

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 391/GT/2019

Coram:

**Shri P.K. Pujari, Chairperson
Shri I.S. Jha, Member
Shri Arun Goyal, Member
Shri Pravas Kumar Singh, Member**

Date of Order: 17th March, 2022

IN THE MATTER OF

Petition for revision of tariff for the 2014-19 tariff period after truing up exercise and determination of tariff for the period 2019-24 in respect of Karcham Wangtoo Hydroelectric Project (1000 MW)

AND

IN THE MATTER OF

JSW Hydro Energy Limited,
Registered Office: Juit Complex
P.O. Dumehar Bani
Kanda Ghat-173215, Solan District, Himachal Pradesh **.....Petitioner**

Vs

1. PTC India Limited,
NBCC Tower,
15, Bhikaji Cama Place,
New Delhi-110066
2. Haryana Power Generation Corporation Limited,
Plot No. C-7, Sector-6, Panchkula
Haryana-134 109
3. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226 001
4. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath
Jaipur-302 005
5. Ajmer Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Panchsheel Nagar, Makarwali Road, Ajmer-305 004



6. Jodhpur Vidyut Vitran Nigam Limited,
New Power House, Industrial Area,
Jodhpur-342 003

7. Punjab State Power Corporation Limited,
The Mall, Old PSEB Building,
Patiala-147001

8. Government of Himachal Pradesh,
Shimla-171002 (HP)

9. Himachal Pradesh State Electricity Board Limited,
Vidyut Bhawan,
Shimla-171004

.....Respondents

Parties Present

Shri Aman Anand, Advocate, JSWHEL
Shri Anurag Aggarwal, JSWHEL
Shri Ravi Kishore, Advocate, PTC
Shri M.G. Ramachandran, Senior Advocate, HPPC
Shri Shubham Arya, Advocate, HPPC
Ms. Ranjitha Ramachandran, Advocate, PSPCL
Shri Rajiv Mishra, HPPC
Shri Manish Garg, UPPCL

ORDER

The Petitioner, JSW Hydro Energy Limited, a company incorporated under the Companies Act, 1956 owns, operates and maintains Karcham Wangtoo Hydroelectric Project (1000 MW) (in short 'the Project' or 'the generating station'), a run of the river power station with pondage, located in the district of Kinnaur in the State of Himachal Pradesh. The Petitioner has filed the present petition for truing-up of tariff for the 2014-19 tariff period in terms of Regulation 8(1) of the 2014 Tariff Regulations and for approval of tariff for the 2019-24 tariff period in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short, 'the 2019 Tariff Regulations') in respect of the generating station.



Background

2. The dates of commercial operation (COD) of the units of the generating station are as under:

COD of Unit-1	COD of Unit-2	COD of Unit-3	COD of Unit-4/ generating station
26.5.2011	23.6.2011	8.9.2011	13.9.2011

3. Initially, Jaypee Karcham Hydro Corporation Limited ('JKHCL') was implementing the Project. JKHCL got amalgamated with Jaiprakash Power Ventures Limited ('JPVL') vide scheme of amalgamation approved by the Hon'ble High Court of Himachal Pradesh vide its order dated 25.7.2011 in Petition No. 19 of 2011. JPVL entered into a Power Purchase Agreement (PPA) with the Respondent No.1, PTC for purchase of 704 MW capacity of power for a period of 35 years from COD for onward sale on long term basis. Based on this, PTC entered into Power Sale Agreements (PSA) with PSEB for 200 MW, with HPGCL for 200 MW, with UPPCL for 200 MW and with Discoms (distribution companies) of Rajasthan (AVVNL, JVVNL and JoVVNL) for the balance 104 MW of power. A second supplementary agreement was executed on 20.12.2007 to amend the definition of COD of the project as 18.11.2011.

4. JPVL filed Petition No. 434/GT/2014 for determination of tariff of the Project for the period 2014-19 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations"). While so, pursuant to the sanction of a Scheme of Arrangement between JPVL and Himachal Baspa Power Company Limited ('HBPCL') by the Hon'ble High Court of Himachal Pradesh on 25.6.2015, HBPCL filed Interlocutory



Application (IA No. 29/2015) and submitted that with effect from 1.9.2015, all pending suits, appeals or other proceedings, by or against JPVL, are to be continued and prosecuted by HBPCL. Accordingly, the Commission by its order dated 9.3.2016 in Petition No. 29/RC/2015 substituted the name of original Petitioner, JPVL with HBPCL in Petition No.434/GT/2014. Thereafter, the name of HBPCL was changed to JSW Hydro Energy Limited (JSWHEL), the Petitioner herein, vide approval of the Registrar of Companies, Himachal Pradesh vide certificate dated 11.9.2018. Any reference to JKHCL or JPVL or HBPCL in the present petition or documents attached hereto may be read as reference to JSWHEL, the Petitioner herein.

5. The Commission vide its order dated 30.3.2017 in Petition No. 434/GT/2014 had determined the capital cost and annual fixed charges of the generating station for the 2014-19 tariff period as under:

Capital cost allowed

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
	Opening capital cost allowed	6,36,074.26	6,44,741.33	6,49,074.07	6,51,658.91	6,51,658.91
	Closing Gross Block claimed as per form-9E	693759.36	693759.36	696866.60	696866.60	696866.60
Less:	CWIP	-	-	-	-	-
Less	IDC claimed on account of capitalisation of Com facilities	4571.87	4571.87	4571.87	4571.87	4571.87
	IDC claimed on account of ACE	1010.17	1010.17	1010.17	1010.17	1010.17
	Current assets and advances	2104.13	2104.13	2104.13	2104.13	2104.13
	Undischarged liabilities	6917.58	2584.84	-	-	-
	IDC & FC claimed	103497.07	103497.07	103497.07	103497.07	103497.07
	Syndication fees included in IEDC	2020.32	2020.32	2020.32	2020.32	2020.32
	Cost reduction due to additional	14034.00	14034.00	14034.00	14034.00	14034.00



	overload capacity					
Less:	Deduction with respect to Notes to form 5B					
	Note-5 to form 5B	21.00	21.00	21.00	21.00	21.00
	Note-5,7,8 to from-5B	1800.00	1800.00	4907.24	4907.24	4907.24
	Note-7 to form 5B	2502.00	2502.00	2502.00	2502.00	2502.00
	Note-8 to form 5B	1045.00	1045.00	1045.00	1045.00	1045.00
	Preliminary expenses (Note-9)	201.00	201.00	201.00	201.00	201.00
Add:	IDC allowed	92829.00	92829.00	92829.00	92829.00	92829.00
	Capital cost before adjustment of initial spares	6,46,864.22	6,51,196.96	6,53,781.80	6,53,781.80	6,53,781.80
Less:	Adjustment for initial spares	2122.89	2122.89	2122.89	2122.89	2122.89
	Closing capital cost allowed	644741.33	649074.07	651658.91	651658.91	651658.91

Annual Fixed Charges allowed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	40107.46	40514.54	40731.15	40812.09	40812.09
Interest on Loan	43724.45	40031.92	36034.26	31829.12	27505.93
Depreciation	33167.48	33504.12	33683.25	33750.19	33750.19
Interest on Working Capital	3535.73	3523.80	3500.56	3470.80	3439.14
O & M Expenses	15253.44	16266.27	17346.35	18498.15	19726.42
Total	135788.55	133840.64	131295.57	128360.35	125233.78

TRUING UP OF TARIFF FOR THE 2014-19 TARIFF PERIOD

6. Regulation 8 of the 2014 Tariff Regulations provides as under:

“8. Truing up

(1)The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2019, as admitted by the Commission after prudence check at the time of truing up Provided that the generating company or the transmission licensee, as the case may be, shall make an application for interim truing up of capital expenditure including additional capital expenditure in FY 2016-17.”

7. The capital cost and annual fixed charges claimed by the Petitioner are as under:



Capital cost claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost as on April of the year	679891.61	686587.93	686590.16	690197.10	691318.52
Add: Addition during the year	777.86	0.00	0.00	0.00	0.00
Less: Decapitalisation during the year	0.00	0.00	0.00	0.00	0.00
Less: Reversal during the year	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year	5918.46	2.23	3606.94	1121.42	1005.76
Closing Capital Cost	686587.93	686590.16	690197.10	691318.52	692324.28

Annual Fixed Charges claimed

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	42789.94	43207.74	43321.30	43470.08	52640.00
Interest on Loan	46994.53	38969.84	31015.07	25640.83	20850.04
Depreciation	35395.42	35568.93	35662.42	35784.90	35840.00
Interest on Working Capital	3756.91	3647.40	3531.29	3480.19	3653.02
O & M Expenses	15848.82	16963.72	18090.14	19291.32	20572.26
Total	144785.63	138357.64	131620.22	127667.32	133555.32

8. The Petitioner has revised the allowed closing capital cost of Rs.636074.26 lakh to Rs.679891.61 lakh as on 31.3.2014 by claiming some of the items which were disallowed in order dated 30.3.2017 in Petition No.434/GT/2014 and some additional claim in the instant petition. Accordingly, the Petitioner has claimed Rs.679891.61 lakh as opening capital cost as on 1.4.2014. The details of the same, submitted by the Petitioner vide its affidavit dated 9.8.2021 is as under:

(Rs. in lakh)

Sl. No.		As on 31.3.2014
1	Capital cost approved for the purpose of tariff as on 31.3.2014 in order dated 30.3.2017 in Petition No. 434/GT/2014	636074.26
A	Add: Items disallowed but claimed in this petition	
2	IDC claimed on account of capitalisation of Common facilities	4571.87
3	IDC claimed on account of Additional Capital Expenditure	1010.17
4	Current Assets and Advances	2104.13
5	Un-discharged liabilities	15584.65
6	Error of IDC in Form 5B, disallowed	5590.39
7	Finance Charges and Syndication fee	7098.41



8	Service tax	21.00
9	Entry tax	2502.00
10	Preliminary Expenses	201.00
11	Initial spares	2122.89
B	Add: Additional items claimed in true up petition 391/GT/2019	
12	IDC on excess equity	18099.00
13	Rectification of current assets as reconciled with balance sheet as on COD of unit 2	445.03
14	Increase in additional IDC due to re-calculation	51.46
15	Closing Capital cost considered in Form 9E as on 31.3.2014 in tariff forms for the period 2014-19	695476.26
16	Less: Amount of capital liabilities included above	15584.65
17	Closing capital cost as claimed in Form-1	679891.61

9. Reply to the Petition has been filed by the Respondent UPPCL vide affidavit dated 3.12.2019 and Respondent HPPC vide affidavit dated 9.9.2020. The Petition was heard on 13.4.2021 and the Commission after hearing the matter, directed the Petitioner vide ROP to submit certain additional information. In compliance, the Petitioner has filed the additional information vide affidavit dated 9.6.2021 and, thereafter, addendum to the said affidavit was also filed. The Respondent, PSPCL has filed its reply vide affidavit dated 6.5.2021. The Petitioner has filed its rejoinder to the replies of the Respondents vide separate affidavits dated 9.6.2021. Thereafter, the matter was heard on 16.7.2021 and the Commission, after hearing the parties, reserved its order in the petition, after directing the Petitioner to file certain additional information. In compliance to the same, the Petitioner has filed the additional information vide affidavit dated 9.8.2021. The Respondent PSPCL has filed its reply vide affidavit dated 17.8.2021 and the Respondent HPCC has filed its written submissions on 17.8.2021. Based on the submissions of the parties and the documents on record, we proceed for truing up the tariff for the 2014-19 tariff period in the subsequent paragraphs.



Time and Cost Overrun

10. As regards time and cost overrun, the Commission in its order dated 30.3.2017 in petition no.434/GT/2014 decided as under:

“Recommendation of DIA on Time and Cost Overrun

52. As regards time overrun, DIA in its report of August, 2012 on vetting of capital cost has recommended the following:

"Time Overrun

“According to the TEC accorded by the CEA in the year 2003, the Zero (Starting) Date had been taken as 1st January, 2004 by assuming that all the balance inputs / clearances (environmental clearance, forest clearance, financial closure, etc.) would be available within a period of six months from the date of issue of TEC. The project execution timeframe had been taken as 72 months with commissioning of all 4 units to be achieved by 31st December, 2009. However, the environment clearance was issued by the MoEF, Gol on 9th November, 2005 and the approval for diversion of forest land was issued by the MoEF, Gol on 17th November, 2005. The financial closure was thereafter achieved on 30th March, 2006.

However, the Starting Date for the Project had been taken by the Generating Company as 18th November, 2005. The project execution timeframe accordingly got revised to 18.11.2005 - 17.11.2011 which was communicated by the Generating Company to Govt. of H.P as well to CEA, Gol. The Govt. of H.P, thereupon, entered into the second Supplementary IA signed on 20.12.2007 with the Company wherein it was agreed that the Scheduled Commercial Operation Date (i.e. 18th November, 2011) shall be 144 months from the Effective Date of the initial IA which was 18.11.1999. The Generating Company had also taken up the issue of extension of TEC up to 31.3.2006 with CEA vide letter No. KW-101 dated 5.3.2005. The CEA, however, replied vide letter dated 18.11.2008 that with the enactment of the EA 2003, the fixation of tariff of all power projects is vested with the Regulatory Commissions. Therefore, FFP/Final Completion Cost of power projects is not to be approved by CEA. As such extending validity of TEC shall serve no purpose as the TEC remains valid in terms of Para 9 of CEA OM dated 31.3.2003.”

53. As regards time overrun, the DIA in its report of May 2015 has observed that there is no impact on overall time frame of construction schedule of the project with respect to the change in overload capacity of the plant and hence, schedule of execution for existing project does not have any impact if it would have been 1000 MW with 10% overload capacity or with 20% overload capacity. It is also concluded that there is no impact of cost due to change in overload capacity of the project.

Cost Overrun

54. DIA in its report has examined the issue of cost overrun and has stated that the following issues/ reasons have impacted the completion cost of the project:

- i) Delayed start of works-*
- ii) Change in design / scope of works*
- iii) Regulatory requirements*
- iv) Additional spare runners and other spares.*
- v) Increase in Miscellaneous cost.*



55. The above factors have been examined and the DIA in its report has recommended the following completion cost:

Capital Cost of the Project = TEC Cost + Increase in Cost
= (USD 117.44 million + RS. 5345.88 crores) +(USD 68.01 million + Rs. 704.40 crores)
= USD 185.45 million + Rs. 6050.28 crores
= Rs. 849.71 + Rs. 6050.28
= Rs. 6899.99 crores. Say Rs. 6900 Crores

56. The DIA has concluded that based on the various factors discussed in the report, the completion cost of Rs.6900.00 crore worked out by it is considered reasonable and the same has been recommended as the completion cost.

57. It is observed that as against the TEC completion cost of Rs.5909.59 crore, DIA has finally recommended completion cost of Rs.6759.66 crore. As such, there is significant variation between the completion cost vetted by DIA and the TEC approved capital cost. It is pertinent to mention that the Commission while determining/revising the tariff of Central Government owned hydro generating stations of NHPC, SJVNL, THDC (after considering the report of DIA) has directed the Central Government owned hydro generating stations to seek revised cost estimates/completion cost of the project approved by the Central Government and place the same on record. In the process of approval of the revised cost estimates, the Central Government invariably consults and seeks recommendations from CEA and therefore, the capital cost of the hydro projects gets vetted by the CEA. The petitioner being a private company, its completion cost does not require the approval of the Central Government and therefore, CEA would not be involved to vet its capital cost. Accordingly, in absence of such recourse, Commission, for the present, has considered the DIA vetted cost, after carrying out the prudence check, as ceiling cost for the purpose of tariff. DIA report has considered certain un-discharged liabilities in the completion cost which have not been taken into account as the tariff has been based on the actual cash expenditure.

58. In this background, we proceed with the determination of completion cost based on DIA report and tariff of the generating station for the period 2014-19 based on Tariff Regulations 2014, as stated in subsequent paragraphs. The Commission is of the view that the expenditure may be vetted by the CEA before final truing up. Accordingly, we direct the petitioner to approach the CEA for vetting of the expenditure of the generating station on payment basis. CEA is requested to take expeditious action and vet the completion cost of the generating station within a period of 3 months. The same may be submitted along with the truing up petition by the petitioner.

Capital Cost

11. Regulation 9 of the 2014 Tariff Regulations provides as under

“9(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects;

(2) The Capital Cost of a new project shall include the following:

(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

(b) Interest during construction and financing charges, on the loans



- (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;
- (c) Increase in cost in contract packages as approved by the Commission;
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
- (e) capitalized Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- (f) expenditure on account of additional capitalization and de-capitalization determined in accordance with Regulation 14 of these regulations;
- (g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- (h) adjustment of any revenue earned by the transmission licensee by using the assets before COD...”

12. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check, in accordance with this Regulation, shall form the basis of determination of tariff for existing and new projects. It is pertinent to mention that the Commission in its order dated 30.3.2017 in Petition No. 434/GT/2014 had approved the completion cost of the generating station based on the vetting of DIA report, subject to vetting by CEA, as stated above. The Petitioner has submitted that it has approached CEA for vetting of capital cost of the generating station and CEA vide its letter dated 29.5.2017 addressed to the Commission has made the following comments:

“..... The matter has been considered in CEA and our comments are as follows:

1. *CEA, a statutory body constituted under the Electricity Act, 2003 is mandated to advice the appropriate Government and the appropriate Commission on all technical matters relating to generation, transmission and distribution of electricity.*
2. *No mandate has been extended to CEA to determine the completion cost of a generating station.*
3. *As such, CEA neither can be made a party for vetting of the completion cost of a generating station nor is responsible or provided with powers to advice CERC in such matters.*

It is therefore submitted that the completion cost of the said project cannot be determined by CEA, as CEA have no mechanism to examine/vet fait-accomplis expenditure.”



