

ODISHA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
PLOT NO. 4, CHUNOKOLI, SHAILASHREE VIHAR,
BHUBANESWAR-751021

Present: Shri G. Mohapatra, Officiating Chairperson
Shri S. K. Ray Mohapatra, Member

Case No.111 of 2023

Date of Hearing : 30.01.2024 (at 11.00 AM)

Date of Order : 13.02.2024

IN THE MATTER OF: An application for approval of Aggregate Revenue Requirement (ARR) and Generation Tariff of OHPC Stations for the FY 2024-25 under Sections 61, 62, 64 & 86 of the Electricity Act, 2003 read with related provisions of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 and the OERC (Conduct of Business) Regulations, 2004.

ORDER

The Odisha Hydro Power Corporation (OHPC) Ltd. has filed an application before the Commission for determination of Aggregate Revenue Requirement (ARR) and Determination of Generation Tariff for its different power stations for the financial year 2024-25.

PROCEDURAL BACKDROP (Para 1 to 6)

1. The Odisha Hydro Power Corporation Ltd. (OHPC) is a 'Generating Company' under Part-I Section 2 (28), (30) of the Electricity Act, 2003. The Company was incorporated under the Companies Act, 1956, in the year 1995 to carry out the business of Hydro Power Generation. After unbundling of the Odisha State Electricity Board (OSEB) in the year 1996, the assets, liabilities and personnel of Hydro Power Projects under erstwhile OSEB and Government of Orissa were transferred to OHPC to carry out the business of generation of hydro-electricity. The entire power produced from OHPC stations is fully dedicated to the State of Odisha. Thus, OHPC is supplying its entire power to GRIDCO Ltd., who in turn is supplying the same to the Distribution Utilities of the State. After the Electricity Act, 2003 came into force and with the promulgation of the Orissa Electricity Reform (Transfer of Transmission & Related Activities) Scheme, 2005, GRIDCO Ltd. as the deemed trading licensee is currently entrusted with statutory obligation to procure bulk power and act as a bulk supplier to four (4)

Distribution Companies. GRIDCO also as the “State Designated Entity” is responsible for Power Purchase Agreements (PPAs) with Generating Companies. Under the existing legal set up, Odisha Power Transmission Corporation Ltd. (OPTCL), the State Transmission Utility (STU) is responsible for evacuation & delivery of the powers from the generating stations of OHPC to the Distribution system of the Distribution Licensees.

2. As per Regulation 61(2) of the OERC (Conduct of Business) Regulations, 2004, a Generating Company is required to file an application by 30th November of each year to the Commission for determination of tariff for any of its generating stations, for sale of energy in the State of Odisha giving details of costs associated with the generation and sale of energy from the generating stations. Accordingly, on 29.11.2023 OHPC Ltd., as a Generating Company, has filed the Present application for approval of the Aggregate Revenue Requirement (ARR) and fixation of generation tariff i.e. Capacity and Energy Charge in respect of each of its generating stations separately before the Commission for the FY 2024-25. The said application is as per the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 which had been notified in the Odisha Gazette on 26.08.2020. OHPC has filed its reply on 06.01.2024 to the query of the Commission dated 18.12.2023 on its application.
3. After due scrutiny and admission of the aforesaid application, the Commission has directed OHPC Ltd. to publish its application in the approved format. In compliance to the same OHPC has published the public notice on 16.12.2023 in leading and widely circulated newspapers and the same is also posted in the Commission’s website, in order to invite objections/suggestions from the general public. The applicant has been also directed to file its rejoinder to the objections/suggestions filed by the Objectors. In response to the aforesaid public notice, the Commission has received 3 number of objections from the following persons/organizations:

Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour & President, Upobhokta Mahasangha, 2. Shri Anand Kumar Mohapatra, the Representative of Shri Soumya Ranjan Patnaik, Hon’ble MLA, Khandapada, 3. Shri Bijay Kumar Das, Sr. G.M & Ms. Sasmita Tudu, AM (EI) of GRIDCO and 4. Ms. Sonali Pattnaik, Manager (Legal), DoE, Government of Odisha. The Commission has impleaded the Principal Secretary to Government, Department of Energy, Government of Odisha, Bhubaneswar

as a party to the above proceeding to put forth their views for fixation of tariff of OHPC Ltd. by OERC.

4. The date of hearing was fixed as 30.01.2024 at 11.00 AM through hybrid mode and was duly notified in the leading and widely circulated newspapers mentioning the list of Objectors. The Commission also issued individual notice to the objectors and the Department of Energy, Government of Odisha informing them about the date and time of hearing through hybrid mode.

All the above named Objectors along with Shri Amresh Kumar, M.D., OHPC & Director (Finance), the applicant herein, and Ms. Sonali Patnaik, Manager(Legal), Department of Energy, Government of Odisha, and the Representative of GRIDCO Ltd., Participated during tariff hearing and their written submissions filed before the Commission being taken on record were considered by the Commission. The Applicant submitted its reply to the issues raised by the various Objectors.

5. In exercise of the power under Section 94(3) of the Electricity Act, 2003 and with a view to protecting the interest of the consumers, the Commission appointed World Institute of Sustainable Energy (WISE), Pune, as Consumer Counsel for objective analysis of the applicant's Aggregate Revenue Requirement and determination of generation tariff proposal for its individual power stations for the financial year 2024-25. The Consumer Counsel presented views on the matter during the hearing.
6. The Commission convened the State Advisory Committee (SAC) meeting on 07.02.2024 at 11.00A.M to discuss about the Aggregate Revenue Requirement (ARR) application and generation tariff proposal of the Generating Company for FY 2024-25. The Members of SAC presented their valuable suggestions and views on the matter for consideration of the Commission.

A. ARR PROPOSAL OF OHPC FOR FY 2024-25 (Para 7 to 25)

7. Installed Generation Capacity

The present installed capacity of various Hydro Stations owned by Odisha Hydro Power Corporation (OHPC) is 2099.80 MW including 50% share of Odisha from Machkund Hydro Electric Project [i.e. 60 MW out of 120 MW (3x17 MW + 3x23 MW)] and the net capacity addition of OHPC has increased by 36.3 MW (24MW of MHEP due to acquisition of additional 20% stake + 12.3 MW due to uprating of Unit-5 & 6 of HHEP, Burla).

8. **Design Energy**

- (i) The Design Energy (DE) of a Hydro Power Station is an important parameter for determination of Tariff. The Design Energy of OHPC's Power Stations and saleable energy approved for the FY 2023-24 and proposed for the FY 2024-25 is given in the table below:

Table - 1
Design energy of Hydro Power Stations of OHPC for the FY 2023-24 and the FY 2024-25
(in MU)

Sl. No.	Name of the Power Station	Design Energy approved for FY2023-24	Saleable Design Energy approved for FY 2023-24	Design Energy proposed for FY 2024-25	Saleable Design Energy proposed for FY 2024-25
1	RHEP	525.00	519.75	525.00	519.75
2	UKHEP	832.00	823.68	832.00	823.68
3	BHEP	1183.00	1171.17	1183.00	1171.17
4	HHEP	684.00	660.52	684.00	660.52
5	CHEP	490.00	485.10	490.00	485.10
6	UIHEP	1962.00	1942.38	1962.00	1942.38
Sub Total of Old Power Stations		5676.00	5602.60	5676.00	5602.60
7	MHEP	262.50	259.875	262.50	259.875
Total		5938.50	5862.475	5938.50	5862.475

*Considering Auxiliary consumption of 1% & reduction of 16.644 MU allocated to CSPDCL from HHEP generation.

- (ii) OHPC has submitted that during years of Hydrology failure OHPC sustains substantial loss in revenue due to shortfall in the recovery of Energy Charges. In response to the OHPC's claim towards Hydrology Failure the Commission had observed the following in the Tariff Order of OHPC for FY 2014-15:

"The compensation claimed towards hydrology failure is not to be allowed in view of the Commission's earlier orders dt.10.06.2005 & dt.23.03.2006 wherein OHPC was directed to maintain a separate fund to deposit the revenue earnings out of sale of secondary energy which shall be utilized to replenish the shortfall in revenue due to lesser generation by OHPC in years of hydrology failure to provide necessary comfort to the consumers of the state. {Para 6.5(e) of Order dt.10.06.2005}."

- (iii) The gross actual generation achieved by different power stations of OHPC (except MHEP) for the last five years are given below:

Table - 2
Gross actual generation of Hydro power stations

(in MU)								
Sl. No.	Name of the Power Station	Design Energy (DE)	Saleable Design Energy (DE)	Actual Gen. of 2018-19 (In MU)	Actual Gen. of 2019-20 (In MU)	Actual Gen. of 2020-21 (In MU)	Actual Gen. of 2021-22 (In MU)	Actual Gen. of 2022-23 (In MU)
1	RHEP	525.00	519.75	745.97	647.71	980.77	866.36	732.53
2	UKHEP	832.00	823.68	923.88	813.04	771.26	450.90	531.94
3	BHEP	1183.00	1171.17	1677.63	1510.40	1594.30	1026.65	980.72
4	HHEP	684.00	677.16	380.69	502.25	597.39	714.26	869.91
5	CHEP	490.00	485.10	158.51	234.0	322.37	268.42	319.53
6	UIHEP	1962.00	1942.38	2142.60	2234.19	1713.10	1155.19	1351.49
Total		5676.00	5619.24	6028.68	6004.23	5979.19	4481.78	4786.12

9. Reservoir Level and Anticipated Generation for FY 2024-25.

OHPC has stated the following with regard to reservoir Level and anticipated Generation for FY 2024-25

- (a) The Reservoir Level of OHPC Power Stations as on 15.11.22 vis-à-vis on 15.11.23 is given below:

Table - 3
Reservoir level of Hydro power stations of OHPC

Sl. No.	Reservoirs	As on 15.11.2022	As on 15.11.2023
1.	Rengali	122.62 mtr.	122.72 mtr.
2.	Kolab	855.55 mtr.	855.71 mtr.
3.	Balimela	1482.80 ft.	1487.90 ft.
4.	Hirakud	628.43 ft.	627.93 ft.
5.	Indravati	637.94 mtr.	636.02 mtr.

- (b) OHPC has submitted the actual generation of different Power Stations under OHPC from 01.04.2023 up to 15.11.2023. The anticipated generation up to 31.03.2024 for the FY 2023-24 has been estimated on the basis of the availability of water, irrigation requirement and peak load requirement of power in co-ordination with Department of Energy (DoE), Department of Water Resources (DoWR), GRIDCO and SLDC. The same is furnished below.

Table - 4
Actual /Anticipated Energy Generation of Hydro Power Stations of OHPC

Sl. No.	Name of the power stations	Actual generation from 01.04.23 up to 15.11.23 (In MU)	Anticipated generation from 16.11.23 to 31.03.24 based on DoWR & DoE Schedule (in MU)	Total Anticipated generation for the FY 2023-24 based on DoWR & DoE Schedule (in MU)
1.	RHEP	629.31	123.48	752.79
2.	UKHEP	368.01	237.98	605.99

Sl. No.	Name of the power stations	Actual generation from 01.04.23 up to 15.11.23 (In MU)	Anticipated generation from 16.11.23 to 31.03.24 based on DoWR & DoE Schedule (in MU)	Total Anticipated generation for the FY 2023-24 based on DoWR & DoE Schedule (in MU)
3.	BHEP	717.04	332.98	1050.02
4.	HHEP	754.18	107.48	861.66
5.	CHEP	226.98	69.02	296.01
6.	UIHEP	1235.73	459.48	1695.21
Total		3931.25	1330.42	5261.68

OHPC has submitted that the extra/ shortfall in generation from the design energy of the respective Power Stations shall be accounted towards the secondary energy fund as per Order of the Commission.

10. Project Cost

- (a) OHPC has submitted that the revalued cost of old power stations under OHPC is Rs.1196.80 Crs as on 01.04.1996 as per the notification vide S.R.O No. 254/96 dtd. 01.04.1996 of Department of Energy, Government of Orissa. The Commission in its Order dated 23.03.2006 [at clause no. 5.4 (C)] has approved the same. Further, the Commission, in the order dated 20.03.2008 has approved Rs. 1194.79 Cr as final capital cost of UIHEP for the purpose of determination of tariff. However, the Tariff of Old power stations was determined on the historical cost of old power station of OHPC for Rs. 479.80 Cr as per the Notification No. 1068 dated 29.01.2003 of DoE, GoO.
- (b) Further, the Commission had approved new addition of Old Power Stations of OHPC from 01.04.1996 to 31.03.2022 as Rs 883.60 Cr and that of UIHEP as Rs. 1282.81 Cr. Therefore, total approved new addition upto FY 2021-22 was Rs. 2166.41Cr.
- (c) OHPC submitted that the Commission had approved Rs. 33.898 Crs as decapitalization of the asset of different power stations of OHPC from FY2011-12 to FY 2021-22. Total decapitalization proposed for the FY2022-23 is (-) Rs. 3.398 Crs. Therefore, the total decapitalization of old power station from FY 2011-12 to FY 2022-23 is Rs. 30.500 Crs out of which Rs. 25.196 Crs has been deducted from the Historic Cost for old power stations of OHPC. Similarly, Rs. 5.305 Crs has been deducted from the project cost of UIHEP towards decapitalization for determination of Tariff.
- (d) Considering the total approved capitalization up to FY 2021-22 & audited expenditure for FY 2022-23 on account of Additional Capitalization, IDC for HHEP, Burla & PSDF grant as described above, the Project Cost considered by OHPC for Computation of Tariff for FY 2024-25 are furnished in the Table below.

Table - 5
Project Cost for tariff calculation for FY 2024-25(in Rs. Cr.)

Name of the power stations	Historic Cost as on 01.04.1996	Asset reduction during FY 2011-12 to FY 2022-23(Ref: Column No.7 of Table-9)	Less PSDF grant during FY2022-23	New additions proposed for old power stations & New Addition of UIHEP excluding Original Project Cost considered in Tariff for FY2024-25	Project Cost considered for Tariff calculation based on Historic Cost
1	2	3	4	5	6=2+5-3-4
RHEP	91.09	0.142	0	71.398	162.347
UKHEP	108.31	0.504	2.69	35.508	140.624
BHEP	115.42	3.286	0	338.919	451.053
HHEP	72.75	18.489	0	421.634	475.895
CHEP	92.23	2.775	0	120.693	210.148
Sub Total	479.8	25.196	2.69	988.152	1440.066
UIHEP	1194.79 (Approved Project Cost)	5.305	0.305	103.281	1292.461
Total	1674.59	30.501	2.995	1091.433	2732.528

11. Tariff for Energy Billing to Chhattisgarh State Power Distribution Company Limited (CSPDCL):

- (i) OHPC has submitted that the erstwhile Chhattisgarh State Electricity Board (CSEB), presently Chhattisgarh State Power Distribution Company Limited (CSPDCL) drawing energy from Hirakud generation for 5MW share of Chhattisgarh State (erstwhile share holder being Madhya Pradesh) is taking a plea since the FY 2006-07 to pay the energy charges at the tariff approved by the Commission for HHEP, Burla, applicable for the consumers of Odisha, considering the supportive measures extended by the Govt. of Odisha which is considerably less than the actual cost of generations from HHEP on which billing is made to them as per the Minutes of Meeting dated 24.12.2004.
- (ii) OHPC has submitted that the Commission have provisionally fixed the Energy Charge Rate (ECR) for billing to CSPDCL for the FY 2015-16 to FY 2023-24. For ensuing FY 2024-25, OHPC has computed the tariff for billing of Energy to CSPDCL as per the CERC (Terms and Conditions of Tariff) Regulation'2019 as furnished in the Table below.

Table - 6
Tariff for CSPDCL for 2024-25

Details of Expenses HHEP	Amount (Rs in Crs)
Saleable Design Energy of HHEP (in MU)	677.16
Project Cost (Up-valued cost as on 01.04.1996 + Capitalization up to 31.03.2023 - Decapitalization)	533.31
Return on Equity (18.7086 %)	29.93
Interest on Loan	11.50
Depreciation (@ 5.28%)	28.16
O & M expenses (Escalated @ 4.77%)	61.78
Interest on Working Capital (@ 10.50%)	3.73
Total ARR	135.10
Average Tariff (p/u)	199.506

OHPC has submitted to approve the tariff for energy billing to CSPDCL @199.506 paisa/unit for the FY 2024-25.

