the final cost of projects up to 5 MW shall be contributed to a Local Area Development Fund (LADF) for infrastructure development. The guidelines for management of Local Area Development Fund (LADF) in respect of Hydro –Electric Projects was notified vide no . MPP-F-(10)15/2006 dated 16.9.2009. Thereafter subsequent notifications have been issued under which an additional provisions in line with the provisions of Government of India's new Hydro Power Policy, 2008 for additional 1% (one percent) free power after commissioning of hydro power projects has been earmarked for the LADF to provide a regular stream of revenue for income generation and welfare schemes, creation of additional infrastructure-and common facilities etc. on a sustained and continued basis over the life of the project.

- The provision has also been kept that government of Himachal Pradesh may also provide a matching 1% from its share of 12% free power. This entire contribution towards Local Area Development Activities has been maintained in the shape of LADF and same has been administered by a committee called Local Area Development Committee (LADC) comprising of various stakeholders including Government departments, project developers and public representatives/nominated members from Project Affected Areas.

ATTESTED

Vijay Kumar Sakhani
Advocate cum Notary
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- The LADF shall comprise of contribution by project based on project cost and free power after commissioning as envisaged in the state and national hydro power policies. The hydro project developers in the State shall contribute towards LADF in two stages.
- **Prior to Commissioning of the Project** : The Project developer shall contribute a minimum of 1.5% for projects of capacity more than 5 MW and a minimum of 1 % for projects of capacity upto 5 MW.
- **After Commissioning of the Project** : The Project developers shall contribute 1% free power for LADF over and above the rates of royalty agreed to be paid to the State Government in the Implementation Agreement/Supplementary Implementation Agreement, as the case may be.. The revenue collected by the Nodal Agency (Directorate of Energy) from sale of such 1% free power contribution from the Project Developer will be transferred to the Local Area Development Fund

Total payment released by HPPCL under LADF against Sawra Kuddu HEP is **Rs. 8.44 Crore** before Commercial Operation Date (COD). The balance amount as per revised cost of project (to be approved by the competent authority authority) against LADF is yet to be paid. However, the provision of amounting to Rs. 21.58 Crore has been kept against said balance amount. **(Total amount considered against LADF Rs. 30.02 Crore (8.44+21.58) has been considered under establishment cost) (Annex-P-12).**

3.9 CDM and Carbon Credit

Sawra Kuddu Hydro Electric Project was registered with Executive Board of UNFCCC on dated 28th February, 2013 with registration date as 21st December, 2012. An action to sell the Carbon Credits to be earned from Sawra Kuddu HEP was also initiated by HPPCL. A Head of Agreement (HoA) was signed on dated 27th May, 2010 with Future Carbon Fund (FCF) established under the trusteeship of Asian Development Bank

ATTN: Virey Kumar, Advocate cum Public Notary, Yamuna, Shimla (H.P.)

Under section 3.1 of CERPA, the sale and purchase of the contract CER were conditional upon accomplishment of certain Condition Precedents (CPs). HPPCL had accomplished all the CPs and provided necessary documents to FCF as a proof to have met all the CPs. Out of 11 CPs, one of the CPs was that the project should be WCD (World Commission on Dams) compliant. In the carbon markets all major buyers were mostly European

2
0
2

Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

countries/firms, which insisted for WCD compliance. HPPCL had got prepared the WCD Compliance Report and submitted to the FCF. WCD Compliance Report was never accepted by FCF on one pretext or the other and finally the CERPA was terminated on 30th May, 2014. During 2022 HPPCL has again initiated the process to avail benefit from sale of Carbon Credit. After completing all the formalities under Contract Provisions, HPPCL has signed contract agreement with EKI Energy Service Limited on 13th October 2022. EKI Energy Service Ltd. EKI Energy Service Ltd is exploring the carbon credit markets to get benefit from the sale of Carbon Credit but till date HPPCL has not received any benefits from sale of Carbon Credit.

3.10 Hydro Purchase Obligation (HPO)/Renewable Purchase Obligation (RPO)

As per the provisions of HPO/RPO issued by CERC/HPERC/Ministry of Power Regulations/Notifications as amended from time to time, Sawra Kuddu HEP is eligible for availing these benefits at present.

3.11 REASONS FOR VARIATION OF COST & TIME OVERRUN I.R.O DPR APPROVED COST.

Table No.12: Detail of Expenditure against different components (Annex-P-13).

Sr. No	Cost Component	DPR approved cost	Cost capitalized	Variation
		A	B	C=B-A
1	Preliminary including Development, Investigation and LAND	6.08	288.72	282.64
2	Buildings & Plantation Roads Tools & Plants and Communication	25.80	39.94	14.14
3	Environmental Management Plan (EMP) & loss of stock	11.04	14.68	3.64
4	Establishment Charges and Audit & Account (After deducting infirm power)	24.08	226.85	202.77
5	Others (Misc-O) including vehicles , construction power	8.67	6.60	-2.07
	Total amount	75.67	576.79	501.12

ATTACHED
Vijay Kumar, Sakshi
Advocate cum Secretary, P.P.
Vishu Sharma, Vikas Nagar
Bilwara (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

➤ **LAND**

As per the DPR provision of 6.95 Hectare LAND amounting to Rs. 2.85 crore had been kept to cover the cost of Land requirement at different locations to construct the various component/Buildings of Sawra Kuddu HEP. The LAND had been acquired by the LAND Accusation Officer (LOA) as per LAND Accusation ACT.

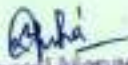
Due to additional work fronts/faces the number of Adits of HRT were increased to 4 numbers i.e. Adit-I, Adit-II, Adit-III & Adit-IV. Later on an additional intermediate Adit Between Adit-I & Adit-III was also introduced /incorporated. Due to this impact and other requirement of LAND at site, the total LAND acquire for Sawra Kuddu HEP is 44.87 Hectare and amounting to Rs 45.78 crore (**Annex-P-14**), had been released by LAO during accusation of LAND. Further as per the various judgments issued by the various judiciary authorities for enhancement of compensation of LAND, the total cost against LAND has been increased upto Rs. 288.72 Crore.

➤ **Buildings & Plantation Roads Tools & Plants and Communication**

• **Buildings & Plantation**

As per the DPR provision for Buildings both residential & Non-residential building were grouped separately under permanent & temporary category. Under the permanent category all those building had been included which were to be utilized for operation & maintenance of project. Under the temporary category credit to the extent of 15% given to the project on account of resale thereof. The cost was worked out on the basis of plinth area rate prevalent in the project area. A provision of 13.470 crore had been made.

The project activities were commenced from June, 2005 for infrastructure & site development works before the award of main packages. Initially permanent Project office, Rest Camp & residential colony was developed at Rohru for running of the offices & residing of Officers posted at the Project. Thereafter the residential colony comprising of permanent & temporary were developed at Hatkoti & Snail near to Barrage site & Power House Complex respectively. The development of land and subsequent construction of colonies were carried out through the call of Tenders. An expenditure of amounting to Rs. 27.955 Crore has been incurred on this account. The increase in the cost was mainly due to increase in the Price level on 2003 on which the DPR was prepared.


Dy. General Manager (SO)
MPPCL, Himfed Building
BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

• **Roads**

As per the DPR provision of Rs. 2.15 Crore had been kept to cover the cost of roads required to be constructed for the execution of various component. The cost of the roads evaluated was based upon the current rate in the Project area.

As per the DPR the Head Race Tunnel of the Project had the provision of one no. Adit i.e. Jhaki Adit. However, considering the substantial length of the HRT, to provide additional work fronts/faces the number of Adit were increased to 4 numbers i.e. Adit-I, Adit-II, Adit-III & Adit-IV. Later on an additional intermediate Adit Between Adit-I & Adit-III was also introduced /incorporated. An expenditure of amounting to Rs. 10.97 Crore has been incurred on this account.

The increase in the number of Adits and subsequent increase in the approaches to be connected to the main Road & escalation effect on the DPR which was prepared based on the cost at March, 2003 price level led to the increased in cost of the ibid component.

• **Tools & Plants and Communication.**

As per DPR provision, the provision of expenditure amounting to Rs. 7.65 Crore had been considered. The total expenditure incurred upto CoD is Rs. 1.02 Crore

Net Expenditure incurred against above i.e. Building, Plantation, Roads & Tools & Plants and communication is amounting to Rs. 39.94 Crore.

Environmental Management Plan (EMP) of SKHEP:

It consists of a set of mitigation, monitoring and institutional measures to be taken during the design, construction and operation (post construction) stages of the project. EMP of SKHEP has been approved by Ministry of Environment & Forest Additional Director GoI, MoEF letter No. J-12011/13/2006-IA-I dated 17th May, 2007 & Extension of Environmental Clearance accorded by GoI MOEF&CC vide letter No. J-12011/13/ 2006-IA-1 dated 14.12.2017 (Annex-P-15).

ATTESTED

Vijay Kumar
Advocate cum Notary Public
Yash Bhawan
Shimla (H.P.)

EMP comprises all the 8 major aspects (Land environment, Water Resources & water quality; Air and terrestrial ecology; Socio-Economics; Air environment, Noise Pollution and Public Health. Baselines against each parameter have been considered and assessed and accordingly mitigation and abatement measures have been suggested with their financial implications.

Total expenditure incurred against Environment of Sawra Kuddu HEP is Rs. 14.68 Crore (CAT Rs. 7.31 Crore + Study & Research Rs.0.12 Crore +EMP Rs. 3.01 Crore + Environment & Ecology Rs. 4.24 Crore).

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

➤ Establishment Charges

As per Techno-economic Clearance & Detailed Project Report , the project shall be completed within 54 months after award of main civil works i.e. upto 18.01.2012. Due to delay in various construction activities/packages of Sawra Kuddu HEP, the Establishment Cost of Sawra Kuddu HEP has been increased and total cost amounting to Rs. 226.85 Crore till COD has been arrived (Employee cost :Rs. 84.39 crore+ Vehicle Expenses : Rs. 5.23 Crore + Office & Administrative Expenses Rs. 7.03 Crore+ Repair & Maintenance Expenses Rs. 1.07 Crore + Investigation & Survey Rs. 8.25 Crore + Consultancy Charges Rs. 3.35 Crore +LADF :Rs. 30.01 Crore+ Common Cost (corporate office) & depreciation during construction: Rs. 103.63 - Earnings during construction period including Infirm power amounting: Rs.16.12).

➤ Others (Misc-O) including vehicles, construction power.

As per DPR , the provisioned of amounting to Rs. 8.67 Crore had been considered against different miscellaneous works like vehicles, construction power and Electronic & Electrical Item. However, the total expenditure incurred against expenditure of Govt. vehicle engaged at Site , different deposit works against 22 kV dedicated feeder constructed for construction power and against different articles of office like computers , photostat machines etc. , is amounting to Rs. 6.60 Crore.

3.11.2 Civil Works:-

Table No. 13:- Detail of Cost Overrun of Civil work

Cost of Civil Works					
S.No	Cost Component	DPR approved cost	Contract awarded cost	Price escalation/ Variation	Cost capitalized
		A	B	C	D= B+C
1	Diversion Barrage, Intake and Desanding Arrangement & HM works	86.75	284.02	63.84	347.86
2	Head Race Tunnel	94.23	256.65	45.16	301.81
3	Power House Complex	37.67	155.24	36.14	191.38
Total		218.65	695.91	145.13	841.05

ATTACHED

Vijay Kumar Gokhale
Advocate cum Notary Public
Yash Sharma, Vikas Kataria
Shimla (H.P.)

No 2493595 ²₀₂₂ Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

3.11.3 The difference in the cost of Civil works resulted due to the following reasons:

The Sawra Kuddu Hydro electric Project comprises of four main contract packages (3 nos Civil Packages and 1 no E&M Package) along with other small contract Packages for ancillary works . The detail of the main civil Packages are as under:

- PACKAGE -I: Construction of Diversion Barrage, Power Intake , Desilting Chamber & Hydro Mechanical Works.
- PACKAGE -II: Construction Head Race Tunnel and Adits.
- PACKAGE -III: Construction of Power House Complex comprising Surge & Pressure Shaft, Machine Hall , MAT, Cable Tunnel and TRT .

➤ **PACKAGE -I: Construction of Diversion Barrage, Power Intake , Desilting Chamber & Hydro Mechanical Works.**

The Sawra-Kuddu HEP comprising of the following main components in respect of diversion structure and intake area works.

1. Diversion Barrage
2. Power Intake & Feeder Conduits
3. Desanding arrangements
4. Hydro mechanical works (Gate arrangements)

Table No. 14: Tabulation of Cost Overrun for DBID Package.