13. In the light of the aforesaid comments of CEA, the Petitioner has submitted the following:

“DIA (Energy Infratech Pvt. Ltd.) is an accredited agency of the Commission itself which has carried out the vetting of the Capital Cost of the Karcham Wangtoo HEP duly considering all aspects related to the Capital Cost and has made a detailed report which is self-explanatory.

Commission itself has carried out detailed analysis of the Capital Cost vetted by DIA, contained in para 59 to 65 of the order dated 30.03.2017.

Commission in para 62 of the Order dated 30.03.2017 has cross checked the Capital Cost of the Karcham Wangtoo HEP with other similar hydro project i.e. Nathpa Jhakri of SJVNL in addition to the Capital Cost vetted by DIA and found the Capital cost of Karcham Wangtoo HEP as reasonable. The finding of the Commission in para 62 is given below:

“62. It is noticed that for the downstream project of Naptha Jhakri of SJVNL which achieved COD on 18.5.2004, the completion cost is Rs.5.71 crore / MW as per RCE-IV submitted to MOP, GOI. Accordingly, for this generating station, the completion cost of Rs.6.76 crore / MW considering the time gap of seven and half years appear reasonable. Based on this, we are inclined to accept the recommendations of the DIA for the completion cost of Rs. 6759.66 crore.”

In view of the aforesaid facts and circumstances, the Petitioner respectfully submits that the Commission may be pleased to do away with the requirement of vetting of Capital Cost by CEA as directed vide Order dated 30.03.2017”

14. The Commission vide ROP of the hearing dated 16.7.2021 directed the Petitioner to furnish, amongst others, the following:

“(i) The status of the completion cost submitted for approval to CEA, after approval of the same by the State Government of Himachal Pradesh, as per TEC dated 31.3.2003”

15. In response, the Petitioner has submitted that the issue has been deliberated/ considered in paragraph 52 of the order dated 30.3.2017 in Petition No.434/GT/2014.

16. As regards the capital cost of the Project, it is noticed that the Commission, after prudence check of the recommendations of the Designated Independent Agency (DIA) (M/s Energy Infratech Pvt. Ltd) had allowed the completion cost of the Project. Considering the fact that CEA has declined to vet capital cost of the



generating station, we consider the capital cost of the generating station in the following paragraphs, in terms of its revised claim in paragraph 8 above.

IDC claimed on account of capitalisation of Common facilities

17. The Petitioner has claimed IDC amounting to Rs.4571.87 lakh on account of capitalization of common facilities. In this regard, the Commission vide order dated 30.3.2017 in Petition No.434/GT/2014 had observed the following:

88. As regards the additional IDC of Rs. 45.72 crore for the period from COD of Unit-1 (26.5.2011) to COD of the Unit-IV / generating station (12.9.2011), we are of the view that apportioning of capital expenditure equally between the units, benefits the beneficiaries by way of reduced tariff during the period starting from the COD of first unit to COD of the last unit and the additional IDC which accrues to the generator on this account trades off the reduced tariff it has received till COD of the last unit. However, in the present case the beneficiaries have not availed the benefit of reduced tariff during the period starting from the COD of first unit to COD of the last unit as the generator was selling the power on short term basis.

89. Further, Regulation 4(2) of the 2009 Tariff Regulations provides as under:

“4(2). For the purpose of determination of tariff, the capital cost of a project may be broken up into stages, blocks, units, transmission lines and sub-stations, forming part of the project, if required:

Provided that where break-up of the capital cost of the project for different stages or units or blocks and for transmission lines or sub-stations is not available and in case of on-going projects, the common facilities shall be apportioned on the basis of the installed capacity of the units, line length and number of bays”.

90. The petitioner has submitted that it has capitalized common facilities in the Books of Account at the time of capitalization of Unit-1 as per the Accounting Practice and accordingly capitalized the IDC in the Books of Account. In terms of the above regulation, all common facilities shall be apportioned on the basis of the installed capacity of the units, only where the break-up of the capital cost for different units is not available. However, in the present case, the unit-wise cost break up is available and hence, capacity wise allocation has not been undertaken.

91. In this background, we disallow the additional IDC of Rs. 45.72 crore claimed by the petitioner for the period from COD of Unit-1 (26.05.2011) to COD of the Unit-4 / generating station (12.9.2011).”

18. The Petitioner has submitted that though the Commission in its order dated 30.3.2017 has rightly observed that the sale of power to the beneficiaries under long term from 26.5.2011 to 12.9.2011 could not be made, it has escaped the attention of the Commission that the revenue earned from sale of power under short term (infirm



power) has been adjusted in tariff during said period, to the benefit of the procurers. It has also stated that though sale of power started from 1.5.2014, but with effect from 1.4.2018, 100% power is being sold under long term arrangements. The Petitioner has further submitted that additional IDC from COD of Unit-1 (26.5.2011) to COD of Unit-4 (13.9.2011) amounting to Rs.45.72 crore was claimed in capital cost since the Petitioner had capitalized all common facilities in books of accounts, at the time of capitalization of Unit-1 as per accounting standards. The Petitioner has stated that due to difference of method of capitalization/ apportionment of common facilities in the books of account (which is as per accounting standard/ Company law) and the Tariff Regulations, IDC during COD of Unit-1 to COD of the last unit of the project has to be different. Due to capitalization of all common facilities at the time of capitalization of Unit-1, the capital cost in books of account is lower as compared to the capital cost calculated with apportionment of common facilities, on the basis of installed capacity, as per the tariff regulations. The Petitioner has illustrated as below:

Illustration:
Case 1 - As per Books of Account:

Cost as on 31.03.18	COD of unit 1 on 01.04.18	COD of unit 1 on 01.05.18	COD of unit 1 on 01.06.18	COD of unit 1 on 01.07.18
Individual unit cost	1000.00	1000.00	1000.00	1000.00
Common facilities	1000.00	-	-	-
Total	2000.00	1000.00	1000.00	1000.00
IDC @ 12% in FY 18-19	-	10.00	20.00	30.00
Cost	2000.00	1010.00	1020.00	1030.00

Total Cost is Rs. 5060

Case - 2 As per Tariff Regulations:

Cost as on 31.03.18	COD of unit 1 on 01.04.18	COD of unit 1 on 01.05.18	COD of unit 1 on 01.06.18	COD of unit 1 on 01.07.18
Individual unit cost	1000.00	1000.00	1000.00	1000.00
Common facilities	250.00	250.00	250.00	250.00
Total	1250.00	1250.00	1250.00	1250.00
IDC @ 12% in FY 18-19	-	12.50	25.00	37.50
Cost (Rs in crore)	1250.00	1262.50	1275.00	1287.50

Total Cost is Rs. 5075.00



19. The Petitioner has submitted that from the above illustration, the Commission may observe that there is difference in IDC during COD of Unit-1 to COD of Unit-4 in both scenarios, due to apportionment of common facilities. IDC in case-1 is Rs.60 as against IDC of Rs.75 in case-2. Also, the cash outflow in both cases are same, but in case-1, Rs.60 has been added to capital cost and Rs.15 will be debited to profit and loss account, as expenditure, and in case-2, Rs.75, will be added to the capital cost.

20. The Petitioner has submitted that in books of account, total cost of common facilities has been capitalized/ apportioned along with capitalization/ COD of Unit-1 which was to be apportioned 1/4th of cost in terms of the 2014 Tariff Regulations (as COD of Unit-1 of 250 MW was declared out of the total 1000 MW capacity). Part of IDC, which was to be added in the capital cost as per the 2014 Tariff Regulations, was debited to Profit & Loss Account, to comply with the Accounting Standard/ Company Law. It has stated that the calculations enclosed in Form-9E of Petition No. 434/GT/2014 and interest of Rs.45.72 crore was claimed in the capital cost, but disallowed by the Commission. Accordingly, the Petitioner has prayed that IDC of Rs.45.72 crore may be allowed.

21. We have examined the matter. It is noticed that IDC, based on the unit-wise apportionment of the accrued IDC was allowed in order dated 30.3.2017 in Petition No.434/GT/2014, in terms of Regulation 4(2) of the 2009 Tariff Regulations, which provides as under:

“4(2). For the purpose of determination of tariff, the capital cost of a project may be broken up into stages, blocks, units, transmission lines and sub-stations, forming part of the project, if required:

Provided that where break-up of the capital cost of the project for different stages or units or blocks and for transmission lines or sub-stations is not available and in case of on-going projects, the common facilities shall be apportioned on the basis of the installed capacity of the units, line length and number of bays”.



22. The observations of the Commission in the said order dated 30.3.2017, is as under:

“90. The petitioner has submitted that it has capitalized common facilities in the Books of Account at the time of capitalization of Unit-1 as per the Accounting Practice and accordingly capitalized the IDC in the Books of Account. In terms of the above regulation, all common facilities shall be apportioned on the basis of the installed capacity of the units, only where the break-up of the capital cost for different units is not available. However, in the present case, the unit-wise cost break up is available and hence, capacity wise allocation has not been undertaken.”

23. In view of the above-quoted decision in Petition No.434/GT/2014, the additional IDC claimed by the Petitioner is not allowed.

IDC claimed on account of Additional Capital Expenditure

24. The Petitioner had claimed IDC for Rs.1010.17 lakh on additional capital expenditure in Petition No.434/GT/2014 and the Commission in its order dated 30.3.2017, decided as under:

“92. The petitioner has claimed Rs. 10.10 crore towards IDC on additional capitalization from COD of unit -IV (13.9.2011) to 31.3.2014. However, the petitioner has not furnished any justification towards the claim for additional IDC on additional capital expenditure. It is also observed that the additional capital expenditure claimed by the petitioner during the period from 13.09.2011 to 31.03.2014 is mainly on account of discharge of the outstanding liabilities. In this regard, it is noticed from Form 9E of the petition that there has been no addition in gross block from CWIP during the said period, and addition in gross block by way of direct purchases is as stated under:

	(Rs. In lakh)		
	13-09-2011 to 31-03-2012	01-04-2012 to 31-03-2013	01-04-2013 to 31-03-2014
<i>Addition in Gross Block Amount during the period (transfer from CWIP)</i>	-	-	-
<i>Addition in Gross Block Amount during the period (Direct purchases)</i>	(-79.16)	(-1247.45)	(-857.81)
<i>Amount of capital liabilities in above</i>	-	-	1576.67

93. Accordingly, the addition in gross block by way of direct purchases is only in 2013-14 which is (on cash basis) Rs. 281.14 lakh only. It is evident from the above discussion that there has been no further fund infusion/ utilization/ transfer from CWIP after COD, whereas, IDC has been duly allowed on the entire debt infusion by the petitioner till COD. Accordingly, the claim of the petitioner is not justifiable and hence not allowed.



25. The Petitioner has submitted that it has incurred capital cost, on cash basis, after COD (as in enclosure 2 of Form 9E of the Petition No. 434/GT/2014) as under:

<i>(Rs. in crore)</i>					
Sr. No.	Period	Amount	Equity 30%	Debt 70%	Interest @ 12.2%
1	14.9.2011 to 31.3.2012	250.67	75.20	175.46	5.91
2	1.4.2012 to 31.3.2013	38.19	11.46	26.73	1.63
3	1.4.2013 to 31.3.2014	60.39	18.11	42.27	2.55

26. The Petitioner has submitted that it has claimed interest on 70% of the expenditure i.e. notional loan for payment. It has stated that interest on loan for the said period has been calculated at the prevailing ROI on average balance. According to the Petitioner, 30% of cash flow is added to equity and 70% is treated as loan in terms of the Tariff Regulations, and IDC on the same is added to the capital cost. The Petitioner, in support of the same has relied upon the judgment dated 3.10.2019 in Appeal No.231/2017 (Powerlink v CERC & ors) and prayed that IDC on additional capital expenditure may be allowed.

27. We have examined the matter. As regards IDC on normative loan, APTEL vide its judgment dated 3.10.2019 held as under:

“8(ix) The Central Commission should have taken into consideration the aspect that whatever be the types of funds it is never free of cost. There is always a cost of funding. The argument that no actual loan for additional capital expenditure was taken and therefore it is not admissible for any normative IDC is wrong. It is the commercial decision of the Appellant whether to borrow the money from the market for the purpose of additional capitalization or use its internal accruals. In either case, the capitalization deserves to be given the Interest During Construction. For the simple reasons that if the internal accruals were not to be used as additional capital than it would have been invested in the market in any interest earning instrument. Additional capitalization is therefore entitled to be compensated in terms of normative IDC. The Central Commission should have considered this aspect that no funds are free funds.”

28. In our view, the aforesaid judgment which mandates allowance of IDC on any fund infusion, irrespective of the source of fund, i.e. loan or equity, as relied upon by the Petitioner, in support of its claim for IDC on additional capital expenditure from



COD of last unit till the cut-off date of the generating station, is not applicable to the present case. In order dated 30.3.2017 in Petition No.434/GT/2014, IDC was denied on the basis that there is no fund infusion towards additional capitalization as claimed by the Petitioner. The Petitioner has considered discharge of 'liabilities as on COD' as cash flow for calculation of IDC, claimed on account of additional capital expenditure, whereas, there has been no further fund infusion/ utilization/ transfer from CWIP to COD and IDC has been duly allowed on the entire debt infusion by the Petitioner till COD, as observed in the said order dated 30.3.2017. In view of this, IDC on account of additional capital expenditure for Rs.10.10 crore is not allowed.

Current Assets and Advances

29. The Petitioner had claimed Current Assets and Advances amounting to Rs.2104.13 lakh. The Commission vide its order dated 30.3.2017 in Petition No.434/GT/2014, had observed as follows:

"70. The same have been considered for deduction from the capital cost claimed by the petitioner for arriving at the capital cost for tariff calculation. However, the petitioner is directed to submit the audited certificate in support of such submission with respect to current assets and advances".

30. In compliance of the aforesaid direction, the Petitioner has furnished Auditor certificate in support of current assets and advances for Rs.2104.13 lakh towards implementation of the Project, as on 31.3.2014.

31. It is evident from the auditor's certificate furnished by the Petitioner that the balance of advances is Rs.2104.13 lakh as on 31.3.2014. However, the reason for including 'advances' as part of capital expenditure has not been mentioned in the said certificate, nor has any clarification been furnished by the Petitioner. As such, the current assets and advances amounting to Rs.2104.13 lakh shall not form part of



the capital expenditure and in turn part of the capital cost allowed for the purpose of tariff. It is also pertinent to mention that the Petitioner has adjusted the 'current assets and advances' amounting to Rs.2104.13 lakh from the capital cost as on 31.3.2019, to arrive at the capital cost as on 1.4.2019, as the same was disallowed in order dated 30.3.2017 in Petition No.434/GT/2014. In view of this, the said amount is not allowed for inclusion in the capital cost for the purpose of tariff.

Error of IDC in Form 5B (Disallowed)

32. The Commission vide its order dated 30.3.2017 in Petition No.434/GT/2014 had allowed IDC for Rs.92829.00 lakh, considering the submissions in Form 5B, as under:

"81. The petitioner vide affidavit dated 27.10.2014 has submitted loan agreements and the bank wise details of the amount drawn, rate of interest applied etc. Based on this, the total interest from the 1st loan drawl till COD of each unit/ generating station has been calculated as Rs. 108399.12 lakh. However, the petitioner has not furnished the basis/ methodology of allocation of IDC to each of the units. In absence of this information, the IDC for tariff purpose has been allowed based on the amount of IDC as on 13.9.2011 claimed by the petitioner in Form 5B is Rs. 92829.00 lakh. Accordingly, IDC has been restricted to Rs. 92829.00 lakh as on 13-09.2011 for the purpose of tariff.

82. The capital cost allowed along with the IDC as above is subject to revision at the time of truing up exercise based on the balance sheet as on COD of each unit and basis of IDC allocation, to be furnished by the petitioner. The petitioner is also directed to furnish the reconciliation of the debt position as per Form-14 with the books of accounts for each year at the time of truing -up in terms of the Regulation 8 of the 2014 Tariff Regulations."

33. The Petitioner has submitted that while calculating the capital cost, the interest earned on deposits has been deducted twice, first from IDC and again from IEDC. The same is visible in the audited balance sheet as on 12.9.2011 i.e. total IDC and IEDC as on 12.09.2011 was Rs.1404.14 crore (IDC Rs.984.19 crore + FC Rs.50.77 crore + IEDC Rs.430.45 crore – interest earned Rs.55.89 crore). The same amount has been mentioned in Form-14 of the tariff filing forms earlier submitted to



Commission. Accordingly, the Petitioner has prayed that the revised Form 5B (enclosed in tariff filing forms submitted in the present petition) with correct presentation of IDC & FC may be considered and the correct IDC of Rs.98419.39 lakh may be allowed in the capital cost.