12. Determination of Annual Fixed Cost

OHPC has submitted that the OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2020 specifies methodology for computation of tariff for supply of electricity from a hydro generating station. The tariff shall comprise of capacity charge and energy charge to be shared on 50:50 basis for recovery of annual fixed cost.

As per the said Regulation, the Annual Fixed Cost of a hydro generating station shall consist of the following components:

- a. Interest on loan capital
- b. Depreciation
- c. Return on equity (ROE)
- d. Operation and Maintenance expenses
- e. Interest on working capital
- f. Income Tax
- g. Less: Non-tariff Income

a. Return on equity (ROE):

(i) OHPC has submitted that the equity component of OHPC has been decided by the Commission Tariff order dtd. 19th April, 2002 in Case No. 65 of 2001 & Case No. 04 of 2002 vide Para 6.4.17 and Para 6.4.21.

(ii) OHPC has submitted that Proviso of clause no. 20(2) of OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2020 stipulates the following:

“Provided that return on equity in case of OPGC (Unit - I & II) and OHPC stations shall be as per the provisions of the PPA.”

Further OHPC has submitted that the Commission in the recent past has approved the Return on Equity as per the provisions of PPA. OHPC in the present Tariff has followed the same principle for computation of RoE and accordingly the provisions made in Clause No. 21(1) OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2020 the income

- tax of the Generating Company shall be recovered from the beneficiaries (This will exclude income tax on other streams i.e. from non-generation business).
- (iii) OHPC has stated that the Commission, in the order dated 20.03.2008 has approved Rs. 1194.79 Crs. as final capital cost of UIHEP for the purpose of determination of tariff. Since UIHEP was commissioned after 01.04.1996, the investment in UIHEP is considered as new investment. Equity Base for Govt. investment in UIHEP was considered as Rs 298.70Crs (i.e.,25% of the project cost). Any decapitalization made in UIHEP is deducted from the Original Approved Cost and Equity is calculated @25% on balance Original Project Cost after deduction of decapitalization. However, for further additional capitalization over Original Project Cost by OHPC, the equity base of 30% has been considered as per the provision in clause No. 16 of OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2020. OERC has approved the same in the past years. OHPC has considered the same principle in the present tariff for the FY 2024-25. However, the project cost for tariff for FY 2024-25 has been computed considering the audited capital expenditure up to FY 2022-23.
- (iv) OHPC has submitted that in case of old power Stations OHPC has computed the Equity Base considering approved Additional Capitalization from 1996-97 onwards up to 2021-22, audited cost for additional capitalization for FY 2022-23, out of which 30% of these additional capitalizations are considered as Equity Base as per the provision in clause No. 16 of OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020
- (v) Further OHPC has submitted that Commission in the Tariff approval of OHPC for the FY2023-24 had approved the Return on Equity with following observations mentioned below;
- “Para No.60 (c)(vii): The Commission has analysed claim of Return of Equity by OHPC in the tariff petition for FY 2023-24. The OERC Generation Tariff Regulations, 2020 provides that the Return on Equity shall be computed at the base rate of 14% for all generating stations. However, the Regulation further provides that the RoE in case of OHPC stations shall be as per provisions of the PPA. The Commission scrutinised the PPA of the OHPC plants and it is found that for old plants, the Return on Equity is 15.5% and for UIHEP, the RoE is 16%. Accordingly, the RoE has been calculated on Equity base excluding the CWIP portion for FY 2022-23. Accordingly, the Commission approved Rs.91.521 Cr towards Return on Equity for all stations of OHPC for the FY 2023-24.”*
- (vi) Accordingly, OHPC has urged the power station wise details of new investment to be considered for computation of RoE for FY 2024-25, which is furnished in the table below;

Table - 7
Computation of RoE for different power stations of OHPC for FY 2024-25 (in Rs. cr.)

Sl. No.	Name of the Power Stations	ROE @15.5% for old Power Station & @16% for UIHEP for 2024-25 (in Crs)	Differential unapproved RoE for the FY2023-24	Total RoE claim of OHPC for the FY2024-25
	1	2	3	4=2+3
1	RHEP	3.320	0.004	3.324
2	UKHEP	1.526	0.023	1.549
3	BHEP	15.760	0.336	16.095
4	HHEP	19.606	0.662	20.268
5	CHEP	5.612	0.322	5.934
6	UIHEP	52.522	0.039	52.561
7	Total	98.346	1.386	99.733

b. Interest on loan

- (i) OHPC submitted the present status of UIHEP Govt. loan which is given in the following table;

Table - 8
Present Status of UIHEP Govt. Loan based on the approvals of the Commission (Rs. Cr.)

1	Original Approved Project Cost	1195.42
2	Project cost after deducting the infirm power cost	1194.79
3	Equity @25%	298.70
4	Govt. Loan of UIHEP	497.86
5	Depreciation allowed from 2010-11 to 2023-24 @ Rs30.23 Crore	423.22
6	Loan Repayment made till FY 2022 -23 & to be paid for FY2023-24	423.22
7	Balance Outstanding Loan as on 01.04.2024	74.64 Crore
8	Cumulative interest on UIHEP Govt. Loan from FY 2006-07 to FY 2023-24 @ 7%	419.93 Crore (Govt. proposed to consider as regulatory asset)
9	Cumulative interest on normative loan from FY 2001-02 to FY 2023-24 @ 7%	134.92 Crore (Not paid)

- (ii) OHPC submitted that PFC loan of Rs319.49 Cr has already been repaid in full by FY 2009-10. OHPC has so far paid Rs 392.99 Cr to Govt. by March 2023. The depreciation approved for FY 2023-24 for Rs 30.23 Cr shall be paid by the end of FY 2023-24.
- (iii) **Normative loan:** OHPC submitted that though, State Govt. loan (at interest rate of 9.8%) has been repaid, the normative loans of the respective units are still pending. The normative loans of CHEP, RHEP & UKHEP is considered at interest rate of 9.8% as per Clause No. 22 of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020. The normative loan of BHEP, Balimela is considered at interest rate of 9.6 % for FY 2024-25 based on

PFC interest rate applicable to BHEP. Similarly, the normative loan of HHEP, Burla is considered at interest rate of 8.75 % for the FY 2024-25 based on PFC interest rate applicable to HHEP, Burla. The Normative loan of UIHEP due to the additional capitalization based on audited accounts of FY 2022-23 is considered at interest rate of 7% being the prevailing rate of interest for State Govt. Loan as per the OERC tariff norms.

- (iv) Hence, basing upon the earlier directions of the Commission, OHPC has not considered the impact of interest on Govt Loan & Normative Loan of UIHEP in the Tariff Calculation of OHPC for the FY2024-25. Similarly, OHPC has not claimed the accumulated interest on Govt Loan & Normative Loan of UIHEP as regulatory asset in view of the directives of the Commission. The details of interest on loan claimed by OHPC for FY 2024-25 is provided below.

Table - 9
Statement of Outstanding Loan & Interest thereon for the FY 2024-25
(Rs. in Crs.)

Sl. No.	Source of Loan	Loan O/S as on 01.04.2024	Interest on Loan for the FY 2024-25
1	State Govt. Loan of UIHEP @7%*	74.64	0.00
2	Normative Loan of Rs78.74Cr for UIHEP, Mukhiguda @ 7%	78.74	0.00
3	Normative Loan of CHEP@ 9.80%	35.95	3.28
4	Normative Loan of UKHEP@ 9.80%	5.65	0.53
5	Normative Loan of HHEP@ 8.75%	102.63	9.36
6	Normative Loan of BHEP@ 9.60%	76.56	6.98
7	Normative Loan of RHEP@ 9.80%	7.29	0.68
8	Normative Loan of UIHEP@ 7.0%	52.16	3.47
Total		433.62	24.29

- (v) OHPC therefore, has submitted that the interest on loan towards Normative Loan for each Power Station are summarised in the following table:

Table - 10
Interest on loan of different power stations of OHPC (Rs. Cr.)

Sl. No.	Source of loan	Interest on loan for FY 2024-25						(Rs. In Crs)
		RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	TOTAL
1.	Normative loan	0.679	0.526	6.982	9.360	3.279	3.468	24.294
2.	Govt. Loan	-	-	-	-	-	-	-
Total		0.679	0.526	6.982	9.360	3.279	3.468	24.294

- (vi) Therefore, OHPC has submitted before the Commission to approve Rs 24.294 Cr in the tariff of OHPC for the FY2024-25 for payment of Interest towards Normative Loans of the different Power Stations of OHPC as mentioned in the above table.

c. **Depreciation:**

- (i) OHPC has submitted that OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 at Appendix-A has specified rates for calculation of depreciation based on the Capital Cost admitted by the Commission. The rate of depreciation of a hydroelectric plant is 5.28%, considering a loan repayment period of 15 years from CoD for a new plant. The remaining depreciable value after 15 years shall be spread over the balance useful life of the assets.
- (ii) OHPC has further submitted that at clause no. 23(4) of OERC (Terms and Conditions for determination of generation tariff) Regulations, 2020 has specified the norms of depreciation for OHPC as follows:
“Provided that for existing plants of OHPC as per the direction of the High Court of Orissa, depreciation will be calculated at pre-1992 norms notified by Government of India on the book value of the assets.”
- (iii) Further, OHPC has submitted that as per the approval given by the Commission, while determining the ARR, depreciation is being allowed based on the actual loan repayment or @2.57% of project cost, whichever is higher upto 2020-21. However from the FY2021-22 to FY 2023-24 the Commission allowed depreciation of all OHPC power stations @2.57% of the approved project cost.
- (iv) It is also submitted by OHPC that the comparative statement for actual repayment of loans and depreciation @2.57% for the FY 2024-25 are shown in the table below to arrive at the depreciation amount claimed by OHPC in the ARR & Tariff of OHPC for the FY 2024-25.

**Table - 11
Depreciation Claim for the FY 2024-25 (Rs. in Cr)**

Sl. No.	Power Stations	Project Cost	Depreciation @ 2.57%	Loan Repayment	Depreciation Claimed for the FY2024-25	Remark
1.	RHEP	162.35	4.17	0.73	4.17	Depreciation @ 2.57%
2.	UKHEP	140.62	3.61	0.56	3.61	Depreciation @ 2.57%
3.	BHEP	451.05	11.59	7.66	11.59	Depreciation @ 2.57%
4.	HHEP	475.90	12.23	10.26	12.23	Depreciation @ 2.57%
5.	CHEP	210.15	5.40	3.60	5.40	Depreciation @ 2.57%
6.	UIHEP	1292.46	33.22	35.45	35.45	Equal to loan Repayment
Total		2732.53	70.23	58.25	72.46	

- (v) OHPC has submitted to approve Rs. 72.46 Cr towards depreciation for FY 2024-25.

d. Operation and Maintenance (O&M) Expenses:

- (i) OHPC has submitted that O&M Expenses has been calculated as per OERC Generation Tariff Regulations, 2020. Accordingly, OHPC for computation of O&M Expense of different power stations of OHPC for the FY 2024-25 has escalated the average actual O&M expenses for FY 2022-23 & FY2023-24 @ 5.72% for FY2022-23 & FY2023-24 as per the principle adopted by the Commission in the tariff order of OHPC for the FY2023-24.
- (ii) Further, OHPC has submitted that the Commission has deducted an amount of Rs 11.07 Cr from the O&M Expense of UIHEP, Mukhiguda towards the Dam Maintenance Expense received from DoWR for the FY 2021-22 while computing the O&M expenses of UIHEP for FY 2023-24. Assuming the same principle, OHPC has deducted Rs10.80 Crs from the escalated O&M expenses of UIHEP for the FY 2022-23 for calculation of O&M expense for FY 2024-25.

Table - 12
Statement of O & M Expenses for different power stations of OHPC for FY 2024-25
(Rs.Cr.)

Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	CO	Total
1	O & M expenses for FY 2023-24 Approved by OERC.	61.327	55.668	60.214	58.967	25.485	261.661	77.166		338.827
2	O & M expenses for FY 2021-22 as per Audited Account	47.84	42.78	42.06	42.9	20.25	195.83	62.22	46.55	304.6
3	O & M expenses for FY 2022-23 as per Audited Account	60.485	65.215	52.003	36.82	17.903	232.427	59.886	41.617	333.931
4	Average O&M expenses (2021-22 & 2022-23)	54.163	53.997	47.032	39.86	19.077	214.129	61.053	44.084	319.265

Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	CO	Total
5	Escalation @5.72% for FY2023-24	57.261	57.086	49.722	42.14	20.168	226.377	64.545	46.605	337.527
6	Escalation @5.72% for FY2024-25	60.536	60.351	52.566	44.551	21.321	239.326	68.237	49.271	356.834
7	Corporate Office expenses apportioned to different units under OHPC based on Installed Capacity	6.039	7.73	12.319	6.952	1.739	34.778	14.493	49.271	
8	Total O & M Expenses for the FY 2024-25	66.575	68.081	64.885	51.502	23.061	274.104	82.73		356.834
Less: Amount Received from DoWR.										
9	Less : Income to be received from DOWR towards dam maintenance of UIHEP							(-) 10.80		(-) 10.80
6	Total O&M Expenses for the FY 2024-25.	66.575	68.081	64.885	51.502	23.061	274.104	71.93		346.034

(iii) OHPC has therefore submitted to approve Rs 346.034Cr towards O&M Expenses for the FY 2024-25 for the different Power Stations of OHPC.

e. Interest on Working Capital

(i) OHPC has submitted that clause no. 24(4) of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 stipulates the following regarding rate of interest on working capital for OHPC.

“Rate of interest on working capital shall be on normative basis and shall be equal to the Bank Rate as on 01.04.2020 or on 1st April of the year in which the generating station or a unit thereof, is declared under commercial operation, whichever is later.”

(ii) OHPC has stated that the Reserve Bank of India has issued guidelines for setting lending rate (on loans) by commercial banks under the name Marginal Cost of Funds based Lending Rate (MCLR). This MCLR has replaced the prevailing

SBI base rate from April 2016 onwards. The MCLR as on 1st April 2023 of SBI for one year was 8.5%. OHPC has considered the MCLR rate of SBI as on 01.04.2023 plus 300 basis point for computation of Interest on working capital.

- (iii) Accordingly, basing upon the above principles, OHPC has calculated the Interest on working Capital of different power stations of OHPC for the FY 2024-25, details of which is given in the table below.

Table - 13
Interest on Working Capital for FY 2024-25

(Rs. in Crs)

Sl. No	Description	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIH EP	Total
1	Receivables of fixed cost for 45 days	9.57	9.09	12.27	11.51	4.64	47.10	20.68	67.77
2	Maintenance spares @ 15% of O&M expenses	9.99	10.21	9.73	7.73	3.46	41.12	10.79	51.91
3	O&M expenses for one month	5.55	5.67	5.41	4.29	1.92	22.84	5.99	28.84
4	Total working capital	25.11	24.98	27.41	23.53	10.03	111.05	37.46	148.51
5	Interest on working capital calculated @ 11.50%	2.887	2.873	3.153	2.706	1.153	12.771	4.308	17.079

- (iv) OHPC has submitted to approve Rs 17.079 Crs towards Interest on Working Capital for the FY 2024-25 for the different Power Stations of OHPC.

f. Non- Tariff Income

- (i) OHPC has submitted that Clause 41, 26 of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 the relevant clauses of the said Regulation is stipulated as follows;

Clause No 26 (1): *“The amount of Non-Tariff Income of the Generating Company as approved by the Commission in accordance with Regulation 41 shall be deducted while determining its Annual Fixed Charge: Provided that the Generating Company shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission.”*

Clause No 26(2): *The Non-Tariff Income shall include:*

- (a) *Income from rent of land or buildings;*
- (b) *Income from sale of scrap;*
- (c) *Income from investments;*
- (d) *Income from sale of ash/rejected coal;*
- (e) *Interest income on advances to suppliers/contractors;*
- (f) *Net Income from supply of electricity by the Generating Company to the housing colonies of its operating staff and supply of electricity by the*

Generating Company for construction works at the generating Station, after adjusting the expenses incurred for supply of such electricity;

- (g) Income from rental from staff quarters;*
- (h) Income from rental from contractors;*
- (i) Income from hire charges from contractors and others;*
- (j) Income from advertisements;*
- (k) Income from sale of tender documents;*
- (l) Any other Non-Tariff Income.*

Clause No 41: SHARING OF NON-TARIFF INCOME

“The non-tariff net income in case of generating station from rent of land or buildings, sale of scrap and advertisements shall be shared between the beneficiaries and the generating company, in the ratio 50:50.”