Sr. No.	Description of Component	DPR Provisions (in Rs)	Awarded Amount as Per Contract Agreement (In Rs)	Actual Cost as on CoD (In Rs)	Variation of awarded amount with respect to DPR (In Rs)	Variation With respect to Awarded Amount (In Rs)
1	Diversion Barrage	403878947	1579315627	1580996667	1175436680	1681040
2	Power Intake	107332106	243634122	271973826	136302016	28339704
3	Desanding	300158238	752446453	661108475	452288215	-91337978

ATTESTED

Vijay Kumar Solanki
Advocate cum Member Public
Yash Bhargava, Vikram Singh
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	Arrangements					
4	HM works	56223120	257406433	334533800	201183313	77127367
5	Misc works of Contract (Annex-P-16 for 1 to 5 above)		2112525	1476951	2112525	-635574
6	Escalation (Annex-P-17)			463448115	0	463448115
7	TRCM (Annex-P-18)			53849714	0	53849714
8	Geotechnical Instrumentation work Awarded as separate contract for the entire project. Amount considered for DBID Package (Annex-P-19).		5234324	5234324	0	0
9	Service tax (Annex-P-20)			50151767	0	50151767
10	Differential Amount of GST			2439931	0	2439931
11	other Misc works (Annex-P-21)			53341791	0	53341791
		867592411	284,01,49,484 (Rs.2834915160 of DBID Package plus Rs.5234324 for instrumentation)	3478555361	1967322749	638405877

ATTESTED

Vijay Kumar Solanki
Additional Chief Secretary, Public
Works, Transport, Mines & Forest
Department, Shimla

Dy. General Manager (S&C)
HPPCL, Himfid Building
9CS, New Shimla-171002

No 2493597 ²₀₂₂ Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

The total expenditure incurred against Package-I i.e. Construction of Diversion Barrage, Power Intake, Desilting Chamber & Hydro Mechanical Works is amounting to Rs. 347.86 crore. The main reasons for cost overrun are described as below:-

Diversion Barrage

The Provision of Rs. 1,57,93,15,687/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs. 40,78,78,946.96 as envisaged in the DPR (Based on March, 2003 Price level).

Following are the reasons for variation as per DPR & Awarded amount

- As per the DPR the Barrage comprised of 11 bays of 8 m width located on the right bank designed for 3000 cumecs design flood and desanding arrangement consisting of 4 longitudinal channels each 80 m long and 19.5 m wide located toward the left bank. During the detail engineering a design flood was reviewed based on guidelines of CWC publication no. WH/22/1994 "Flood estimation for western Himalayas Zone 7" & design flood of 6880 cumecs finalized as per the recommendation of Panel of Experts (PoE) the design flood was also vetted by CWC & NIH. In order to pass such a large flood 18 no. gates of size 8m X 6.3 m were required. In view of the inherent risk of gate jamming due to siltation and any other mechanical problem due to infrequent gate operations it was proposed to adopt PK weir in combination with under sluices. Accordingly the PK Weir was designed for the middle existing delta / Island and under sluice gates in the two deep channels on the either bank.

- The change in the design & escalation effect on the DPR which was prepared based on the cost at March, 2003 price level led to the increased in cost of the ibid component viz-a-viz as provisioned in the DPR.

ATTESTED

Vijay Kumar
Advocate cum Notary Public
Yash Bhowan, Vikas Nagar
Shimla (H.P.)

Reasons for variation as awarded amount & Actual Expenditure

The work for the Construction of Diversion Barrage, Power Intake, Desanding arrangements & Gates & Hoisting arrangements complete in all respects of Sawra-Kuddu HEP (111 MW) was awarded to M/s Patel Engineering Limited Mumbai for an accepted contract amount of Rs 283,49,15,127/- only vide letter of acceptance dated 25.08.2009 & Contract Agreement executed

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

between HPPCL & M/s Patel Engineering Limited on dated 09.09.2009. As per the Sub Clause I.1.3.3 of section -8 PCC under Part-A contract data of Document- II of the Contract agreement the time of Completion for this Package was 32 months from the commencement date reckoned from 08.10.2009 & was to be completed on or before 07.06.2012. (Annex-P-22).

The total expenditure incurred against the sub-component is to the tune of Rs. 1,58,09,96,667/- .The reasons of variance in amount are on account of the following :-

- a) The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements, as per the contract agreement , some of the items provisioned in the BOQ were inadequate as per the executional requirement and some items were surplus which had negative deviation.
- b) Some of the items / sub components were introduced during the construction stage , as per the site specific requirement ,the provision of which was not kept in the awarded scope of work . This additional work was notified as variations. Some of the major variations executed are detailed as under:-
 - i. Control room building
 - ii. Steel work in barrage area for railing, grating etc.
 - iii. Extension of upstream floor panels as per the recommendation of ADB project implementation consultant Lahmeyer international limited further endorsed by the Panel of Expert (PoE) to mitigate the possibility of suffusion (internal erosion) under the barrage foundation.
 - iv. The change in the design of Piano Key weir framed structure with mass solid concrete into hollow sections.
 - v. Change of walking inspection path in to motorable Road for plying of vehicle on the request of local villages up to lip of reservoir.

vi. E-flow valve complete in all respect

Power Intake

Following are the reasons for variation as per DPR & Awarded amount

1. The Provision of Rs. 24,36,34,118/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs. 10,73,32,105.84 as envisaged in the DPR (Based on March,2003 Price level).
2. Change in Design & Escalation effect on 2003 price level at the time of award.

ATTESTED

Vijay Kumar, Sahib
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Reasons for variation as awarded amount & Actual Expenditure

The total expenditure incurred against the sub-component is to the tune of Rs. 27,19,73,827/-. The reasons of enhanced amount are on account of the following :-

- a) The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements. as per the contract agreement , some of the items provisioned in the BOQ were inadequate as per the executional requirement and some items were surplus which had negative deviation.
- b) Some of the items / sub components were introduced during the construction stage , as per the site specific requirement ,the provision of which was not kept in the awarded scope of work . This additional work were notified as variations. Some of the major variations executed are detailed as under:-
 - i. Extension of upstream floor panels as per the recommendation of ADB project implementation consultant Lahmeyer international limited further endorsed by the Panel of Expert (PoE) to mitigate the possibility of suffusion (internal erosion) under the barrage foundation.
 - ii. Steel work in Power intake for railing, grating etc.
 - iii. Providing & laying of graded filter

• **Desanding arrangement**

Following are the reasons for variation as per DPR & Awarded amount

1. The Provision of Rs. 75,24,46,453/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs. 30,01,58,238/- as envisaged in the DPR (Based on March,2003 Price level).
2. Change in Design & Escalation effect on 2003 price level at the time of award.

ATTENDED

Vijay Kumar - Saksham
Advocate cum Notary Puzos
Vishu Bhawan, Vilepar
Srinagar (H.P)

Reasons for variation as awarded amount & Actual Expenditure

The total expenditure incurred against the sub-component is to the tune of Rs. 66,11,08,476/-. The reasons of enhanced amount are on account of the following :-

- a) The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements. as per the contract agreement , some of the items provisioned in the BOQ were inadequate as per the executional requirement and some items were surplus which had negative deviation.

[Signature]

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

b) Some of the items / sub components were introduced during the construction stage , as per the site specific requirement ,the provision of which was not kept in the awarded scope of work .This additional work were notified as variations. Some of the major variations executed are detailed as under:-

- i. Steel work in Desanding area for railing, grating etc.
- ii. Painting hold coat (0.50mm thick coat) with Nordbak brushable Ceramic mixed with Resin in by weight mix ratio of Resin 4.8 (Four point eight) kg: Hardener 1 (one) kg (Both quick set) on steel Transition of Silt Flushing Conduit.

• **Hydro-mechanical Works (Gates & Hoisting arrangements)**

Following are the reasons for variation as per DPR & Awarded amount

1. The Provision of Rs. 25,74,06,433/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs. 5,62,23,120/- as envisaged in the DPR (Based on March,2003 Price level).
2. Change in Design & Escalation effect on 2003 price level at the time of award

Reasons for variation as awarded amount & Actual Expenditure

The total expenditure incurred against the sub-component is to the tune of Rs. 33,45,33,802/-. The reasons of enhanced amount are on account of the following :

- a) Less provisions of some of the items in the Bill of quantities. The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements.
- b) The introduction of additional gate on right bank resulted in increase of one no. extra regulation gate.
- c) Some of the items / sub components were introduced during the construction stage , as per the site specific requirement ,the provision of which was not kept in the awarded scope of work .This additional work were notified as variations. Some of the major variations executed are detailed as under:
 - i. Design fabrication, painting , transportation to project site , erection commissioning , testing and supply of stoplog gate groove covers and latching arrangement for operation of Diversion Barrage Stoplog gates etc. for complete in all respect.

ATTESTED

Vijay Kumar Sharma
Adequate and Hon'ble
Joint Director, HPPCL
Shimla (H.P.)

2
0
2
2

No 2493601 **Himachal Government Judicial Paper**

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- ii. Design fabrication, painting , Procurement, transportation to project site, erection, commissioning, testing and supply of Surge Shaft Gate, complete in all respect.
- iii. The change in the specifications/design of EoT Crane & increase in the length of its support structure thereof for the operation of Stoplogs on both left hand & right hand side.

In addition to above following separate contract were also awarded as per site requirement.

1. Trash Rack cleaning Machine was awarded as a separate contract to M/s GMW . The total expenditure incurred against this work is to the tune of Rs. 5,38,49,714/-.
2. Geotechnical Instrumentation work was also Awarded as a separate contract for the entire project to monitor the healthiness of components & the total expenditure incurred against in this work in Barrage is to the tune of Rs. 5234324.

Escalation

The price variation amounting to Rs. 463448115/- has been paid as per the Contract Clause.

Taxes & Duties

Taxes & duties have been paid to the Contractor as per the provision of the Contract.

➤ **PACKAGE -II: Construction Head Race Tunnel and Adits**

Table No. 15: Tabulation of Cost Overrun for HRT Package

Sr..	HRT	Sanction Estimate (DPR) (in Rs)	awarded work as per contract (In Rs)	Actual Cost as on CoD (In Rs)	Variation of awarded amount w.r.t. DPR (In Rs)	Variation w.r.t. Awarded works (In Rs)
	Initial awarded works to M/s Aban –Coastal JV (Annex-P-23) *work	94,23,92,88	53,41,65,281*	53,41,65,281		

ATTESTED

Vijay Kumar Saktani
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	terminated				
1(b)	Price variation paid to M/s Aban –Coastal JV (Annex-P-24)		11,10,41,679		
2	Awarded work of Face-0 to M/s Coastal Project Limited (Annex-P-25)	3,33,73,016	4,02,35,222		
3(a)	Balance work of HRT awarded to M/s HCC limited (Annex-P-26)	1,79,90,00,000	2,15,58,98,568		
3(b)	Price variation paid to M/s HCC Ltd (Annex-P-27)		7,44,81,714		
4(a)	Additional Adit work awarded to M/s PEL (Annex-P-28) * Work scope reduced	19,99,63,518	5,97,14,919		
4(b)	Price variation paid to M/s M/s PEL (Annex-P-29)		7,62,538		
	MISC Expenditure (Annex-P-30)		6,15,49,498		
6	Instrumentation *Awarded as separate		2631690		

ATTESTED
Vijay Kumar Sakhani
Advocate
Yash Dhuwan, Vikas Nigam
Shimla (H.P.)

No 2493603 ²/₀/₂ ² Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	contract for the entire project. Amount considered for HRT Package on for the work executed there in.(Covered in Annex-P-16)					
8	Differential amount of GST (Annex-P-31)			72696800		
9	Amount recovered from HCC			-95093984		
	Total	942392883	2566501815	3,01,80,83,925	1624108932	451582110

*Actual awarded amount is amounting to Rs. 1159161063/- However, the actual work done amount by the contractual agency till termination of contract is amounting to Rs. 53,41,65,281 and the new contract was awarded on ris & cost of said company. Hence, the actual work done cost has been considered as awarded amount.

- The total expenditure incurred against PACKAGE -II:Construction Head Race Tunnel and Adits is amounting to Rs. 301.81 crore. The main reasons for cost overrun are described as below:-

ATTENDED

Reasons for variation as per DPR & Awarded amount

Vijay Kumar Saklani
Advocate cum Notary Public
Yash Bhargava, Vikas Taneja
Baramulla (H.P.)

As per the DPR the Head Race Tunnel of the Project had the provision of one no. Adit i.e. Jhaki Adit. However, considering the substantial length of the HRT, to provide additional work fronts/faces the number of Adit were increased to 4 numbers i.e. Adit-I, Adit-II, Adit-III & Adit-IV.

(Signature)

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

2. An additional intermediate Adit Between Adit-I & Adit-III was also introduced /incorporated on later stage.
3. The increase in the number of Adits and subsequent increase in the approaches to be connected to the main Road.
4. Change in Design & Escalation effect on 2003 price level at the time of award.

Reasons for variation as awarded amount & Actual Expenditure

1. Initially the Work of HRT of Sawra-Kuddu HEP was awarded to M/s Aban –Coastal JV on dated 18.06.2007 amounting to Rs. 1,15,91,61,063 /- only with the completion period of 48 months. The completion date of Package was 17.06.2011. However due to the non achievement of progress & dismal performance by the Contractor the work was terminated on 03.11.2014. The contractor had only executed the awarded work amounting to Rs. 53,41,65,281 only against the awarded amount of Rs. 1,15,91,61,063 .

After the termination of Contract from M/s Aban –Coastal JV, the construction of balance work of HRT i.e Underground excavation 1643 m , Concrete lining of Overt 9057 m , Concrete lining of Invert 10691 m, support system in already excavated reach (where ever required), steel liner in 530 m tunnel length, one number inspection Gate etc. was awarded to M/s HCC Ltd at risk & cost of Aban-Coastal JV through competitive bidding for an accepted amount of Rs. 179,90,00,000/- only with a completion period up to 24.11.2016 against a the amount of Rs. 62,49,95,782/- (The balance amount of work which was to be executed by M/s Aban-Coastal JV)

The Taking over certificate for the ibid work contract was issued to M/s HCC on dated 29.09.2020. However, total expenditure of Rs. 2,15,58,98,568/- has been incurred against the ibid awarded work inclusive of variations & deviation against the awarded amount of Rs. 179,90,00,000 /- .