34. We have examined the matter. The Petitioner has submitted that the total of IDC and IEDC was Rs.1404.14 crore as on 12.9.2011, as verified from the balance sheet as on 12.9.2011. However, the same differs from the total amount (IDC Rs.984.19 crore + FC Rs.50.77 crore + IEDC Rs.430.45 crore – interest earned Rs.55.89 crore) submitted by the Petitioner for Rs.1409.52 crore, which could be verified from the balance sheet as on 31.3.2012. It is, therefore, evident from the submissions that while calculating capital cost, the interest earned on deposits has been inadvertently deducted twice by the Petitioner, first from IDC and then from IEDC. The Petitioner has revised Form 5B and has claimed the IDC amount of Rs.98419.39 lakh. However, as per consistent methodology adopted by the Commission, based on the information furnished by the Petitioner, IDC has been worked out as Rs.96488.62 lakh and is allowed.

Financing Charges and Syndication Fees

35. The Commission in its order dated 30.3.2017 in Petition No.434/GT/2014 while rejecting the prayer of the Petitioner, had granted liberty to the Petitioner as under:

“Financing Charges & Syndication fees

83. In compliance with the direction of the Commission to furnish reconciliation of the IDC & FC amounts claimed in Form 14 (Rs. 105517.39 lakh) and form 9E (Rs. 103497.07 lakh), the petitioner vide affidavit dated 24.12.2014 has submitted that the total amount of FC as per Form 14 includes syndication fees of Rs. 2020.32 lakh which has been included in IEDC in Form 9E. Accordingly, the break of IDC & FC claimed is as under:



(Rs. in lakh)

		Break up		Total IDC & FC
		IDC	Financing Charges	
1	As per Form 14	98419.39	7098.00	105517.39
2	As per Form 9E	98419.39	5077.68	103497.07
3	Difference (1-2)		2020.32	2020.32

84. The petitioner has submitted that the difference in the amounts furnished in the two forms is on account of syndication fees of Rs. 2020.32 lakh, which has been included as IEDC in Form 9E and as Financing charges in Form 14. However, the petitioner has not furnished any supporting document, break up details in justification of the financial charges and syndication fees claimed (considered as IEDC in Form 9E). Similar issue was considered in Petition no.77/GT/2013 (determination of tariff of GMR- Kamalanga project for 2009-14), and the Commission by order dated 12.11.2015 had decided as under:

“69. The petitioner has not furnished detailed calculations and breakup of the financial charges claimed, along with the supporting documents to substantiate the unit-wise allocation of the financing charges. In the absence of the same, financing charges have not been allowed as of now, as a conservative measure. However, the petitioner is granted liberty to submit the details of expenditure incurred towards the financing charges along with detailed breakup/ calculations, duly certified by Auditor, along with all supporting bank documents, including the basis of unit-wise allocation of the financing charges, at the time of revision of tariff based on truing-up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations.”

“85. In line with the above decision, the claim of the petitioner with respect to Financing charges and Syndication fees has not been allowed. However, the petitioner is granted liberty to submit the details of expenditure incurred towards the financing charges/ syndication fees, detailed breakup/ calculations, duly certified by Auditor, along with all supporting bank documents, including the basis of unit-wise allocation of the financing charges, at the time of truing up of the tariff in terms of the Regulation 8 of the 2014 Tariff Regulations.”

36. In compliance to the aforesaid direction, the Petitioner has furnished the Auditor's certificate in support of the Financing charges/ Syndication fees along with a detailed break-up/ calculation. In addition, the Petitioner has submitted that the basis of unit-wise allocation of financing charges has been explained in Enclosure-1 to Form 9E as furnished in Petition No. 434/GT/2014.

37. The matter has been considered. The Petitioner has furnished the Auditor's certificate in support of the financing charges claimed. The Petitioner has also furnished the schedule of balance sheets, as documentary evidence, in support of



the same vide affidavit dated 26.10.2019 in the original petition. In addition to the above, the Petitioner has also submitted vouchers, general ledgers, bank statements, loan documents, bank certificates etc. in its rejoinder to the reply of the Respondent HPPC vide affidavit dated 4.5.2021. Accordingly, on prudence check, the financial charges amounting to Rs.5077.68 lakh and syndication fees amounting to Rs.2020.32 lakh are allowed.

Service Tax and Entry Tax

38. The Commission vide its order dated 30.3.2017 in Petition No.434/GT/2014 had observed as under:

“101. As regards the submission of the petitioner in Note-5, an amount of Rs 30.64 crore has already been included in the capital cost as on COD. In respect to the amount of Rs 21.00 lakh claimed as capitalization during the year 2013-14 as service tax, the petitioner has not clarified as to whether this amount pertains to undischarged liability included in the gross block value or is an amount accrued in the year 2013-14 and if so, on what account it has been accrued or paid.

Similarly, as regards the claim for additional capital expenditure of Rs. 4097.98 lakh during the period from 2014-17, the petitioner has submitted that the same is required to be paid. In the absence of proper justification, the claim of the petitioner is not allowed. Accordingly, the amount of Rs 21.00 lakh has been deducted from the gross block as on 31.3.2014 and Rs 4097.24 lakh from the gross block during the period from 2014-17 from the respective years as indicated in Form- 9A.

102. As regards the submission of the petitioner in Note-7, it is noticed that the petitioner has submitted that the entry tax amounting to Rs 17.87 crore (16.13 + 1.74) has been paid upto COD but has not been included in the capital expenditure. However, the reasons for not including the said amount in capital expenditure upto COD though paid, and claimed as additional capital expenditure has not been clarified by the petitioner. The petitioner has also submitted in Form-9A that the said amount has been considered as cash flow but it is not clear as to year in which the same has been considered. As regards the amount of Rs 7.15 crore and Rs 7.78 crore capitalized in 2013-14 and is required to be paid, no clarification has been submitted by the petitioner. Accordingly, the entire amount of entry tax amounting to Rs 32.80 crore has not been allowed on account of absence of information like the exact year of accrual/ payment, the reasons for not including the same in capital expenditure upto COD (stated to have been paid upto COD), the activities related to which the entry tax has been accrued after the period of COD.

Accordingly, these amounts have been deducted from the closing gross block (Form-9E) of the respective years (post COD) to arrive at the capital cost for the purpose of tariff. As the year of claiming capitalization of Rs 17.87 crore is not evident from Form- 9 A, the same has been deducted from the gross block as on 31.3.2012”.



39. The Petitioner, in the present petition, has submitted as under:

(i) An amount of Rs.2101977 was paid as 'service tax' to the construction contractor M/s Jaiprakash Associates Limited (JAL) for RA bills up to 31.3.2013 and has been capitalized in books in 2013-14. The said amount was paid within the original scope of work of project though it had accrued and capitalized after COD and same is not a revenue expenditure. It is also clarified that it was not included in the un-discharged liability. The Commission may allow Rs.0.21 crore in the capital cost.

(ii) Additional capital expenditure towards Service tax for Rs.4097.98 lakh payable against RA bills of M/s Jaiprakash Associates Limited was demanded by the Service tax department vide show cause notice dated 20.10.2011. Accordingly, provision for said amount was kept in completion cost and not capitalized and formed part of un-discharged liability. JAL had filed appeal with the Commissioner (Appeals) against the demand of service tax, which was allowed in favour of JAL. Later, the Revenue Department filed appeal before CESTAT and the matter is pending.

(iii) The same amount is included in the un-discharged liability in the 2019-24 tariff period also, but no tariff is being claimed against the same. The Petitioner shall include this 'service tax' in the capital cost, if it is paid by the Petitioner, based on the orders of the competent authority.

(iv) Entry tax was levied as per Himachal Pradesh Tax on entry of goods as per Local Area Act, 2010 effective from 7.4.2010. The Petitioner had challenged the applicability of entry tax in Hon'ble Himachal Pradesh High Court and later in the Hon'ble Supreme Court. The Petitioner had paid 1/3rd entry tax in cash and 2/3rd in the form of pledged FDRs with Sales Tax department.

(v) The Hon'ble Supreme Court on 11th November, 2016 upheld the constitutional validity of the State legislations with regard to levy of entry tax on goods coming into its territory. By a 7:2 majority verdict, the Hon'ble Supreme



Court ruled that the tax legislation by the State does not require the consent of the President under Article 304B of the Constitution.

(vi) A Division Bench of the Hon'ble Supreme Court on 21.3.2017 in the case of State of UP & Ors v Indian Oil Corporation Ltd (in CA No. 997-998/2004) decided that the matter pertaining to entry tax is required to be examined by the respective High Courts, in view of the reference answered by the nine judges of the Hon'ble Supreme Court.

(vii) Based on directions in order dated 22.9.2010 of the Hon'ble High Court of Himachal Pradesh, an amount of Rs.327995358/- has been paid by the Petitioner towards 'Entry Tax' incurred up to 31.12.2011 against the project works of the generating station to the Himachal Pradesh Sales Tax department in the form of 1/3rd cash payment and 2/3rd bank FDRs pledged. The year-wise details of 'entry tax' payments and FDR pledged (as per order dated 22.9.2010 of Hon'ble High Court of Himachal Pradesh) are as under:

<i>(in Rupees)</i>				
Sr. No.	Entry tax assessment period	Cash payment (1/3 rd of the assessed amount)	FDR pledged (2/3 rd of the assessed amount)	Total entry tax amount
1	08.04.2010 to 30.09.2010	9,86,35,996	-	9,86,35,996
2	01.10.2010 to 28.02.2011	2,69,99,240	5,39,98,479	8,09,97,719
3	01.03.2011 to 31.03.2011	3,00,23,477	6,00,46,953	9,00,70,430
4	01.04.2011 to 30.06.2011	56,13,577	1,12,27,155	1,68,40,732
5	01.07.2011 to 30.09.2011	1,02,67,686	2,05,35,370	3,08,03,056
6	01.10.2011 to 31.12.2011	35,49,142	70,98,283	1,06,47,425
	Total	175089118	152906240	327995358

(viii) The payments against the 'entry tax' assessment period was made in different years and classified in books as advances to the Sales tax department and considered as cash outflow for the purposes of computation of tariff. The Commission may please consider that the Petitioner has already paid the said amounts which directly impacted its cash flow. It is also clarified that the activities on which entry tax has been levied are completely related to the construction of dam and tunnels of the generating station.

(ix) The Petitioner, in its rejoinder to the reply of Respondent PSPCL has submitted that the matter of entry tax was sub-judice before the Hon'ble High



Court of Himachal Pradesh and Petitioner shall approach the Commission after final decision in this regard by the Hon'ble High Court.

(x) However, as per amnesty scheme launched by the Government of HP, the Petitioner has settled all the dues/ payments of 'entry tax' liabilities till the year 2017-18. The Writ appeals filed by the Petitioner has been withdrawn to avail the amnesty scheme. Out of Rs.32.80 crore already spent and forming part of the capital cost, Rs.17.51 crore was earlier paid to the State Government and the balance amount of Rs.15.29 crore has been paid under the amnesty scheme.

40. The matter has been examined. With respect to Rs.21.02 lakh claimed by the Petitioner for capitalization towards Service tax in 2013-14, the Petitioner has submitted that the same has been paid as 'service tax' to the construction contractor M/s Jaiprakash Associates Limited for RA bills up to 31.3.2013 and has been capitalized in books in 2013-14. It has submitted that said amount was paid under the original scope of work of project, though the same had accrued and was capitalized after COD and is not a revenue expenditure. The Petitioner has also clarified that the said amount was not included in un-discharged liability. In view of this, the same is considered for calculation of capital cost as on 1.4.2014 for the purpose of tariff.

41. As regards the Service tax of Rs.4097.98 lakh, demanded by the Service tax department, the Petitioner has submitted that the same has been included in the un-discharged liability for the period from 2019-20 to 2023-24, but no tariff has been claimed against the same. We notice that Petitioner has claimed the said amount as additional capitalization in 2019-20. In our view, the inclusion of the said amount of Service tax in the capital cost, is permitted, only if it has been paid, based on the



orders of Competent Authority. Since the appeal filed by the Revenue Department before CESTAT is pending, the same cannot be treated as un-discharged liabilities. Moreover, as the said amount of Rs.4097.98 lakh has not been paid by the Petitioner, the claim for the same as additional capitalization in 2019-20 has not been allowed.

42. As regards 'entry tax' for Rs.32.80 crore pertaining to the period prior to COD, it is observed from the submissions of the Petitioner that it had availed the amnesty scheme launched by the Government of HP and has therefore paid a total amount of Rs.3280 lakh. The Petitioner has claimed Rs.2502 lakh, out of the said Rs.3280 lakh up to 31.3.2014 and the remaining amount of Rs.777.86 lakh as additional capitalization in 2014-15. However, the Petitioner vide its rejoinder to the reply of the Respondent PSPCL dated 4.5.2021, has stated that it has paid Rs.1750.89 lakh before COD and Rs.1529.06 lakh in 2020-21 under the 'amnesty scheme'. Considering the above submissions, the total amount of Rs.3280 lakh (i.e. Rs.1750.89 lakh as on COD and Rs.1529.06 lakh in 2020-21) has been allowed. The amount paid in 2020-21 has however been accounted for, while determining tariff for the 2019-24 period.

Preliminary Expenses

43. The Commission vide its order dated 30.3.2017 in Petition No.434/GT/2014 had observed as under:

"105. The petitioner in Note-9 in Form 5B of the petition has submitted as under:

"The Company has incurred an amount of Rs. 2.01 Crore towards Preliminary Expenses which are not included in the capitalization as per Accounting Practices. However, the same has been considered in Cash Out Flow in Form 9E."

106. Though the petitioner has submitted that the claims have not been capitalized in the books of account, as per accounting practices, it is observed that the petitioner has not furnished any details and explanation as regards the said claims such as



break- up of the expenses, reasons/ accounting practices on account of which such expenses have not been considered for capitalization. Accordingly, in the absence of detailed justification, the petitioner's claim for Rs 2.01 crore has not been allowed. The petitioner is however, granted liberty to approach the Commission at the time of truing up for 2014-19 subject to submission of details along with proper justification of the said claims."

44. As regards the deduction of Rs.2.01 crore on account of preliminary expenses, the Petitioner has submitted that the said expenses pertain to issue of share capital and increase in share capital, exclusively for the Petitioner, which was incorporated for the construction of the project i.e. Jaypee Karcham Hydro Corporation Ltd. (JKHCL) and it had no other business, except power generation. It has also submitted that as per the accounting practices, the preliminary expenses, though incurred till 2005-06, are charged in the Profit & Loss statement for the year ending 31.3.2010. The details of the same is below:

	Date of payment	Amount (Rs.)
ROC fee paid for share capital of Rs.100 crore (Form 5 & Form 23)	30.6.2003	2605500
Miscellaneous Expenses	30.6.2003	94180
ROC filing fee towards increase in authorized share capital (Form 5 & Form 23)	8.2.2005	2500500
ROC filing fee towards increase in authorized share capital from Rs.100 crore to Rs.2000 crore (DD issued to ROC Jalandhar with Form 5)	19.4.2005	14894000
ROC filing fee at ROC Jalandhar (Form 23)	19.4.2005	500
Total		20094680

45. The Petitioner has submitted that the aforesaid preliminary expenses have been incurred exclusively for M/s JKHCL, which is predecessor of the Petitioner (JPVL/ HBPCCL) and without incurring such expenses, necessary for the business of generation of electricity the project could not come into existence. The Petitioner has stated that the change in ownership occurred with transfer of all the assets & liabilities and the consideration paid for acquisition included the said 'preliminary



expenses'. Accordingly, the Petitioner has prayed that the Commission may allow the amount of Rs.2.01 crore incurred on account of 'Preliminary Expenses'.

46. The matter has been considered. The Petitioner has submitted that the claims have not been capitalized in the books of account, as per accounting practices, which were incurred till 2005-06, but charged in Profit & Loss statement for the year ending 31.3.2010. The balance sheet of JKHCL, as on 31.3.2010 stipulates the following:

"The profit and Loss account has been prepared for the purpose of writing off the Preliminary expenditure in accordance with the opinion of Expert Advisory Committee of Institute of Chartered Accountants of India dated 15th December 2009. Therefore, Preliminary expenses being of earlier year, have been charged to Profit and Loss account as a prior period item. Had the same not been charged, the loss would have been lower by Rs.2,00,94,680 and debit balance in Profit and Loss account would have been lower by Rs.2,00,94,680"

47. In view of the above, the claim of the Petitioner for Rs.200.95 lakh towards preliminary expenses is allowed.

Additional Claims

IDC on excess equity

48. The Petitioner has submitted that during the construction period of the project, the equity deployed was more than the equity mentioned as per the debt-equity ratio specified under the Tariff Regulations. It has, therefore, submitted that the extra equity deployed during the construction period is to be treated as normative loan and interest on the said normative loan is to be allowed in the capital cost. The Petitioner has further submitted that the present claim was inadvertently left out in the tariff petition (Petition No. 434/GT/2014) and the same is claimed in present petition. The details of the cumulative expenditure incurred and the source of finance from equity & loans/ excess equity to be treated as normative loan is as under:



(Rs. in crore)

Year	Expenditure including cash & bank balance	Equity	Loan	Normative Equity (30% of expenditure)	Excess equity to be treated as normative loan	Interest on Excess equity to be treated as normative IDC *
2006	600.00	600.00	-	180.00	420.00	43.05
2007	998.38	750.00	248.38	299.51	450.49	46.18
2008	1332.82	750.00	582.83	399.85	350.15	35.89
2009	2834.74	925.00	1909.75	850.42	74.58	9.14
2010	4201.27	1325.00	2626.28	1260.38	64.62	7.92
2011	6334.19	2145.00	4189.19	1900.26	244.74	28.76
2012 (up to 12.9.11)	6578.68	2145.00	4433.68	1973.60	171.40	10.05
Total						180.99

* @ SBI PLR of 1st April

49. The Petitioner has revised the calculation of IDC on excess equity in rejoinder to reply of UPPCL vide affidavit dated 4.5.2021 to Rs.175.45 crore and has further revised the same to Rs.205.00 crore in its additional submission vide affidavit dated 9.8.2021 and prayed for allowing the same.