OHPC has further submitted that in this connection, Regulation- 62 of the Central Electricity Regulatory Commission (Terms and conditions of Tariff) Regulations-2019 provides the following;

“ The non-tariff net income in case of generating station and transmission system from rent of land or buildings, sale of scrap and advertisements shall be shared between the beneficiaries or the long-term customers and the generating company or the transmission licensee, as the case may be, in the ratio 50:50.”

- (ii) In view of such provisions in the Regulations of OERC & CERC, OHPC submitted that in the order dated 26.03.2021, a lump sum amount of Rs.25.00 crore was deducted from the ARR of OHPC towards sharing of non-tariff income as OHPC had not furnished the details of the non-tariff income in its original application in Case No.70 of 2019. In the present review petition OHPC has furnished the details of non-tariff income from rent of land or buildings, sale of scrap and advertisements for FY 2019-20 (at Annexure-II of its application) amounting to a total of Rs.0.46 crore (Rent of land and building: Rs.0.37 crore & Sale of scrap: Rs.0.09 crore). As per Regulation 41 of OERC Generation Tariff Regulation, 2020, 50% of non-tariff income i.e. Rs.0.23 crore (0.5xRs.0.46 crore) is to be deducted from the ARR of the petitioner against which an amount of Rs.25.00 crore has been deducted from the ARR of OHPC in the order for the FY 2021-22. The OHPC has submitted for recovery of the excess deduction of Rs.24.77 crore (Rs.25.00 Cr. – Rs.0.23 Cr.) within a period of coming three years. The Commission in its order 65 of 2021 dated 05.09.2022 allowed for recovery of Rs.24.77 crore in the ARR of OHPC spread over next five years starting from the FY 2023-24 to ensure minimum financial burden on the consumers.”
- (iii) Accordingly, in line with the above provisions of OERC & CERC Tariff Regulations, the OHPC submitted the deductible Non-Tariff income of different power stations of OHPC to be considered for ARR for the FY2024-25 (based on the audited account of OHPC for the FY 2022-23).This is shown in the following table:

Table - 14
Non-Tariff Income of different Power Stations of OHPC for FY 2024-25 (Rs Cr.)

Sl. No	Description	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
1	Rent of land & buildings	0.051	0.074	0.177	0.146	0.021	0.111	0.581
2	Sale of scrap	0.266	1.254	0.024	0.296	0.018	0.886	2.743
3	Advertisement	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Total deductible Non-Tariff Income	0.317	1.328	0.201	0.442	0.039	0.997	3.324
5	50% of total deductible Non- Tariff Income to be considered in ARR	0.159	0.664	0.100	0.221	0.020	0.499	1.662

(iv) OHPC has submitted to approve the deductible non-tariff income of Rs1.662 Cr for different power stations for the FY2024-25.

(v) Further, OHPC has submitted that they have adjusted Rs 4.954 Cr (i.e. Rs 24.77Cr/5= Rs4.954Cr) as 2nd instalment of recovery of excess Non-Tariff income deducted by the Commission in the FY2021-22 as per Order dated 05.09.2022 in Case No. 65 of 2021.

13. Aggregate Revenue Requirement (ARR) & Tariff for the FY 2024-25

Basing upon the above parameters, the power station wise ARR and tariff of OHPC have been proposed for the FY 2024-25 as follows.

Table – 15
Station wise ARR and Tariff for the FY 2024-25 considering saleable D.E. of 5602.60 MU

Details expenses	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
Existing Saleable Design Energy (MU)	519.75	823.68	1171.17	660.52	485.10	3660.22	1942.38	5602.60
Return on Equity	3.324	1.549	16.095	20.268	5.934	47.17	52.561	99.733
Interest on Loan	0.679	0.526	6.982	9.36	3.279	20.83	3.469	24.294
Depreciation	4.172	3.614	11.592	12.231	5.401	37.01	35.45	72.46
O&M Expenses	66.575	68.081	64.885	51.502	23.061	274.1	71.93	346.034
Interest on working capital	2.887	2.873	3.153	2.706	1.153	12.77	4.308	17.079
Total Cost	77.638	76.643	102.707	96.067	38.827	391.881	167.718	559.60
Less Non-Tariff Income as per Audited Account for FY2022-23	0.159	0.664	0.10	0.22	0.020	1.163	0.499	1.662

Details expenses	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
Adjustment of recovery of 2nd instalment of excess Non-Tariff income deducted in ARR of OHPC for FY2021-22 (Apportioned as per Installed Capacity)	0.607	0.777	1.239	0.699	0.175	3.497	1.457	4.954
Less Sale of power to CSPDCL for 2024-25				3.321		3.321		3.321
Total ARR for FY2024-25	78.086	76.756	103.846	93.225	38.982	390.895	168.676	559.571
Average Tariff (p/u)	150.24	93.19	88.67	141.14	80.36	106.8	86.84	99.88

14. Application Fee and Publication Expenses

- (i) OHPC has stated that as per clause no. 47 of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020, under the head Application & Publication expenses has stipulated the following;

“The application filing fee and the expenses incurred on publication of notices may, in the discretion of the Commission, be allowed to be recovered by the generating company directly from the beneficiaries”

- (ii) As per the Commission notification no. 1992 dated 31.08.2009 (in the clause no. 17), the Commission has fixed a fee of Rs. 5000/- per MW as application fee for determination of tariff of conventional fuel based plant/ hydel plants, subject to maximum limit of Rs. 25,00,000/- (Rupees Twenty-five lakhs). In consideration of the above order, OHPC has to deposit application fee of Rs. 25 Lakhs for the FY 2024-25. Further OHPC has proposed Rs 2 Lakhs reimbursement towards publication expenses for FY 2024-25. OHPC has submitted to approve Rs 27 Lakhs to be reimbursed from GRIDCO towards application & publication expenses as detailed in the table below;

Table - 16
Application Fees and Publication Expenses FY 2024-25

(Rs. In lakhs)		
Sl. No.	Particulars	Amount to be reimbursed
1	Application fee for FY2024-25	25.00
2	Publication expenses for FY2024-25	2.00
	Total	27.00

15. Electricity Duty on Auxiliary Consumption

- (i) OHPC has submitted that as per the agreed PPA, the taxes and duties including ED on auxiliary consumption etc payable by OHPC to the State Government and other statutory bodies shall be passed on to GRIDCO in the shape of supplementary bill raised by OHPC. GRIDCO will make payment accordingly within 30 days of receipt of bills.
- (ii) Basing upon the subsequent implementation of Odisha Electricity (Duty) Amendment Rules, 2017 by Govt. of Odisha in Dept. of Energy vide Notification No.617 dated 24.01.2017, OHPC is paying the Electricity Duty in “J” format, where Electricity Duty is payable on total Energy Generated minus total Energy Sold. OHPC stated that this implies that the Electricity Duty is payable on the Auxiliary Equipment consumption and Transformer loss within the Power Station.
- (iii) Further in pursuance to Sub-section-I of Section-3 of Orissa Electricity (Duty) Act-1961 and supersession to the Govt. Notification No 9539 BT(ed)-01/2016-En dated 27.12.2016, the State Govt, the Dept. of Energy has revised the rate of ED vide notification No.912 dated the 12.05.2017. Accordingly, the Rate of Electricity Duty / Unit has been revised from 30 paise per unit to 55 paise per unit with effect from 12th May 2017 as per the Gazette Notification No. 912 dtd. 12.05.2017. Accordingly, OHPC has computed ED @55paise per Unit for all power station for FY 2024-25 as reimbursement, the details of which are given below. Hence, OHPC has submitted to approve reimbursement of ED amounting to Rs3.122Cr for the FY 2024-25 from GRIDCO.

Table - 17
ED claim for OHPC power station for FY 2024-25

Power Stations	Design Energy (in MU)	Proposed Percentage of Auxiliary Energy Consumption (in%)	Auxiliary Energy Consumption to be approved (in MU)	ED Rate Applicable (in Rs/Unit)	(Rs. in Crs)
					ED proposed for Reimbursement by OHPC @55p/u & AUX @1% (in Crs)
RHEP	525	1	5.25	0.55	0.289
UKHEP	832	1	8.32	0.55	0.458
BHEP	1183	1	11.83	0.55	0.651
HHEP	684	1	6.84	0.55	0.376
CHEP	490	1	4.90	0.55	0.270
UIHEP	1962	1	19.62	0.55	1.079
Total	5676	1	56.76	0.55	3.122

16. License Fee for Use of Water for Generation of Electricity

- (i) OHPC has submitted that as per the gazette Notification Dt. 01.10.2010, OHPC has to pay @Rs. 0.01/KWh as Licence Fee on water used for generation of electricity from all Hydro Electric Project and getting the same reimbursed from GRIDCO.
- (ii) The Revenue & Disaster Management Department have amended the Odisha Irrigation (Amendment) Rule, 2016 which was published in Odisha Gazette on 27.09.2016. As per the amendment made in Rule-23-A (2) (f) of the Odisha Irrigation Rule, the license fee for drawl or allocation of water was enhanced @10% per annum w.e.f. 1st day of April earlier each year or specified year.

Accordingly, OHPC was paying water cess @1.1paise/ unit for the FY 2017-18, @1.2 paise/ unit for the FY2018-19 & @1.3paise/ unit for the FY2019-20 & @1.4paise/ unit for FY 2020-21, @1.5paise/ unit for the FY2021-22 , @1.6paise/unit for the FY2022-23 & @1.7paise/ unit for the FY2023-24 and got reimbursed from GRIDCO. Accordingly, OHPC shall pay Licence Fee on water used for generation of electricity for FY 2024-25 @1.8 paise/ unit. Hence, OHPC has submitted before the Commission for approval of provisional amount of Rs 10.217 Cr towards License fee, mentioned in the table below, as Reimbursement from GRIDCO subject to approval of reimbursement to the extent of actual water Cess paid to the Govt. based on actual generation pattern for the FY2024-25.

Table - 18
License fee for Consumption of water for generation of electricity FY 2024-25
(Rs. in Crs)

Power Stations	Design Energy (in MU)	Licence Fee on water Proposed by OHPC @ Rs 0.018 Kwh of Generation (in Crs)	Remarks
RHEP	525	0.945	OHPC will claim reimbursement @Rs 0.018/Kwh on actual generation of each Power Station.
UKHEP	832	1.458	
BHEP	1183	2.129	
HHEP	684	1.231	
CHEP	490	0.882	
UIHEP	1962	3.532	
Total	5676	10.217	

17. SLDC Charges

- (i) OHPC has mentioned that as per OERC (fees & charges of state load dispatch center and other related matters) regulations, 2010, SLDC has to levy and collect annual charges from the users towards System Operation Charges (SOC) and Market Operation Charges (MOC).

- (ii) The Commission has approved for Rs.1.546 Cr. for the FY 2023-24, which is to be collected by SLDC from OHPC on monthly basis and OHPC has to reimburse the same from GRIDCO. Since OHPC has not received the ARR, fees & charges of SLDC for the FY 2024-25, the previous year approved charges applicable to OHPC has been escalated @5.72% to arrive at the charges payable by OHPC for the FY 2024-25.
- (iii) Accordingly, Rs.1.6344 Cr. has provisionally been considered as fees & charges of SLDC payable by OHPC on the average available Installed Capacity of 1798.80 MW for the FY 2024-25.

18. Reimbursement of Contribution Made to ERPC

OHPC has stated that annually OHPC is paying Rs15 Lakhs towards contribution to ERPC Establishment Fund & Rs 1.00 Lakh towards contribution to ERPC Fund. Assuming the same claim of ERPC, OHPC has claimed the amount of Rs 16.0 Lakhs as a pass through in the tariff for FY 2024-25 to be reimbursed from GRIDCO. Any excess claim (above Rs16.0 Lakhs) made by ERPC for the FY 2024-25 will be claimed as additional reimbursement in the subsequent Tariff year.

19. Income Tax

20. OHPC has submitted that the Clause No. 21 of OERC (Terms & Conditions for determination of Generation Tariff) Regulations, 2020 regarding Tax on Income stipulates the following:

“Income tax of the Generating Company shall be recovered from the beneficiaries. This will exclude income tax on other income streams (income from non-generation and non-transmission business.”

Income Tax paid by OHPC for the FY2022-23 is detailed below:

Table - 19
Income Tax paid by OHPC for the FY 2022-23

Item No.	Particular	Rs in Cr
1	Total Other Income (for FY 2022-23) (Including dividend from OCPL)	185.91
2	Less: Income tax exempted on dividend from subsidiary/JV/Associate companies u/s 80M of the Income tax Act,1961.	70.44
3	Total Taxable Other income (for FY 2022-23) [(1) - (2)]	115.47
4	Less : Reimbursement of Income Tax from GRIDCO	2.06
5	Less : Dam Share from DOWR (against O&M expenses)	10.80
6	Less : 50% of the other income to be shared between GRIDCO and OHPC as per Regulation 41 (Income from rent of land or buildings, sale of scrap and advertisement)	1.66
7	Net other income (i.e. non-tariff income) on which Income Tax should not be reimbursed [(3) - (4) – (5) – (6)]	100.94
8	Income tax @ 25.168% on the above net other income as shown above (7)	25.41
9	Income tax on capital gain	23.06
10	Total income tax paid by OHPC	65.49
11	Income tax on Generation Business (which is to be reimbursed as per Regulation 26) [(10) - (9) – (8)]	17.02

OHPC has stated that it is entitled to get reimbursement of Rs 17.02 Cr towards income tax for FY 2022-23 on core income from GRIDCO in the Tariff of OHPC for FY 2024-25 towards reimbursement of Income Tax as per the Audited Accounts of FY2022-23. Further OHPC has submitted for approval of differential income tax reimbursement for an amount of Rs 1.33 Cr from GRIDCO for FY 2023-24 as per their review petition of ARR for the FY 2023-24 in case no.52 of 2023.

21. Details of Reimbursement Cost:

Total reimbursement cost claimed for the FY 2024-25 by OHPC is given in the table below.

**Table - 20
Details of Reimbursement for FY 2024-25**

<i>Component of Costs</i>	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
(a) License fee for use of water for generation of electricity for FY 2024-25.	0.945	1.458	2.129	1.231	0.882	3.532	10.217
(b) ED on Auxiliary Energy Consumption for FY2024-25.	0.289	0.458	0.651	0.376	0.270	1.079	3.122
(c) SLDC charges for FY 2024-25.							1.6344
(d) Application fees and publication expenses for FY2024-25							0.270
(e) ERPC charges for FY2024-25							0.160
(f) Income Tax as per Audited Account of FY 2022-23							17.02
(g) Unapproved Income Tax of 2023-24 as per Audited Account of FY2021-22							1.33
Total							33.753

Thus, OHPC has submitted that the Commission may approve the total reimbursement of Rs **33.753** Cr. as proposed by OHPC in the above table. The above expenditure may be included in GRIDCO's ARR and hence shown as revenue requirement in OHPC filing for FY 2024-25.

22. Aggregate Revenue Requirement & Tariff for Machhkund H.E. (Jt.) Scheme

- (i) OHPC has submitted that the Final bill received from APGENCO towards 50% share of O&M expenditure payable by OHPC to APGENCO for FY 2022-23 amounts to Rs 28.7506 Cr. The total expected annual expenditure towards 50% power purchase cost from MHEP is calculated as Rs. 32.1337 Cr for FY 2024-25 by applying escalation factor of 5.72% per year. The cost per unit is derived as Rs 123.651 paisa/unit considering drawl of 50% share of saleable design energy of Machhkund i.e. 259.875 MU.