The reasons of enhanced amount are on account of the following :-

- a) Less provisions of some of the items in the Bill of quantities. The work executed as per the approved construction drawings issued by Design Cell, Sundernagar

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

& site specific requirements. Due to the adverse geological conditions encountered during the execution of HRT works & various left out works by the previous contractor in the excavated reaches of the tunnel, the quantities of some of the items as incorporated in the contract agreement increased substantially i.e Undercut, Slush Removal, Placing of cement grout, Concrete etc.

- b) Some of the items were introduced during the construction stage to mitigate the problem of adverse geological conditions encountered during the course of execution as per the site specific requirement after due consultation with the Design Unit. The provision of which was not kept in the awarded scope of work. This additional work were notified as variations. Some of the major variations executed are detailed as under:-
- i. Grouting with Micro fine Cement
 - ii. PU Grouting

In addition to above following separate contract were also awarded as per site requirement.

1. Work of Face -0 upstream of Adit-1 towards HRT Intake Gate was awarded to M/s Coastal amounting to Rs. 3,33,73,016 as a separate contract & total expenditure incurred against F-0 is to the tune of Rs. 4,02,35,222. The main variation is due to the deviation in some items of the Bill of quantities & execution of some extra items as per site requirement.
2. Additional /intermediate Adit between Adit-I & II was also awarded as a separate contracts to M/s Patel Engineering Limited amounting to Rs. 19,99,63,518. The total Expenditure incurred against the work of Additional Adit was Rs. 5,97,14,919/- only as Part of the awarded scope of work was reduced & which was executed by M/s HCC. (As the scope of part-B of Additional Adit Contract was also in the scope of M/s HCC)

ATTESTED

Vijay Kumar Saksham
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

3. Escalation

The Price variation paid to M/s Aban -Coastal JV, M/s HCC Ltd & M/s PEL has been paid as per the Contract Clause.

Dy. General Manager (S&P)
HPPCL, Himfed Building
BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

4. Taxes & Duties

Taxes & duties have been paid to the Contractor as per the provision of the Contract

5. Geotechnical Instrumentation work was also Awarded as a separate contract for the entire project to monitor the healthiness of components & the total expenditure incurred against in this work in HRT is to the tune of Rs. 2631690.

➤ PACKAGE -III: Construction of Power House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT

The Sawra-Kuddu HEP comprising of the following main components in respect of Power House Complex works.

1. Surge Shaft
2. Pressure Shaft
3. Power House & Transformer Cavern
4. MAT, TRT & Adits

Table No. 16: Tabulation of Cost Overrun for Power House Package

Sr. No.	Description of Component	DPR Provisions (in Rs)	Awarded Amount as Per Contract Agreement (in Rs)	Actual Cost as on CoD (in Rs)	Variation w.r.t awarded amount with respect to DPR (in Rs)	Variation With respect to Awarded Amount (in Rs)
1	Surge shaft	39167450	182466667	160565596	143299217	-21901071
	P/shaft	92300000	383283006	397298250	290983006	14015244
3	Power house & Transformer hall	210859010	485143181	631858756	274284171	146715575
4	MAT, TRT & Adits	34300000	478023068	350147219	443723068	-127875849
5	Misc works of Contract (Annex-P-32) for Sr. No. 1 to 5		4816500	4612802	4816500	-203699

ATTESTED

Vijay Kumar, Sakshi
Advocate cum Notary Public
Yash Bhawan, Village Nagla
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	above)					
6	Escalation (Annex-P-33)			173567130	0	173567130
7	other Misc works (Annex- P-34)			172349297	0	172349297
8	Instrumentation Awarded as separate contract for the entire project. Amount considered for PH Package (Already considered under P-22)		6541823	6541823	0	0
9	Earth mat Awarded as separate contract (Annex-P-35)		12055973	12055973	0	0
10	Provisioned for 91 st RA bill			4610536		4610536
	Total	376626460	Rs. 1552330218/- (Rs. 1533732422 for PH plus Rs.6541823 for instrumentation plus Rs. 12055973 for Earth Mat)	1913607382	1157105962	361277164

ATTENDED
Vijay K. S. Sakhani
Adequate sum Money Paid
Mach (11/17) J. K. Singh
Sawra (11/17)

- The total expenditure incurred against PACKAGE -III: Construction of Power House Complex comprising Surge & Pressure Shaft, Machine Hall, MAT, Cable Tunnel and TRT is amounting to Rs. 191.38 crore. The main reasons for cost overrun are described as below:-

[Signature]
Dy. General Manager (SrP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

➤ **Reasons for variation as per DPR & Awarded amount**

1. As per the DPR the underground power house Cavern of size 50x12x32.2 m & Transformer Hall Cavern of size 54 m x 12 mx17m located about 260m inside the hill mass to be accessed through Main Access Tunnel of size 7.5 m D-Shaped 275 m Long was envisaged. However due to the change in the orientation of the Power Cavity & Transformer Hall Cavity the size of the Caverns were increased to 90.10mx14mx39.20m & 73mx14mx22.5m respectively. The location of the surge shaft was also shifted & accordingly the alignment of pressure shaft changed from inclined to vertical after the valve chamber.
2. The change in the design & escalation effect on the DPR which was prepared based on the cost at March, 2003 price level led to the increased in cost of the ibid component viz-a-viz as provisioned in the DPR .

Reasons for variation as awarded amount & Actual Expenditure

The work for the Construction of **Power House Complex comprising Surge & Pressure Shaft, Machine Hall ,MAT,Cable Tunnel and TRT** complete in all respects of Sawra-Kuddu HEP (111 MW) was awarded to M/s Patel Engineering Limited Mumbai for an accepted contract amount of Rs 153,37,32,423/- only (**Annex-P-36**). vide letter of acceptance dated 22.01.2009 & Contract Agreement executed between HPPCL & M/s Patel Engineering Limited on dated 10.02.2009. As per the Sub Clause 1.1.3.3 of section -8 PCC under Part-A contract data of Document- II of the Contract agreement the time of Completion for this Package was 39 months from the commencement date reckoned from 04.03.2009 & was to be completed on or before 03.06.2012.

The Power House Complex Package comprised of the following components detailed as under:-

1. Surge Shaft

Reasons for variation as per DPR & Awarded amount

1. The Provision of Rs. 18,24,66,667/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs.3,91,67,450 as envisaged in the DPR (Based on March,2003 Price level).
2. Change in Design & Escalation effect on 2003 price level at the time of award

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Reasons for variation as awarded amount & Actual Expenditure

The total expenditure incurred against the sub-component is to the tune of Rs. 16,05,65,597/-. The reasons of variance in amount to the awarded work viz-a-viz actual execution are on the following account:-

- Change in the provisions of some of the items in the Bill of quantities . The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements.
- Some of the items as provisioned in the contract were substituted with other items based upon the geological conditions encountered and site specific requirement.

2. Pressure Shaft

Reasons for variation as per DPR & Awarded amount

- The Provision of Rs. 38,32,83,006/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs.9,23,00,000 as envisaged in the DPR (Based on March,2003 Price level).
- Change in Design & Escalation effect on 2003 price level at the time of award.

Reasons for variation as awarded amount & Actual Expenditure

The total expenditure incurred against the sub-component is to the tune of Rs. 39,72,98,262/-. The reasons of variance in amount to the awarded work viz-a-viz actual execution are on the following account:-

- Less provisions of some of the items in the Bill of quantities . The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements.
- Change in the specification in the concrete grades were introduced during the construction stage , as per the site specific requirement ,the provision of which was not kept in the awarded scope of work .This additional work were notified as variations.

ATTESTED

Vijay Kumar Saksham
Advocate cum Notary
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

Power House & Transformer Cavern

Reasons for variation as per DPR & Awarded amount

- The Provision of Rs. 48,51,43,181/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs.21,08,59,010 as envisaged in the DPR (Based on March,2003 Price level).
- Change in Design & Escalation effect on 2003 price level at the time of award.

Reasons for variation as awarded amount & Actual Expenditure

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

The total expenditure incurred against the sub-component is to the tune of Rs. 63,18,59,008/-. The reasons of variance in amount to the awarded work viz-a-viz actual execution are on the following account:-

- i. Less provisions of some of the items in the Bill of quantities . The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements. In view of the poor & very poor rock mass in the Caverns & based upon the 3-D modeling results & actual site conditions the supporting system as provisioned in the BoQ was inadequate and accordingly the support system for the various stages of excavation adopted as per the drawings issued by the design unit.
- ii. Some of the items / sub components were introduced during the construction stage, as per the geological conditions & site specific requirement, the provision of which was not kept in the awarded scope of work .This additional work were notified as variations. Some of the major variations executed are detailed as under:-
 - a) Steel fibre reinforced shot crete (SFRS)
 - b) Finishing work of Control Block & service Block
 - c) Surge Chamber (To take care of the surges & negative pressure in the Turbine Draft tube).
 - d) Steel works for Cut out gratings ,Railing etc.
 - e) Chemical Grout.

4. MAT,TRT & Adits

Reasons for variation as per DPR & Awarded amount

1. The Provision of Rs. 47,80,23,068/- was considered as per the awarded amount under this sub component of the ibid contract agreement viz-a-viz to Rs.3,43,00,000 as envisaged in the DPR (Based on March,2003 Price level).
2. Change in Design & Escalation effect on 2003 price level at the time of award.

Reasons for variation as awarded amount & Actual Expenditure

The total expenditure incurred against the sub-component is to the tune of Rs. 35,01,47,221/-. The reasons of variance in amount to the awarded work viz-a-viz actual execution are on the following account:-

- i. Change in the provisions of some of the items in the Bill of quantities. The work executed as per the approved construction drawings issued by Design Cell, Sundernagar & site specific requirements. Some of the items as provisioned in

ATTESTED
Vijay Kumar
Advocate cum Notary Public
Yash Bhowmik
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

the contract were substituted with other items based upon the geological conditions encountered and site specific requirement. Moreover, Main Access Tunnel & Cable Tunnel cum Adit to top of Power House Cavern (up to Rd 172m) were executed as forerunner contracts before the award of Main Package.

ii. Some of the items / sub components were introduced during the construction stage, as per the geological conditions & site specific requirement, the provision of which was not kept in the awarded scope of work. This additional work were notified as variations. Some of the major variations executed are detailed as under:-

- a) Approach Adit to Gate Shaft & Surge Chamber
- b) Drainage Gallery around Power House Cavern

Escalation

The price variation amounting to Rs. 173567130/- has been paid as per the Contract Clause.

Taxes & Duties

Taxes & duties have been paid to the Contractor as per the provision of the Contract.

Note # the amount of Instrumentation and Earth Mat not included in Total of awarded amount

Time overrun

➤ PACKAGE -I: Construction of Diversion Barrage, Power Intake, Desilting Chamber & Hydro Mechanical Works.

The work for the Construction of Diversion Barrage, Power Intake, Desanding arrangements & Gates & Hoisting arrangements complete in all respects of Sawra-Kuddu HEP (111 MW) was awarded to M/s Patel Engineering Limited Mumbai for an accepted contract amount of Rs 283,49,15,127/- only vide letter of acceptance dated 25.08.2009 & Contract Agreement executed between HPPCL & M/s Patel Engineering Limited on dated 09.09.2009. As per the Sub Clause 1.1.3.3 of section -8 PCC under Part-A contract data of Document- II of the Contract agreement the time of Completion for this Package was 32 months from the commencement date reckoned from 08.10.2009 & was to be completed on or before 07.06.2012.

Since the work was not completed on the stipulated date the Extension of Time was Granted to the Contractor without levy of liquidated damages as per detail given below :

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

**HPPCL,
Sawra
Kuddu
HEP**

Table No. 17: Detail of Extension of Time w.r.t DBID Package

Sr. no.	Completion date as per Agreement	Total extension granted (days)	Total Extension of Time Approved	Remarks
1 st Extension of time	07.06.2012	473	08-06-2012 to 23-09-2013	1 st extension of time approved by the BoD of HPPCL in its 39 th Meeting held on dated 25.04.2013. 1 st Extension of time granted without levy of liquidated damages conveyed vide letter No. 2036-37 dated 27.05.2013 (Annex-P-37).
2 nd Extension of time	23.09.2013	1714	24-09-2013 to 03-06-2018	2 nd extension of time approved by BoD of in its 65 th meeting held on dated 30.06.2018. 2 nd Extension of time granted without levy of liquidated damages (Annex-P-38).

The reason to grant the time extension are as under :-

1st Extension of time

1. Delay due to construction drawing
2. Delay due to Power Failure
3. Delay due to decision in construction of 2nd stage coffer Dam.
4. Delay due to Rainfall/Snow fall

2nd Extension of time

1. Delay in issuance of construction drawing (Diversion Barrage Curtain Grouting)
2. Delay due to variation order/Extra/Deviated /substituted /addition works
 - a) Diversion Barrage
 - ◆ E-Flow pipe & Valve
 - ◆ Construction of Control Room
 - ◆ Approach Road to Control Room & Deck of Bridge over PK Weir

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- ◆ Construction of embankment /Cofferdam for diversion of River (U/S of Barrage Area) for Drilling & Curtain Grouting.
- b) Miscellaneous works
 - ◆ Construction of approach road from outfall structure to left bank guide bund junction.
- c) Delayed Instructions
 - ◆ Time for delayed instruction of curtain Grouting after issuance of drawings

The taking over certificate of ibid contracted was issued to Contractor on dated 07.10.2021 consequent upon the witnessing of the "Test upon completion " after the water availability subsequent to the completion of Head Race tunnel works.