50. The matter has been examined. Petition No.252/GT/2013 filed by the Petitioner for fixation of provisional tariff of the generating station for the period from 26.5.2011 to 31.3.2014 was disposed of by the Commission vide order dated 9.10.2014 with liberty to the Petitioner to file fresh petition for determination of tariff in respect of this generating station for the 2014-19 tariff period. Accordingly, in Petition No. 434/GT/2014 filed by the Petitioner for the 2014-19 tariff period, the Commission vide its order dated 30.3.2017 determined the capital cost as on COD of the generating station and for the 2014-19 tariff period. It is pertinent to mention that, in the said petition, the Petitioner had not claimed any normative IDC. Also, no additional submissions/ forms with regard to normative IDC were submitted nor any oral submissions were made by the Petitioner in this connection. Accordingly, no IDC



was considered/ allowed by the Commission in its order dated 30.3.2017 in Petition No.434/GT/2014. In this background, the claim of the Petitioner for normative IDC, in the present petition, cannot be considered, as the same is for truing up of the expenditure already incurred as against the projected expenditure allowed earlier. In our considered view, new issues/ claims (i.e. claims prior to COD) which were not raised earlier, by the Petitioner, cannot be considered in the present petition. Accordingly, we are not inclined to allow the IDC on excess equity, as claimed by the Petitioner.

Rectification of current assets as reconciled with balance sheet as on COD of Unit-2

51. The Petitioner has claimed an amount of Rs.445.03 lakh on account of rectification of current assets, as reconciled, with the balance sheet, as on COD of Unit 2. Since the 'current assets and advances' shall not form part of the capital cost allowed for the purpose of tariff (as discussed earlier), the rectification for the same also shall not form the part of the capital cost.

Increase in additional IDC due to re-calculation

52. The Petitioner has claimed Rs.51.46 lakh on account of additional IDC due to re-calculation. However, the Petitioner has not furnished any supporting document or explanation in this regard. Thus, in line with decision of not allowing IDC on additional capital expenditure (as in paragraph 28 above), the increase in additional IDC due to recalculation of Rs.51.46 lakh is disallowed.

Initial spares

53. As regards the admissibility of initial spares, the Commission vide its order dated 30.3.2017 has observed as under:

“107. The cutoff date of the generating station is 31.3.2014. As regards the cost of initial spares to be included in capital cost, the petitioner has claimed initial spares



amounting to Rs 116.64 crore based on the actual expenditure till COD, in addition to the cost of additional runners with associated spares for Rs 89.95 crore. Thus the petitioner has claimed total cost of spares Rs 206.59 crore.

108. The respondent no. 7 has submitted that while the petitioner has claimed the actual spares, the DIA has recommended cost of spares for Rs 158.55 crore in accordance with Regulation 8 of the 2009 Tariff Regulations. This cannot be allowed in view of the specific provision of the Regulation 47 of the 2014 Tariff Regulations. It has further submitted that in terms of the schedule-E of the PPA entered into by the petitioner and PTC, it was agreed to limit the initial spares to 1.5% of the original capital cost as on the cut- off date. The respondent has stated that though the 2014 Tariff Regulations provide for 4%, only 1.5% of the initial spares may be allowed by the Commission in terms of the contractual agreement entered into by the parties.

109. While the admissibility of Rs 89.95 crore towards additional runner and associated spares has been decided, we discuss the ceiling limit of the spares allowable in terms of the 2009 Tariff Regulations. Sub-clause (iii) of Regulation 8 of the 2009 Tariff Regulations provides that initial spares shall be capitalized as percentage of the original project cost subject to ceiling norm of 1.5% for hydro-generating stations including pump storage hydroelectric generating station. Accordingly, considering the capital cost of Rs 638197.15 lakh (prior to adjustment of capital spares) as on the cut-off date of the generating station, the cost of spares (without the cost of 3 additional runner as spares) works out to Rs 9541.11 lakh. Accordingly, the cost of initial spares allowable in terms of the Regulation 8(iii) of the 2009 Tariff Regulations is summarized as under:

(Rs. in lakh)		
1	capital cost on 31.3.2014 before adjustment of initial spares	638197.15
2	Cost of initial spares included in above by petitioner	11664.00
3	Cost of initial spares allowed as per Regulation 8 of the 2009 Tariff Regulations	$1.5 \times (638197.15 - 11664) / 98.5 = 9541.11$
4	Deduction on claimed initial spares	11664-9541.11= 2122.89

54. The Petitioner, in the present petition, has submitted as under:

“(a) In Form 5B & 5C to the MYT, Petitioner had claimed total spares as under:

Normal Spares	Rs. 116.64 lakh
Additional Spares (Runners)	Rs. 89.99 lakh

The Petitioner has categorically specified additional runners (under water spares) as additional spares of Rs. 89.99 crore, which were required to combat the high silt content in Satluj river. Apart from under water spares, many over water spares were also procured for the very same reason. These over water additional spares had been clubbed under “normal spares” heading of Rs. 116.64 crore.

All these additional spares had been procured by the Petitioner for bonafide use for smooth operations of Karcham Wangtoo HEP so that downtime of the Karcham Wangtoo can be minimized.

b) Hon’ble Commission has already increased Normative Annual Plant Availability Factor (NAPAF) of Karcham Wangtoo HEP from 85% allowable as per provisions of



Regulation 37 (1) (c) of the 2014 Tariff Regulations to 90% vide para 140 of its Order dated 30.03.2017 which is causing hardship to the Petitioner.

In view of bonafide requirement of the initial spares for smooth operation of Karcham Wangtoo HEP and increase in the NAPAF from 85% to 90% explained as above, Petitioner respectfully submits amount of Rs. 2122.89 Lakh deducted on account of additional spares may please be allowed.

However, if the Hon'ble Commission is still firm on the methodology followed in para 109 of the MYT order dt. 30.3.2017, it may kindly consider the trued up capital cost for the calculation of allowable initial spares.”

55. With regard to the submission of the Petitioner for reconsideration of the initial spares disallowed by the Commission in order dated 30.3.2017 in Petition No.434/GT/2014, we notice that the Commission, based on the submissions of the Petitioner therein, had allowed the capitalization of initial spares. The Petitioner in the present petition has, however, not furnished any fresh grounds /justification, in support of its claim. Accordingly, the amount of Rs.2122.89 lakh towards initial spares which was disallowed in order dated 30.3.2017 has not been reconsidered in this order.

56. With regard to the request of the Petitioner to reconsider the trued-up capital cost for allowing initial spares, we notice that the capital cost, as on the cut-off date (31.3.2014) of the generating station has been revised from Rs.638197.15 lakh to Rs.650927.61 lakh (prior to adjustment of capital spares). Accordingly, the amount of initial spares is revised in this order. The allowable cost of initial spares in terms of the Regulation 8(iii) of the 2009 Tariff Regulations works out to as Rs. 9734.98 lakh as detailed below:

(Rs. in lakh)		
1	Capital cost on 31.3.2014 before adjustment of initial spares	650927.61
2	Cost of initial spares included in above by Petitioner	11664.00
3	Cost of initial spares allowable as per Regulation 8 (iii) of the 2009 Tariff Regulations.	$1.5*(650927.61-11664)/98.5 = 9734.98$



57. In view of above, the amount of initial spares allowed in this order, over and above, the cost of initial spares allowed in order dated 30.3.2017 in Petition No. 434/GT/2014 works out as Rs.193.86 lakh [Rs.9734.98 lakh-Rs.9541.11(as allowed in order dated 30.3.2017)] and the same is allowed.

Deduction in capital cost for overload capacity

58. CEA while granting TEC during the year 2003 had approved the installed capacity of 1000 MW. The Petitioner in Petition No. 434/GT/2014 had claimed tariff based on 10% overload capacity i.e. 1091 MW against the CEA approved installed capacity i.e. 1000 MW. The Petitioner has approached CEA for approval of enhancement of capacity. However, CEA has recommended that the installed capacity of the project has to be maintained as 1000 MW. Accordingly, the Commission in order dated 30.3.2017 had determined the tariff of the generating station, based on the installed capacity of 1000 MW, as recommended by CEA and has made a deduction in the capital cost of Rs.140.34 crore corresponding to extra 10% overload capacity built in by the Petitioner over and above requirement of 10% as per IEGC. Relevant para of the same is as under:

“61. Cost reduction corresponding to extra 10% overload capacity built by the petitioner over and above requirement of 10% as per IEGC:

a) xx

xxx.

g) We are also in agreement with the recommendations of DIA as regards no cost reduction in SCADA, Static Excitation System, Governing System, LT AC & DC Power Distribution System and Mechanical & Electrical Auxiliary System for the technical reasons (Digital equipment of standard designs and use of available margins) as mentioned in the recommendation, which are not repeated here for the sake of brevity. Based on the above discussions, the cost reduction of Rs.140.34 crore towards differential overload capacity of 10% as recommended by DIA is acceptable.

59. The Petitioner in the instant petition has submitted that it has approached CEA vide its letters dated 16.4.2018 and 29.6.2018 for uprating of installed capacity of the



Project from 1000 MW (presently) to 1091 MW. The Petitioner has also submitted that it shall approach the Commission with an appropriate petition for enhancement of installed capacity and for consequential relief, including that of allowance of Rs.140.34 crore disallowed on account of reduction of installed capacity, after a final decision by CEA in the matter. Also, the Petitioner vide its affidavit dated 9.8.2021 has submitted that with regard to uprating of installed capacity, CEA vide letter dated 29.4.2021, has accorded conditional approval for uprating the capacity of the Project in 2 stages i.e.1045 MW (for 2 monsoon seasons) and 1091 MW. Relevant extract of the CEA letter is extracted under:

“..... Based on various reports and recommendations of the expert groups/ committees and the facts on record, the Authority has agreed to uprate the capacity of Karcham Wangtoo HE Project from existing 1000 MW to 1091 MW in two stages i.e. 1045 MW (with 10% continuous overload) in the first stage and then to 1091 MW (with 10% continuous overload) in the second stage. It was, however, decided by the Authority that after initial uprating to 1045 MW (with 10% continuous overload) in the first stage, the performance of the project and various operating parameters would be observed for at least two monsoon seasons. After this, CEA may concur for further uprating of the capacity to 1091 MW with 10% continuous overload capacity on submission of satisfactory report by the Developer”

60. The Respondent UPPCL has submitted that since the matter is under consideration of CEA, the same has no bearing on the determination of tariff for the 2014-19 tariff period and in event the installed capacity is increased from 1000 MW to 1091 MW, it shall translate into a capital cost of Rs.1.54 crores/MW. The Respondent has also submitted that since it is one of the beneficiaries of the project since inception, it may be given first right of refusal to purchase additional energy at such competitive rates. The Respondent HPPC has submitted that the Commission in its order dated 30.3.2017 in Petition No. 434/GT/2014 had decided that there has to be cost reduction in terms of the additional overload capacity of 10% capacity, which has not been challenged by the Petitioner. Accordingly, the Respondent has



submitted that the said issue may not be considered at the stage of truing up of tariff. The Respondent PSPCL has pointed out to the letter dated 8.7.2021 from Respondent PTC with regard to uprating of capacity of the Project from 1000 MW to 1091 MW, wherein, the Petitioner has informed PTC that it will directly sell the additional 45 MW + 10% overload capacity in short-term market. The letter also states that the Petitioner shall be scheduling power from its project for 1045 MW plus overload capacity, which shall include the capacity sold under short term market. The relevant portion of the said letter is extracted below:

“Subsequently, JSW Hydro Energy on 07.07.2021 has informed to PTC that they will sell (directly) the additional 45 MW + its 10% overload in the short term market and shall be scheduling the power from the project for 1045 MW + overload (incl. 45 MW + overload to be sold under short term directly by them)”

61. The Respondent PSPCL has submitted that it is liable to pay capacity charges only against the contracted capacity of 1000 MW, as per PSA dated 1.9.2006 and it may not be burdened with the capacity charges for the uprated capacity which the Petitioner intends to directly sell under short-term market. The Respondent has submitted that since the uprating was conditionally approved by CEA on 29.4.2021, the annual fixed charges for Rs.140.34 crore corresponding to the uprated capacity may be considered only after April, 2021.

62. In view of the above submissions and considering the fact that the uprating of the installed capacity of the generating station from 1000 MW to 1091 MW, is subject to the actual performance of the generating station for at least two seasons, the capital cost of Rs.140.34 crore, corresponding to additional 10% overload capacity, as deducted vide order dated 30.3.2017 in Petition No.434/GT/2014 has not been reconsidered. However, the Petitioner is directed to submit the final



approval of CEA with regard to the revised capacity at the time of truing-up of tariff for the 2019-24 tariff period

Capital Cost as on 31.3.2014

63. Accordingly, based on the above discussion, the capital cost as on 31.3.2014 (as worked out below) has been considered as the capital cost as on 1.4.2014:

	<i>(Rs. in lakh)</i>
	As on 31.3.2014
Capital cost approved as on 31.3.2017 by order dated 30.3.2017 in Petition No. 434/GT/2014	636074.26
Less: IDC allowed by order dated 30.3.2017 in Petition No. 434/GT/2014	92829.00
Capital cost excluding IDC	543245.26
Add: IDC allowed	96488.62
Financing charges including Syndication fees allowed	7098.00
Add: Items allowed in addition to already allowed in order dated 30.3.2017 in Petition No.434/GT/2014	
Service Tax	21.00
Entry Tax	1750.89
Preliminary Expenses	200.95
Initial spares allowed over an above the amount of Rs.9541.11 lakh allowed in order dated 30.3.2017	193.86
Closing Capital cost as on 31.3.2014 (considered as on 1.4.2014)	648998.59

Discharge of Liabilities

64. The Petitioner has submitted that liabilities for Rs.15584.65 lakh as on 1.4.2014 has been discharged and claimed as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
5918.46	2.23	3606.94	1121.42	1005.76

65. Accordingly, the liabilities discharged for 2014-19 is considered for the purpose of tariff. The balance discharged liabilities for Rs.3929.84 lakh as on 31.3.2019 will be considered during the 2019-24 tariff period.



Additional Capital Expenditure

66. The Petitioner has not claimed any additional capital expenditure, except for additional capitalization towards Entry tax amounting to Rs.777.86 lakh in 2014-15, that has been dealt with in paragraph 42 of this order.

Capital Cost for the 2014-19 tariff period

67. Based on the above discussions, the capital cost considered for the purpose of tariff for the 2014-19 tariff period is as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	648998.59	654917.05	654919.28	658526.22	659647.64
Additional Capital Expenditure	0.00	0.00	0.00	0.00	0.00
Discharge of Liabilities	5918.46	2.23	3606.94	1121.42	1005.76
Closing Capital Cost	654917.05	654919.28	658526.22	659647.64	660653.40

Debt-Equity Ratio

68. Regulation 19 of the 2014 Tariff Regulations provides as under:

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan: Provided that:

i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

69. The Commission vide order dated 30.3.2017 in Petition No.434/GT/2014, had determined the annual fixed charges of the generating station, on the basis of debt-equity ratio of 70:30, as on COD. Accordingly, in terms of Regulation 19 of the 2014 Tariff Regulations, the debt-equity ratio of 70:30 has been considered on the admitted additional capital expenditure, after adjustment of un-discharged liabilities as under:



(Rs. in lakh)

Asset	As on 1.4.2014		Net Additional Capitalization		As on 31.3.2019	
	Amount	%	Amount	%	Amount	%
Debt	454299.0	70.00%	8158.37	70.00%	462457.38	70.00%
Equity	194699.5	30.00%	3496.44	30.00%	198196.02	30.00%
Total	648998.5	100.00%	11654.81	100.00%	660653.40	100.00%

Return on Equity

70. The Petitioner has furnished the Tax Audit Reports for the assessment years 2015-16 to 2019-20 (FY 2014-15 to 2018-19) as supporting documents for the tax rate applied for grossing up of the rate of Return on Equity (ROE). The Petitioner has also furnished revised Form-2 for correct tax rate vide affidavit dated 9.8.2021. From the tax audit reports furnished by the Petitioner, the following tax rates have been considered for the purpose of grossing up of rate of ROE for the 2014-19 tariff period:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Tax payable	196871394	334985110	359257858	596288720	145179019
Total Income	939249515	1569634470	1683368901	2794020693	673722060
Tax Rate	20.961%	21.342%	21.342%	21.342%	21.549%

71. The base rate has been grossed up in terms of Regulation 24 and Regulation 25 of 2014 Tariff Regulations and ROE has been worked out and allowed as under:

(Rs. in lakh)

		2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Notional Equity	194699.58	196475.12	196475.78	197557.87	197894.29
B	Addition due to additional capitalization	1775.54	0.67	1082.08	336.43	301.73
C	Closing Equity (A+B)	196475.12	196475.78	197557.87	197894.29	198196.02
D	Average Equity [(A+C)/2]	195587.35	196475.45	197016.83	197726.08	198045.16
E	Return on Equity (Base Rate)	16.500%	16.500%	16.500%	16.500%	16.500%
F	Tax rate for the year	20.961%	21.342%	21.342%	21.342%	21.549%
G	Rate of Return on Equity [E/(1-F)]	20.876%	20.977%	20.977%	20.977%	21.032%



		2014-15	2015-16	2016-17	2017-18	2018-19
H	Return on Equity (D*G)	40830.81	41214.66	41328.22	41477.00	41652.86

Interest on loan

72. The Petitioner has submitted that in order to reduce the rate of interest on loan, it has undertaken re-financing of loan in terms of Regulation 26(7) of 2014 Tariff Regulations. It has further submitted that in terms of the said regulation, the benefit of re-financing is to be shared between the generating company and beneficiaries in the ratio of 1:2. The Petitioner has also stated that the refinancing charges are to be passed on to beneficiaries on actual basis. The Petitioner has furnished detailed calculation of the benefit in Annexure-T13 of the petition and has clarified that the share of the Petitioner due to refinancing, shall be recovered, over and above the annual fixed charges through separate bills, after approval of same. In view of the submissions of the Petitioner, the benefit of re-financing of loan shall be shared between the generating company and beneficiaries in the ratio of 1:2 as per Regulation 26(7) of 2014 Tariff Regulations. In case of any dispute, the parties are at liberty to make an application in accordance with Regulation 26(9) of the 2014 Tariff Regulations.