Table - 21
Projected Tariff of Machhkund H. E. (J) Scheme for FY 2024-25

PROJECTED TARIFF OF MACHHKUND (JT.) HEP FOR 2024-25	
2024-25	
Present Installed Capacity of MHEP (Jt.) Scheme (MW)	120
(50%) Odisha Share as per New Agreement dated 23.10.2020 (MW)	60
Design Energy of MHEP for Generation (MU)	525
Normative Auxiliary Energy Consumption (AUX) (%)	1%
Normative Auxiliary Energy Consumption (AUX) (MU)	5.25
Saleable Design Energy for sharing between Andhra Pradesh & Odisha (MU)	519.75
(50%) Saleable Design Energy Share of Odisha (MU)	259.875
Drawl of Total Share of Odisha Energy by GRIDCO (MU)	259.875
O&M Escalation factor @ 5.72 % for two years over the O&M Bill of MHEP for FY 2022-23.	1.1177
	(Rs. in Cr.)
1. Total Audited Cost of O&M Bill of MHEP (Jt.) for the FY 2022-23	57.5011
2. 50% O&M Expenditure share (Orissa share of Actual O&M Expenditure for 2022-23)	28.7506
3. O&M Expenditure for FY 2024-25 applying the escalation factor	32.1337
4. Total Expected Expenditure during the FY 2024-25	32.1337
5. Provisional Tariff (Paise/Kwh)	123.651
Reimbursements of Statutory Dues/Duty/Cess as applicable shall be considered under the O&M Expenses	

23. **Normative Plant Availability Factor (NAPAF)**

OHPC has submitted that the Commission, in Case No. 52 of 2019, had fixed the NAPAF of different power stations for the control period 2019-20 to 2023-24. In view of the above Order, the NAPAF of different power stations of OHPC for the FY 2024-25 for computation of Capacity Charges may be extended as mentioned in the Table below:

Table -22
Normative Plant Availability Factor proposed by OHPC for FY 2024-25

Power Stations	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP
NAPAF (%)	80	87	87	75	75	88

24. **Two-Part Tariff**

- (i) OHPC has stated that as per clause no. 28 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations 2020, the annual fixed cost

of a power station shall be recovered on monthly basis through capacity charge (inclusive of incentives) and energy charge to be shared on 50:50 basis.

Accordingly, annual capacity charges, annual energy charges and energy charge rate of different power stations of OHPC for FY 2024-25 is shown below.

Table - 23
Capacity charge and energy charge of OHPC power stations for FY 2024-25

Name of the Power Stations	Annual Fixed Cost (Rs in Crs.)	Capacity Charges (Rs in Crs.)	Energy Charges (Rs in Crs.)	Saleable Design Energy (in MU)	Energy Charge Rate(P/U)
RHEP, Rengali	78.086	39.043	39.043	519.75	75.118
UKHEP, Baraniput	76.756	38.378	38.378	823.68	46.593
BHEP, Balimela	103.846	51.923	51.923	1171.17	44.334
HHEP, Burla	93.225	46.613	46.613	660.52	70.570
CHEP, Chiplima	38.982	19.491	19.491	485.10	40.180
UIHEP, Mukhiguda	168.676	84.338	84.338	1942.38	43.420

OHPC has submitted to approve the AFC, ACC, AEC& ECR of its power stations as indicated in Table above for the FY 2024-25.

25. TRUING UP:

- (i) OHPC has submitted that “Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020” in Para No. 8.1.(c) stipulate as follows:

“The existing generation plants of OHPC and OPGC (Unit - I & II) may file an application each year for truing up of its generating stations of the previous year(s), with respect to the capital expenditure including additional capital expenditure incurred up to last day of the previous year(s) and determination of revenue gap/surplus for the ensuing year, within the time limit as specified by the Commission.”

In the Order dated 08.06.2023 in Case No. 53 of 2022 & Case No.19 of 2023 regarding approval of true-up of ARR and Tariff of individual power stations of OHPC from FY2016-17 to FY2020-21, OERC had made the following observations at para no. 10.

“Para no- 10: Basing on the above discussion we are not inclined to accept the truing up application in its present form. However, we draw the attention to a general provision in OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 with regard to truing up which is reproduced below:

“8.(1) The Commission shall carry out truing up exercise at the end of the Tariff Period along with the tariff petition filed for the next tariff period, with respect to the following:

(a) the capital expenditure including additional capital expenditure incurred up to 31.03.2024, as admitted by the Commission after prudence check at the time of truing up.

(b) the capital expenditure including additional capital expenditure incurred up to 31.3.2024, on account of Force Majeure and Change in Law.”

The above Regulation relates to approval of any additional capital expenditure which has not been specifically allowed in each year’s tariff order. Accordingly, the Petitioner has the liberty to approach the Commission under the above Regulation once the control period of the present Tariff Regulations expires on 31.03.2024.

26. COMPLIANCE TO THE DIRECTIVES AS PER ARR AND TARIFF ORDER OF OHPC FOR FY 2023-24

PARA NO	DIRECTIVES OF OERC	COMPLIANCE
66(a)	<p>“Odisha is not a renewable rich state. In near future there is no likely substantial addition of generation from hydro sources. At present the contribution of generation from thermal, hydro and RE sources are 64%, 28% and 8% respectively. There is need for proper generation planning to ensure adequacy of generation availability to meet long term power demand of the State of Odisha in line with Generate Resource adequacy planning of CEA and OHPC may take pro-active steps for capacity addition and plan accordingly in consultation with Government of Odisha and GRIDCO. Long term generation planning study should be carried out along with OPTCL.”</p>	<p>OHPC has already taken initiatives to develop the following 3 Pumped Storage Projects and 02 Hydroelectric Projects. The DPR preparation work of following Projects are in progress through WAPCOS Limited.</p> <p>(i) Upper Indravati PSP with Installed Capacity of 600MW and annual generation of 1040MU is proposed near the existing UIHEP. DPR of the project is in advance stage for approval by CEA. OHPC is planning to implement this project in the FY 2025-26.</p> <p>(ii) Upper Kolab PSP with Installed capacity of 320MW and annual generation of 506.60 MU is proposed near the existing UKHEP. However, as per suggestion of CEA & CWC, it was planned to enhance the Installed capacity of UKPSP from 320 MW to 600 MW. Accordingly Hydrology study is going on. OHPC is planning to implement this project in the FY 2026-27.</p> <p>(iii) Balimela PSP with installed capacity 500 MW and annual generation of 1095 MU is proposed near the existing BHEP. OHPC is planning to implement this project in the FY 2026-27.</p> <p>(iv) OHPC has identified 9 off the river closed loop PSP with projected total capacity of the order of 10900 MW. OHPC is preparing the PFRs . GRIDCO has been duly informed. OHPC will be pursuing for development of these projects.</p> <p>The detailed status report of the above Pump Storage Projects of OHPC are attached at Annexure 24</p> <p>Kharag Hydro Electric Project with installed capacity 63 MW and annual generation of 233.5MU is proposed at Kandhamal District.</p>

PARA NO	DIRECTIVES OF OERC	COMPLIANCE
		The detailed status report of the Kharag Hydro Electric Project is attached at Annexure 25. OHPC is planning to implement this project in the FY 2025-26.
66(b)	Considering the large-scale penetration/ integration of RE resources, there is need for adequate balancing system in the form of Pumped Storage System (PSS) or other Energy Storage System (ESS) including Battery Energy Storage System (BESS). Addition of large Hydro Electric Generation Plant including PSS is the need of hour. Accordingly, OHPC should plan and explore the feasibility of generation capacity addition without further delay which will provide the cleanest form of energy for meeting peak demand, HPO and for balancing the intermittency in RE penetration. It would help in socio-economic development of people of the State of Odisha.	<p>OHPC has already taken initiatives to develop the following 3 Pumped Storage Projects and 02 Hydroelectric Projects. The DPR preparation work of following Projects are in progress through WAPCOS Limited. The detailed status report of the above Pump Storage Projects of OHPC are attached at Annexure-24.</p> <p>Kharag Hydro Electric Project with installed capacity 63 MW and annual generation of 233.5MU is proposed at Kandhamal District. The detailed status report of the Kharag Hydro Electric Project is attached at Annexure-25.</p> <p>Being the wholly owned subsidiary company of OHPC Ltd, the main objectives of GEDCOL to promote investment in renewable energy projects and various green energy sources and to develop and execute special renewable energy project on commercial and / or demonstration basis.</p> <p>The detailed report of completed projects, projects to be developed under JV mode, other solar projects, Small Hydroelectric Projects & Floating solar Projects of GEDCOL are attached at Annexure- 26 for reference.</p>
66 (c)	OHPC should expedite the R & M / uprating work associated with HHEP, RHEP & UKHP which would add generation capacity with minimum investment and without any environmental impact.	<p>The RLA & LE study of Unit-7 of HHEP, Burla is not be taken up due to following reason.</p> <ul style="list-style-type: none"> - There is no major work required in Turbine & Generator, all the concerns can be addressed with the capital maintenance of unit and the machine can run smoothly. - The new 60 MVA Generator Transformer of the unit was installed in 2015. The capacity upgradation of the unit could not be taken up as the tail race of HHEP, Burla could not accommodate additional water discharge due to capacity upgradation. - It is being felt that some useful life of the Unit-7 of HHEP, Burla is still left. Hence, the Units can be operated for few more years.

PARA NO	DIRECTIVES OF OERC	COMPLIANCE
		<ul style="list-style-type: none"> - In this context, considering the down time & cost involvement, it may not be beneficial to take up R&M works at this juncture instead it will be advisable to go for capital maintenance work of the unit. <p>The RLA & LE study of all the 5 units of RHEP, Rengali are not taken up due to following reason.</p> <ul style="list-style-type: none"> - The generator of unit-1 and the turbine of unit-2 have already been replaced in the year 2012 & 2013 respectively. - The Automatic Voltage Regulator of all the 5 units have already been replaced with Digital Automatic Voltage Regulator in phased manner in between the year 2007 to 2019. - All units are in running condition without any major problem. In order to make the units problem free and grid responsive the following points needs to be addressed. <ul style="list-style-type: none"> a. Vacuum breaking valve of the penstock needs to be redesigned. b. All electromechanical relays in the unit control panel to be replaced by numerical relays. c. Governing system of unit-3, 4 & 5 (both electrical & mechanical system) to be replaced. In case of unit-1 & 2 only the old mechanical portion to be replaced to make compatible with the already replaced MAX DNA (BHEL make) electrical system. d. The aging HP compressor (3 nos) & LP compressor (2 nos) to be replaced. e. The oil, water, air pipe lines of the units are required to be replaced in phased manner. f. The leakage from the concrete to be arrested. - The average no. of days of water spillage from the reservoir is 16 days per annum during the last 10 years. Further, during the last 10 years the RHEP is able to achieve its Design Energy. - As there is no constraint of accommodating higher discharge in the tailrace being a natural river, if possible upgradation of capacity of the unit may be explored. But with the upgraded capacity there may not be much change in energy generation.

PARA NO	DIRECTIVES OF OERC	COMPLIANCE
		<ul style="list-style-type: none"> - It is being felt that some useful life of the generating units of RHEP is still left. Hence, the Units can be operated for few more years. - Further, considering the down time & cost involvement, it may not be beneficial to take up R&M works at this juncture instead it will be more prudent to go for need based capital maintenance work of the unit. <p>The RLA & LE study of all the 4 units of UKHEP, Bariniput are not taken up due to following reason.</p> <ul style="list-style-type: none"> - The generator stator of Unit-1 & 4 have already been replaced & order has been placed with M/s BHEL to supply 02 nos. of Generator stator for replacement in Unit no. 2 & 3. Further, modification of the HP Lub. Oil System for Thrust Bearing pads of Unit No. 1 & 4 has already been done & approval has also been accorded to the unit for similar modification in the Thrust Bearing pads of Unit No. 2 & 3. - The old Automatic Voltage Regulator (AVR) of excitation system of Unit No. 4 has been replaced with Digital Automatic Voltage Regulator (DAVR). Similarly, to replace the old AVR system in Unit No. 1, 2 & 3 with DAVR, the purchase order has been placed with M/s BHEL and the same will be replaced in phased manner. The Governing System of Unit No. 1 & 4 of UKHEP have already been replaced and steps are being taken for replacement of Governing System of Unit No. 2 & 3. - The performance of all the four (04) Turbines & Generator Transformers (GTs) of are satisfactory. Action has already been initiated for procurement of one spare GT as decided in the 149th Meeting of the Board of Directors. - The balance of plant & equipment, control system etc. are being repaired/replaced as and when required under operation & maintenance of the plant. - With all the above replacements & modifications, all the four (04) Units of UKHEP are expected to be operated without any major problem for next 10 years.

PARA NO	DIRECTIVES OF OERC	COMPLIANCE
		<ul style="list-style-type: none"> - Further, considering the down time & cost involvement, it may not be beneficial to take up R&M works at this juncture instead it will be more prudent to go for need based capital maintenance work of the unit.
66 (d)(i)	Status of R & M / uprating of existing old hydro plant (Unit-7 of HHEP, Uniy-1 to 5 of RHEP and Unit-1 to 4 of UKHEP based on Residual Life assessment (RLA) study.	The RLA & LE study of Unit-7 of HHEP, Burla, all 05Nos. of Units of RHEP & all 04 Units of UKHEP, Bariniput are not taken up due to the reasons cited in the compliance to the directive under Clause No 66(c) as above.
66 (d)(ii)	Status of implementation of pumped storage plants associated with Upper Indravati, Upper Kolab and Balimela power stations.	The status of implementation of pumped storage plants associated with Upper Indravati, Upper Kolab and Balimela power stations are attached at Annexure- 24 for reference.
66 (d)(iii)	Status of upcoming hydro project and expected time frame to met HPO target of MoP, GoI.	The status of upcoming hydro project and expected time frame to meet HPO target to MoP, GoI is attached at Annexure-25 for reference.
66 (d)(iv)	Steps being taken to address the slit deposit problem in various power plants, which decrease the live storage capacity of the reservoir.	<ul style="list-style-type: none"> • All the reservoirs are being operated and maintained by DoWR. • Hence the data on extent of silt deposition decrease in the live storage capacity of the reservoirs and steps taken to address the silt deposit problem etc. are not available with OHPC.
66 (d)(v)	Details of secondary energy fund and utilization of such fund.	The details of secondary energy fund is attached at Annexure-6 and the utilization is made during the short fall of generation during lean period.
66 (d)(vi)	Status of implementation of floating solar power generation utilizing the reservoir/pondage of existing Hydro power stations, as per provision in Odisha RE policy 2022 of GoO.	Status of implementation of floating solar power generation utilizing the reservoir/pondage of existing Hydro power stations are attached at Annexure-26 for reference.
66 (d)(vii)	Status of capital maintenance of Unit 1&2 of Chiplima Power House and Repair & Renovation of power channel from Burla Power House to Chiplima Power House.	<p>Status of capital maintenance of Unit 1&2 of Chiplima Power House is attached at Annexure-27 for reference.</p> <p>Status of Repair & Renovation of power channel from Burla Power House to Chiplima Power House as follows.</p> <ul style="list-style-type: none"> • The DPRs have been submitted by M/s NBCC Ltd. for the following works. <ul style="list-style-type: none"> (i) Repair & Renovation of power Channel from RD 0.00 ft. to 16,000.00 ft. (ii) Repair & Renovation of Power Channel from RD 30,000.00ft. to 83,480.00 ft.

PARA NO	DIRECTIVES OF OERC	COMPLIANCE
		<ul style="list-style-type: none"> • DPR is under scrutiny by OHPC. • After obtaining financial concurrence & administrative approval, tendering action for execution of work will be taken up.