The 3rd & Final Extension of time of the ibid Contract as submitted is under review & shall be finalized shortly. The impact of above, if any arises in future, the same shall be considered in the true up accordingly.

➤ **PACKAGE -II: Construction Head Race Tunnel and Adits**

Initially the Work of HRT of Sawra-Kuddu HEP was awarded to M/s Aban –Coastal JV on dated 18.06.2007 amounting to Rs. 1,15,91,61,063 /- only with the completion period of 48 months. The completion date of Package was 17.06.2011. However due to the non achievement of progress & dismal performance by the Contractor the work was terminated on 03.11.2014. The contractor could only achieve 46% (approx.) financial progress till the termination of the Contract.

Table No. 18: Detail of Extension of Time w.r.t HRT Package awarded to M/s Aban –Coastal JV

Sr. no.	Completion date as per Agreement	Total extension granted(days)	Total Extension of Time Approved	Remarks
1	17.07.2011	907 (628 days attributed to HPPCL & none and 279	18.07.2011 to 09.01.2014	1 st extension of time approved by the BoD of HPPCL with levy of liquidated damages amounting to Rs. 11,59,16,106.00 (Annex-P-

ATTESTED

Vijay Kumar Sakshani
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

2
0
2
2

No 2493614 Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

**HPPCL,
Sawra
Kuddu
HEP**

	days to Contractor)	39).
--	---------------------	------

The liquidated damages amounting to Rs. 11,59,16,106.00 could not recovered from the Contractor as the Arbitrator has rejected the Counter Claim regarding the recovery of Liquidated damages & presently the matter is sub-Judice in High Court.

After the termination of Contract from M/s Aban –Coastal JV, the construction of balance work of HRT i.e Underground excavation 1643 m , Concrete lining of Overt 9057 m , Concrete lining of Invert 10691 m, support system in already excavated reach (where ever required), steel liner in 530 m tunnel length, one number inspection Gate etc. was awarded to M/s HCC Ltd through competitive bidding on dated 3.11.2014 on Risk & Cost of Aban –Coastal JV for an accepted amount of Rs. 179,90,00,000/- only with a completion period up to 24.11.2016.

However, the Taking over certificate for the ibid work contract was issued to M/s HCC on dated 29.09.2020.

Since the work was not completed on the stipulated date as per the agreement, the Extension of Time was Granted to the Contractor in the following manner :

Table No. 19: Detail of Extension of Time w.r.t HRT Package awarded to M/s Hindustan Construction Company

Sr. no.	Completion date as per Agreement	Total extension granted(days)	Total Extension of Time Approved	Remarks
1 st Extension of time	24.11.2016	615	25.11.2016 to 01.08.2018	1 st extension of time approved by the BoD of HPPCL in its 63 rd Meeting held on dated 15.12.2017. 1 st Extension of time granted without levy of liquidated damages conveyed vide letter No. 23807 dated 22.12.2017 (Annex-P-40).
2 nd Extension	01.08.2018	359	02.08.2018 to	2 nd extension of time

ATTESTED

Vijay Kumar Saklani
Advocate cum Notary Public
Yash Bhatnagar, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

of time			26.07.2019	approved in 1 st meeting of WTD. 2 nd Extension of time granted without levy of liquidated damages (Annex-P-41).
3 rd & Final Extension of Time * *Reviewed from the beginning i.e. date of the completion of the Contract	24.11.2016		25.11.2016 to 30.09.2020	3 rd & final extension of time approved by WTD of HPPCL during its 14 th meeting held on dated 15.07.2022. 3 rd & final EoT was granted with Levy of Liquidated damages Amounting to Rs. 17,99,00,000/- conveyed vide letter No. 516-19 dated 20.07.2022 (Annex-P-42).

The liquidated damages amounting to Rs. 17,99,00,000.00 has not been recovered from the Contractor as the matter is in Arbitration. The impact of same, if any arises in future, the same shall be considered in the true up accordingly.

Additional Adit

Detail of Extension of Time in r/o Additional Adit awarded to M/s Patel Engineering Limited

The work of Construction of Additional Adit + 427 m long ,5m D-Shaped additional Intermediate Adit between I & II of Head Race Tunnel joining the HRT approximately at RD \pm 1482 m Part(A) and construction of 5m D-shaped Head Race Tunnel up to \pm 432 m u/s & up to + 263 m d/s immediately from the junction of additional intermediate Adit with HRT complete in all respect Part (B) for Sawra-Kuddu HEP, was awarded to M/s Patel Engg. Limited on dated 14.01.2013. As per contract award, the date of completion of work was 13.05.2014. However , the actually the work was completed on dated 30.09.2020

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Since the work was not completed on the stipulated date as per the agreement, the Extension of Time was Granted to the Contractor in the following manner :-

Table No. 20: Detail of Extension of Time w.r.t Additional Adit of HRT Package awarded to M/s Patel Engg. Limited

Sr. no.	Completion date as per Agreement	Total extension granted(days)	Total Extension of Time Approved	Remarks
1 st Extension of time	13.05.2014	1240	Upto 21.11.2016	1 st extension of time approved by the Managing Director, HPPCL, Shimla without levy of liquidated damages & conveyed vide letter No. 1053-58 dated 18.06.2016 (Annex-P-43).

The 2nd & Final Extension of time upto 30.09.2020 of the ibid Contract has been submitted for approval of the competent Authority to Grant of extension with levy of liquidated damages which is under consideration. The impact of same, if any arises in future, the same shall be considered in the true up accordingly

➤ **PACKAGE -III: Construction of Power House Complex comprising Surge & Pressure Shaft, Machine Hall ,MAT,Cable Tunnel and TRT .**

The work for the Construction of Power House Complex comprising Surge & Pressure Shaft, Machine Hall ,MAT,Cable Tunnel and TRT complete in all respects of Sawra-Kuddu HEP (111 MW) was awarded to M/s Patel Engineering Limited Mumbai for an accepted contract amount of Rs 153,37,32,423/- only vide letter of acceptance dated 22.01.2009 & Contract Agreement executed between HPPCL & M/s Patel Engineering Limited on dated 10.02.2009. As per the Sub Clause 1.1.3.3 of section -8 PCC under Part-A contract data of Document- II of the Contract agreement the time of Completion for this Package was 39 months from the commencement date reckoned from 04.03.2009 & was to be completed on or before 03.06.2012.

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Since the work was not completed on the stipulated date the Extension of Time was Granted to the Contractor without levy of liquidated damages in the following manner :-

Table No. 21: Detail of Extension of Time w.r.t Power House Package awarded to M/s Patel Engg. Limited

Sr. no.	Completion date as per Agreement	Total extension granted(days)	Total Extension of Time Approved	Remarks
1 st Extension of time	03.06.2012	573	04.06.2012 to 28.12.2013	1 st extension of time approved by the BoD of HPPCL in its 39 th Meeting held on dated 25.04.2013. 1 st Extension of time granted without levy of liquidated damages vide letter No. 2032-33 dated 27.05.2013 (Annex-P-44).
2 nd Extension of time	28.12.2013	1671	29.12.2013 to 26.07.2018	2 nd extension of time approved by BoD of in its 63 rd meeting held on dated 15.12.2017, 2 nd Extension of time granted without levy of liquidated damages vide letter No. 23883-884 dated 23.12.2017 (Annex-P-45).

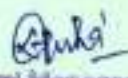
ATTESTED

Vijay Kumar Saklani
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

The reason to grant the time extension are as under :-

1st Extension of time

1. Delay due to Handing over of land & Hindrance Caused by local Villagers.
2. Delay on account of Changed Construction Methodology for Power House & Transformer Caverns


Dy. General Manager (SOP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

2nd Extension of time

1. Delay due to handing over of MIV makeup piece site for concreting by E&M agency Unit-II.
2. Delay due to handing over of MIV makeup piece site for concreting by E&M agency Unit-I.
3. Delay due to variation ordered by HPPCL for construction of Pedestal for Pipe routing AT to fire fighting Tank.
4. Delay due to Non –Availability of water for testing of underwater component.
5. Delay due to time for witness the wet testing & Handing over of whole of the works

Moreover, the substantial works as defined in the scope of work had been completed during September, 2016 & the Contractor was in readiness for test upon completion after the plugging of the Adits.

The taking over certificate of ibid contracted was issued to Contractor on dated 22.12.2020 consequent upon the witnessing of the “Test upon completion “ & satisfactory healthiness of the components after the water availability subsequent to the completion of Head Race tunnel works. The 3rd & Final Extension of time of the ibid Contract has been submitted for approval of the competent Authority to Grant extension up to 22.12.2020 without levy of liquidated damages which is under consideration.

3.11.3 Electromechanical works:-

Table No. 22: Detail of Expenditure of Electro-mechanical work w.r.t. DPR

Cost of electromechanical works (in Crores)					
S.No	Cost Component	DPR approved cost	Contract awarded cost	Price escalation/ Variation	Cost capitalized
		A	B	C	D= B+C
1	Generator, Turbine & Accessories	59.23	180.54	67.43	247.97
2	Auxiliary Electrical Equipment	11.94			
3	Auxiliary Equipments and Services for Power	7.29			

ATTESTED

Vijay Kumar Salwan
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	Station				
4	Switchyard Package	38.56			
5	Design ,Consultancy and Inspection Charges	2.35			
6	Maintenance during construction	1.03	0	4.97	4.97
	Total	120.40	180.54	72.40	252.94

COST OVERRUN

As per DPR ; the total cost of Electro-Mechanical works of Sawra Kuddu HEP was 120.40 Crore. Whereas the E&M package of Sawra Kuddu got capitalized for amounting to Rs. 252.94 Crore at the time of Commercial Operation Date (COD). The main reasons for Cost over of Electro-mechanical Package w.r.t DPR estimated Cost are described as under:

- **Cost Overrun at the time of award of Electro-mechanical package**

The procurement of E&M package for Sawra Kuddu HEP against ADB funding was approved in 10th BOD meeting. The Techno commercial part of the bid was scrutinized and after approval from ADB on dated 24.12.2008; the Price Bid of the responsive firms were opened on dated 30.12.2008.

The evaluation of financial bid has been carried out by a processing committee with assistance of consultant and WAPCOS. The report of the processing committee was deliberated by Tender Evaluation committee constituted by HPPCL management including representation from Finance. The comments of TEC were incorporated in the final report which has been approved by HPPCL management. The Final Financial Bid Evaluation Report (FBER) has been forwarded to ADB for approval on dated 18.01.2009.

The memorandum was deliberated at length in 14th meeting of Board of Directors of HPPCL held on dated 20th January 2009 and approved the award of contract to Joint Venture of M/s VA TECH Hydro India Pvt. Ltd & M/s VA Tech EWF India Pvt. Ltd., Bhopal at the cost of (EURO 44,24,613+INR 150,99,07,326) or INR 180,53,82,982.00 (11 EURO =INR 66.78) (One Hundred Eight Crores Fifty Three Lakh Eighty Two

ATTACHED

Vijay Kumar Saksena
Adyokshya aur Mohan Singh
Vish Singh
Saksena (H.S.)

(Signature)

Dy. General Manager (SOP)
HPPCL, Himfed Building
BCS, New Shimla-171006

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Thousand Nine Hundred Eighty Two Only). The prices are Exclusive of Taxes & Duties and Price Variation with a ceiling of $\pm 20\%$ (Annex-P-46).

Supply Contract :- The contract price was the aggregate of EURO Four Million Four Hundred Twenty Four Thousand Six Hundred Thirteen (EURO 4,424,613.00) Only and Indian Rupees One Billion Three Hundred Forty Six Million One Hundred Sixty Eight Thousand Four Hundred Ten Only (INR 1,346,168,410)

Service Contract :- The contract price was the aggregate Indian Rupees One Hundred Sixty Three Million Seven Hundred Thirty Eight Thousand Nine Hundred Sixteen Only (INR 163,738,916)

➤ **Detail of Cost over run after award of Electro-mechanical work**

• **Price Variation**

The prices awarded against Electro-mechanical packages are Exclusive of Price Variation with a ceiling of $\pm 20\%$.

As per the Clause No.7 of terms & procedure of Payment and as per Appendix -2 of Contract agreement, the price variation amount has been paid to the contractual agency as per conditions described below :-

- ❖ Price adjustment was applied only if increase or decrease is more than 2% of Contract price.
- ❖ No price increase was allowed beyond the original delivery date unless covered by extension of time awarded by employer under the contract.
- ❖ The total adjustment (plus or minus) of contract price component for which price adjustment is allowed was subject to ceiling of 20% of the aggregate contract price during contractual period.
- ❖ In case of delay reasons not attributed to the contractor , the price variation adjustment (plus or minus) to a ceiling of 25% shall be allowed for only those activities completed in the extendable period beyond the contractual completion period.
- ❖ The Price variation was not applicable to the amount of contract price of goods paid as advance to the contractor.

Therefore, as per Formulae's defined in the Supply & Service Contract agreement , the Price variation calculation sheets has been approved by the competent authority of

ATTACHED
Vijay Kumar Solanki
Administrative Officer, Pwds
Yash Viroh Singh, Pwds
Shimla, 24/11/2023

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

HPPCL and payment amounting to Rs. 21.36 Crore against Supply & Services of E&M equipments has been released to the Contractor (**Annex-P-47**).