73. Interest on loan has been worked out as under:

- i. The opening gross normative loan as on 1.4.2014 has been arrived at in accordance with Regulation 26 of the 2014 Tariff Regulations.
- ii. The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project.
- iii. The repayment for the years of the 2014-19 tariff period has been considered equal to the depreciation allowed for that year.
- iv. Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.



74. Accordingly, Interest on loan has been computed as under:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative loan (A)	454299.01	458441.94	458443.50	460968.35	461753.35
Cumulative Repayment (B)	91484.21	125259.06	159187.28	193208.98	227353.16
Net loan-Opening (C)=(A-B)	362814.81	333182.88	299256.22	267759.38	234400.19
Repayment during the year (D=Depreciation)	33774.85	33928.22	34021.70	34144.18	34199.28
Cumulative repayment adjustment due to de-capitalization (E)	0.00	0.00	0.00	0.00	0.00
Net Repayment (F)=(D-E)	33774.85	33928.22	34021.70	34144.18	34199.28
Addition due to additional capitalization (G)	4142.92	1.56	2524.86	785.00	704.03
Net loan-Closing (H)=(C+G-F)	333182.88	299256.22	267759.38	234400.19	200904.95
Average loan (I)=[(C+H)/2]	347998.84	316219.55	283507.80	251079.79	217652.57
Weighted Average Rate of Interest (J)	12.7845%	11.6518%	10.3349%	9.6383%	9.0274%
Interest on loan (K)=(I*J)	44489.93	36845.42	29300.32	24199.80	19648.46

Depreciation

75. The Commission in its order dated 30.3.2017 in Petition No. 434/GT/2014 had considered depreciable value as under:

“126. In the present case, out of the 1000 MW capacity, 704 MW capacity (i.e. 70.4%) has been tied up under long-term PPA on cost plus basis. This implies that the depreciable value is to be limited up to 70.40%. Accordingly, the depreciable value has been considered as 70.40% of the gross block value (excluding free hold land)”

76. In this regard, the Petitioner has submitted that the Commission had approved the tariff of the generating station at 100% capacity, on the basis of 1000 MW (presently) capacity in terms of Regulation 6(5) of 2014 Tariff Regulations. The Petitioner has, however, submitted that it is recovering the capacity charges and energy charges from the beneficiaries, in proportion to capacity tied up in long term PPA i.e. 70.4% and is not recovering 100% tariff as approved by the Commission in order dated 30.3.2017. The Petitioner has further submitted that 100% capacity of



the project has been tied up under long term PPA with PTC, with effect from 23.12.2017.

77. We have examined the matter. The first proviso to Regulation 27(3) of the 2014 Tariff Regulations provides as under:

'(3) 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 in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

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

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.'

78. We have considered the submission of the Petitioner. The Commission vide its order dated 11.10.2021 in Petition No.12/RP/2020 in Petition No.249/GT/2016 (pertaining to tariff of Teesta III HEP) had observed the following:

"12. As noticed in paragraph 112 of the impugned order dated 9.1.2020, the Review Petitioner had submitted that the Implementation Agreement dated 18.7.2005 provides that upon completion of the 35-year period (unless extended further), the Project is to be transferred 'free of cost' to the Government of Sikkim. It has been further mentioned that the depreciable value (in Form-12) has been considered as per the proviso to Regulation 27(3) of the 2014 Tariff Regulations.....Accordingly, in terms of the proviso to Regulation 27(3) of the 2014 Tariff Regulations, we hold that the depreciable value of 100% (instead of 90% considered in the impugned order), based on the Implementation Agreement dated 18.7.2005 with the Government of Sikkim, shall be considered for the purpose of tariff."

79. It is noticed that the Implementation Agreement dated 18.11.1999 entered into by the Government of HP and the Petitioner provides that *"the salvage value shall be as reflected in the annual accounts of the company as per Companies Act."* In this regard, Part- C of Schedule II of the Companies Act 2013, states as under:



“... the residual value of an asset is often insignificant but it should generally be not more than 5% of the original cost of the asset.”

80. As per first proviso to Regulation 27(3) of the 2014 Tariff Regulations and in line with our decision in order dated 11.10.2021 in Review Petition No.12/RP/2020 in Petition No.249/GT/2016, the depreciable value has been considered at 95%. Due to revision in capital cost, cumulative depreciation and cumulative repayment have been revised to Rs.91484.21 lakh as on 1.4.2014, based on the 2009 Tariff Regulations, which has been considered for the purpose of tariff. The weighted average rate of depreciation (Annexure - I) , calculated in terms of the Regulation 27 of the 2014 Tariff Regulations, has been considered for calculation of depreciation as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital cost (A)	648998.59	654917.05	654919.28	658526.22	659647.64
Additional capital expenditure (B)	5918.46	2.23	3606.94	1121.42	1005.76
Closing Capital cost (C)=(A+B)	654917.05	654919.28	658526.22	659647.64	660653.40
Average Capital cost (D)=[(A+C)/2]	651957.82	654918.17	656722.75	659086.93	660150.52
Rate of Depreciation (E)	5.181%	5.181%	5.181%	5.181%	5.181%
Value of freehold land (F)	2200.02	2200.02	2200.02	2200.02	2200.02
Depreciable Value (G)= [95% of (D-F)]	617269.91	620082.24	621796.59	624042.57	625052.98
Remaining Depreciable value (H) = (G-cumulative dep. at 'J' at the end of previous year)	525785.71	494823.18	462609.32	430833.59	397699.82
Depreciation (I) = (D*E)	33774.85	33928.22	34021.70	34144.18	34199.28
Cumulative Depreciation at the end of the year (J)*	125259.06	159187.28	193208.98	227353.16	261552.44

* Cumulative depreciation as on 31.3.2014 is Rs.91484.21 lakh

Operation & Maintenance expenses

81. Sub-clause (c) of clause (3) of Regulation 29 of the 2014 Tariff Regulations provides as under:



“In case of the hydro generating stations, which have not been in commercial operation for a period of three years as on 1.4.2014, operation and maintenance expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation and resettlement works) for the first year of commercial operation. Further, in such case, operation and maintenance expenses in first year of commercial operation shall be escalated @6.04% per annum up to the year 2013- 14 and then averaged to arrive at the O&M expenses at 2013-14 price level. It shall be thereafter escalated @ 6.64%per annum to arrive at operation and maintenance expenses in respective year of the tariff period.”

82. Regulation 3(43) of the 2014 Tariff Regulations defines ‘original project cost’ as under:

“Original Project Cost’ means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission”

83. The Commission in its order dated 30.3.2017 in Petition No.434/GT/2014, had allowed O&M expenses based on the original project cost i.e. approved capital cost as on cut-off date (31.3.2014) of Rs.636074.26 lakh as under:

<i>(Rs in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
15253.44	16266.27	17346.35	18498.15	19726.42

84. However, considering the revision of the capital cost as on the cut-off date i.e. 31.3.2014, as stated in paragraph 63 above, the O&M expenses of the generating station stands revised as under:

<i>(Rs. in lakh)</i>	
Original project cost i.e. approved capital cost as on cut-off date (a)	648998.59
Certified R&R cost as per Form-13B (b)	43.30
Capital cost for the purpose of O&M calculation (c)=(a)-(b)	648955.29
O&M expenditure for the first year of plant operation i. e. 2011-12 @ 2% of above	12979.11

85. Accordingly, in terms of Regulation 29(3)(c) of the 2014 Tariff Regulations, the O&M expenses allowed are as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
15563.40	16596.80	17698.83	18874.04	20127.27



Interest on Working Capital

86. Sub-section (c) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

“28. Interest on Working Capital:

(1) The working capital shall cover

xxx

(c) Hydro generating station including pumped storage hydroelectric generating station and transmission system including communication system:

(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(iii) Operation and maintenance expenses for one month.”

87. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

“(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later”.

Working capital for Maintenance Spares

88. Working capital for Maintenance spares have been worked out on the basis of 15% of the O&M expenses as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
2334.51	2489.52	2654.82	2831.11	3019.09

Working capital for Receivables

89. Working capital for Receivables has been worked out on the basis of two months of fixed cost as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
23043.35	22013.28	20955.94	20339.22	19823.00

Working capital for O&M Expenses (1 month)

90. Working capital for O&M Expenses has been worked out on the basis of one month of O&M Expenses as under:



(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
1296.95	1383.07	1474.90	1572.84	1677.27

91. In terms of clause (3) of Regulation 28 of the 2014 Tariff Regulations, the bank rate of 13.50% as on 1.4.2014 for the 2014-19 tariff period has been considered. Accordingly, Interest on working capital has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital towards O & M expenses	1296.95	1383.07	1474.90	1572.84	1677.27
Working Capital towards Maintenance Spares	2334.51	2489.52	2654.82	2831.11	3019.09
Working Capital towards Receivables	23043.35	22013.28	20955.94	20339.22	19823.00
Total Working Capital	26674.81	25,885.87	25,085.67	24,743.17	24,519.36
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Total Interest on working capital	3601.10	3494.59	3386.57	3340.33	3310.11

Normative Annual Plant Availability Factor (NAPAF)

92. NAPAF of 90% as allowed in order dated 30.3.2017 in Petition No.434/GT/2014 is considered in this order.

Design Energy

93. Design Energy of 4131.06 MU corresponding to the installed capacity of 1000 MW as approved by CEA and allowed by order dated 30.03.2017 in Petition No.434/GT/2014 is considered in this order.

Annual Fixed Charges

94. Accordingly, the total annual fixed charges approved for the generating station for the 2014-19 tariff period (after truing-up) are summarized as under:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	33774.85	33928.22	34021.70	34144.18	34199.28
Interest on Loan	44489.93	36845.42	29300.32	24199.80	19648.46
Return on Equity	40830.81	41214.66	41328.22	41477.00	41652.86
O&M Expenses	15563.40	16596.80	17698.83	18874.04	20127.27
Interest on Working Capital	3601.10	3494.59	3386.57	3340.33	3310.11
Total	138260.09	132079.69	125735.64	122035.34	118937.98

95. The difference between the annual fixed charges already recovered by the Petitioner in terms of the order dated 30.3.2017 in Petition No.434/GT/2014 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 8(3) of the 2014 Tariff Regulations.

DETERMINATION OF TARIFF OF THE GENERATING STATION FOR THE 2019-24 TARIFF PERIOD

96. The Petitioner has filed the present petition also for determination of tariff of the generating station for the period from 1.4.2019 to 31.3.2024 in terms of the provisions of the 2019 Tariff Regulations. The capital cost and the annual fixed charges claimed by the Petitioner for the 2019-24 tariff period are as under:

Capital cost claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	690220.15	697483.93	701045.39	702193.08	702304.65
Add: Addition during the year/period	2085.00	1392.00	1197.00	441.00	185.00
Less: Decapitalisation during the year/period	297.72	381.86	49.31	329.44	62.34
Add: Discharges during the year/period	5476.50	2551.32	0.00	0.00	0.00
Closing Capital Cost	697483.93	701045.39	702193.08	702304.65	702427.30

Note-Capital Cost above with Revised Form 9(A) and Form 9(B)(i) vide affidavit dated 9.8.2021

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	35952.91	36250.91	36384.06	36426.49	36442.70
Interest on Loan	18197.26	15228.26	12033.12	8716.38	5364.15
Return on Equity	52850.33	53273.24	53419.10	53494.04	53522.13
Interest on Working Capital	2119.42	2221.55	2203.08	2181.56	2154.98



Capital					
O & M & Security Expenses	11710.14	14714.58	15299.36	15912.01	16553.86
Total	120830.05	121688.54	119338.72	116730.48	114037.82

Note- Annual Fixed Charges above have been claimed in original petition vide affidavit dated 25.10.2019, however the petitioner has not submitted Revised Annual Fixed Charges with revised Form 9(A) and Form 9(B)(i) vide affidavit dated 9.8.2021

Capital Cost

97. Clause (1) of Regulation 19 of the 2019 Tariff Regulations provides that the capital cost as determined by the Commission, after prudence check, in accordance with this Regulation shall form the basis of determination of tariff for existing and new projects. However, capital cost for an existing project is governed as per clause (3) of Regulation 19 of the 2019 Tariff Regulations, which is as under:

“The Capital cost of an existing project shall include the following:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernization as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries....”

98. The Petitioner vide Form-1(l) has claimed capital cost for the 2019-24 tariff period. Subsequently, the Petitioner has revised Form 9(A) and Form 9(B)(i) vide affidavit dated 9.8.2021, as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	690220.15	697483.93	701045.39	702193.08	702304.65
Add: Addition during the year/period	2085.00	1392.00	1197.00	441.00	185.00
Less: Decapitalisation during the year/period	297.72	381.86	49.31	329.44	62.34
Add: Discharges during the year/period	5476.50	2551.32	0.00	0.00	0.00
Closing Capital Cost	697483.93	701045.39	702193.08	702304.65	702427.30

99. It is noticed that though the Petitioner in the petition has claimed closing capital cost of Rs.692324.28 lakh as on 31.3.2019, it has claimed the opening capital cost of Rs.690220.15 lakh as on 1.4.2019. The Petitioner has submitted that the difference of Rs.2104.13 lakh is towards 'current assets and advances' from 31.3.2014 onwards. The Commission, while truing-up the tariff of this generating station for the 2014-19 tariff period, has, in this order, allowed the closing capital cost of Rs.660653.40 lakh as on 31.3.2019. Accordingly, in terms of Regulation 19 of the 2019 Tariff Regulations, the capital cost of Rs.660653.40 lakh as on 31.3.2019, has been considered as the opening capital cost as on 1.4.2019, for the purpose of determination of tariff for the 2019-24 tariff period.

Discharge of Liabilities

100. The discharge of liabilities for Rs.3929.84 lakh as on 1.4.2019 claimed by the Petitioner, as under, is allowed for the purpose of tariff:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1378.52	2551.32	-	-	-

Additional Capital Expenditure

101. Regulation 24 of the 2019 Tariff Regulations provides as under:

“(1) The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and upto the cut-off date may be admitted by the Commission, subject to prudence check:

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*



- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;
- (e) Change in law or compliance of any existing law; and
- (f) Force Majeure events:

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.”

102. Regulation 25 of the 2019 Tariff Regulations provides as under:

“25. Additional Capitalization within the original scope and after the cut-off date:

(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Deferred works relating to ash pond or ash handling system in the original scope of work;

(d) Liability for works executed prior to the cut-off date;

(e) Force Majeure events;

(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and

(g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.



103. Regulation 26 of the 2019 Tariff Regulations provides as under:

“26. Additional Capitalization beyond the original scope

(1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Force Majeure events;

(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;

(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernization (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(f) Usage of water from sewage treatment plant in thermal generating station.

(2) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalization takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalized.”

104. The Petitioner, in this petition, has claimed additional capital expenditure, on projection basis. The Commission vide ROPs of hearing dated 13.4.2021, and 16.7.2021, had directed the Petitioner to submit the details of additional capital expenditure claimed for the 2019-24 tariff period in the format specified under the 2019 Tariff Regulations i.e. Form 9A for projected additions during the period and Form 9Bi for projected deletions during the period. In response, the Petitioner vide affidavits dated 4.5.2021 and 9.8.2021 has furnished the said details as per the requisite format. The details of additional capital expenditure claimed by the Petitioner vide affidavit dated 9.8.2021 for the 2019-24 tariff period are as under:



(Rs. in lakh)

Sl. No.	Regulations	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Additions as per Form 9(A)							
1	24 (1)(a) & (b)	5476.50	2551.32	0.00	0.00	0.00	8027.82
2	25(2)(a)	1997.00	1317.00	662.00	406.00	50.00	4432.00
3	25(2)(c)	80.00	50.00	35.00	35.00	35.00	235.00
4	26 (1) (d)	8.00	0.00	0.00	0.00	0.00	8.00
5	76 & 77	0.00	25.00	500.00	0.00	100.00	625.00
Total Additions		7561.50	3943.32	1197.00	441.00	185.00	13327.82
De-capitalization (as per Form 9(B)(i))							
6	25	297.72	381.86	49.31	329.44	62.34	1120.67
Net Additional Capital Expenditure claimed		7263.78	3561.47	1147.69	111.56	122.66	12207.15

Claims under Regulation 24(1)(a) & 24(1)(b) of the 2019 Tariff Regulations

105. The Petitioner has claimed total additional capitalization for Rs.8027.82 lakh for the 2019-24 tariff period, under Regulation 24 of the 2019 Tariff Regulations. The Petitioner has claimed discharge of liabilities for assets/ works under the heads namely, Land, Environment & Ecology, LADA and Service Tax. It is pertinent to mention that discharge of liabilities, amounting to Rs.1378.52 lakh in 2019-20 and Rs.2551.32 lakh in 2020-21 claimed as additional capitalization has been allowed under paragraph 100 above. However, the additional capitalization of Rs.4097.98 lakh towards 'Service Tax' has not been allowed as stated in paragraph 41 above.