C. VIEWS OF OBJECTORS AND REPLY / REJOINDER OF OHPC (Para 27 to 49)

27. Design Energy

Views/suggestions of objectors

- a. The design energy fixed for Hydro Generation of the above Power Projects are 5676 MU and actually the OHPC generating more Power than the design energy. The State Govt. has to see that the water resource management should cooperate with OHPC for more low-cost generation.
- b. The OHPC has applied in their Aggregate Revenue Requirement to reduce design energy which is not acceptable. The OHPC measurably failed to improve/ develop any Hydro Projects and also Mini Hydro Project of the States. The Govt. should be direct to appoint a full time Chairman for the OHPC. But, that has not yet been done.
- c. The Petitioner in Para 4(c), Page 7 of the Petition has submitted that few generating stations are not able to generate energy as per their Annual Design Energy being approved by the Commission. The Commission may kindly consider that due to lower generation of hydro power, there would be non-recovery of Energy Charges as approved by the Commission as per the Design energy of the respective stations. Moreover, the lower generation in comparison to the Design energy would have upward revision of tariff as compared to other years.
- d. The Petitioner has proposed to revise the saleable design energy for the Power Plants of OHPC in view of the reduced hydrology, restriction imposed by DoWR, GoO etc. The Commission is requested to kindly take up the matter of revision of design energy in a separate Petition and may appoint an independent agency for any revision to the design energy, if so required.

Rejoinder/Response by OHPC

- a. OHPC submitted that the design energy of a Hydro Electric Project is a basic design criteria which is calculated prior to the project inception considering statistical data of rainfall over the catchment and gross total inflow from all source and generator-turbine capacities. Accordingly, the Design Energy has been defined in OERC (Terms & Conditions for Determination of Generation Tariff) Regulations 2020 as follows:
“Design Energy” means the quantum of energy which can be generated in a 90% dependable year with 95% installed capacity of the hydro generating station.”
 So, actual generation from a hydroelectric project depends on the rainfall pattern, availability of water in the reservoir & operational serviceability of machines for generation, demand of the state. Further the water available in a carry-over reservoir is very often carried over to the next year due to uncertainty and irregular pattern of rainfall which affects the actual generation in a particular year. Therefore there is always a mismatch between actual generation & design energy. Accordingly OHPC power stations have never generated exactly equal to its Design Energy (5676 MU) during any financial year. In most of the financial years, the total generation of OHPC is less than the Design Energy of 5676 MU due to the reasons mentioned above. OHPC

has highlighted some of the constraint for non-achievement of Design Energy in different power stations at Para No.4 (C) of Tariff Application for the FY2024-25 which may please be referred

- b. The claim of Objector about reduction of Designed Energy is not true. OHPC in the Tariff Application for FY 2024-25 has not applied for any reduction of Design Energy for computation of Tariff. Further, regarding the development of hydro projects, please refer to compliance to the directives of Commission furnished at Para no. 18 of original application of OHPC for the FY2024-25.
- c. The upward revision of Tariff due to less generation as pointed out by the Respondents is not being allowed to OHPC by the Commission.
- d. OHPC has been filing its application as per the saleable Design energy approved by OERC during the current Tariff period. OHPC has not proposed to revise the saleable Design energy for any of its power-plant.

28. **Vision document**

Views/suggestions of objectors

The OHPC has not yet published its vision document about its future planning as per the direction of Commission in different Tariff Orders. The OHPC should publish their vision documents before the hearing of the Tariff Orders. In this connection, the order of the Commission has not yet been accepted by OHPC.

Rejoinder/Response by OHPC

Necessary compliances have been made to the directives of OERC in the Tariff order of OHPC for FY 2023-24 at para no 18 of the ARR application for FY 2024-25 which may please be referred to.

29. **Independent body**

Views/suggestions of objectors

That as per the Odisha Electricity Reform Act, 1995, the main role of the OHPC is to develop Hydro potential of the State, but that has not yet been done. The officials are now functioning in the OHPC in Govt. style, which clearly violates the Odisha Electricity Reform Act, 1995. The Commission should advise Government not to do so and the OHPC should function as an independent body.

Rejoinder/Response by OHPC

OHPC is a Corporation incorporated under the provisions of the Companies Act and has been given the autonomy by the Govt. of Odisha to function as a business entity and take actions in accordance with Corporate Governance practices.

30. **Issues related with Water Resources Department**

Views/suggestions of objectors

- a. OHPC is now functioning as a subordinate office of Water Resources Department of Govt. of Odisha. The Department is regularly not allowing OHPC to generate low-cost power for the use of State consumers. The Hirakud Dam at Burla is not allowed to generate upto 600RL water level. That, he strongly opposes the Govt. decision to increase the Minimum Draw Down Level (MDDL) from 590RL to 600RL at Burla, which will reduce generation of low cost power for the interest of the consumers.
- b. As per direction of Hon'ble High Court of Odisha, the Water Resources

Department has failed to collect 400Cr. from the industry since 2011 till date. The objector submitted that the dues should be collected on priority. The objector oppose the wave out process of the govt. of Odisha since same would adversely affect the interest of the consumers. The objector submitted that the detail list of industries using water from 2011 to November 2023 should be produced along with outstanding dues.

Rejoinder/ Response by OHPC

- a. OHPC generates its power from multipurpose storage type reservoir where electricity generation is prioritized after flood control, irrigation & consumptive use. Operation of all these reservoirs are under the control of DoWR.
- b. The actual generation schedule of different Power Stations under OHPC is prepared on the basis of the availability of water, irrigation requirement and peak load requirement of power in co-ordination with DoE, DoWR, GRIDCO and SLDC.
- c. Generation in HHEP, Burla is done by collaborative efforts of Water Resource Department, OHPC, SLDC & GRIDCO for efficient utilization of the water resources.
- d. As per the direction of the Hon'ble High Court, and provisions under the Executive Instruction of DoWR, vide its office letter no.25983/WR dtd. 01.10.2013, OHPC has been raising energy compensation bill against the industrial drawl of water from the reservoirs where the OHPC power stations are situated & HHEP, Burla has received a sum of Rs 21.3747 Crs up to July 2023 & CHEP, Chiplima has also received a sum of Rs 0.543 Crs up to September 2023. The detail of industry wise receipt of revenue is enclosed at Annexure-8 of Original Tariff Application of OHPC for the FY2024-25, which may please be referred.

31. Manpower

Views/suggestions of objectors

- a. The OHPC has always given the wrong information to the Commission about the employees cost .Near about 500 workers are now engaged against the sanctioned post which I have intimated several times before the OHPC management to regularise them without recruiting outsiders. The above 500 workers are recruited against the vacancies which I have received the information from RTI.
- b. The Commission should appoint a fact-finding committee to access the efficiency of each units of OHPC for the greater interest of the consumers of the State. Workers are deprived of getting drinking water medical facilities and other amenities for better living & better working conditions.
- c. Some of the workers those who have retired or are going to retire have not received the pension as per Common Pension Scheme 2012. The workers, those who were engaged before 2012, should be paid pension as pension is right of the workers as per order of the Hon'ble Supreme Court of India. In this connection, Govt approved the pension scheme in the year 2011. That may be taken as a date of engagement of the workers eligible for Common Pension Scheme, 2012.

Rejoinder/ Response of OHPC

- a. OHPC has submitted that the contention raised by the Respondent is not stated to be true and devoid of facts as all such workers as claimed by the Respondents are not recruited against vacancy. However, such manpower has been deployed/ outsourced through service provider agencies. Moreover, regularization of such

manpower deployed/ outsourced through service provider agencies is not permissible under the extant rules.

- b. OHPC is carrying out periodic maintenance like daily, quarterly & annual maintenance as per guidelines prescribed by the Original Equipment Manufacturer (OEM) to maintain the efficiency and reliability of the generating units as prescribed in the design parameters. Further need based Renovation & Modernization & Capital Maintenance are also carried out from time to time to improve the performance of the generating units.
- c. OHPC has been providing various welfare facilities like provision for free residential accommodation, free medical facilities and free drinking water supply for the employees and their family members at different Units. Construction/renovation of residential quarters, water supply system, roads, drainage system and other amenities are being taken up as per requirement.
- d. DoE, vide notification no. 5449 dated 11.07.2012, has extended pensionary benefits to the non-pensionary category regular employees of OHPC transferred to OHPC on or after 01.04.1996 and employees recruited by OHPC between the date of its incorporation & 31.12.2004. As per the said notification, employees recruited on or after 01.01.2005 are not entitled for any pensionary benefits as has been extended to the employees joined on or before 31.12.2004.

32. R&M expenses with regard to Balimela & Hirakud HEPs

Views/suggestions of objectors

- a. GRIDCO has pointed out that OHPC has claimed an amount of Rs.80.963Crs. towards R&M work of Balimela & Hirakud Stations, which includes proposed project cost of Rs.78.023Cr.and Rs.2.94 Crs. towards Interest during construction (IDC) of Hirakud HEP, which needs to be capitalised in the ARR of OHPC for FY-2024-25
- b. In this regard GRIDCO has submitted that the Commission, vide Order dtd. 31.03.2014, has approved the period for completion of R&M works of Balimela & Hirakud Power Stations within the stipulated time period. The petitioner has claimed IDC of Rs.2.94Crs. against R&M works for #5 & #6 of Hirakud HEP in the ARR of OHPC for FY-2024-25. A table indicating approved period for R&M work of various units of Balimela & Hirakud vis-à-vis actual commercial operation date of the units are shown below for kind reference of the Commission.

Table -24

Unit Name	Approved Period of R&M	Zero Date	Commercial Operation Date	Actual Period of R&M
#5 Hirakud	21 months	25.10.2016	09.01.2022	63 months
#6 Hirakud	18 months	16.10.2015	02.11.2021	74 months
#1 Balimela	30 months	05.08.2016	15.04.2022	69 months
#2 Balimela	18 months	21.11.2017	19.12.2021	50 months

- c. It may be observed from the above table that the Petitioner has not complied to the approved timeline for undertaking R&M works for the above stations and there has been substantial delay in the execution of the project. In view of this, the Petitioner may need to provide necessary justification and provisions of the Regulations under which such time & cost overrun is to be allowed.

- d. GRIDCO requested the Commission to carry out prudent verification of IDC Claim of the Petitioner for the period beyond the approved period of completion by the Commission.

Rejoinder/ Response by OHPC

OHPC has submitted that IDC has been claimed by the petitioner against Unit-5 & 6 RM&U works of HHEP Burla. It may be noted that OHPC has claimed IDC for the approved period of RM&U works i.e. from Zero date to Scheduled Date of Commercial Operation (SCOD). So cost implication due to Time overrun does not arise. Moreover, OHPC had already lost the Capacity Charge benefit due to time over run. Hence the contention of Respondent is not correct.

33. **ARR**

Views/suggestions of objectors

- a. The Commission should direct the OHPC authorities not to place the up valuation demand of Govt. of Odisha as it has already been settled & finalized by the OERC in their last ARR orders for the FY2019-20.
- b. Truing up exercises covers two parts, such as (i) Cost & (ii) Revenue. In the cost part, the approved ARR for Licensees and Tariff for GENCOs for the year concerned is trued up item-wise with reference to their audited financial statements and the same is done by Licensees & GENCOs in an irregular manner

Rejoinder/ Response by OHPC

- a. OHPC has submitted that the ARR & Tariff of OHPC Power Stations is computed for FY 2024-25 without considering the impact of Govt. Notification No. 5843 Dtd. 03.07.2015 in respect of up valuation of generation asset.
- b. Regarding non- filing of Truing Up petition with ARR Application of OHPC, the para no.17 of OHPC ARR Application for FY 2024-25 may please be referred. In the Order dated 08.06.2023 in Case No. 53 of 2022 & Case No.19 of 2023 regarding approval of true-up of ARR and Tariff of individual power stations of OHPC from FY2016-17 to FY2020-21 & FY 2021-22, OERC had made the following observations at para no. 10.

“Basing on the above discussion we are not inclined to accept the truing up application in its present form. However, we draw the attention to a general provision in OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 with regard to truing up which is reproduced below”:

The Commission shall carry out truing up exercise at the end of the Tariff Period along with the tariff petition filed for the next tariff period, with respect to the following:

- (i) The capital expenditure including additional capital expenditure incurred up to 31.03.2024, as admitted by the Commission after prudence check at the time of truing up.
- (ii) The capital expenditure including additional capital expenditure incurred up to 31.3.2024, on account of Force Majeure and Change in Law.”

The above Regulation relates to approval of any additional capital expenditure which has not been specifically allowed in each year’s tariff order. *Accordingly, the Petitioner has the liberty to approach the Commission under the above Regulation once the control period of the present Tariff Regulations expires on 31.03.2024.”*

The copy of the Order dtd.08.06.2023 is enclosed at **Annexure-22** of the Tariff Application of OHPC for the FY2024-25 for kind reference.

Accordingly, OHPC shall file Reconciliation of Project Cost and Truing Up of ARR from FY2020-21 to FY2023-24 mentioned above before filing of ARR & Tariff application for the FY2025-26. The consequential effect of Truing Up shall be given in the Tariff of OHPC for FY2025-26 as an additional effect.

34. **Return on Equity**

Views/suggestions of objectors

GRIDCO has submitted that OHPC has claimed differential unapproved RoE for the FY-2023-24 for an amount of Rs. 1.386Cr. to be allowed in the ARR for FY-2024-25. In this regard, it is to mention that the Commission, vide Order dtd. 11.07.2023 in Case No. 52 of 2023, have observed that ROE is to be allowed on the equity infused by the company. Further, while calculating RoE, asset reduction/decapitalised for historical assets and assets created through Govt. grant are to be excluded from the total capitalised amount. In view of the above the differential RoE claim of OHPC may be prudently checked by the Commission in line with the earlier observation in Case No. 52 of 2023

Rejoinder/ Response by OHPC

- a. OHPC has submitted that there was an inadvertent error during approval of RoE of different power stations of OHPC for the FY2023-24. The Commission while determining the equity capital of old power stations of OHPC for computation of RoE for the FY2023-24, had deducted the decapitalization of asset from new investment made after 01.04.1996 instead of deducting the same from Historic Cost of asset. Since most of the asset decapitalized for old power station of OHPC belong to the Transferred asset.
- b. Similarly, the Commission while determining the equity capital of UIHEP for computation of RoE for the FY2023-24, had deducted the decapitalization of asset from new investment made after CoD i.e. 19.04.2001 instead of deducting the same from Original project cost of asset. Since most of the asset decapitalized for UIHEP belong to the Original Project Cost.

OHPC has applied for review of order dated 23.03.2023 for correction of this inadvertent error in respect of approval of RoE in the Review petition of ARR of OHPC for the FY2023-24 in Case No. 52 of 2023. OERC, in the Order dated 11.07.2023 at para no. 15(e), had made the following observations.

“OHPC in this petition has proposed for calculation of RoE by deducting decapitalization from historic cost rather than from new additional capitalization of assets. The Commission analyzed and observes that the ROE is to be allowed on the equity infused by the company. Further, while calculating ROE, asset reduction/decapitalized historical assets and assets created through Govt. grant are to be excluded from the total capitalized amount. The ROE calculation for FY2023-24 has been made basing on above principle considering data/information provided by OHPC. For any additional claim with respect to ROE, OHPC is required to submit a detailed calculation of ROE for FY 2023-24 excluding decapitalized historical assets and grant assets (created through Govt. grant) from the total GFA (Gross Fixed Asset). Accordingly, review on this matter is not attracted.”

Also the OERC at para no.16 of the said order had made following observations:

“However, the review petitioner is at liberty to submit relevant information lack of which resulted in filing the present review petition along with its forthcoming ARR and Generation Tariff application for the FY 2024-25 for consideration of the Commission.”

For detail submission & calculation, para 11(A) (page no 26,27 & 28) and page no A162 & A163 of the Tariff Application of OHPC may please be referred.

35. Depreciation

Views/suggestions of objectors

GRIDCO has submitted that the depreciation should not be allowed to be used to earn additional return over and above the Return on Equity (RoE) allowed by the Commission. Therefore, GRIDCO humbly submits before the Commission to consider the depreciation amount for different plants as per the actual loan repayment instead of considering higher value between loan repayment & depreciation calculated @ 2.57%”.

Rejoinder/ Response of OHPC

OHPC has requested to referred the OERC order dated 30.09.2022 in Case No. 31 of 2022, which state that “However, we cannot wink at the fact that the principal loan repayment is an essential aspect of consideration which is to be recovered through the depreciation in generation tariff. Therefore, the Commission in their past tariff orders of the OHPC had allowed Advance against depreciation to facilitate the loan repayment by the OHPC in respect of its power stations. It is the fact that the depreciation cannot be allowed beyond 90% of the capital cost.