• **Taxes & Duties**

The prices awarded against Electro-mechanical packages are Exclusive of Taxes and Duties.

As per Clause No. 14 of General Condition of Contract (GCC) Agreement, 100% taxes and Duties and levies, if any on receipt of goods at site in case of Supply of Goods and along with each progressive payment and on advance in case of services was applicable. Accordingly, the total amounting to Rs. 4.86 Crore (**Annex-P-48**) against CST/Service tax/GST (GST has been applicable w.e.f 01.07.2017) has been paid to the contractor against Supply & Service Contract under E&M Package.

• **Financial Claims**

The completion time of all the units of Sawra Kuddu HEP was originally June 2012. But was extended mainly due to delay in handing over of civil fronts in Power House, Delay in water availability, Delay in availability of Power Evacuation system, Delay caused in transportation of heavy E&M equipments to site; the different Extension of Time was granted to the E&M contractual agency as per contract agreement.

As the extension of time was granted to the contractor for reasons not attributed to the contractor or for the reasons beyond the control of the contractor; various Financial claims under different following heads has been submitted by the contractor.

- **Warehouse Charges (due to intermediate storage):** The claim against the warehouse charges for storage of Over Dimensions consignment (ODC) equipments i.e. Stator (05 Boxes) at intermediate store yard in Chandigarh due to poor road condition of road and under capacity bridge was claimed by the contractor. The claim was evaluated on actual basis on production of valid bills/documentary evidence i.e. Bank Statements and SAP documents for storage of stator segments (05 Boxes) only at intermediate store in Chandigarh for the period of actual storage date i.e. 01st January 2011 to 31st January 2013. Finally the total claim amounting to Rs. 0.34 Crore against this head has been approved and release to the contractor

- **Loading unloading due to transshipment :** The claim against loading/unloading of over dimensions consignment at intermediate store yard at Parwanoo, Kunihar and Chandigarh, was claimed by the contractor. As the loading/unloading of the material kept at aforesaid intermediate store i.e. MIV (02 No's) & BFV at Parwanoo, Generator Transformer at Kunihar and Stator segments (5 Boxes) at Chandigarh warehouse are

ATTESTED

Vijay Kumar Salgotra
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

additional activity , hence expenses on account of these are considered for reimbursement as per actual on the production of valid bills/documentary evidence including payment proof with duly stamped bank statement & SAP documents. Finally the total claim amounting to Rs. 0.15 Crore against this head has been approved and release to the contractor.

- **Impact on Transportation cost due to transshipment.:** The claim against the impact of transportation cost due to transshipment of Over Dimensions Consignment (ODC) equipments was claimed by the contractor . The claim was evaluated on flat 25% basis of the rates specified in approved billing breakup for all items. Finally the total claim amounting to Rs. 0.16 Crore against this head has been approved and release to the contractor.
- **Extended Supervision Cost-Design/Automation/EPs/Site, PM & CPM Cost, Travelling Cost, Site Supervision Cost , Site Running Expenses & Infrastructure maintenance :** The claim against the engagement of execution team comprising of Project Manager (02 Nos), System Engineer (mechanical & Electrical)(4 Nos) Commercial Manager (02 Nos), Designers (3 Nos), Installation Coordinators (02 Nos) at the contractors Head office in order to coordinate with HPPCL, Sub contractors and overall managements to ensure timely commissioning of the project during extended period ,expenses incurred in travelling to attend the CRMs in extended period, expenses incurred at site including manpower of the contractor & supporting staff at their office , rest house & mess ; was claimed by the contractor. The Claim was evaluated by the committee by considering the extent of Man days and Hourly rates extracted from Form -16 of the employees. Finally the total claim amounting to Rs. 0.20 Crore against this head has been approved and release to the contractor.
- **Cost of Additional Technical, Management & Administrative Services, Care of facility and Extended Installation :** The claim against the Addition Technical , Managerial & administrative services during extended period , against expenses incurred for deployment of store manager , watch & ward of Power House , Store , consumables used in Power House , replenishment cost of short life items , replacement of battery of DG set , deployment of site manager , site supporting staff , expenses incurred as rent of accommodations , hiring of vehicles, PH electricity charges , Accommodation electricity charges etc.; was claimed by the contractor. The Claim was evaluated by the committee based on documentary evidence. Finally the total claim amounting to Rs. 4.40 Crore against this head has been approved and release to the contractor

ATTESTED

Vijay Kumar Sakshi
Advocate cum Notary
Vishal Bhargava, Vikas Nagar
Srinagar, J.K.

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- Cost of Warranty for the supplies/services:** The claim against cost of warranty extension on supplies and services during extended period, was claimed by the contractor. The warranty charges during extended period was 2.25% of the composite price per annum on prorata basis as per the guidelines followed by National Hydroelectric Power Corporation (NHPC). Also warranty charges during extended period was upto 3% of the composite price as per the guidelines followed by Bhakra Beas Management Board (BBMB). Accordingly, the warranty extension charges was negotiated at the rate of 2% per annum of composite price (Supply and Service Contract Excluding price Variation) with the E&M contractor by the committee. Further the applicable CST against issue of C Form under Supply Contract & Service tax for Service Contract was born by the E&M contractor. During the extended warranty period, the E&M contractor provided their manpower for maintenance and care of facilities/preservation of all installed equipments in Power House, Pot Head Yard, BFV Cavern & Barrage Area. Also any damage to the E&M equipments were covered under warranty claim and be repaired /replaced by the contractor at No cost during warranty period. Finally the total claim amounting to Rs. 22.93 Crore (Including Tax due to variation of taxes after implementation of GST) against this head has been approved and release to the contractor
- Cost against expenses incurred for extension of bank Guarantees:** The completion time of all the units of Sawra Kuddu HEP was originally June 2012. But was extended mainly due to delay in handing over of civil fronts in Power House, Delay in water availability, Delay in availability of Power Evacuation system, Delay caused in transportation of heavy E&M equipments to site; the different Extension of Time was granted to the E&M contractual agency as per contract agreement.

As the extension of time was granted to the contractor for reasons not attributed to the contractor or for the reasons beyond the control of the contractor; the contractor claimed the expenses incurred against extension of Bank Guarantee under E&M package.

As per the contract clause 25.5.2(c) & 10.8 of GCC of contract agreement, the contractor is liable to received expenses towards the extension of securities/Bank Guarantee under the contract, of which the validity needs to be extended.

Accordingly, different expenses towards extension of Bank Guarantee as claimed by the contractor was approved and amounting to Rs. 1.01 Crores has been released to the contractor.

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

• **Cost against expenses incurred for extension of Erection All Risk Insurance Policy:**

The completion time of all the units of Sawra Kuddu HEP was originally June 2012. But was extended mainly due to delay in handing over of civil fronts in Power House, Delay in water availability, Delay in availability of Power Evacuation system, Delay caused in transportation of heavy E&M equipments to site; the different Extension of Time was granted to the E&M contractual agency as per contract agreement.

As the extension of time was granted to the contractor for reasons not attributed to the contractor or for the reasons beyond the control of the contractor; the contractor claimed the expenses incurred against extension of Insurance Policy under E&M package.

As per the contract clause 25.5.2(c) & 10.8 of GCC of contract agreement, the contractor is liable to received expenses towards the extension of securities under the contract, of which the validity needs to be extended.

Accordingly, different expenses towards extension of Erection All Risk Insurance Policy as claimed by the contractor was approved and amounting to Rs. 2.05 Crores has been paid to the contractor.

Table 23: The detailed of aforesaid Financial claims in r/o E&M package of Sawra Kuddu HEP are tabulated as below:

Sr. No.	Description	Total Amount in Crores	Remarks
1	Claim against Warehouse Charges (due to intermediate storage)	Rs. 0.34	Approved Vide Amendment No. 1 circulated vide No. HPPCL/EC/E&M/Sawra - Kuddu/Vol-20/2016-17-3386-92 Dated 08.03.2017
2	Claim against Loading unloading due to transshipment	Rs. 0.15	
3	Claim against Impact on Transportation cost due to transshipment.	Rs. 0.16	
4	Claim against Extended Supervision Cost- Design/Automation/EPS/Site, PM & CPM Cost, Travelling Cost, Site Supervision Cost,	Rs. 0.20	

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	Site Running Expenses & Infrastructure maintenance		
5	Claim against Cost of Additional Technical, Management & Administrative Services, Care of facility and Extended Installation	Rs. 4.40	Approved Vide Amendment No. 4 circulated vide No. HPPCL/EC/E&M/Sawra - Kuddu/Vol-24/2018-19-12828-34 dated 29.08.2018
6	Claim against Cost of Warranty for the supplies/services:	Rs. 19.58 +Rs. 3.35 (EURO 0.04)=Rs.22.93	Approved Vide Amendment No. 1 circulated vide No. HPPCL/EC/E&M/Sawra - Kuddu/Vol-20/2016-17-3386-92 Dated 08.03.2017 and Amendment No. 5, 09 & 12 circulated vide even file No. 21236-242 dated 02.01.2019 , 666-72 dated 16.05.2020 & 14859-65 dated 11.01.2021 respectively.
A	Total Financial Claim amount (Annex-P-49).	Rs. 28.18	
B	Cost against expenses incurred for extension of bank Guarantees (Annex-P-50).	Rs. 1.01	
C	Cost against expenses incurred for extension of Erection All Risk Insurance Policy (Annex-P-51).	Rs. 2.05	
D	Grand Total (A+B+C)	Rs. 31.24	

ATTESTED

Vijay Kumar Salgotra
Advocate cum Notary Public
Yash Bhowan, Vikas Nagar
Shimla (H.P.)

Dy. General Manager (Sof)
HPPCL, Himfed Building
BCS, New Shimla-171039

No 2493626 ²₀₂₂ Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- Cost Overrun due to Expenses incurred on Preservation of E&M equipments installed under E&M package (Annex-P-52).

The completion time of all the units of Sawra Kuddu HEP was originally June 2012. But was extended mainly due to delay in handing over of civil fronts in Power House , Delay in water availability , Delay in availability of Power Evacuation system , Delay caused in transportation of heavy E&M equipments to site; the different Extension of Time was granted to the E&M contractual agency as per contract agreement.

During the extended period , it become necessary to preserve the installed E&M equipments to ensure the healthiness of different parts & equipments for future to avoid any unwanted condition/situation at the time of wet commission of the project. As per preservation approved vide amendments , the contractor was responsible and accountable for the preservation of the plant and facilities as required for the healthiness of the installed plant including House keeping of the Power House. The contractor performed all the activities defined in the preservation schedule and also other activities which could not be covered under preservation schedule but necessary to ensure the healthiness of the equipment/plant. The contractor was responsible to deployed sufficient manpower , material and facilities required for the successful and satisfactory work.

Accordingly, the preservation charges for the period from 20.02.2018 till water availability was approved vide Amendment No. 3,7 & 10 circulated vide No. HPPCL/EC/E&M/Sawra Kuddu/Vol-23/2018-19-573-579 Dated 09.04.2018 , even file No. 5780-87 dated 15.07.2019 & 8376-82 dated 05.09.2020 and amounting to Rs. 3.64 Crore has been paid to the contractor.

- Cost Overrun due to Expenses incurred on Preservation under HPPCL scope of E&M equipments installed under E&M package. (Annex-P-53).

ATTESTED

Vijay Kumar, Saran
Advocate cum Notary, Kudde
Yash Bhawan, Vilas Nagar
Shimla (H.P.)

As per the various Amendments of E&M Contract agreement issued in r/o Preservation of installed E&M equipments to be performed by the E&M contractor ; the following activities are excluded from contractual scope of work preservation and need to be performed by HPPCL at own level.

- AMC of DG Sets , EOT Crane and Elevators.

Dy. General Manager (SOP)
HPPCL, Himfad Building
BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- Fuel of DG Sets
- Turbine , Generator and Transformer Oil replacement , if required.
- Accommodation of contractor staff, sub-contractor manpower , office , rest house & mess without electricity.
- Power House Electricity Charges
- Dismantling & Re-assembly of Turbine & Generator Units , if required prior to commissioning.
- Security of Power House.
- Pest Control at Power House.

Accordingly, the above mentioned activities during preservation of installed E&M equipments were performed by HPPCL as per Site requirement and total expenses amounting to Rs. 1.33 Crore has been incurred against Preservation activities of installed E&M equipments under HPPCL scope.

- Cost Overrun due to various Change orders for different E&M activities/equipments issued under E&M package (Annex-P-54).

The completion time of all the units of Sawra Kuddu HEP was originally June 2012. But was extended mainly due to delay in handing over of civil fronts in Power House , Delay in water availability , Delay in availability of Power Evacuation system , Delay caused in transportation of heavy E&M equipments to site; the different Extension of Time was granted to the E&M contractual agency as per contract agreement.

As per site conditions & E&M work requirement , the amounting to Rs. 1.01 Crore against various change orders for HT & LT Cables, Bus Duct , Passenger Lifts , Welding of Pressure Shaft steel Liner with BFV Inlet & Outlet Pipe, Supply & Installation of Globe Valves , Supply installation & Commissioning of Pressure Transmitter in Cooling water system BFV Upstream & moisture detection relay at BFV OPU, Implementation of System Protection Calculations to get clearance before line charging of Gumma Substation to Sawra Kuddu HEP Pot head yard , Runway Speed test, has been released to the contractor.