Claims under Regulation 25(2)(a) & (c) and Regulation 26(1)(d) of the 2019 Tariff Regulations

106. The additional capital expenditure claimed in terms of Regulation 25(2)(a) and Regulation 25(2)(c) of the 2019 Tariff Regulations are examined below:



(Rs. in lakh)

Sr. No.	Description of assets/ work	Projected Additional Capital Expenditure					Justification furnished by the Petitioner	Remarks for Admissibility / Non-admissibility	Amount Allowed
		2019-20	2020-21	2021-22	2022-23	2023-24			
Regulation 25(2)(a) of the 2019 Tariff Regulations									
1	Supervision Vehicles	8.00	124.00	50.00	0.00	0.00	Existing vehicles are very old and are prone to frequent breakdown. Further, as the Power Station is located at remote hilly location, the healthiness of the vehicles is important from the point of road safety. In view of this, procurement of 'new vehicles' is proposed are necessary due to obsolescence of the old vehicles.	As the additional capital expenditure claimed is (from sl. no. 1 to 5) are towards replacement of the asset/work, the additional capital expenditure claimed is allowed under Regulation 25(2)(a) of the 2019 Tariff Regulations. The Petitioner has also claimed de-capitalisation of replaced assets which has been considered under 'De-capitalization'.	182.00
2	Machinery & Equipment	9.00	66.00	0.00	56.00	50.00	Existing equipment are very old being left over equipment since construction time. Due to this, some are prone to		181.00
	a. Welding machine								
	b. Fork Lift								
	c. JCB, Loader,								



	d. Crane							
3	Material Shifting equipment i.e. Truck, Tipper etc.	0.00	27.00	12.00	0.00	0.00	frequent breakdowns failures and are very expensive to operate. Further, being very old, spare parts are not readily available. The Power Station is located at a very remote hilly area and such heavy equipment are not locally available on hire basis. In view of this, procurement of new equipment may be allowed.	39.00
4	Guide Vanes	280.00	300.00	0.00	350.00	0.00	The Power Station experiences heavy silt during monsoon period and underwater parts get heavily eroded. Every year, the guide vanes are repaired by welding followed by HVOC coating. However, after few years of such repair, the guide vanes become distorted due to heavy welding and	930.00



							cannot be installed. Hence, it is proposed to replace old and distorted guide vanes in a phased manner.		
5	Kilba Township	1500.00	0.00	0.00	0.00	0.00	The O&M staff staying at Kilba Colony are residing in old temporary tin sheds which are in use from the construction stage. The project is located at a very high altitude and experiences snow fall. Due to this, such accommodation is not conducive for employee health. In view of this, the old accommodation is being replaced in a phased manner.	The Petitioner has submitted that these expenditures (sl. No. 5 and 6) are claimed for replacement of assets deployed within original scope of the project and pertain to temporary structures which are being replaced by permanent structures for staff of the employees who are living in nearby	1500.00
6	Sholtu Township	200.00	800.00	600.00	0.00	0.00	Since construction stage of the project, most of the offices of various departments are being operated from shelter/ temporary structure at scattered locations. Therefore,	area on rent/ temporary arrangements. The Petitioner has also claimed decapitalization of the old assets. With regard to claim of the	1600.00



						<p>construction of permanent centralized office has been taken up for the efficient operation of Power Station.</p>	<p>Petitioner, it is clear from Form 5B of the petition that the Petitioner, out of Rs.57.82 crore (revised capital cost as vetted by DIA) has incurred Rs.23.30 crore as on COD of the generating station under the head 'Buildings'. As such, the claim of the Petitioner is well within the balance available under this head. However, the Petitioner is directed to submit the complete details of the expenditure under this head including details of un-discharged liabilities in this regard, till date. As the additional capital expenditure are towards replacement of the assets/ works of original scope, the</p>	
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								additional capital expenditure claimed are allowed under Regulation 25(2)(a) of the 2019 Tariff Regulations. The de-capitalisation of old replaced assets are considered under 'De-capitalization' allowed.		
Total amount claimed		4432.00								
Total amount allowed		4432.00								

Regulation 25(2)(c) of the 2019 Tariff Regulations									
7	XLPE Cable temperature monitoring system	80.00	0.00	0.00	0.00	0.00	XLPE Cable temperature monitoring system was supplied along with the XLPE Cables. At present, the system is not working and the model has become obsolete. Due to this, the XLPE Cable temperature is not being monitored. In view of this, the system needs to be replaced.	The additional capital expenditure claimed by the Petitioner (sl.no. 7 to 10) are for replacement of assets deployed within the original scope of project due to obsolescence of assets. The Petitioner has furnished the relevant documents for the same. Accordingly, on prudence check, the	80.00
8	Vibration Monitoring System (For all 4 units)	0.00	25.00	25.00	25.00	25.00	The Vibration Monitoring System was supplied		100.00



							along with the Generating Units. At present, the system is prone to frequent malfunctioning/ breakdown. The particular model had become obsolete and OEM support for this model has been withdrawn. Due to this, spare availability is not possible. As proper functioning of the vibration monitoring system is essential for safe operation of the Generating Units, these need to be replaced.	additional capital expenditure are allowed under Regulation 25(2)(c) of the 2019 Tariff Regulations. The replacement and decapitalization of old asset is considered under 'De-capitalization.	
9	Human Machine Interface (HMI) up-gradation for excitation system for three units	0.00	0.00	10.00	10.00	10.00	Excitation Systems were purchased with the main Generating Units and are very old. At present, Human Machine Interface (HMI) of the Excitation Systems have become obsolete and OEM support like spares have been withdrawn. In		30.00



							case of any future breakdown, it may not be possible to operate the Excitation System through HMI. Hence, to retain the present functionality and efficiency level, HMI needs upgradation.	
10	Partial Discharge measurement system	-	25.00	-	-	-	The Partial Discharge measurement of GIS equipment system was supplied along with the GIS. At present, the system is partly functioning and proper monitoring is not being done. The particular model had become obsolete and OEM support for this model has been withdrawn. Due to this, spare availability is not possible. As proper functioning of PD monitoring system is essential for safe operation of the GIS,	25.00



							these need to be replaced.		
Total amount claimed		235.00							
Total amount allowed		235.00							
Regulation 26(1)(d) of the 2019 Tariff Regulations									
11	Beam Detector	8.00	0.00	0.00	0.00	0.00	The Power Station being underground have a very high threat perception of fire hazard. Beam Detectors are required for fire detection. Based on the recommendation of the Insurance Audit (copy enclosed), this system was installed in addition to existing fire detection system. This expenditure is necessary for safety and security of the plant, under Regulation 26 (1)(d) of the 2019 Tariff Regulations.	Considering the fact that the additional capital expenditure claimed is on account of higher safety and security of the generating station, the claim is allowed under Regulation 26(1)(d) of the 2019 Tariff Regulations.	8.00
Total amount claimed		8.00							
Total amount allowed		8.00							

107. In addition to the above, the Petitioner has claimed additional capital expenditure for certain items under Regulation 76 (Power to relax) and Regulation 77 (power to remove difficulties) and the same are examined below:



Regulation 76 and Regulation 77 of the 2019 Tariff Regulations									
12	HVOC Coating Plant	0.00	0.00	500.00	0.00	0.00	The Power Station experiences heavy silt during monsoon period and underwater parts get heavily eroded. The damaged components are repaired by welding and HVOC coating. For HVOC Coating, all components are sent to external vendors. It is proposed to develop a HVOC Coating plant at the Power Station in line with the facilities developed at Nathpa Jhakhri Power Station.	It is noted that considering the same reasons as stated here, the Commission in order dated 30.3.2017 in petition no. 434/GT/2014 has allowed capitalization of additional spares. As additional spares had already been allowed, the claim of the Petitioner is not allowed .	0.00
13	Turbine Guide Bearing pad	0.00	0.00	0.00	0.00	100.00	At present, there is only one set of TGB pads available. The procurement lead time for this item is very long. As the Power Station has 4	The claim of the expenditure is for procurement of spares. Since the same is in the nature of O&M expenses,	0.00



							Units, it is prudent to have another set available to ensure unit availability	the expenditure is not allowed .		
14	Transit Mixer (Self Loading type)	0.00	25.00	0.00	0.00	0.00	Transit Mixer (Self Loading Type) to be purchased for various Civil Construction/ Repairing related activities as existing one Transit Mixer is very old and also is not self-loading type.	As the expenditure claimed is for repair and maintenance works, the same is not allowed .	0.00	
Total amount claimed		625.00								
Total amount allowed		0.00								
Grand Total amount claimed		2085.00	1392.00	1197.00	441.00	185.00				
Grand Total additions allowed		4675.00								

De-capitalization

108. As regards de-capitalization, Regulation 26(2) of the 2019 Tariff Regulations provides as under:

“(2) In case of de-capitalization of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalization shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalization takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalized”

109. The Petitioner vide affidavit dated 9.8.2021 has claimed the following de-capitalization (as per Form 9Bi) for assets such as vehicles, guide vanes, DG



welding machine, vibration monitoring system, partial discharge measurement system, Building at Sholtu & Kilba, fork lift, JCB excavator, trucks, human machine interface (HMI) upgradation for excitation system, Firefighting tender, Tank mounted air compressor, Mobile crane, etc. as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24	Total
297.72	381.86	49.31	329.44	62.34	1120.67

110. The Petitioner has submitted that the aforesaid decapitalized assets form part of the original scope of work of the Project and, presently, additional capital expenditure is proposed against the de-capitalization. As the decapitalization is in respect of the above-mentioned assets, which are not in use, claim of the Petitioner is allowed.

111. Also, on perusal of Form 9(B)(i), it is noticed that there is variation in the gross value of the old assets furnished by the Petitioner for assets such as Bolero camper, trucks, etc., in different years. The Petitioner is directed to furnish clarification for the same at the time of truing-up of tariff of the generating station. The net additional capital expenditure allowed is summarized as under:

(Rs. in lakh)

Regulations	2019-20	2020-21	2021-22	2022-23	2023-24
Additions allowed in Additional Capital Expenditure (A)					
24 (1)(a) Discharge of Liabilities	1378.52	2551.32	0.00	0.00	0.00
24 (1)(b)	0.00	0.00	0.00	0.00	0.00
25(2)(a)	1997.00	1317.00	662.00	406.00	50.00
25(2)(c)	80.00	50.00	35.00	35.00	35.00
26 (1) (d)	8.00	0.00	0.00	0.00	0.00
76 & 77	0.00	0.00	0.00	0.00	0.00
Entry Tax		1529.06			
Total (A)	3463.52	5447.38	697.00	441.00	85.00
De-capitalization considered (B)	297.72	381.86	49.31	329.44	62.34
Net Additional Capital Expenditure allowed (C)=(A-B)	3165.80	5065.52	647.69	111.56	22.66



Capital Cost for the 2019-24 tariff period

112. Accordingly, the capital cost considered for the purpose of tariff for the 2019-24 tariff period is as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	660653.40	663819.20	668884.72	669532.41	669643.97
Net Additional capital expenditure	3165.80	5065.52	647.69	111.56	22.66
Closing capital cost	663819.20	668884.72	669532.41	669643.97	669666.63
Average capital cost	662236.30	666351.96	669208.57	669588.19	669655.30

Debt-Equity Ratio

113. Regulation 18 of the 2019 Tariff Regulations provides as under:

“18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan: Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.”

114. The Petitioner has stated that the funding of additional capital expenditure has been made through internal resources and others. Accordingly, in terms of Regulation 18 of the 2019 Tariff Regulations, the debt equity ratio of 70:30 has been considered on the admitted additional capital expenditure, after adjustment of the un-discharged liability for the purpose of tariff.

Asset	As on 1.4.2019		Net Additional Capitalization during 2019-24		As on 31.3.2024	
	Amount	%	Amount	%	Amount	%
Debt	462457.38	70.00%	6309.26	70.00%	468766.64	70.00%
Equity	198196.02	30.00%	2703.97	30.00%	200899.99	30.00%
Total	660653.40	100.00%	9013.23	100.00%	669666.63	100.00%



Return on Equity (ROE)

115. For grossing up of ROE during the 2019-24 tariff period, MAT rate of 17.472% for the year 2019-20 has been allowed, subject to truing up. Further, in terms of Regulation 30(2) of the 2019 Tariff Regulations, additional capital expenditure as allowed above for the purpose of calculating ROE, has been bifurcated under the heads 'additional capital expenditure with-in the original scope of work' and 'additional capital expenditure beyond the original scope of work', as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional capital expenditure allowed in paragraph 111 above	3165.80	5065.52	647.69	111.56	22.66
Equity portion considered in above @ 30% (b)	949.74	1519.66	194.31	33.47	6.80
additional capital expenditure with-in the original scope of work in (b) (i)	947.34	1519.66	194.31	33.47	6.80
additional capital expenditure beyond the original scope of work excluding the additional capitalization due to change in law in (b) (ii)	2.40	0.00	0.00	0.00	0.00

116. Based on above, ROE with respect to additional capital expenditure with-in the original scope of work, is calculated and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Notional Equity (A)	198196.02	199143.36	200663.02	200857.32	200890.79
Addition due to additional capitalization (B)	947.34	1519.66	194.31	33.47	6.80
Closing Notional Equity(C)=(A+B)	199143.36	200663.02	200857.32	200890.79	200897.59
Average Equity (D)=[(A+C)/2]	198669.69	199903.19	200760.17	200874.06	200894.19
Return on Equity (Base Rate) (E)	16.500%	16.500%	16.500%	16.500%	16.500%
Tax rate for the year (F)	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (G)=[(E)/(1-F)]	19.993%	19.993%	19.993%	19.993%	19.993%
Return on Equity (H)=(D*G)	39720.03	39966.64	40137.98	40160.75	40164.78



117. As regards ROE for the 2019-24 tariff period, in respect of additional capitalization after cut-off date and beyond the original scope, excluding additional capitalization due to change in law, the same is computed at the weighted average rate of interest on loan portfolio of the generating station. This is subject to revision, if any, at the time of truing-up of tariff. Accordingly, ROE has been worked out and allowed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Notional equity (A)	0.00	2.40	2.40	2.40	2.40
Addition due to Additional Capitalization (after cut of date) (B)	2.40	0.00	0.00	0.00	0.00
Closing Equity (C)= (A+B)	2.40	2.40	2.40	2.40	2.40
Average Equity (D) = [(A+C)/2]	1.20	2.40	2.40	2.40	2.40
Weighted average rate of interest on actual loan portfolio (E)	9.256%	9.256%	9.256%	9.256%	9.256%
Return on Equity (F)=(D*E)	0.11	0.22	0.22	0.22	0.22

Interest on loan

118. Interest on loan has been worked out as under:

- a) The gross normative loan amounting to Rs.462457.38 lakh has been considered as on 1.4.2019;
- b) Cumulative repayment amounting to Rs.261552.44 lakh as on 31.3.2019 as considered in this order in truing up for the 2014-19 tariff period has been considered as on 1.4.2019;
- c) The repayment for the year of the 2019-24 tariff period has been considered equal to the depreciation allowed for that year;
- d) Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest as claimed by the Petitioner. This is subject to true-up.