OHPC has claimed depreciation @2.57% (Pre-1992 rate) of project cost or loan repayment whichever is higher in the present tariff. In case of power station, in which depreciation @2.57% of the Project Cost is higher than loan repayment obligation, the differential amount (@2.57% of Project Cost - Loan Repayment obligation) is allowed as depreciation to facilitate recovery of 70% to 90% of the Historic Cost or Additional Capitalization

36. Interest on Loans claimed

Views/suggestions of objectors

GRIDCO has submitted that, the Petitioner has proposed interest on loans Rs.24.294Cr. on the outstanding loans availed for various existing HEPs. It is submitted that the loans carry interest in the range of 7% to 9.80% as submitted in Table-19 of the ARR application. The Commission may kindly consider that the Petitioner maintains bank balance of Rs.1896.32Cr. which can be prudently utilized for repayment obligations as to optimize the ARR through financial restructuring of the existing loan portfolio along with maintaining the addl. reserves to meet the future projects in the best interest of the sector”.

Rejoinder/ Response by OHPC

OHPC has submitted that the bank balance maintained by OHPC is generated from Return on Equity Fund & Depreciation Fund approved by Commission over the years. These funds are to be utilized for implementation of new Pump storage Projects in UIHEP, UKHEP & BHEP; Storage Hydro Project at Kharag, Capital Maintenance work as and when required for smooth functioning of the Power stations etc. For details,

Annexure-24 & 25 of the Tariff Application of OHPC for the FY2024-25 may please be referred. Moreover, Interest on actual and normative loan is a pass through in the OERC Generation Tariff Regulation 2020.

OHPC urge GRIDCO to kindly cite the provision of the OERC (Terms & Conditions for Determination of Generation Tariff) Regulations 2020, that interest on loan for a generator is to be recovered from its Own Fund / Equity Fund.

37. Regarding GEDCOL

Views/suggestions of objectors

The Commission should direct the petitioner to produce the detail loss & profit balance sheet of GEDCOL, being a 100% owned Company, their Board of Directors & performance should be produced

Rejoinder/Response by OHPC

OHPC has submitted the composition of Board of Directors of GEDCOL as follows:

- | | | | |
|----|--|---|----------|
| 1. | Sh Suresh Chandra Mahapatra, IAS (Retd.) | : | CMD |
| 2. | Sh Amresh Kumar | : | CEO |
| 3. | Sh Ashish Kumar Mohanty | : | Director |
| 4. | Sh Pranab Kumar Mohanty | : | Director |
| 5. | Sh Subash Chandra Jena | : | Director |
| 6. | Sh Sarat Chandra Bhadra | : | Director |
| 7. | Sh Chittaranjan Pradhan | : | Director |
| 8. | Sh Bijoy Chandra Jena | : | Director |
| 9. | Sh Bibhuti Bhushan Acharya | : | Director |

The Balance sheet and profit & loss statement of GEDCOL is enclosed at Annexure-I with the petition.

38. Regarding OCPL

Views/suggestions of objectors

OHPC have 49% share of OCPL. Now OCPL is a profit making company. The OHPC should produce the detail status report of total operation of OCPL & profit earned i.e. last 5 years i.e., for 2018 to 2023.

Rejoinder/ Response by OHPC

OHPC has submitted that Govt. of Odisha has acquired 49% equity share of OCPL from OHPC w.e.f 30.12.2022 and as such OHPC ceased to be a shareholder in OCPL w.e.f. 30.12.2022.

39. Machkund Hydro Project

Views/suggestions of objectors

The petitioner OHPC should produce the detail agreement between the Govt. of Andhra Pradesh & their Company regarding power generation & power purchase from Machkund Hydro Projects. Per unit rate of Machkund Power should not be more than 50 paisa as it was earlier settled. The petitioner has to produce the detail status report of Potero Power Projects i.e. cost of project & year wise expenses till 2023 before hearing of the case.

Rejoinder/ Response by OHPC

OHPC has submitted that the copy of the “New Machkund Agreement 2020” signed between the State of Odisha and State of Andhra Pradesh is enclosed at **Annexure-II** which may please be referred to. OHPC calculates Tariff of Machhkund considering 50% of O&M expenses of the latest audited account as per the provision stipulated in the Agreement. Potteru Hydroelectric project has no relevance in the computation of tariff of OHPC for FY 2024-25.

40. Drawl of power by Chhattisgarh

Views/suggestions of objectors

The petitioner OHPC has mentioned in their periodical history that they are paying 05MW share to Chhattisgarh Power Distribution Corporation from Hirakud as per the Minutes of meeting dated 24.12.2004. The Objector strongly opposes it because there is a big water dispute of Mahanadi that is continuing between Odisha Govt. & Chhattisgarh Govt. As such, that should be stopped. The present status report of Mahanadi Water flow from Chhattisgarh for the water year 2004-05 to 2023-24 should be produced before the hearing of the case.

Rejoinder/ Response by OHPC

OHPC has submitted that the drawl of power by Chhattisgarh from Hirakud generation towards their 5MW share is envisaged in the procedural history (para 1) of tariff application for FY 2024-25 which may please be referred to. The data regarding water flow to Hirakud Reservoir from Chhattisgarh is available with DoWR, GoO. OHPC generates power as per the schedule of generation fixed by SLDC.

41. Dividend

Views/suggestions of objectors

The Income Tax paid by OHPC should not be accepted as dividend which has to be adjusted against the GRIDCO’s dues for the greater interest of the consumers.

Rejoinder/ Response by OHPC

OHPC has submitted that clause no. 21 of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 under the head Tax on Income has stipulated the following:

“Income tax of the Generating Company shall be recovered from the beneficiaries. This will exclude income tax on other income streams (income from non-generation and non-transmission business.”

OHPC claims reimbursement of Income Tax as per the provision mentioned above. Further adjustment of dividend against outstanding dues of beneficiary is not in line with OERC Generation Regulation, 2020.

42. UIHEP

Views/suggestions of objectors

The interest payment on Govt. investment at UIHEP against the loan should not be accepted by the commission because the project was started in the year 1977 & completed in the year 1999. This inaction of the Govt. officials’, the loans & interest are increasing day by day, that should not be considered in tariff application.

Rejoinder/ Response by OHPC

OHPC has submitted that the original Project Cost of Rs.1194.79Cr for UIHEP was approved by the Commission in Case No 60/2007, the Tariff Order of OHPC for the FY2008-09. Again,

Commission in the Para 131 of Compendium of Tariff Order of OHPC for FY 2013-14 has observed that “The Commission has analyzed the proposal of OHPC and observes that the principal repayment has already been passed in the tariff of 2010-11, 2011-12 and 2012-13 @ Rs.30.23 Cr. per year. The same amount is allowed in the tariff of 2013-14 towards principal repayment. The total principal repayment will take 17 years i.e. beginning with 2010-11 and will terminate by 2027-28. Thereafter, the interest payment will be taken into consideration. As far as repayment of normative loan of Rs.78.23 Crs. is concerned, the Commission feels that after the total repayment of Govt. loan as approved above, this loan repayment may start at the same rate of Rs.30.23 Crs. each year i.e. beginning with 2028-29. The interest component will be considered after the total repayment of the principal in line with the Govt. loans.”

Accordingly, as per earlier directions of the Commission, OHPC has not considered any impact of interest on Govt Loan & Normative Loan of Rs 78.74Cr in respect of UIHEP for Tariff Calculation for the FY 2024-25.

43. Multi Year Tariff

Views/suggestions of objectors

- a. The Truing up, Review & Determination of Tariff proceedings has been carried out by the Commission without following the Multi Year Tariff (MYT) Principles as provided in sec 61(f) of the Act & the Tariff policy thereof.
- b. That the instant annual tariff proceeding has been carried out for review of existing tariff for FY 2023- 24 & determination of generation tariff, transmission tariff, bulk price and RST for FY2024-25 without any valid Generation Tariff and Transmission Tariff Regulations.
- c. It has been submitted that taking late action by the State Commission is the failure of regulatory system and obviously violation of the provision of the Act. The Objector requested the Commission to initiate necessary action for framing upgraded Generation Tariff & Transmission tariff Regulations for the 5th MYT period FY2024-25 to FY 2028-29.

Rejoinder/ Response by OHPC

- a. OHPC has submitted that as per the provisions envisaged in the Clause No. 7(6) of the OERC (Terms & Conditions for Determination of Generation Tariff) Regulations 2020, Approved PPA between OHPC and GRIDCO & principles laid down in the tariff orders of OHPC for each year, OHPC has been filling the tariff petition for every year covering the following.
 - i. Additional capitalization as per audited account for respective tariff years of the tariff period and
 - ii. Decapitalization,
 - iii. Forecast of expected revenue and estimates of quantum of electricity to be generated from individual Power Stations.
- b. OERC at clause no. 1(4) of the OERC (Terms & Conditions for Determination of Generation Tariff) Regulations 2020 has set provisions for period of applicability of the Regulation which is reproduced as follows.

“These Regulations shall come into force on the date of publication in the Official Gazette, and unless reviewed earlier or extended by the Commission shall remain in force till 31.03.2024.”

- c. Anticipating the extension of applicability of the OERC (Terms & Conditions for Determination of Generation Tariff) Regulations 2020 for next year by the Commission, OHPC has filed the Tariff proposal for the FY2024-25 based on the provisions in the present OERC Generation Tariff Regulation 2020.

44. Mismatch of actual data

Views/suggestions of objectors

The Petition filed by GRIDCO reveals that the total power generation by OHPC Stations for first six months of the current FY2023-24 is 2906 MUs whereas SLDC’s Power Status Report for the aforesaid period as submitted says that same is 3151 MUs. So there is a difference of 245MUs between GRIDCO Petition and SLDC report. As the aforesaid two documents are available on spot, then the difference cannot be ignored in the instant proceedings. The Commission may direct the Petitioners OPTCL(SLDC), GRIDCO & OHPC for reconciliation of actual generation in the instant proceedings for determination of their Tariff/ Charges/Prices.”

Rejoinder/Response by OHPC

OHPC has submitted that the total power generated by OHPC including Odisha share from Machkund from April 2023 to September 2023 is 3176.75 MU and Power sold to GRIDCO in the said period is 3107.65 MU.

45. Additional Capitalisation

Views/suggestions of objectors

- a. GRIDCO has submitted that as per OERC Generation Tariff Regulations, 2020, any capital expenditure incurred by OHPC will have to meet the conditions set out by the Commission under regulation 12 (2) of the OERC Generation Tariff Regulations, 2020. The Objector further pointed out that the additional capitalization claim of OHPC for its different stations for the FY-2024-25 is as follows:

Table -25

Sl. No.	Power Station	Additional capitalization during FY-2022-23 as per Audited accounts at Annexure-9 of Tariff Application (in Crs.)	Additional Capitalization Claim of OHPC in the ARR for FY-2024-25 (in Crs)
1	Rengali	4.09	7.338
2	Upper Kolab	7.85	7.888
3	Balimela	57.91	57.959
4	Hirakud	27.79	30.764
5	Chiplima	0.582	0.603
6	Upper Indravati	15.18	15.261
	Total	113.402	119.813

- b. The Objector observed that, there is a difference of around Rs.6.41 Crs. towards additional capitalization as reflected in the Audited accounts of OHPC for FY-2022-23 vis-à-vis the amount claimed in the Statement at Para-9 (Table-10) of the ARR Application of OHPC.
- c. The Objector has requested the Commission to direct OHPC to give proper justification regarding excess claim of Rs. 6.41Crs. additional capitalization in the ARR of OHPC for FY-2024-25 and to submit the proper justification regarding criteria under which the items of additional capitalization claimed as mentioned in Annexure-I comes under Regulation 12 (2) (a) to (g) of the OERC Generation Tariff Regulations, 2020. GRIDCO prays before the Commission to carry out prudent verification of additional capitalizations so claimed by OHPC.

Rejoinder/ Response by OHPC

- a. OHPC has submitted that the petitioner has already cited the provisions of Regulation under which additional capitalizations has been claimed at para 7(A) of original tariff application for FY 2024-25 which may please be referred.
- b. The additional capitalization as claimed by OHPC in its ARR application for FY 2024-25 is as follows: -

• Addition in the Gross block as reflected in audited Account (Page no A-80 of Annexure-7 of	Rs. 113.65 Cr
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ARR Application for FY 2024-25):-

• Add: - Adjustment of Rs 3.2273 Cr under Power house electro Mechanical work against RHEP**	Rs. 3.23 Cr
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(Page no A116 of ARR Application for FY 2024-25) :-

• Add: - IDC against RM&U of Unit 5 &6 of HHEP: -	Rs. <u>2.94 Cr</u>
Total	Rs 119.82

- c. OHPC has submitted that they have apportioned capital cost of Rs0.240 Crs of Corporate Office among individual units of OHPC w.r.t their design energy and had added with respective Additional Capitalizations of respective Units.
- d. RHEP, Rengali had inadvertently de-capitalized Rs.4.76 Cr. from the gross block of fixed assets during the FY 2021-22. However, there is no gross block against such decapitalization, since OHPC has taken into the account net block as on 31.03.2015 during the financial year 2015-16 in due compliance with IND AS.Now, the amount of Rs. 3.23 Cr. had again added back to gross block of asset during the FY 2022-23 as adjustment in deletion group of assets.

46. Office Expenses

Views/suggestions of objectors

GRIDCO has observed that, Petitioner has claimed an amount of Rs.0.24Crs. towards Corporate Office Expenses to be capitalized in the ARR of OHPC for FY-2024-25. GRIDCO submits before the Commission so as not to consider same in absence of the provisions as per regulation justifying the same.

Rejoinder/Response by OHPC

OHPC has submitted that the Corporate Office of a Generating Station is always an integral part of individual power station. Hence its Capital Expenditure & Revenue Expenditure needs to be recovered from beneficiary. So, both the expenditures are apportioned among the individual units w.r.t their Design Energy and claimed as per the norms of OERC Generation Tariff Regulation & provisions of PPA.

47. Miscellaneous earnings

Views/suggestions of objectors

GRIDCO has observed that, the Petitioner in addition to the domain earnings generated from sale of power have other sources of earning including interest from fixed deposit which constitutes a magnificent share of the total income. As per the annual Audited Accounts for FY 2022-23, the miscellaneous earning has been mentioned to be Rs.185.90 Crs. However, OHPC has deducted only Rs.1.662Crs. as non-tariff income from the total projected ARR of OHPC as per Regulation 41 of OERC Generation Tariff Regulation, 2020. The Commission may kindly consider the amount earned by the Petitioner from non-tariff income over the years and also the miscellaneous earning of OHPC is very significant”.

Rejoinder/Response by OHPC

OHPC has submitted that there are no such provisions in OERC (Terms & Conditions for determination of Generation Tariff) Regulations 2020 to deduct the other income from the ARR to determine the Tariff of generating stations.

48. Upcoming Hydro Projects of OHPC

Views/suggestions of objectors

GRIDCO has submitted that OHPC is being involved in developing Solar projects, Small hydro projects as well as Large hydro Projects. OHPC has been developing the Kharag Hydro Electric Project having capacity of 63 MW in Kandhamal district. In addition to that OHPC has also been developing the Pumped Storage Projects like Upper Indrāvati Pumped Storage Project, Upper Kolab Pumped Storage and Balimela Pumped Storage Project. It is to mention that the COD of all the Projects will be after FY-2029-30. GRIDCO submitted that the timely completion of these important projects is beneficial for all. The development is expected to have positive environmental implications and increased availability of clean energy marking a significant step towards holistic development in the region. GRIDCO requested the Commission for issuance of necessary directions to the petitioner to complete the upcoming hydro Projects at an early date so that the HPO Obligation of the State can be met.

Rejoinder/Response of OHPC

OHPC has submitted that Hydroelectric projects invariably suffer from unique geological risk, environmental risk, political risk & other social risks etc. As such projects navigate through a lot of uncertainties. Despite all such constraints, OHPC will endeavor to complete the upcoming projects within the budget and the timeline. OHPC seek attention of the Commission towards persistent delay in settlement of dues by GRIDCO and the matter could not be resolved until intervened by Energy Dept. Due to delay in release of such outstanding payment by GRIDCO, OHPC earlier suffered in its cash flow thereby adversely affected the financial position of OHPC.