Table 24: The detail of various change orders E&M are tabulated as below:

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

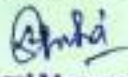
HPPCL,
Sawra
Kuddu
HEP

Sr. No.	Description	Amount (in Crore)
1	Change order for HT & LT cables and associated accessories	Rs. 2.01
2	Change in amount due to deletion of passenger Lift	(-) Rs. 0.24
3	Adjustment of amount due to change in quantity of Segregated Bus Duct System	(-) Rs. 0.92
4	Change order for Welding of Pressure Shaft steel Liner with BFV Inlet & Outlet Pipe	Rs. 0.14
5	Change Order in r/o Supply & installation of Globe Valve	Rs. 0.20
6	Change Order in r/o Supply installation & Commissioning of Pressure Transmitter in Cooling water system BFV Upstream & moisture detection relay at BFV OPU	Rs. 0.02
7	Change Order in r/o Implementation of System Protection Calculations to get clearance before line charging of Gumma substation to Sawra Kuddu HEP Pot head yard	Rs. 0.05
8	Due to deletion of Runway Speed test	(-) Rs. 0.25
Total Amount		Rs. 1.01

• **Cost Impact due to due to variation in exchange rates of foreign currency under E&M package**

At the time of award of Electro-mechanical contract, the conversion rate of 1 EURO = INR 66.78 was considered. However, at the time of payment to the contractor as per contract agreement; the actual conversion rates were different w.r.t the conversion rate considered at the time of contract agreement and therefore, total amounting to Rs. 29,35,16,850.00 was paid against EURO portion of the contract agreement.

Therefore, a total variation of (-) Rs 0.20 Crore $\{(Rs. 29.3516850 \text{ Crore} - (Rs. 0.4424613 * 66.78))\}$ has been arrived w.r.t awarded value of the contract agreement of E&M Package.


Dy. General Manager (Sof)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- Cost Impact due to Changes/implication of Statutory levies under E&M package (Annex-P-55).

In April 2010, a new tax "Entry Tax" on shipment of material from outside state to Himachal Pradesh had been imposed by the H.P. Government. The E&M equipments of Sawra Kuddu HEP were transported from different places/outside state to Power House Site of Sawra Kuddu HEP. Therefore, the Entry Tax @5% of the goods value imposed by the H.P. Govt was applicable on the E&M equipments under E&M package due to shipment from outside state and thus total amounting to Rs. 6.33 Crore has been paid to the Excise & taxation department, H.P. Govt. against E&M equipments supplied under E&M package of Sawra Kuddu HEP by HPPCL.

- Cost Impact due to expenses incurred on facilitating the shipment of heavy equipments under E&M package (Annex-P-56).

As per Point No. 4b of Section V of Volume 1A (Supply Contract) of E&M contract Agreement; it was the responsibility of HPPCL to upgrade the conditions of road/bridges if required for transportation of heaviest package to site. The ibid clause is reproduced as below:

However, the employer agrees to facilitate the transportation of heaviest package to site mentioned in contract bid and the conditions of road/bridges if required to be upgraded shall be responsibility of HPPCL.

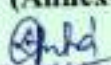
Therefore, during the transportation of Over Dimensions Consignments/Heavy E&M equipments i.e. Stator (05 Boxes), MIV, BFV, Generator Transformers (03 No's); it become necessary to improve the road & bridge conditions as the road was very narrow for transportation of Over dimensions Equipments & the bridges were under weight.

ATTESTED

Vijay Kumar
Advocate cum Notary
Yash Bhawan,
Shimla (H.P.)

Therefore, to facilitate the transportation of Over Dimensions Consignment of E&M Equipments as per Contract agreement, the work of widening of road from Theog to Power House Site (as per the requirement) were carried out by Public Work department, H.P. Government on behalf of HPPCL as deposit work to the tune amounting to Rs. 0.72 Crore.

- Cost Impact due to various additional works other than E&M package (Annex-P-57).


Dy. General Manager (30P)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Various other works i.e. Design , Supply, Installation and commissioning of Early warning systems, Design , Supply & Installation of LT panel , Manufacturer , supply and installation of Galvanized Steel Structure for D&D system, Supply & Installation of ABT meters, Supply & Installation of Various illumination System & tubular poles, Supply of Power Cables, Supply & Installation of NRV, Supply of Transceivers, EPBAX, FCT etc., which were not envisaged at the time of award of E&M package and were required as per site requirements were executed by the different vendors and total expenses amounting to Rs. 1.99 Crore has been incurred by HPPCL.

Table 25: The detail of various Additional E&M works is tabulated as below :

Sr. No.	Description	Amount (In crore)
1	Design , manufacturing, assembly , testing at manufacturing works , supply & delivery , installation , testing and commissioning of 1 No 415 Vols (AC) L.T. Distribution Boards at barrage control room of Sawra Kuddu HEP including LT Power cable for LT panel incomer and mandatory spares	Rs. 0.29
2	Manufacture, assembly , supply and delivery , installation , testing and fixing of 02 nos Galvanized steel structure platform for the installation of two nos submersible pumps and laying of 300 nB G.I Pipes for discharging the flooding water from D&D sumps to discharge end including all other associated items i.e. elbow , bends , reducer , expenders , flanges , socket , coupling , welding of flanges /jointing of pipes , nuts and bolts etc and complete in all respect .	Rs. 0.18
3	Supply and installation of ABT meters along with Data collection device & computer based software for outgoing feeders . HV side of generator transformer installed inside Power House of Sawra Kuddu HEP.	Rs. 0.06
4	Supply and installation of illumination system in ventilation tunnel & Adit to surge chamber of Power House of Sawra Kuddu HEP (111 MW) located in Distt. Shimla , H.P.	Rs. 0.02

ATT/STED

Vijay Kumar Sekhri
Advocate cum Notary Public
Yash Bhargava, Vikas Prasad
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

5	Supply and fitting i/c cutting , welding of C.I. Double flange end 200mm dia non-return valve (Class-A category) in existing piping system including carriage along with supply of associated accessories i.e. bolts ,nuts, rubber insertion sheet etc in all respect required for fitting assembly at Power House , Sawra Kuddu HEP (111 MW), HPPCL, Chouri Colony, Teh Jubbal , Distt. Shimla (H.P.)	Rs. 0.02
6	Supply and installation of street light fixtures along with painting of steel tubular poles of street light from MAT portal of Power House to Residential complex , Chouri colony , Sawra Kuddu HEP (111 MW), , HPPCL, P.O .Jhalta , Teh Jubbal , Distt. Shimla	Rs. 0.03
7	Supply of 10 HP Dewatering submersible pump (MODY Make) along with 15-20 mtr cable , associated mechanical seals , outlet, H class insulation, oil proof PVC cable and other required accessories and Control panel suitable for 10 HP dewatering pump with 63 amp MCCB , AMP meter, Volt meter and required accessories/equipments for protection	Rs. 0.01
8	Supply and installation Lighting poles along with other luminaries for illumination at Barrage Area of Sawra Kuddu HEP (111 MW), HPPCL, Hatkoti, Distt. Shimla	Rs.0.14
9	Design , Engineering , Supply , Installation and commissioning of Early Warning System before release of water from Barrage of Sawra Kuddu HEP (111 MW), HPPCL, Hatkoti.	Rs. 0.83
10	Supply & Installation of Electrical Luminaries in Security Room and Toilets at MAT portal of Power House , SKHEP, HPPCL, Snail.	Rs. 0.01
11	Supply & Installation of luminaries inside Hall of Silt flushing gates arrangements at Barrage , SKHEP, HPPCL, Hatkoti.	Rs. 0.07
12	Supply & Installation of Balance luminaries for illumination at Barrage area of SKHEP, HPPCL, Hatkoti.	Rs. 0.07
13	Supply of 185 sqmm 3.5 Core AL Power Cable & Termination kits along with Required hardware.	Rs. 0.05
14	Supply & Installation of Lighting Pole along with other luminaries for illumination at outside area of MAT of Power	Rs. 0.09

ATTN: V

Vijay Kumar - Sakshee
Assistant Engineer (Civil)
Sawra Kuddu HEP
HPPCL, Shimla

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	House , SKHEP, HPPCL, Snail.	
15	Supply and installtion of submersible slurry pump for de-watering of seepage water from Drainage gallery to outside MAT portal of Power House , SKHEP, HPPCL, Snail,	Rs. 0.12
Total Amount		Rs. 1.99

• **Cost Impact due to Miscellaneous Charges (Annex-P-58).**

Other expenses incurred against Miscellaneous heads like Dispute Board members fee, Advocate Fee, Electrical Inspector Fee for clearance of Power House etc. also caused impact on cost of Electro-mechanical work of Sawra Kuddu HEP and total expenses amounting to Rs. 0.12 Crore has been incurred by HPPCL.

Table No. 26: The Detail of expenses incurred against miscellaneous charges (E&M works) are tabulated

Sr. No.	Description	Amount (In Crores)
1	Fee paid to the Dispute Board members against Dispute Board framed as per Contract Agreement of E&M work to resolve the dispute with the contractor	Rs. 0.08
2	Fee paid to the Advocate	Rs. 0.005
3	Electrical Inspector Fee	Rs. 0.005
4	Fees paid against clearance as per Factory Act	Rs. 0.02
5	Fee paid to E&M expert against site visit for witness of different tests during commissioning for fulfilling the conditions of COD	Rs. 0.01
Total Amount		Rs. 0.12

Table 27: The complete detail of Cost over run due to various factors is tabulated as below :

Sr. No.	Description	Amount (In Crores)
1	Cost Overrun due to Price Variation applicable for	Rs. 21.36

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	Electro-mechanical package	
2	Cost Overrun due to Taxes & Duties applicable for Electro-mechanical package	Rs. 4.86
3	Cost Overrun due to Financial Claims against Various Extension of Time of E&M package	Rs. 28.18
4	Cost Overrun due to Financial Claim against expenses incurred for extension of bank Guarantees under E&M package	Rs. 1.01
5	Cost Overrun due to Financial Claim against expenses incurred for extension of Erection All Risk Insurance Policy under E&M package	Rs. 2.05
6	Cost Overrun due to Expenses incurred on Preservation of E&M equipments installed under E&M package	Rs. 3.64
7	Cost Overrun due to Expenses incurred on Preservation under HPPCL scope of E&M equipments installed under E&M package	Rs. 1.33
8	Cost Overrun due to various Change orders for different E&M activities/equipments issued under E&M package	Rs. 1.01
9	Cost Impact due to due to variation in exchange rates of foreign currency under E&M package	(-) Rs. 0.20
10	Cost Impact due to Changes/implication of Statutory levies under E&M package	Rs. 6.33
11	Cost Impact due to expenses incurred on facilitating the shipment of heavy equipments under E&M package	Rs. 0.72
12	Cost Impact due to various additional works other than E&M package	Rs. 1.99
13	Cost Impact due to Miscellaneous Charges	Rs. 0.12
	Total Amount	Rs.72.40

Note: The Financial Claim amounting to Rs. 2.97 Crore claimed by the contractual agency against different expenses incurred during extension of time by them, are under finalization. The impact of same, if any arises in future, the same shall be considered in the true up accordingly.

(Signature)
Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Time Over run Reasons

As per contract agreement, Vol-1A, Section-1, Appendix-1 Special Contract Conditions , para -8 , the commissioning schedule of the project is as under.

- | | |
|---|------------|
| 1. Effective Date | 28.04.2009 |
| 2. Commissioning of 1 st Unit (36 months from effective date) | April 2012 |
| 3. Commissioning of 2 nd Unit (37 months from effective date) | May 2012 |
| 4. Commissioning of 3 rd Unit (38 months from effective date) | June 2012 |

Due to various reasons during execution of work , extension of time has been granted as per detail given below :

Table 28: Detail of Extension of Times in r/o E&M package

Sr. No.	Unit No.	Extension from	Extension to	Remarks
1	#1	28.04.2012	April 2014	1 st Extension granted by BoD and Conveyed vide office order No. HPPCL/EC/E&M/Sawra Kuddu/12-1411-24 dated 01.11.2012 (Annex-P-59).
	#2	28.05.2012	May 2014	
	#3	28.06.2012	June 2014	
2	#1	April 2014	January 2017	2 nd Extension granted by BoD and Conveyed vide office order No. HPPCL/EC/E&M/Sawra Kuddu/Vol-17/2015-3397-04 dated 17.03.2015 (Annex-P-60).
	#2	May 2014	February 2017	
	#3	June 2014	March 2017	
3	#1	January 2017	February 2019	3 rd Extension granted by BoD and Conveyed vide Amendment No. 2 issued vide No. HPPCL/EC/E&M/Sawra Kuddu/Vol-23/2018-19-467-73 dated 06.04.2018 (Annex-P-61).
	#2	February 2017	March 2019	
	#3	March 2017	April 2019	
4	#1	February 2019	April 2020	4 th Extension granted vide Amendment No. 8 issued vide No. HPPCL/EC/E&M/Sawra Kuddu/Vol-28/2020-659-65 dated 16.05.2020 (Annex-P-62).
	#2	March 2019	May 2020	
	#3	April 2019	June 2020	
5	#1	April 2020	August 2020	5 th Extension granted by BoD and

ATTESTED

Vijay Kumar
Advocate cum
Yesh Bhawan,
Shimla (H.P.)