119. Accordingly, Interest on loan has been worked out as under:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative loan (A)	462457.38	464673.44	468219.31	468672.69	468750.78
Cumulative Repayment up to previous year (B)	261552.44	295727.14	330059.25	364700.93	399192.74
Net loan-Opening (C)=(A-B)	200904.95	168946.30	138160.05	103971.76	69558.04
Repayment during the year (D)	34307.33	34520.55	34668.53	34688.20	34691.68
Less: Cumulative repayment adjustment on a/c of de-capitalization (E)	132.63	188.43	26.86	196.39	40.39
Net Repayment (F)=(D-E)	34174.70	34332.12	34641.67	34491.81	34651.29
Addition due to additional capitalization (G)	2216.06	3545.87	453.38	78.09	15.86
Net loan-Closing (H)=(C+G-F)	168946.30	138160.05	103971.76	69558.04	34922.61
Average loan (I)=[(C+H)/2]	184925.63	153553.18	121065.91	86764.90	52240.33
Weighted Average Rate of Interest on loan (J)	9.2564%	9.2564%	9.2564%	9.2564%	9.2564%
Interest on loan (K)=(I*J)	17117.37	14213.42	11206.29	8031.26	4835.55

Depreciation

120. Accordingly, the cumulative depreciation amounting to Rs.261552.44 lakh, as on 31.3.2019 as above, is considered for the purpose of tariff. Depreciation has been calculated by applying the weighted average rate of depreciation (WAROD), calculated in terms of the Regulation 33 of the 2019 Tariff Regulations (Annexure – II), subject to truing up. Accordingly, depreciation has been worked out and allowed as follows:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross block (A)	660653.40	663819.20	668884.72	669532.41	669643.97
Net Additional capital expenditure during 2019-24 (B)	3165.80	5065.52	647.69	111.56	22.66
Closing gross block (C)=(A+B)	663819.20	668884.72	669532.41	669643.97	669666.63
Average gross block (D)=[(A+C)/2]	662236.30	666351.96	669208.57	669588.19	669655.30
Value of Freehold land	2200.02	2200.02	2200.02	2200.02	2200.02
Depreciable Value (E) = [95% of (D-Freehold land)]	627034.47	630944.34	633658.12	634018.76	634082.52
Remaining Depreciable Value at the beginning of the year (F)=[(E) - (Cumulative Depreciation at 'K' at the end of previous year)]	365482.03	335217.21	303598.87	269317.84	234889.78
Rate of Depreciation (G)	5.181%	5.181%	5.181%	5.181%	5.181%
Depreciation (H)=(D*G)	34307.33	34520.55	34668.53	34688.20	34691.68
Cumulative Depreciation at the end of the year (I)=[(H)+ (Cumulative Depreciation at 'K' at the end of previous year)]	295859.77	330247.68	364727.79	399389.13	433884.41
Less: Depreciation adjustment on account of de-capitalization (J)	132.63	188.43	26.86	196.39	40.39
Cumulative Depreciation at the end of the year (K)*	295727.14	330059.25	364700.93	399192.74	433844.03

*Cumulative depreciation as on 31.3.2019 is Rs.261552.44 lakh

Operation & Maintenance Expenses

121. Regulation 35(2)(a) of the 2019 Tariff Regulations provides as under:

“(2) Hydro Generating Station: (a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 1.4.2019:

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Karcham Wangtoo	11710.14	12268.31	12853.09	13465.74	14107.59

Note: The impact in respect of revision of minimum wag, pay revision and GST, if any, will be considered at the time of determination of tariff.

(c) In case of hydro generating stations which have not completed a period of three years as on 1.4.2019, operation and maintenance expenses for 2019-20 shall be worked out by applying escalation rate of 4.77% on the applicable operation and maintenance expenses as on 31.3.2019. The operation and maintenance expenses for subsequent years of the tariff period shall be worked out by applying escalation rate of 4.77% per annum.

(c) The Security Expenses and Capital Spares for hydro generating stations shall be allowed separately after prudence check:



Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.”

122. The Petitioner has claimed O&M expenses in terms of Regulation 35(2) of the 2019 Tariff Regulations. In addition, the Petitioner has claimed Security Expenses as additional O&M expenses in terms of Regulation 35(2)(d) of the 2019 Tariff Regulations. Accordingly, the total O&M expenses claimed by the Petitioner are as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses claimed as per Regulation 35(2)(a) of the 2019 Tariff Regulations (A)	11710.14	12268.31	12853.09	13465.74	14107.59
Security Expenses (B)	0.00	2446.27	2446.27	2446.27	2446.27
Total O&M expenses claimed for the period (C)=(A)+(B)	11710.14	14714.58	15299.36	15912.01	16553.86

123. The Respondents UPPCL, MPPMCL, BRPL and TPDDL have submitted that the O&M expenses claimed by the Petitioner are exorbitant and unreasonable and the same would result in additional burden to end consumers. These Respondents have also submitted that the Petitioner may be directed to furnish the detailed information for prudence check, as required under Regulation 35(2)(d) of the 2019 Tariff Regulations. As regards Corporate Expenses, the Respondents have submitted that the said expenses may not be allowed and the Petitioner may be directed to submit detailed information and justification in support of such claims. The Respondent, MPPMCL has submitted that the Commission may direct the Petitioner to file appropriate application with regard to pay revision, at the time of truing up, and the Commission may examine the same on a case to case basis. In response, the Petitioner has submitted that the impact of pay/ wage revision has not



been claimed under O&M expenses and the petition for the same will be filed only after finalization of pay revision by the Government/ Appropriate Authorities.

124. The O&M expenses claimed by the Petitioner are in accordance with Regulation 35(2)(a) of the 2019 Tariff Regulations and hence allowed.

Security Expenses

125. The Petitioner has claimed Security expenses for Rs.2446.27 lakh for each year of the period 2019-24 in terms of Regulation 35(2)(c) of the 2019 Tariff Regulations, based on the letter dated 12.12.2018 of CISF indicating the projected security expenses for the 2019-24 tariff period. It is noticed that the actual security expenses for the period 2016-17 as provided by the Petitioner while framing the 2019 Tariff Regulations, was Rs.138.86 lakh. However, the projected claim of the Petitioner in this petition, is on the higher side, the reason for which shall be furnished by the Petitioner at the time of truing-up of tariff for the 2019-24 tariff period, the reason for which shall be furnished by the Petitioner at the time of truing up of tariff. However, based on the letter of CISF dated 12.12.2018, the security expenses as claimed by the Petitioner are allowed on projection basis. The Petitioner is, however, directed to submit details of the actual security expenses incurred in terms of Regulation 35(2)(c) of the 2019 Tariff Regulations, at the time of truing-up of tariff.

126. Accordingly, the total O&M expenses, including security expenses claimed by the Petitioner, as in the table under paragraph 122 above is allowed.



Interest on working capital

127. Sub-section (c) of clause (1) of Regulation 34 of the 2019 Tariff Regulations provides as under:

“34. Interest on Working Capital: (1) The working capital shall cover:

(c) For Hydro generating station (Including Pumped Storage Hydro Generating Station) and transmission system:

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expense including security expenses; and

(iii) Operation and maintenance expenses including security expenses for one month”

128. Clause (3) of Regulation 34 of the 2019 Tariff Regulations provides as under:

“34(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later.

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.”

Working capital for Receivables

129. Working capital for Receivables has been worked out and allowed on the basis of 45 days of fixed cost as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
12877.37	12977.46	12701.20	12388.32	12038.82

Working capital for Maintenance Spares

130. Working capital for Maintenance spares has been worked out on the basis of 15% of annual O&M expenses and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1756.52	2207.19	2294.90	2386.80	2483.08



Working capital for O&M expenses

131. Working capital for O&M expenses has been worked out on the basis of one month of O&M expenses, including security expenses, and allowed as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
975.85	1226.22	1274.95	1326.00	1379.49

Rate of Interest of working Capital

132. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered on projection basis, for the 2019-24 tariff period is 12.05% (i.e. 1-year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for the 2019-24 tariff period is being determined during the year 2021-22, the SBI MCLR as on 1.4.2020 (7.75%) and as on 1.4.2021(7.00%) is also available which is lower than 8.55% as on 01.04.2019. Since the rate of interest on working capital is subject to revision at the time of truing-up of tariff, based on the bank rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020 and 1.4.2021, for the subsequent financial years. Accordingly, the rate of interest for the year 2019-20 is 12.05%, 2020-21 is 11.25% (i.e., 1-year SBI MCLR of 7.75% as on 1.4.2020 + 350 basis points) and for the subsequent years the rate of interest of 10.50% (i.e.,1-year SBI MCLR of 7.00% as on 1.4.2021 + 350 basis points) has been considered.

133. Accordingly, Interest on working capital is allowed as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital towards O & M expenses	975.85	1226.22	1274.95	1326.00	1379.49
Working Capital towards Maintenance Spares	1756.52	2207.19	2294.90	2386.80	2483.08
Working Capital towards Receivables	12877.37	12977.46	12701.20	12388.32	12038.82



	2019-20	2020-21	2021-22	2022-23	2023-24
Total Working Capital	15609.74	16410.86	16271.05	16101.13	15901.39
Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
Total Interest on Working capital	1880.97	1846.22	1708.46	1690.62	1669.65

Annual Fixed Charges

134. Based on the above, the annual fixed charges approved for the 2019-24 tariff period in respect of the generating station is summarized below:

	2019-20	2020-21	2021-22	2022-23	2023-24
	<i>(Rs. in lakh)</i>				
Depreciation	34307.33	34520.55	34668.53	34688.20	34691.68
Interest on Loan	17117.37	14213.42	11206.29	8031.26	4835.55
Return on Equity	39720.14	39966.87	40138.20	40160.97	40165.00
O&M Expenses	11710.14	14714.58	15299.36	15912.01	16553.86
Interest on Working Capital	1880.97	1846.22	1708.46	1690.62	1669.65
Total	104735.95	105261.64	103020.84	100483.06	97915.73

Normative Annual Plant Availability Factor (NAPAF)

135. The Petitioner has claimed NAPAF of 90%. It is observed that there is no specific provision for NAPAF under the 2019 Tariff Regulations for this generating station. It is noticed that the actual PAF for the period 2012-17 as provided by the Petitioner while framing of Tariff Regulations, 2019 was 96.69%. Further, the maximum NAPAF allowed for pondage type of hydro generating in terms Regulation 50(A)(1) of the 2019 Tariff Regulations is 90%. In view of above, NAPAF of 90% as claimed by the Petitioner is allowed for the purpose of tariff for the period 2019-24 period.

136. The Petitioner has also submitted that the ramp up/ ramp down period may be reviewed or in alternate, allow power generation in the ramping period to be considered for PAFM calculation based on the following background:

'27. Ramp up & Ramp down of the units:



The Hon'ble Commission vide its MYT order dated 30.3.2017 has prescribed NAPFM for the KWHEP at 90% as against claimed 85%. The availability of plant (PAFM) is dependent upon the availability of water and machine both. To achieve NAPFM hydro plants are required to plan its generation in accordance with the peak hours notified by Regional load dispatch centres (NRLDC in case of KWHEP) in accordance with Regulation 44(2) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019.

Sometime the peak hours notified by the RLDC are broken into 2 parts. In both the situations, single block/ dual blocks of peak hours, hydro generators are advised by RLDCs to ramp up / ramp down the units at a specific ramp rate of 15 minutes i.e. minimum interval of 15 minutes between the units to sync with the Grid. Generating station having multiple units mandatorily have to wait for the units to synchronise with the Grid.

It can be observed from the studies of CEA that compared to coal, hydro is a major contributor due to its ability of quick start-stop and quick ramping. (Ref. "Flexible Operation of Thermal Power Plant for Integration of Renewable Generation" of January 2019)

It is submitted that the water being essential part to achieve NAPFM, is utilised to give such ramp up/ ramp down by the hydro generators. Said water quantum can be switched in to the peak hours to meet the Grid requirement of peaking. It is also submitted that the units at KWHEP are capable to sync with the Grid at a faster pace against 15 minutes' time period prescribed by the RLDC. This will definitely help the Grid and Nation to meet its peaking requirement of energy.'

137. The submissions of the Petitioner above are in the nature of a prayer to amend the Regulations notified by the Commission with regard to Peak hour tariff. Since the same is beyond the scope of the present petition, the request of the Petitioner has not been considered in this order.

Auxiliary Energy Consumption

138. Regulation 50(C) of the 2019 Tariff Regulations provides as follows:

Type of Station	Auxiliary Energy Consumption	
	Installed Capacity above 200 MW	Installed Capacity up to 200 MW
Surface		
Rotating Excitation	0.7%	0.7%
Static	1.0%	1.2%
Underground		
Rotating Excitation	0.9%	0.9%
Static	1.2%	1.3%

139. The generating station is underground with static excitation system with installed capacity of 1000 MW. The Petitioner has claimed Auxiliary Energy



Consumption (AEC) of 1.2% for the generating station in terms of the 2019 Tariff Regulations and the same is allowed.

Design Energy

140. As regards Design Energy (DE) of the generating station, the Commission in its order dated 30.3.2017 in Petition No.434/GT/2014 decided as under:

“Analysis and Decision

29. *We have examined the submissions of the parties. The petitioner has submitted that in response to CEA letter dated 23.9.2013 it had made a request to CEA vide letter dated 5.10.2013 to consider the deemed installed capacity of the project as 1091 MW. However, CEA has recommended that the installed capacity of the project has to be maintained as 1000 MW as accorded in TEC without giving any reason on the request of the petitioner. The petitioner has further submitted that it had assigned the task to IIT Roorkee for reconfirmation/ reassessment of safety/ adequacy of various components of the project for generation of 1200 MW capacity and IIT Roorkee in its report of June 2015 has recommended that the electro mechanical equipments provided at the generating station are capable and safe to operate the plant at 4x 300 MW i.e. 1200 MW capacity continuously. While the respondent, UPPCL has maintained that the installed capacity should be considered as 1000 MW in terms of the recommendations of the CEA as contained in the TEC, the other respondents have submitted that the capacity of the project if increased to 1200 MW, should be subject to restriction in capital cost and no additional burden on account of the increased capacity shall be passed on to the consumers.*

30. *Section 8 of the Electricity Act, 2003 (EA, 2003), provides as under:*

(1) Notwithstanding anything contained in section 7, any generating company intending to set-up a hydro-generating station shall prepare and submit to the Authority for its concurrence, a scheme estimated to involve a capital expenditure exceeding such sum, as may be fixed by the Central Government, from time to time, by notification.

(2) The Authority shall, before concurring in any scheme submitted to it under sub-section (1) have particular regard to, whether or not in its opinion, -

(a) the proposed river-works will prejudice the prospects for the best ultimate development of the river or its tributaries for power generation, consistent with the requirements of drinking water, irrigation, navigation, flood-control, or other public purposes, and for this purpose the Authority shall satisfy itself, after consultation with the State Government, the Central Government, or such other agencies as it may deem appropriate, that an adequate study has been made of the optimum location of dams and other river works;

(b) the proposed scheme meets the norms regarding dam design and safety.

31. *It is observed that CEA while granting TEC during the year 2003 had approved the Design Energy of the project as 4559.77 MU for the installed capacity of 1000 MW (4x*



250 MW). The petitioner has submitted that the project being grid connected, shall be capable of generating upto 110% of rated/ installed capacity on a continuous basis as per the CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007. According to the petitioner, if only 10% continuous overload capacity is considered for the project, the deemed rated/ installed capacity of each generating unit would work out to 272.75 MW. Based on this, the petitioner has considered the deemed rated/ installed capacity of the project as 1091 MW (4x 272.75 MW) with 10% overload on 1091 MW as specified under the above said regulation, which works out to 1200 MW. In support of this contention, the petitioner has submitted that the word 'regulate' does not mean to 'restrict' and is intended to promote the objective of the EA, 2003 and thus for optimizing the generation during the few days of monsoon season, it was considered prudent to provide the higher overload capacity, without compromising the safety and security of the plant.

32. The submissions of the petitioner, cannot, in our view, be accepted. From the plain reading of Section 8 of the EA 2003 (as quoted above), it is evident that prior to the concurrence of any scheme with respect to hydro-generating stations, the CEA shall have particular regard as to whether the proposed scheme meets the norm regarding the dam design and safety. Moreover, Section 73(n) of the EA 2003 vests the CEA with the functions and duties to advise the Appropriate Govt. and the Appropriate Commission on all technical matters relating to generation, transmission and distribution of electricity. In our view, CEA had decided the capacity of the project as 1000 MW as per TEC during the year 2003, which does not mention any specific overload provision in the generating units. CEA, being a statutory body and mandated to advise the Commission on all technical matters, involved in deciding the Installed capacity and Design Energy of the project, we are inclined to consider the recommendations of the CEA for installed capacity of 1000 MW (4x250 MW). Accordingly, the prayer of the petitioner for consideration of installed capacity as 1091 MW is rejected. Accordingly, we proceed to determine the tariff of the generating station based on the installed capacity of 1000 MW and the design energy of 4131.06 MU as recommended by CEA. The prayer of the petitioner is disposed of as under:

(a) The capacity of the generating station shall be 1000 MW (4 x 250MW) as accorded by CEA in TEC.

(b) Overload Capacity of generating station shall be 10% as per provisions of CEA Regulations and IEGC. NLDC/NRLDC shall ensure that the scheduling of the station shall be based on the installed capacity of 1000 MW with overload capacity of 10%.

(c) The revised Design Energy of the generating station shall be 4131.06 MU corresponding to the installed capacity of 1000 MW as against 4559.77 MU originally envisaged at the time of TEC.

The Saleable Design Energy of the project shall be calculated after deduction of the Auxiliary Energy Consumption as specified under the 2014 Tariff Regulations, i.e. 1.2% & 12% free power to Govt. of H.P as claimed by the petitioner for the period 2014-19. Accordingly, Saleable Design Energy of generating station shall be 3591.71 MUs as detailed below:

	Million Units (MUs)
Revised Design Energy	4131.06
Less: Auxiliary Energy Consumption @ 1.2%	49.57
Net Design Energy	4081.49
Free Power to GoH.P @ 12% of Net Design Energy	489.78



Saleable Design Energy	3591.71
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(d) NLDC/NRLDC shall ensure that the scheduling of the station shall be based on the installed capacity of 1000 MW with overload capacity of 10%. For the purpose of keeping the velocities in HRT and TRT within safe region as envisaged by CEA while approving TEC, the petitioner shall not be allowed to overload the machines beyond 1100 MW in any case. Further, availability declaration above 1100 MW, even when actual water inflow is more than required for generation of 1100 MW, shall not be allowed and considered for the calculation of Plant Availability Factor (PAF) and secondary energy benefits.