OHPC has requested the Commission to direct GRIDCO to adhere to its commitment to make regular payment as agreed in the securitization agreement along with timely payment of all current energy dues failing which provision of Late Payment surcharge rule may be levied without passing through Tariff.

49. VIEWS OF CONSUMER COUNSEL

On behalf of Consumers, the World Institute of Sustainable Energy (WISE), Pune the Consumer Counsel had made a presentation on the Analysis of ARR and Tariff filing of OHPC for 2024-25. The Consumer counsel's observations /suggestions are summarized below:

- Comparative analysis of tariff approved by the Commission for FY 2023-24 to that of the proposed tariff for FY 2024-25 reveals that there is 6.83% increase proposed on tariff. In case of Machkund HEP, proposed tariff is Rs1.23 / kWh for FY 2024-25, which is higher than the approved tariff for FY 2023-24 at Rs1.16 /kWh.
- The Commission may review the reservoir level as on Nov 2023 vis-a-vis the level recorded as on November 2022 and the anticipated and actual generation projected by the Petitioner carefully. The reservoir level as on Nov 2023 are noted to be high (Except BHEP, HHEP) compare to the level recorded as on Nov 2022; also, anticipated generation for FY 2023-24 is projected to be higher than FY 2022-23 by around 10%. The Commission may review the same.
- The consumer counsel attempts to bring to notice of Commission that RHEP and HHEP are performing well and having positive fund amount in Secondary fund. However, Generation of UKHEP is on lower side, w.r.t design energy (only 55%). In FY 22-23, total generation was considerable low (2nd lowest in last 5 years).
- OHPC has considered the historical cost of its power stations as on 01.04.1996 plus new capitalization and decapitalization after 01.04.1996 up to FY 2022-23 along with estimated capitalization for next two years for computation of tariff for FY 2024-25. OHPC is claiming for tariff determination for FY 2023-24 considering already approved additional capitalization of Rs.971.62 Cr (up to FY 21-22), and additional capitalization of Rs.119.81 Cr (FY 2022-23 audited), and PSDF grant of Rs2.995 Crs, was deducted. Capitalization mainly in HHEP, BHEP may be reviewed as per the OERC Generation Regulations. Capital asset not in put to use may not be considered for tariff calculation for FY 2024-25. Details of cost overrun and time overrun, if any, may be submitted. Also, increased capitalization shall lead to increased energy generation, and OHPC may submit the required results.
- While calculating equity base, the additional capitalization up to FY 2022-23 , may be approved by the Commission. Also, decapitalization should be considered appropriately.
- OHPC has not considered interest on government loan and normative loan of UIHEP for FY 2024-254 as per the directives of the Commission in previous orders. OHPC has claimed interest on normative loan on account of additional capitalization for its different power stations which may be approved as per earlier orders of the Commission.
- In case of O&M expenses, the proposed escalation factor may be approved as per the provisions given in OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020. The Commission may verify the amount to be received from DoWR towards Dam Maintenance Sharing of UIHEP.
- Depreciation was allowed as per clause 23 of the OERC Generation Tariff Regulations, 2020, i.e. for existing plants of OHPC. As per the direction of the High Court of Orissa, depreciation may be continued to calculate at pre-1992 norms notified by Government of India.

- OHPC has claimed interest on working capital on normative basis as per provision under Clause No. 24(4) of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020. Interest is calculated based on the SBI Marginal Cost of Funds based Lending Rate (MCLR) prevailing on 01.04.2023 plus 300 basis points; i.e. 10%. Working capital may be approved based on approved O&M cost and receivable according to annual fixed cost.

OHPC has claimed Non-tariff income (NTI) as per Clause 26 and 41 of OERC Generation Tariff Regulations, 2020 and the amount of Rs 11.23 Cr is considered as 50% of deductible non-tariff income. Further, as per review order, OHPC has adjusted 2nd instalment of recovery of excess NTI deducted by the Commission in FY 2021-22. The same may be reviewed by the Commission.

VIEWS OF GOVERNMENT OF ODISHA (PARA 50)

50. The Government of Odisha, Department of Energy has communicated their views on the tariff proceeding of the Commission for FY 2024-25 vide in their letter No.Eng-DER-OERC-0001-2021/1704 dated 09.02.2024. The views in respect of OHPC as here after;

1. Keeping in abeyance of up-valuation of assets:

Regarding the issue of up-valuation of assets pertaining to OPTCL, Generators and other Licensees, the Government for the time being agree with views of the Commission to keep in abeyance the up-valuation of assets like previous years. Considering the present difficult situation, the Govt. agrees to extend the status-qou on up-valuation for 5 years for FY 2021-22 to 2025-26.

ANALYSIS AND OBSERVATIONS OF COMMISSION ON OHPC'S PROPOSAL (PARA 51 to 64)

51. The Commission has carefully examined and analysed the proposal of OHPC. The written and oral submissions of the Objectors have been considered while determining the tariff. In the tariff proposal, OHPC has furnished technical information such as type of Hydro stations, Normative Annual Plant Availability Factor (NAPAF), potentials of energy generation and financial details like capital cost, calculation of depreciation, interest on loans, interest on working capital, Operation & Maintenance (O&M) expenses etc. of all Hydro power stations. The apportionment of capital cost, audited figures for additional capitalisation, O&M expenses in respect of each Hydro stations have also been provided along with tariff calculations.
52. Section 61 of the Electricity Act, 2003 provides that the Commission shall specify the terms and conditions for determination of tariff and while doing so, shall be guided by the principles and methodologies specified by the Central Commission for determination of the tariff applicable to the Generating Companies. Accordingly, the Commission in exercise of the powers conferred by Section 61 read with Section 62 (1) (a), 86 (1) (a) & (b) and Section 181 of the Electricity Act, 2003, has notified the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 (in short Generation Tariff Regulations, 2020) on 26.08.2020. The Commission, while disposing the present petition of the applicant for determination of ARR and tariff of OHPC power stations for the FY 2024-25, has followed the said Regulations read with relevant provisions of Electricity Act and OERC (Conduct of Business) Regulations, 2004.

53. During the course of public hearing, the Objectors raised certain issues having direct impact on tariff of OHPC and the response of OHPC to their queries has been submitted by OHPC. Commission's analysis on the issues related to tariff of OHPC are discussed as under:

- Power Procurement from OHPC
- Project Cost
- Annual Fixed Cost
- Two-part Tariff (Capacity Charge & Energy Charge)
- Tariff for Chhattisgarh State Power Distribution Company Limited (CSPDCL)
- Issues relating to Machhakund Hydro Electric Project

54. **Availability of Power from OHPC**

- (a) The design energy of all the six generating stations of OHPC (RHEP, UKHEP, BHEP, HHEP, CHEP & UIHEP) is 5676 MU. Deducting 1% towards auxiliary energy consumption and transformation loss and share of 5MW of CSPDCL the saleable energy to GRIDCO would be 5602.60 MU. The Commission observed that as per the MOM with erstwhile Chhattisgarh State Electricity Board, presently Chhattisgarh State Power Distribution Company Limited (CSPDCL), CSPDCL shall draw energy from Hirakud Power Stations towards its share of 5 MW. As per the agreement between OHPC and CSPDCL, pending the disputes on computation of quantum of supply of power on RTC basis with or without consideration of PLF, 16.644 MU of energy shall be supplied to CSPDCL from Hirakud Power Station annually.
- (b) The Design Energy and saleable energy of all the six power stations of OHPC for computation of tariff for the FY 2024-25 are given in the table below:

Table – 26

(in MU)				
Sl. No.	Name of the Power Station	Design Energy for FY 2024-25	Design Energy (Considering Auxiliary consumption of 1%) for FY 2024-25	Energy Approved for Sale to GRIDCO for FY 2024-25
1	RHEP	525.00	519.75	519.75
2	UKHEP	832.00	823.68	823.68
3	BHEP	1183.00	1171.17	1171.17
4	HHEP	684.00	660.52	660.52
5	CHEP	490.00	485.10	485.10
6	UIHEP	1962.00	1942.38	1942.38
Total		5676.00	5602.60	5602.60

*Considering Auxiliary consumption of 1% & reduction of 16.644 MU allocated to CSPDCL from HHEP generation.

55. **Machhakund**

Machhakund Power Station is a joint venture project of Government of Odisha and Andhra Pradesh having installed capacity of 120 MW (i.e. 3x17 MW + 3x23MW). As per the new agreement, Odisha has a share of 50% from this power station. The design energy of Machhakund power station is 525 MU and considering 1% towards auxiliary energy consumption and transformation loss, the net energy availability to Odisha is 259.88 MU. The Commission, therefore, approves 259.88 MU as drawl from Machhakund Power Station during FY **2024-25** against 50% share of Odisha.

56. **Project Cost**

- (i) OHPC has submitted that the re-valued cost of old power stations was Rs.1196.80 Crs. as on 01.04.1996 as per Notification vide S.R.O No. 254/96 Dt. 01.04.1996 of the Department of Energy, Government of Orissa. The Commission in their order dated 23.03.2006 had approved the same. Further, the Commission, in the order dated 20.03.2008 had approved Rs. 1194.79 Crs. as final capital cost of UIHEP for the purpose of determination of tariff. However, the Tariff of Old power stations is being determined on the basis of their historical cost, which is Rs. 479.80 Crs as per the Notification No. 1068 dated 29.01.2003 of DoE, GoO.
- (ii) OHPC has submitted that actual decapitalisation after reconciliation is Rs.27.273 Cr for FY 2022-23.
- (iii) Further OHPC has submitted that the total approved capitalization up to FY 2021-22 & audited expenditure for FY 2022-23 on account of Additional Capitalization, IDC for HHEP, Burla & PSDF grant, the Project Cost considered by OHPC for determination of Tariff for FY 2024-25 amounts to Rs 2732.528 Cr as per Para 10 above.
- (iv) The additional capitalisation as reflected in the audited accounts for FY 2022-23 has been considered by the Commission for determination of project cost for FY 2024-25. The Commission after analysing approves the following Historic cost, new addition, additional capitalisation , decapitalisation and PSDF grant to arrive at the project cost. for Tariff calculation for FY 2024-25, the details of which is given in Table below:

Table – 27
DETAILS OF PROJECT COST OF OHPC FOR DETERMINATION OF TARIFF FOR
FY2024-25

(Rs. Cr)

Sl. No.	Name of Power Station	Historic cost of assets as on 01.04.1996 & Original Project Cost of UIHEP	New Additions from 01.04.1996 to 31.03.2022(OERC Approved)	Addition Capitalisation for FY 2022-23	Total Asset reduction/ Decapitalisation up to FY2022-23	PSDF Grant up to FY2022-23	Project cost considered for Determination of for FY 2024-25 based on Historic Cost.
1	2	3	4	5	6	7	8=3+4+5-6-7
1	RHEP	91.09	67.19	4.11	-3.085	3.133	162.34
2	UKHEP	108.31	28.23	7.89	0.504	3.299	140.62

Sl. No.	Name of Power Station	Historic cost of assets as on 01.04.1996 & Original Project Cost of UIHEP	New Additions from 01.04.1996 to 31.03.2022(OERC Approved)	Addition Capitalisation for FY 2022-23	Total Asset reduction/ Decapitalisation up to FY2022-23	PSDF Grant up to FY2022-23	Project cost considered for Determination of for FY 2024-25 based on Historic Cost.
3	BHEP	115.42	283.37	57.96	3.286	2.412	451.05
4	HHEP	72.75	391.85	27.82	18.489	0.982	472.96
5	CHEP	92.23	120.67	0.60	2.775	0.576	210.15
	Sub Total	479.8	891.31	98.38	21.969	10.402	1,437.12
6	UIHEP	1194.79	91.49	15.26	5.305	3.776	1,292.46
	Total	1674.59	982.80	113.64	27.273	14.178	2,729.58

For the determination of ARR & Tariff of OHPC for FY 2024-25, the Commission has considered the total project cost as Rs 2729.58 Cr. and the effect of up-valuation of assets has not been considered as usual.

57. Determination of Tariff

As per OERC (Terms & Conditions for Determination of Generation Tariff) Regulations, 2020, the annual fixed cost (AFC) of a hydro generating station shall consist of the following components:

- a. Interest on loan capital;
- b. Depreciation;
- c. Return on equity;
- d. Operation and maintenance expenses;
- e. Interest on working capital;
- f. Income Tax;

Less:

- g. Non-Tariff Income:

(a) Interest on Loan:

OHPC has submitted that the loan liabilities consisting of State Government loan and Normative Loans. There is no outstanding loan liability in respect of old hydro stations of OHPC.

(i) Normative Loans of different Power Stations due to Additional Capitalization

OHPC has submitted that though, State Govt. loan (at interest rate of 9.8%) has been repaid, the loans from other sources are still pending. As per Clause No. 22 of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020, the normative interest rate for loans is 9.8% in respect of CHEP, RHEP & UKHEP; 9.6 % (PFC loan) for BHEP, Balimela for FY 2024-25; 8.75 % (PFC loan) for HHEP, Burla for the FY 2024-25; and 7% (State Govt. loan) for UIHEP due to the additional capitalization based on audited accounts of FY 2022-23.

- (ii) As per earlier directions of the Commission, OHPC has not considered the impact of interest on Govt Loan & Normative Loan of Rs 78.74Cr in respect of UIHEP for Tariff Calculation for the FY 2024-25. Similarly, in view of the directives of the OERC, OHPC has not claimed the accumulated interest on Govt Loan & Normative Loan in respect of UIHEP as regulatory asset.
- (iii) Considering the above rate of interest on loans (Govt. loan as well as normative loan) for various Hydro generating stations of OHPC, OHPC has proposed interest amount of Rs 24.294 Cr for the FY 2024-25 as per **Table-9**.
- (iii) The Commission, after analysis of the same, approves interest payment of Rs.23.511 Cr. (against Rs.24.294 Cr claimed by OHPC) in respect of all hydro stations of OHPC for FY 2024-25, the details of which is given in Table below.

Table – 28

Interim Payment approved by Commission for FY 2024-25

Sl. No.	Source of Loan	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	TOTAL
1	Normative Loan	0.469	0.486	6.828	9.109	3.242	20.134	3.377	23.511
2	Govt. Loan of UIHEP						0.000	0.000	0.000
	Total	0.469	0.486	6.828	9.109	3.242	20.134	3.377	23.511

(b) Depreciation:

- (i) OHPC has computed depreciation for the FY 2024-25 @ 2.57% on the Historic project cost as on 01.04.1996 and additional capitalization w.e.f. 01.04.1996 up to FY 2022-23 (excluding de-capitalization). The depreciation so calculated is compared with the Loan repayment amount and the higher of the two has been considered by OHPC as depreciation for Tariff computation.

The comparative statement for actual repayment of loans, depreciation calculated @2.57% (pre-1992 notified rate) and the depreciation amount claimed by OHPC for each station in the ARR & Tariff calculation for the FY 2024-25 is given in the Table below.

Table –29

Depreciation claimed by OHPC for the FY 2024-25

(Rs. in Cr.)

Sl. No.	Power Stations	Project Cost	Depreciation @ 2.57%	Loan Repayment amount	Depreciation Claimed for the FY 2024-25	Remark
1.	RHEP	162.35	4.17	0.73	4.17	Depreciation > loan repayment
2.	UKHEP	140.62	3.61	0.56	3.61	Depreciation > loan repayment

Sl. No.	Power Stations	Project Cost	Depreciation @ 2.57%	Loan Repayment amount	Depreciation Claimed for the FY 2024-25	Remark
3.	BHEP	451.05	11.59	7.66	11.59	Depreciation > loan repayment
4.	HHEP	475.90	12.23	10.26	12.23	Depreciation > loan Repayment
5.	CHEP	210.15	5.40	3.60	5.40	Depreciation > loan Repayment
6.	UIHEP	1292.46	33.22	35.45	35.45	Depreciation < loan Repayment
Total		2738.53	70.23	58.25	72.46	

OHPC has claimed Rs.72.46 Cr under depreciation for FY 2024-25 in the ARR calculation.