Sakshi
Notary
Vikram

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

#2	May 2020	September 2020	Conveyed vide Amendment No. 11 issued vide No. HPPCL/EC/E&M/Sawra Kuddu/Vol-28/2020-14852-58 dated 11.01.2021 (Annex-P-63).
#3	June 2020	October 2020	

The main reasons of Extension of Time are mentioned below :

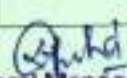
- **Delay in handing over of Civil fronts in Power House, Transformer Hall & water availability for the erection & commissioning of E&M equipment/units.**
 - The slow progress of all the packages of civil work, shortage of construction material and poor geological conditions in the critical reaches , the completion schedules of civil work packages were revised and resulting the delay in handing over of civil fronts for E&M work.
 - The delay in water availability also results the delay in commissioning of the units.
- **Delay in Power Evacuation System**
 - The Power evacuation system for Sawra Kuddu HEP has been constructed by HPPTCL , which got delayed and thus grid was not available for power Evacuation system of Sawra Kuddu HEP. Finally , the power evacuation system of Sawra Kuddu HEP was completed and made available by HPPTCL on dated 02.11.2020.

The main reasons for delay in completion of Sawra Kuddu HEP i.e. water availability and availability of Power evacuation system is tabulated as below:

Table No. 29: Detail of dates of water availability & power evacuation system

Sr. No.	Front	Front Availability date as per PoP	Actual Front Availability date	Total delay in Days
	Water Availability at MIV	31.03.2012	10.09.2020	3085
	Availability of Power Evacuation System	31.03.2012	02.11.2020	3138

After water availability , the units were synchronized as below:


Dy. General Manager (SoP)
HPPCL, Himfid Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Unit#1 : 03.11.2020

Unit#2: 17.11.2020

Unit#3: 09.12.2020

Thereafter, the Commercial Operation Date (COD) of the Sawra Kuddu HEP was declared w.e.f 00:00 Hrs of 21.01.2021 (i.e. Thursday) vide Notification No. HPPCL/Notification/COD/SKHEP/2021-1168-88 Dated 20.01.2021.

Therefore, as per the aforementioned reasons, the committee constituted to examine/scrutinize the proposal of Final extension of Time (EoT) recommended to grant the Final Extension of Time in favour of E&M package upto 17.09.2020 for Unit #1 plus common items, 01.10.2020 for Unit #2 and 19.10.2020 for Unit #3 and 1.5 months for commissioning of all the units after availability of grid, vide 2nd Minutes of meeting circulated vide office letter No. HPPCL/E&M/Sawra Kuddu/Vol-30/2020-422-427 Dated 18.02.2022 (Annex-P-64).

However, the approval of the competent authority in r/o Final Extension of Time of Electro-mechanical package of Sawra Kuddu HEP as recommends by the committee is still awaited.

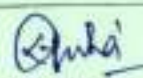
Transmission Works :-

As per DPR, the provision of cost amounting to Rs. 38.09 crore had been considered against Transmission works of Sawra Kuddu HEP. However, the work of transmission work i.e. 220 KV, D/C transmission line from Snail to Hatkoti for Power evacuation of Sawra Kuddu HEP has been executed by Himachal Pradesh Power Transmission Corporation Limited (HPPTCL). Therefore, no expenditure has been incurred by SKHEP, HPPCL.

Table No. 30: Detail of Cost of Transmission works

S.No	Cost Component	DPR approved cost	Capatilised Cost
		A	B
	Transmission works	38.09	0.00
	Total	38.09	0.00

3.11.6 Interest during Construction (IDC) and Escalation:


Dy. General Manager (S&P)
HPPCL, Himfed Building
B-3, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Table No. 31: Detail of Cost of IDC & Escalation

S.No	Cost Component	DPR approved cost	Capatilised Cost
		A	B
1	Interest during Construction (IDC)	63.29	530.79
2	Escalation	46.60	Included in main packages
Total		109.89	530.79

As per Techno-economic Clearance & Detailed Project Report , the project shall be completed within 54 months after award of main civil works i.e. upto 18.01.2012 . Due to delay in various construction activities/packages of Sawra Kuddu HEP, the Interest During Construction has been increased and total cost amounting to Rs. 530.79 Crore till COD has been arrived (**Annex-65**).

Table 32: Detail of IDC cost is tabulated as below

FY	Govt. of Himachal Pradesh	PFC	UCO	Credit limit availed by Head office	Total
Upto 2012-13	32.34	20.88			53.22
2013-14	55.78	2.58			58.36
2014-15	39.11	2.32			41.43
2015-16	54.27	1.99			56.26
2016-17	67.62	1.84			69.46
2017-18	63.57	1.72			65.29
2018-19	64.99	1.99			66.98
2019-20	64.99	0.00	0.80		65.79
01/04/20 to 20/01/2021	52.53	0.00	1.26	0.21	54.00
	495.20	33.32	2.06	0.21	530.79

(Signature)
 Dy. General Manager (S&T)
 MPPCL, Himed Building
 CCS, New Shimla-171003

(Signature)
 Dy. General Manager (S&T)
 MPPCL, Himed Building
 CCS, New Shimla-171003

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

4 ANNUAL FIXED COST

4.1 Components of Annual Fixed Cost

4.1.1 The Petitioner, for the purpose of determination of Annual Fixed Cost of the electricity generated from the Sawra Kuddu Hydro Electric Projects, has considered the below mentioned elements as components of Annual Fixed Cost, as specified by the HPERC (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011, read along with its amendments thereafter.

- (a) Operation and Maintenance Expenses;
- (b) Depreciation;
- (c) Interest on Loans;
- (d) Interest on Working Capital; and
- (e) Return on Equity (RoE).

4.2 Operations & Maintenance Expenses

4.2.1 Clause 22 of the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its amendments thereafter states as follows:

"(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 (EF_k) for a particular year (Kth year) which shall be calculated using the following formula

ATTESTED
Vijay Kumar Sakshi
Advocate cum Notary
Yash Bhatnagar, Vikas Nagar
Shimla (H.P.)
$$EF_k = 0.20 \times WPI \text{ Inflation} + 0.80 \times CPI \text{ Inflation}$$

Provided that, out of the O&M expenses so determined based on the above regulations,

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

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."

4.2.2 Detailed note on rehabilitation and resettlement works and data in tabulated form FY wise.

The Resettlement & Rehabilitation Plan schemes has been approved by the Govt. of HP vide No. Rev(PC)A(10)-7/2008 Dated 19.01.2009 (Annex-P-66). Accordingly, total expenditure amounting to Rs.4.2 Crore & Rs. 2.3 Crore has been incurred against various grants & Schemes under R&R plan.

Table 33: The detail of Amount released under different grants are tabulated as below:-

Sr. No.	Description	Amount (In Crore)
1	Resettlement Grant.	Rs. 2.81
2	Houseless Grant.	Rs. 0.07
3	Vulnerability Grant –Additional one time financial assistance on equivalent to five hundred days minimum agriculture wages	Rs. 1.23
4	Loss of Livelihood of Fisherman –Assistance for lost income based on three months minimum wage rates.	Rs. 0.03
5	Loss of Livelihood of Sharecroppers –Assistance for lost income based on three months minimum wage rates.	Rs. 0.06
Total Amount		Rs. 4.2

Note :- The Values considered against different grants are considered under LAND head.

Table 34: Grand Total of amount issued under various R&R scheme.

Sr. No.	Description	Amount (In Crore)
1	Merit Scholarship Scheme	Rs. 0.32
2	Training and Skill up-gradation Scheme-ITI Scheme	Rs. 0.46
3	Scheme for involving CBO	Rs. 0.12
4	School Competition Scheme for awareness	Rs. 0.029

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

5	Sports Tournament Scheme	Rs. 0.037
6	Medical Fund Scheme	Rs. 0.35
7	Scheme for Self-Employment	Rs. 0.10
8	Training-cum-Awareness Camps Scheme	Rs. 0.15
	Miscellaneous Expenditure against R&R	Rs. 0.734
Total Amount		Rs. 2.3

4.2.3 The Actual O&M expenses for FY 20-21 (Since CoD i.e. 21.01.2021 to 31.03.2021) & F.Y. 2021-22 is amounting to Rs. 6.57 Crore & Rs. 25.68 Crore.

4.2.4 The relevant clause of the Regulation for determination of escalation factor, the "WPI Inflation" and "CPI Inflation" has been computed as described in the HPERC Tariff Regulation (Amendment 2) as given 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 (CPI) for the three years immediately preceding the base year;....."

4.2.5 For the subsequent years, the O&M Expenses have been calculated after applying escalation factor for subsequent years considering actual O&M expenses of F.Y. 2021-22 as base O&M expenses. The escalation factor is tabulated below as per Regulations:-

Table 35: Details of Calculation of Escalation Factor Calculation from 2021 to FY23-24.

Particulars	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
WPI	119.83	121.8	123.4	139.4	152.52
CPI	299.92	322.5	338.69	356.06	377.62
Escalation factor	1.72%	3.84%	5.27%	5.78%	5.90%

ATTESTED

Vijay Kaur, Assistant Engineer (Hydro) Peshawar, Punjab
Yash Bhambhani, Assistant Engineer (Hydro) Peshawar, Punjab
Subhash Chandra, Assistant Engineer (Hydro) Peshawar, Punjab

[Signature]

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

No 2493641 ²/₀/₂/₂ Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

4.2.6 **Table 36:** The O&M expenses considered are tabulated as below:-

Particulars	FY 2020-21	FY 2021-22	FY 2022-23*	FY 2023-24**
	A	B	C=B*(1.059)	D=C*(1.059)
Total O&M Expenses in Cr.	Rs. 6.57	Rs. 25.68	Rs. 27.19	Rs. 28.80

*Accounts are yet to be finalised. Therefore, expenditure has been considered as per regulation & escalation factor.

**Projected

4.2.7 The Petitioner requests the Hon'ble Commission to approve the same.

4.3 Depreciation

4.3.1 Clause 20 of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its subsequent amendments states as follows

"(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."

ATTESTED depreciation rate has been considered as per Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 Appendix I: Depreciation Schedule for the first 12 years of capitalization. Thereafter, the balance net asset value is equally spread over the useful life of the plant, as per the Tariff conditions issued by Hon'ble HPERC.

Vijay Kumar
Advocate cum
Yash Bhawan,
Shimla (H.P.)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

4.3.3 The depreciation projected as per Regulation is provided in the table given below:

Table 37: Projected Depreciation Expenses (Rs. Cr.)

Particulars	FY 2020-21 (Since CoD)	FY 2021-22	FY 2022-23	FY 2023-24
Opening GFA	91.45	2203.87	2200.63	2201.67
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

4.3.4 HPPCL requests the Hon'ble Commission to kindly approve the actual amount of Depreciation.

4.4 INTEREST ON LOANS

4.4.1 Interest on loans is mainly payable on account of the capital expenditure planned in the Control Period. Interest on normative loan has been projected considering debt:equity ratio of 70:30 for Hydro Generation as per Regulations.

4.4.2 The relevant clause of the Regulations pertaining to Interest on Loans is produced 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.

ATTESTED
Vijay Kumar Sharma
Advocate cum Notary Public
Yash Sharma, Vikas
Sharma (H.P.)

[Signature]
Dy. General Manager (SO-2)
MPPCL, Himfad Building
BGS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

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

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

(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..."

4.4.3 Asian Development Bank had sanctioned loan facility to Government of India for the execution of Sainj HEP under Himachal Pradesh Clean Energy Development Investment Programme (HPCEDIP). This multilateral loan was routed to the Corporation, through Government of India and, subsequently, through Government of Himachal Pradesh also. Government of Himachal Pradesh on-lent these loan funds to HPPCL at the interest rate of 10% per annum. Copy of On-lending Loan Agreement attached.

As per the terms and conditions of the On-lending Loan Agreement, the repayment of loan and interest has become due. But due to financial constraints, Corporation is unable to repay its loan liabilities and has sought deferment of the same from GoHP. The deferment of loan has been approved by the State Government upto 2020-21 and a case for further deferment of loan has already been placed before the Government. Therefore

ATTESTED
Vijay Kumar
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

Dy. General Manager (SOP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

as per regulation 17 (4) quoted above notional repayment of loan has been considered equal to depreciation and interest on loan capital has been calculated accordingly.

Table 38: The interest on loan considered since CoD are given below:-

Particulars	FY 2020-21 (from CoD)	FY 2021-22	FY 2022-23	FY 2023-24
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

4.4.4 HPPCL requests the Hon'ble Commission to kindly approve the Interest on Loan as mentioned above.

4.5 Interest on Working Capital

4.5.1 Regulation 18 and 19 of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its subsequent amendments states as follows:-

"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

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

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."

- 4.5.2 The petitioner has calculated the interest on working capital considering prevalent SBI MCLR as on 20.05.2023 respectively plus 300 basis points. In accordance with the above regulations the interest on working capital claimed is as shown below
- 4.5.3 Interest on working capital has been calculated @ 11.50% percent (SBI MCLR) in accordance with the above Regulations.
- 4.5.4 The interest on working capital thus computed as per the Regulation is provided in the table given below:

Table 39: Detailed The interest on working capital booked since CoD upto 2021-22 and considered as per regulation for F.Y. 2022-23 are given below:-

Particulars	FY 2020-21 (Since CoD)	FY 2021-22	FY 2022-23	F.Y 2023-24
Operation & Maintenance Expenses for 1 Month	2.82	2.14	2.27	2.40
Maintenance Spare Equivalent to 15% of total O&M	0.99	3.85	4.08	4.32
Receivable Equivalent of 2 Months of average billing	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

ATTESTED

Vijay Kumar Sahasr
Advocate cum Notary Public
Yash Bhawan, Vikas Nagar
Shimla (H.P.)