33. It is noticed that in terms of the IA dated 18.11.1999 entered into between the petitioner and the Govt. of H.P, free power to the Govt. of H.P shall be 18% for the next 28 years from the expiry of the period of first 12 years. It is pertinent to mention that in terms of the 2014 Tariff Regulations, free energy to home state is limited to 13% or actual, whichever is less. However, the respondents in their respective PPAs have agreed to the enhanced free power to home state after 12 years. In this background and considering the fact that this issue of enhanced free power to home state after 12 years is not relevant for the purpose of determination of tariff of the generating station for the period 2014-19, the same has not been considered. However, the parties are at liberty to claim the relief and the same will be considered at an appropriate time as per the prevailing tariff regulations.

34. The petitioner has submitted that it may be required to supply additional free power towards LADF as insisted by Govt. of H.P. The petitioner has also stated that the same has not been considered for determination of tariff for the present but shall be duly considered as and when necessary. We are of the view that in case the petitioner is required to supply additional free power towards LADF, it may approach the Commission by an appropriate application for relief on this count.”

141. The Petitioner in the present petition has submitted as under:

(1) An Implementation Agreement (IA) was executed with Government of Himachal Pradesh (GoHP) for implementation of Karcham Wangtoo HEP on 18.11.1999. Article 5 of the Implementation Agreement (IA) deals with obligations of the Company. The relevant Clause of the Article-5 is reproduced below:

“5.1. Government Supply

(a) The Company shall supply to the Government or its Agent, during the Agreement period, at the Interconnection Point without any cost or charges to the Government, the quantum of electrical energy generated as specified below (Government Supply):-

i)	Commencing from the date of synchronization of the first Unit and for the first twelve (12) years from Commercial Operation Date (COD) of the Project	Twelve (12) percent of Net Generation
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ii)	For the next twenty eight (28) years after expiry of the period specified in (i) above	Eighteen (18) percent of Net Generation
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(2) Power Purchase Agreement (PPA) was executed on 21.3.2006 and a supplementary PPA was executed on 1.12.2017 with PTC. The definition of Free Power given in the PPA is reproduced below:

“Free Power means the quantum of power (in kW or multiples thereof) supplied free of cost by the Company at or before the Delivery Point to the Project State Government. This shall be equal to 12% (twelve percent) of net generation (gross generation at generator terminals less Auxiliary Consumption), for the first 12 (twelve) Tariff Years from the COD and 18% (eighteen percent) of such net generation from the start of the 13th (thirteenth) Tariff Year till the end of the term of this Agreement”.

(3) PTC India Limited had entered into four PSAs with the States of Haryana, Uttar Pradesh, Rajasthan and Punjab respectively. The definition of free power given in PSAs with all four States is similar to the definition given in the PPA.

(4) The issue of free power is in respect of the period starting after 12 years from COD of the project (i.e. after 13.9.2023). It is relevant for next tariff cycle of 2019-24 and has no bearing on truing up exercise for 2014-19.

(5) In respect of the observations in paragraph 33 of the order dated 30.3.2017, this Commission may appreciate that the IA was executed in 1999 and PPA and PSAs were executed in 2006. It was the first time that Ministry of Power, Government of India issued notification on 31.3.2008, wherein, it was provided that free power up to 13% including 1% free contribution towards Local Area Development Fund will be considered in the determination of tariff for hydro power projects, which was incorporated in the 2009 Tariff Regulations. Prior to this, there was no such restriction regarding the quantum of free power to be supplied to the home State and it was a matter of agreement between the Developer and the host State.

(6) Since the Petitioner has agreed in IA for 18% free power after 13.9.2023, the tariff working based on 13% shall result into severe loss of 5% in tariff and for the balance life of the project. If the entire basis of the Project is changed in this manner midway, the legitimate expectations of the petitioner would be defeated. The loss in tariff of 5% shall have to be borne by the Petitioner from ROE only, resulting in a situation where the Petitioner will not be recovering ROE of 16.5% as per the Tariff Regulations.



(7) In view of the aforesaid facts and circumstances, it is submitted that the Commission may exercise its power under Regulations 54 and 55 of the 2014 Tariff Regulations and allow free power as stipulated in the IA as well as in the PPA and PSAs.

142. The Petitioner, in support of its prayer above, has relied upon the judgments of the Hon'ble Supreme Court in UPPCL v NTPC (2009 (6) SCC 235), UPPCL v NTPC (2014 (1) SCC 371), the judgment of the Hon'ble Appellate Tribunal for Electricity (APTEL) in RPGGL v CERC & ors (Appeal No. 130/2009 dated 25.3.2011) and the Commission's order dated 9.1.2020 in Petition No. 249/GT/2016 (TUL v PTC & ors).

143. The Respondent HPCC vide its reply has objected to the prayer of the Petitioner and has submitted the following:

- (a) The Commission vide its order dated 30.3.2017 in Petition No. 434/GT/2014 had decided that 'free energy' to home state is limited to 13% or actuals, whichever is less, in terms of the 2014 Tariff Regulations. The determination of tariff of the Petitioner is in terms of the 2019 Tariff Regulations notified by the Commission for the 2019-24 tariff period and would be applicable to the Petitioner's claims in respect of free energy.
- (b) Under Regulation 55 Note 3, the 2019 Tariff Regulations provide for free energy of 13% or actual, whichever is less.
- (c) The Tariff Regulations notified by the Commission are binding and there is a rationale and reason for the Commission to consistently provide for ceiling for 'Free Energy' to 13%.
- (d) It is incorrect to contend that there were no provisions related to free energy prior to 2009, as the 2004 Tariff Regulations applicable for the 2004-09 tariff period, provided for saleable energy for hydro projects as under:

"(xxv) 'Saleable Primary Energy' means the quantum of primary energy available for sale (ex-bus) after allowing for 12% free energy to the home state;"
- (e) The Petitioner knowingly entered into an agreement for more than 12% free power, which has now gone up to 13%. Even otherwise, Regulations



of this Commission override existing contracts as laid down by the Hon'ble Supreme Court in PTC India v CERC & ors (2010 4 SCC 603) which is to be followed.

- (f) The Tariff Regulations apply to all projects and even those which are commissioned prior to the coming into force of the said Regulations. Therefore, merely because the Petitioner entered into an agreement prior to such Regulations would not change or nullify the applicability of such Regulations to its project.
- (g) The reference to PPAs/PSAs and free power definition does not mean that the beneficiaries have agreed to pay for such power. It was the Petitioner's choice to enter into the agreement with the Government of Himachal Pradesh. In any case, the licensees cannot agree to any relaxed norms in favour of the generating company and contrary to interests of the consumers.
- (h) The generating company in terms of Regulation 65 of the 2019 Tariff Regulations can agree to improved norms. The prayer of the Petitioner seeking relief with regard to free power under the 2014 Tariff Regulations cannot be made applicable for the period after 13.9.2023, for which the said relief is sought for by the Petitioner.
- (i) In any case, the Petitioner cannot expect the consumers to bear the burden of its agreement and this is not a case fit for power to relax or remove difficulty.
- (j) APTEL vide its judgment dated 18.5.2017 in Appeal No. 325/2016 (DSL Hydrowatt Pvt Ltd v GERC had rejected the claim of DSL for free power more than 13% based on the Tariff Policy and Hydropower policy and the regulations therein. It is, therefore, not acceptable to the Petitioner to claim higher free power on the basis of PPA/PSA executed by the parties.

144. We have examined the matter. In terms of the Implementation Agreement dated 18.11.1999 entered into between the Petitioner and the Government of Himachal Pradesh, free power equal to 12% of net generation, is to be supplied by the Petitioner to the Government of HP for the first 12 years from COD of the Project and at 18% of the net generation for the next 28 years, after expiry of the period of 12 years, as above. PPA/ Supplementary PPA executed by the Respondents with



PTC defines the term 'free power', which is same as the aforesaid provision in the IA. It is, therefore, evident that the issue of 'free power' is significant and relevant for the 2019-24 tariff period (i.e. from 30.9.2023).

145. The main contention of the Petitioner is that since the quantum of free power to be supplied to the home State was based on the agreement between the parties, which were executed prior to coming into force of the Tariff Regulations notified by the Commission, the same may be considered by the Commission in exercise of the power to relax/ power to remove difficulties. The Respondent HPPC has submitted that in terms of the judgment of the Hon'ble Supreme Court in PTC v CERC & ors, Tariff Regulations override existing contracts. Note 3 under Regulation 55 of the 2019 Tariff Regulations provides as under:

Note 3: FEHS = Free energy for home State, in percent and shall be taken as 13% or actual whichever is less.

146. The Constitution Bench of the Hon'ble Supreme Court in PTC India Ltd Vs CERC & ors (2010 4 SCC 603) has laid down the principle of law, whereby any provision of an agreement, if it falls within the domain of the Regulations of subordinate legislation, has to be aligned with the Regulations. The relevant portion of the judgment is quoted below:

"58. One must understand the reason why a regulation has been made in the matter of capping the trading margin under Section 178 of the Act. Instead of fixing a trading margin (including capping) on a case to case basis, the Central Commission thought it fit to make a regulation which has a general application to the entire trading activity which has been recognized, for the first time, under the 2003 Act. Further, it is important to bear in mind that making of a regulation under Section 178 became necessary because a regulation made under Section 178 has the effect of interfering and overriding the existing contractual relationship between the regulated entities. A regulation under Section 178 is in the nature of a subordinate Legislation. Such subordinate Legislation can even override the existing contracts including Power Purchase Agreements which have got to be aligned with the regulations under Section 178 and which could not have been done across the board by an Order of the Central Commission under Section 79(1)(j)."



147. Thus, the provisions of the PPA/PSAs executed by the Petitioner in respect of free power to the home State is inconsistent and shall accordingly stand overridden by Note 3 under Regulation 55 of the 2019 Tariff Regulations. We, therefore, find no reason to exercise the power to relax and grant relief, as prayed for by the Petitioner. Accordingly, the free energy to home state is to be considered as 13% in this case.

148. As stated earlier, the installed capacity of the generating station is considered as 1000 MW. Accordingly, DE of 4131.06 MU corresponding to the installed capacity of 1000 MW, as approved by CEA and considered by the Commission in order dated 30.3.2017 in Petition No. 434/GT/2014 is allowed in this order. The month-wise design energy is as under:

Month	Number of Days	Energy (MU)
JUNE	10	158.28
	10	228.00
	10	228.00
JULY	10	228.00
	10	228.00
	11	250.80
AUGUST	10	228.00
	10	228.00
	11	250.80
SEPTEMBER	10	203.70
	10	172.14
	10	103.23
OCTOBER	10	65.10
	10	45.55
	11	39.72
NOVEMBER	10	33.66
	10	38.26
	10	59.66
DECEMBER	10	54.58
	10	51.23
	11	51.82
JANUARY	10	43.70
	10	41.07
	11	42.02
FEBRUARY	10	37.49
	10	36.71



	8	29.75
MARCH	10	39.94
	10	45.26
	11	53.07
APRIL	10	57.81
	10	62.47
	10	117.34
MAY	10	159.74
	10	167.33
	11	250.83
Total Energy		4131.06

Application Fee and the Publication expenses

149. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

150. The annual fixed charges determined as above are subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations.

151. Annexure-I and Annexure-II form part of this order.

152. Petition No. 391/GT2019 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I.S.Jha)
Member

Sd/-
(P.K.Pujari)
Chairperson



Weighted average rate of depreciation for the 2014-19 tariff period

		Depreciation Rates as per CERC's Depreciation Rate Schedule	Gross Block as on 31.3.2014	Depreciation Amount	Gross Block as on 31.3.2015	Depreciation Amount	Gross Block as on 31.3.2016	Depreciation Amount	Gross Block as on 31.3.2017	Depreciation Amount	Gross Block as on 31.3.2018	Depreciation Amount
A	Land under full ownership		2,488.44	-	2,488.44	-	2,488.44	-	2,488.44	-	2,488.44	-
	Land under reservoir (0.5913 hect.)	3.34%	288.42	9.63	288.42	9.63	288.42	9.63	288.42	9.63	288.42	9.63
	Land other than under reservoir (4.5103 hect.)	0.00%	2,200.02		2,200.02		2,200.02		2,200.02		2,200.02	
B	Land under lease											
(a)	for investment in the land	3.34%	1,278.86	42.71	1,278.86	42.71	1,278.86	42.71	1,278.86	42.71	1,278.86	42.71
C	Assets purchased new											
(a)	Plant and Machinery in generating stations											
(i)	Hydro electric	5.28%	151,251.94	7,986.10	151,251.94	7,986.10	151,251.94	7,986.10	151,251.94	7,986.10	151,251.94	7,986.10
(b)	Hydraulic works forming part of the Hydro											
(i)	Dams, Spillways, Weirs, Canals, Reinforced concrete flumes and syphons	5.28%	88,808.86	4,689.11	88,808.86	4,689.11	88,808.86	4,689.11	88,808.86	4,689.11	88,808.86	4,689.11



(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and hydraulic works	5.28%	361,632.25	19,094.18	361,632.25	19,094.18	361,632.25	19,094.18	361,632.25	19,094.18	361,632.25	19,094.18
(c)	Building & Civil Engineering works											
(i)	Containing hydro-electric generating plant	3.34%	25,657.49	856.96	25,657.49	856.96	25,657.49	856.96	25,657.49	856.96	25,657.49	856.96
(ii)	Others	3.34%	3,217.87	107.48	3,217.87	107.48	3,217.87	107.48	3,217.87	107.48	3,217.87	107.48
(d)	Transformers, Kiosk, substation equipment & other fixed apparatus (including plant)											
(i)	Transformers including foundations having rating of 100 KVA and over	5.28%	7,307.32	385.83	7,307.32	385.83	7,307.32	385.83	7,307.32	385.83	7,307.32	385.83
(e)	Switchgear including cable connections	5.28%	38,047.87	2,008.93	38,047.87	2,008.93	38,047.87	2,008.93	38,047.87	2,008.93	38,047.87	2,008.93
(f)	Lightning arrestor											
(i)	Station Type	5.28%	373.39	19.71	373.39	19.71	373.39	19.71	373.39	19.71	373.39	19.71
(g)	Batteries	5.28%	465.91	24.60	465.91	24.60	465.91	24.60	465.91	24.60	465.91	24.60
(h)	Communication equipment											
(i)	Radio and high frequency carrier system	6.33%	2,014.11	127.49	2,014.11	127.49	2,014.11	127.49	2,014.11	127.49	2,014.11	127.49
(i)	Self-propelled vehicles	9.50%	71.17	6.76	71.17	6.76	71.17	6.76	71.17	6.76	71.17	6.76
(j)	Air Conditioning Plants											



(i)	Static	5.28%	924.89	48.83	924.89	48.83	924.89	48.83	924.89	48.83	924.89	48.83
(k)(i)	Office furniture and furnishing	6.33%	16.96	1.07	16.96	1.07	16.96	1.07	16.96	1.07	16.96	1.07
(k)(ii)	Office Equipment	6.33%	214.55	13.58	214.55	13.58	214.55	13.58	214.55	13.58	214.55	13.58
	TOTAL		683,771.87	35,422.99	683,771.87	35,422.99	683,771.87	35,422.99	683,771.87	35,422.99	683,771.87	35,422.99
	Weighted Average Depreciation Rate (%)			5.1805%		5.1805%		5.1805%		5.1805%		5.1805%



Annexure-II

Weighted average rate of depreciation for the 2019-24 tariff period

		Depreciation Rates as per CERC's Depreciation Rate Schedule	Gross Block as on 31.3.2019	Depreciation Amount
A	Land under full ownership		2,488.44	-
	Land under reservoir (0.5913 hect.)	3.34%	288.42	9.63
	Land other than under reservoir (4.5103 hect.)	0.00%	2,200.02	
B	Land under lease			
(a)	for investment in the land	3.34%	1,278.86	42.71
C	Assets purchased new			
(a)	Plant and Machinery in generating stations			
(i)	Hydro electric	5.28%	151,251.94	7,986.10
(b)	Hydraulic works forming part of the Hydro			
(i)	Dams, Spillways, Weirs, Canals, Reinforced concrete flumes and syphons	5.28%	88,808.86	4,689.11
(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and hydraulic works	5.28%	361,632.25	19,094.18
(c)	Building & Civil Engineering works of a			
(i)	Containing hydro-electric generating plant	3.34%	25,657.49	856.96
(ii)	Others	3.34%	3,217.87	107.48
(d)	Transformers, Kiosk, substation equipment & other fixed apparatus (including plant)			
(i)	Transformers including foundations having rating of 100 KVA and over	5.28%	7,307.32	385.83



(e)	Switchgear including cable connections	5.28%	38,047.87	2,008.93
(f)	Lightning arrestor			
(i)	Station Type	5.28%	373.39	19.71
(g)	Batteries	5.28%	465.91	24.60
(h)	Communication equipment			
(i)	Radio and high frequency carrier system	6.33%	2,014.11	127.49
(i)	Self-propelled vehicles	9.50%	71.17	6.76
(j)	Air Conditioning Plants			
(i)	Static	5.28%	924.89	48.83
(k)(i)	Office furniture and furnishing	6.33%	16.96	1.07
(k)(ii)	Office Equipment	6.33%	214.55	13.58
	TOTAL		683,771.87	35,422.99
	Weighted Average Depreciation Rate (%)			5.1805%