- 4.5.5 HPPCL requests the Hon'ble Commission to kindly approve the Interest on working capital as per table above.

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

4.6 Return on Equity

4.6.1 Regulation 21 of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its subsequent amendment states as follows:-

"(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 15.5% to be grossed up as per sub-regulation (3) of this regulation:

(2) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate 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."

4.6.2 Since, HPPCL is continuously incurring losses and no profit has been earned till date for any Financial Year since its incorporation i.e. 18/12/2006. Therefore, No Liability of Income Tax has arisen on HPPCL as on date. However, if HPPCL earns profits, then Income Tax liability may arise as per the provisions of Income Tax Act and which may attract Income Tax @ 25% of the Net Profit for FY 2022-23 plus Surcharge extra (i.e. depending upon quantum of the profits).

4.6.3 Accordingly, the ROE has been considered @ 15.50% as per the regulations mentioned above.

Table 40: The return on equity as per regulation is provided in the table given below:

Particulars	FY 2020-21 (since CoD)	FY 2021-22	FY 2022-23	FY 2023-24
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 Equity	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

ATTESTED

Vijay Kumar Saini
Advocate with Special
Power
With Branch Office
Shimla (HPP)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

4.6.4 HPPCL requests the Hon'ble Commission to kindly approve the Return on Equity as per table above.

4.7 Summary of Annual Fixed Charges

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

Table 41: Annual Fixed Charges

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Operation & Maintenance Charges	6.57	25.68	27.19	28.80
Interest on Finance Charges	154.27	152.41	143.13	134.15
Depreciation	18.57	90.56	90.58	91.11
Return on Equity	102.48	102.40	102.35	102.62
Interest on Working Capital	1.14	3.49	3.67	4.04
Total	283.03	374.54	366.92	360.72

4.7.2 The petitioner humbly requests the Hon'ble Commission to approve the same.

Dy. General Manager (Sr.)
MPPCL, Himfed Building
BCS, New Shimla-171 001

ATTESTED

Vijay Kumar, Solicitor
Advocate cum Notary Public
Yash Bhawan, Vidhan Sabha
Sector 11, RQ

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

5 OPERATIONAL NORMS

5.1 Performance Targets

The Commission shall set targets for each year of the control period for the items or parameters that are deemed to be "controllable" and which will include-

- (a) Normative Annual Plant Availability Factor;
- (b) Auxiliary energy consumption;

5.2 Normative Annual Plant Availability Factor (NAPAF)

5.2.1 Regulation 23 of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its subsequent amendments specifies as under.

"(i) The norms of operation for hydro generating stations shall be as under-

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

(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 "

Table 42: The energy data of the project is tabulated as below:-

Month	Period	Design Energy (MU)	FY 202-21 (MU)	FY2021-22 (MU)	FY2022-23 (MU)
Jan	I	6.75	2.15	12.03	10.23
	II	6.34			
	III	6.12			
Feb	I	5.52	6.23	11.05	9.38
	II	5.60			
	III	4.35			
Mar	I	5.19	8.85	21.05	9.11
	II	5.41			
	III	6.10			
Apr	I	5.88		13.36	21.35

ATTESTED
 [Signature]
 [Stamp]

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

	II	6.33	0		
	III	7.81			
May	I	8.20	0	26.64	19.40
	II	9.34			
	III	11.34			
Jun	I	10.06	0	34.70	17.43
	II	9.32			
	III	9.64			
Jul	I	10.34	0	42.26	52.74
	II	14.41			
	III	27.68			
Aug	I	26.40	0	49.51	62.37
	II	26.40			
	III	27.77			
Sep	I	15.72	0	54.56	49.41
	II	15.07			
	III	14.68			
Oct	I	10.41	0	30.66	41.26
	II	10.00			
	III	9.52			
Nov	I	8.43	0	15.05	18.92
	II	8.17			
	III	7.98			
Dec	I	7.89	0	11.57	12.42
	II	7.70			
	III	7.89			

5.3 Auxiliary Energy Consumption

5.3.1 The Hon'ble Commission shall set targets for performance improvement as per the below clause of HPERC Regulations.

ATTESTED

Vijay Kumar Salhotra
Advocate General
Yash Bhawan, 3/10
Shimla (H.P.)

Regulation 23 (b) of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its subsequent amendments specifies as under

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

Surface hydroelectric power generating station	With rotating exciters mounted on the generator shaft	0.7%
	With static excitation system	1%
Underground hydro electric power generating station	With rotating exciters mounted on the generator shaft	0.9%
	With static excitation system	1.2%

5.3.3 The petitioner presents that Sawra Kuddu HEP is an underground hydroelectric power generating station with static excitation system and accordingly the Petitioner is requesting to approve an auxiliary consumption of 1.2%

Table 43: Generation Details As per DPR

Annual Energy (MUs)	
Gross Generation	385.78
Aux. Consumption %	1.20%
Net Generation	381.15
Free Energy to State (FEHS)%	13%
Net Salable (MU)	331.60

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APTESTED

Vijay Kumar, Sakshat
Advocate cum Notary Public
Yash Bhawan, Vicoa Nagar
Shimla (H.P.)

6 CAPACITY CHARGES

6.1 Capacity Charges and Energy Charges

Regulation 26 of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Hydro Generation Tariff) Regulations, 2011 and its subsequent amendments specifies as under:

"26. Computation of Capacity Charge and Energy Charge

(1) The fixed cost of a hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis under capacity charge (inclusive of incentive) and energy charge, which shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, that is to say, in the capacity excluding the free power to the State:

The capacity charge (inclusive of incentive) payable to a hydro generating station for a calendar month shall be –

$$AFC \times 0.5 \times NDM / NDY \times (PAFM / NAPAF) \text{ (in Rupees)}$$

Where,

AFC = Annual fixed cost specified for the year, in Rupees.

NAPAF = Normative plant availability factor in percentage

NDM = Number of days in the month

NDY = Number of days in the year

PAFM = Plant availability factor achieved during the month, in percentage....

$$PAFM = 10000 \times i = 1 \sum N DCV / f \{N \times IC \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage

DCV = Declared capacity (in ex-bus MW) for the ith day of the month which the station can deliver for at least three (3) hours, as certified by the State Load Dispatch Centre after the day is over.

ATTESTED
Vijay Kumar Saksena
Advocate cum Public
Yash Shekhar, B.A., B.L.,
S.A. (P)

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

IC = Installed capacity (in MW) of the complete generating station

N = Number of days in the month.

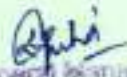
Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis, for a hydro generating station, shall be determined up to three decimal places based on the following formula, subject to the provisions of sub-regulation (7):-

$$ECR = AFC \times 0.5 \times 10 / \{DE \times (100 - AUX) \times (100 - FEHS)\}$$

Where,

DE = Annual design energy specified for the hydro generating station, in MWh, subject to the provisions of sub-regulations (6)

FEHS = Free energy for State, in per cent defined in regulation 28."


Dy. General Manager (SO)
HPPCL, Himad Building
BCS, New Shimla-171008


Valley Project Director
Authority with Factory License
Muzh Shikhar, Uttar Simla
Shimla-171008

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

7 PRAYERS TO COMMISSION

HPPCL respectfully prays to the Hon'ble Commission:

- i. To admit the Petition seeking Capital Cost along with Additional capitalization approval and determination of tariff from COD till FY 2023-24.
- ii. To approve the capital cost along with Additional capitalization and subsequent determination of Annual Fixed Charges under each MYT including periodic review and true-up for Sawra Kuddu HEP.
- iii. To determine Annual Fixed Charges from COD till FY 2023-24 in accordance with HPERC Hydro Tariff Regulation 2011 parameters as amended from time to time as the same were not been booked by the petitioner in line with the CERC/HPERC Regulations (i.e. *Operation & Maintenance Charges, Interest on Finance Charges, Return on Equity & Interest on Working Capital*) due to uncertainty of beneficiary throughout the Nation till 31.03.2023.
- iv. To devise a mechanism to overcome the loss/profit incurred to HPPCL since COD till 31.03.2023 because of Sale of Power of Sawra Kuddu HEP on Short Term Basis due to non availability of beneficiary.
- v. The Arbitration cases in r/o Civil and Electromechanical works of Sawra Kuddu HEP are sub-judice and the cost involved **286.95 Crores** (211.40+1.77+69.16+4.62) has not been considered in the total capital cost of the project and may be considered during true up.
- vi. To pass such order to avail the benefit of the Hydro Purchase Obligation (HPO)/Renewable Purchase Obligation (RPO) as per the relevant CERC/HPERC/Ministry of Power Regulations/Notifications as amended from time to time.
- vii. The expenditure incurred towards levies, taxes, duties, cess etc., if any and Water Cess on HEP being levied by HP, fee and charges of State Load Dispatch Centre (SLDC) etc. may be allowed to be recovered from the Respondent.

ATTESTED

Vijay Kumar Bakhshi
Advocate cum Notary
Yash Bhatnagar, Vikas Nagar
Shimla (H.P.)

To approve auxiliary consumption of 1.2%.

To determine NAPAF of the Project for calculation of Capacity Charges.


Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171009

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

- x. To issue appropriate mechanism for calculation of Declared Capacity (in ex-bus MW) for further calculation of Plant Availability Factor achieved during the month in % (PAFM) for computation of Capacity Charges.
- xi. To pass such orders that the Petition filing fee amounting to Rs. 78,74,000/- and other expenditure incurred in may be allowed to be recovered by the Petitioner from the Respondent.
- xii. To condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.
- xiii. To allow further submissions, addition and alteration to this Petition as may be necessitating from time to time.
- xiv. To treat the filing as complete in view of substantial compliance as also the specific requests for waivers with justification placed on record;
- xv. To pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case.
- xvi. To grant any relief as the Hon'ble Commission may consider appropriate.

By the Applicant

Dy. General Manager (Sr.)
HPPCL, Himed Building
BCS, New Shimla-171009

ATTTESTED

Vishv Kumar, Solicitor
Advocate cum Notary Public
Vishv Kumar, Vikas Nagar
Shimla (H.P.)

No 2493655

2
0
2
2

Himachal Government Judicial Paper

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X 37 MW) FROM COD TO FY 2023-24.

HPPCL,
Sawra
Kuddu
HEP

BEFORE THE HON'BLE HIMACHAL PRADESH ELECTRICITY REGULATORY
COMMISSION

Filing No.....

Petition No.....

IN THE MATTER OF

FILING OF PETITION FOR APPROVAL OF CAPITAL COST AS ON COD TAKING IN CONSIDERATION THE ADDITIONAL CAPITAL EXPENDITURE AND DETERMINATION OF TARIFF FROM COD TILL FY 2023-24 FOR 3 X 37 MW SAWRA KUDDU HYDRO ELECTRIC PROJECT, OF HIMACHAL PRADESH POWER CORPORATION Ltd. (HPPCL) UNDER THE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS FOR DETERMINATION OF HYDRO GENERATION TARIFF) REGULATIONS, 2011 AND ITS AMMENDMENTS THERAFTER AND UNDER SECTION-62 READ WITH SECTION 86 OF THE ELECTRICITY ACT 2003.

HIMACHAL PRADESH POWER CORPORATION LIMITED, HIMFED BUILDING, BCS, NEW SHIMLA, SHIMLA -9.

PETITIONER

VERSUS

THE HIMACHAL PRADESH STATE ELECTRICITY BOARD LIMITED, HPSEBL, VIDYUT BHAWAN, SHIMLA-171004.

RESPONDANT

ACCEPTED
Vijay Kumar Saini
Advocate cum Notary
Vishwanagar, Shimla
District (H.P.)

Dy. General Manager (SoP)
HPPCL, Himfed Building
BCS, New Shimla-171004

No 2493656 2
0
2
2 **Himachal Government Judicial Paper**

APPROVAL OF CAPITAL COST ALONG WITH ADDITIONAL CAPITALIZATION AND HPPCL
 DETERMINATION OF TARIFF FOR SAWRA KUDDU HYDRO ELECTRIC PROJECT (3 X Sawra
 37 MW) FROM COD TO FY 2023-24.



AFFIDAVIT

I, Er. Sangram Singh, son of Sh. Ranjeet Singh Guleria, aged about 56 years, occupation Dy. General Manager (Sale of Power), HIMFED Building, HPPCL, BCS, Shimla-171009, do hereby solemnly affirm and declare that I have gone through the contents of the accompanying petition and that the contents of the same are true and correct to the best of my personal knowledge as derived from the official record.

I further solemnly affirm and verify that the contents of this affidavit are true and correct to the best of my personal knowledge, no part of it is false and nothing material has been concealed therein.

Verified and signed at Shimla on this 3rd day of June, 2023.

ATTESTED

Vijay Kumar Bakhshi
 Advocate cum Notary Public
 Tash Bhawan, Vikas Nagar
 Shimla (H.P.)

[Signature]
 Dy. General Manager (SOP)
 HPPCL, Himfed Building
 BCS, New Shimla-171009

Witness:

1. Er. Rohit Sharma, GM (Gen)
HPPCL
2. *[Signature]*
 Er. Gulshan Kumar
 Sr. Manager (E), HPPCL

[Signature]
 IDENTIFIED BY
 A No
 243696941716

Subscribed before me on the 3rd day of June, 2023
 at Shimla by Sh. Er. Sangram Singh
 Identify by Dharamendra Thakur
 who is known to me and he has read
 and signed the contents of the above
 affidavit in my presence on the date
 and at the place mentioned above.

[Signature]
 3/6/23