(ii) However, clause No. 23 of OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 provides as follows;

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

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of fifteen (15) years from date of commercial operation shall be spread over the balance useful life of the assets;

Provided that for existing plants of OHPC as per the directions of the High Court of Orissa, depreciation will be calculated at pre-1992 norms notified by Government of India on the book value of the assets;

Provided, further that for existing plants of OPGC (UNIT-I & II), the applicable depreciation rate shall be as determined by Commission from time to time.”

Accordingly, the Commission analysed the submission of the OHPC in respect of claim of depreciation in the ARR. As per clause 23 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 the depreciation shall be computed from the date of commercial operation of a generation station or unit thereof. The capital cost of the assets admitted by the Commission shall be the base for calculation of depreciation. The Regulation further provides that for existing plants of OHPC as per the direction of the High Court of Orissa, depreciation will be calculated at pre-1992 norms notified by Government of India on the book value of assets. The Commission observed that OHPC has not submitted the details of assets station wise, year wise, pre 1992 asset, additional assets capitalised, asset class and IDC not allowed as per IND AS in the instant petition. The Commission after detailed analysis and scrutiny of the audited accounts now allows the depreciation of Rs.70.15 Cr for the ARR of 2024-25 as per clause 23 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020.

Table – 30

Depreciation approved by the Commission for HEPs of OHPC for the FY 2024-25

Rs (Crs)

Sl. No.	Name of the Power Station	Project Cost	Depreciation (@ 2.57%) approved for FY 2024-25
1	2	3	4 = 3*2.57%
1	RHEP	162.34	4.17
2	UKHEP	140.62	3.61
3	BHEP	451.05	11.59
4	HHEP	472.96	12.15
5	CHEP	210.15	5.40
	Sub Total	1437.12	36.93
6	UIHEP	1292.46	33.22
	Total	2729.58	70.15

(c) Return on Equity (RoE)

- (i) OHPC has submitted that the Commission in the tariff order dated 19th April, 2002 in Case No. 65 of 2001 and Case No. 04 of 2002 in Para 6.4.17 had decided the equity component of OHPC. Based on the above order and subsequent notification of Government dated 29.01.2003, the Return on Equity was allowed to OHPC on new investments made after 01.04.1996.
- (ii) Clause No. 20(2) of the OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2020 provides the mechanism for allowing ROE which is reproduced below:
“Provided that return on equity in case of OPGC (Unit - I & II) and OHPC stations shall be as per the provisions of the PPA.”
- (iii) The Commission in the recent past years has approved the Return on Equity as per the provisions of PPA. OHPC in the present Tariff has followed the same principle for computation of RoE.
- (iv) The Commission, in the order dated 20.03.2008, has approved Rs. 1194.79 Crs. as final capital cost of UIHEP for the purpose of determination of tariff. The investment in UIHEP, which was commissioned after 01.04.1996, is being considered as new investment. Equity Base for Govt. investment in UIHEP was considered as Rs 298.70 Cr (i.e. 25% of the historical project cost of Rs.194.79 Cr). Any decapitalization made in UIHEP is deducted from the Original Approved Cost and Equity is calculated @25% on balance Original Project

Cost. However, for further additional capitalization over Original Project Cost by OHPC, the equity base of 30% has been considered as per the provision in clause No. 16 of OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2020. The Commission has approved the same in the past years. OHPC has considered the same principle in the present tariff for the FY 2024-25.

- (v) In case of old power Stations OHPC has calculated the Equity Base considering approved Additional Capitalization from 1996-97 onwards upto 2021-22 & audited cost for capitalization for FY 2022-23 as per **Table-7**. 30% of these additional capitalizations has been considered as Equity Base as per the provision in clause No. 16 of OERC Generation Tariff Regulations, 2020.
- (vi) The Commission has taken into consideration the differential ROE claimed by OHPC for FY 2023-24. The Commission analysed and approves an amount of Rs 1.205 Cr as per capitalisation of asset station wise under differential ROE as against OHPC claim of Rs 1.386 Cr.
- (vii) The Commission has analysed the Return of Equity claim by OHPC in the tariff petition for FY 2024-25 and differential ROE for FY 2023-24. The OERC Generation Tariff Regulations, 2020 provides that the Return on Equity shall be computed at the base rate of 14% for all generating stations. However, the Regulation further provides that the RoE in case of OHPC stations shall be as per provisions of the PPA. The Commission scrutinised the PPA of the OHPC plants and it is found that for old plants, the Return on Equity is 15.5% and for UIHEP, the RoE is 16%. Accordingly, the RoE has been calculated on Equity base for FY 2022-23., the details of which is shown in the following table:

Table - 31
RoE approved by the Commission for different power stations of OHPC for FY 2024-25
(Rs. in Crs.)

Sl. No.	Name of the Power Stations	New additions from 01.04.1996 to 31.03.2022 (Approved)	Original Project Cost Approved for UIHEP	New additions for FY 2022-23 (Audited)	Less PSDF Grant for FY 2022-23	Total New additions from 01.04.1996 to 31.03.2023 considered for Tariff 2024-25	Asset reduction after FY1996-97 to be considered for computation of RoE (Refer N.B-1)	Net New addition for computation of RoE for FY2024-25
	1	2	3	4	5	6=2+3+4-5	7	8=6-7
1	RHEP	67.193	0.000	4.108	3.133	68.168		68.168
2	UKHEP	28.229	0.000	7.888	3.299	32.818		32.818
3	BHEP	283.372	0.000	57.959	2.412	338.919		338.919
4	HHEP	391.852	0.000	27.824	0.982	418.694		418.694
5	CHEP	120.666	0.000	0.603	0.576	120.693		120.693
		891.312	0.000	98.382	10.402	979.292	0.000	979.292
6	UIHEP*	91.491	1194.790	15.261	3.776	1297.766	5.305	1292.461
7	Total	982.803	1194.790	113.643	14.178	2277.058	5.305	2271.753

Sl. No.	Name of the Power Stations	Total Capitalisation from 01.04.1996 to 31.03.2023 less PSDF Grant	Equity Capital rate (%)	Equity Capital	ROE @15.5% for old power stations & @16% for UIHEP	Differential ROE for FY 2023-24	Total RoE for the FY2024-25
	1	2	3	4	5		
1	RHEP	68.168	30	20.451	3.170	0.004	3.174
2	UKHEP	32.818	30	9.845	1.526	-0.102	1.424
3	BHEP	338.919	30	101.676	15.760	0.336	16.095
4	HHEP	418.694	30	125.608	19.469	0.662	20.132
5	CHEP	120.693	30	36.208	5.612	0.296	5.908
6	UIHEP	1292.461	25 & 30	328.264	52.522	0.009	52.531
7	Total	2271.753		622.052	98.059	1.205	99.264

(vii) The Commission approves Rs.99.264 Cr (Rs 98.059 Cr plus Rs 1.205 Cr differential ROE for FY 2023-24) towards Return on Equity for all stations of OHPC for the FY 2024-25.

(d) O&M Expenses

(i) Clause no.25 of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 stipulates the following in respect of Operation and Maintenance Expenses for hydro generating stations:

“In case of the hydro generating stations declared under commercial operation on or after 01.04.2014, operation and maintenance expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation & resettlement works) and shall be subject to annual escalation of 5.72% per annum for the subsequent years.”

“O&M norms for the existing plants of OPGC (UNIT-I & UNIT-II) & OHPC will be determined by the commission from time to time.”

(ii) OHPC has submitted the O&M expenses as per audited accounts for calculation of O&M expense of different power stations of OHPC for the FY 2024-25, OHPC has escalated the average actual O&M expenses for FY 2021-22 & FY2022-23 @ 5.72% for FY2023-24 & FY2024-25 as per the principle adopted by the Commission in the tariff orders of OHPC for the FY2022-23 & FY2023-24 mentioned above. The Commission analysed the audited O&M expenses of OHPC for FY 2021-22 and FY 2022-23 and observed that certain audited expenditure cannot be treated as purely O&M expenses i.e. loss of asset, loss of

inventory, CSR, Rebate on sale of scrap and Donation. The Commission, after due scrutiny, is not inclined to allow the above audited expenditures booked under O&M expense. The O&M expenses have been calculated by taking the average audited O&M after deducting disallowed expense mentioned above and DOWR share for FY 2021-22 and FY 2022-23. The same has been escalated @ 5.72% for FY 2023-24 and FY 2024-25. The Commission, after taking into due consideration, allows an amount of Rs 317.89 Cr towards O&M for FY 2024-25 ARR. The details of O&M expenses approved by the Commission for FY 2024-25 is given in the following table.

Table-32
O&M Expenses approved by the Commission for different power stations of OHPC for the FY 2024-25

(Rs Cr)									
Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
1	O & M expenses for FY 2021-22 as per audited accounts	51.71	47.71	49.87	47.46	21.45	218.19	60.45	278.64
2	O & M expenses for FY 2022-23 as per audited accounts	51.54	51.24	53.60	49.73	22.51	228.62	61.57	290.19
3	Average Audited O&M expense	51.62	49.47	51.73	48.60	21.98	223.41	61.01	284.42
4	Escalation @5.72% over average audited O&M expenses for FY 2023-24	54.58	52.30	54.69	51.38	23.23	236.19	64.50	300.69
5	Escalation @5.72% over FY 2023-24 for FY 2024-25	57.70	55.30	57.82	54.32	24.56	249.70	68.19	317.89
6	Total O&M Expenses for the FY 2024-25	57.70	55.30	57.82	54.32	24.56	249.70	68.19	317.89

(e) **Interest on Working Capital**

OHPC, in its ARR petition for the FY 2024-25, has computed Interest on Working Capital of different power stations as per the previous approval of the Commission.

- (i) Clause no. 24(4) of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 relating to Interest on working capital for hydro generating stations is reproduced below:

“Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken loan for working capital from any outside agency.”

- (ii) Further the Clause No. 24(3) of said Regulations stipulates the following regarding rate of interest on working capital.

“Rate of interest on working capital shall be on normative basis and shall be equal to the Bank Rate as on 01.04.2020 or on 1st April of the year in which the generating station or a unit thereof, 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 2020-24.

- (iii) OHPC has considered the MCLR rate of SBI as on 01.04.2023 i.e. 8.5% plus 300 basis point for computation of Interest on working capital for FY 2024-25 as per **Table-13**.
- (iv) The Commission analyzed the submission of OHPC and considers 10.10% (7.10% interest rate as on 01.04.2020 + 300 basis point) as rate of interest as per clause 24(3) of the Regulations for calculation of working capital for FY 2024-25.
- (v) The details of interest on working Capital approved by the Commission in respect of different power stations for the FY 2024-25 is given in the following table:

Table - 33
Interest on Working Capital approved by the Commission for all HEPs of OHPC for FY 2024-25

(Rs. in Crs.)

Sl. No.	Description	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
1	O & M Expenses	57.70	55.30	57.82	54.32	24.56	249.70	68.19	317.89
2	O & M Expenses for One Month	4.81	4.61	4.82	4.53	2.05	20.81	5.68	26.49
3	Maintenance spares @15% of O & M Expenses	8.65	8.29	8.67	8.15	3.68	37.45	10.23	47.68
4	Receivable equivalent to 45days of Annual Fixed Cost	8.40	7.77	11.84	11.75	4.97	44.74	19.96	64.70
5	Total Working Capital	21.90	20.67	25.33	24.43	10.71	103.01	35.87	138.88
6	Interest on Working Capital calculated @ 10.10%	2.212	2.088	2.559	2.467	1.081	10.407	3.623	14.030

The Commission approves an amount of Rs 14.030 Cr towards interest on working capital against Rs 17.07 Cr proposed by OHPC for FY 2024-25.

(f) Non-Tariff Income

OHPC in its petition has proposed the deductible non-tariff income of different power Stations of OHPC for FY 2024-25 amounting to Rs. 1.662 Cr on the basis of the provisions of Regulation 26 and 41 of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 and Regulation 62 of the CERC (Terms and conditions of Tariff) Regulations, 2019.

- (i) The stipulation of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 regarding Non-Tariff Income is reproduced below:

NON-TARIFF INCOME

Clause 26(2) The Non-Tariff Income shall include: (a) Income from rent of land or buildings; (b) Income from sale of scrap; (c) Income from investments; (d) Income from sale of ash/rejected coal; (e) Interest income on advances to suppliers/contractors; (f) Net Income from supply of electricity by the Generating Company to the housing colonies of its operating staff and supply of electricity by the Generating Company for construction works at the generating Station, after adjusting the expenses incurred for supply of such electricity; (g) Income from rental from staff quarters; (h) Income from rental from contractors; (i) Income from hire charges from contactors and others; (j) Income from advertisements; (k) Income from sale of tender documents; (l) Any other Non-Tariff Income.

Clause 41(1) The non-tariff net income in case of generating station from rent of land or buildings, sale of scrap and advertisements shall be shared between the beneficiaries and the generating company, in the ratio 50:50.

- (ii) The Commission scrutinized the Non-tariff income earned by the OHPC as shown in the audited accounts for FY 2022-23 as per Regulation 41 of the OERC's Generation Tariff Regulation, 2020. From the audited accounts, it is observed that OHPC has earned Rs3.324 Cr from (a) rent of land and buildings, (b) sale of scrap and (c) advertisements. As per Regulation of OERC, the Non-Tariff net income from the above three sources shall be shared between the beneficiaries and the generating company, in the ratio of 50:50. Accordingly, the Commission allows Rs.1.662 Cr (50 percent of Rs 3.324 Cr) as the deductible Non-Tariff income of different Power stations of OHPC for the FY 2024-25, the details of which is shown in the following table.

Table -34
Deductible Non-Tariff Income of different Power Stations of OHPC for FY 2024-25
(Rs. in Cr.)

Sl. No	Description	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
1	Rent of land & buildings	0.051	0.074	0.177	0.146	0.021	0.111	0.581
2	Sale of scrap	0.266	1.254	0.024	0.296	0.018	0.886	2.743
3	Advertisement	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Total deductible Non- Tariff Income	0.317	1.328	0.201	0.442	0.039	0.997	3.324
5	50% of total deductible Non-Tariff Income to be considered in ARR	0.159	0.664	0.100	0.221	0.020	0.499	1.662

(g) Total Annual Fixed Cost

Based on the above components, ARR and average tariff for different hydro power stations of OHPC have been calculated for the FY 2024-25 considering the total Saleable Design Energy of 5602.60 MU, the details of which is shown in the following table.

Table - 35
ARR and Tariff for different Hydro stations of OHPC for the FY 2024-25 considering saleable Design Energy of 5602.60 MU

Proposed Station wise ARR & Tariff of different power station of OHPC for FY 2024-25									
								(Rs. in Cr.)	
Components	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total FY2024-25	Approved for 2023-24
Saleable Design Energy (MU)	519.75	823.68	1171.17	660.52	485.10	3660.22	1942.38	5602.60	5602.60
Return on Equity	3.17	1.42	16.10	20.13	5.91	46.73	52.53	99.26	91.52
Interest on Loan	0.47	0.49	6.83	9.11	3.24	20.13	3.377	23.51	21.88
Depreciation	4.17	3.61	11.59	12.15	5.40	36.93	33.22	70.15	67.14
O & M expenses	57.70	55.30	57.82	54.32	24.56	249.70	68.19	317.89	338.83
Interest on Working Capital	2.21	2.09	2.56	2.47	1.08	10.40	3.623	14.03	14.45
Total Cost	67.72	62.91	94.90	98.18	40.19	363.90	160.94	524.84	533.82
Less Non Tariff Income	0.16	0.66	0.10	0.22	0.02	1.16	0.50	1.66	11.49
Adjustment of Non-Tariff Income of FY2022-23	0.61	0.78	1.24	0.70	0.18	3.50	1.46	4.95	4.95
Less Sale of Power to CSPDCL				3.32		3.32		3.32	3.50
Total ARR for FY2024-25	68.17	63.02	96.04	95.34	40.35	362.91	161.90	524.81	523.79
Average Tariff (P/U) for 2024-25	131.16	76.51	82.00	144.34	83.18	99.15	83.35	93.67	93.49
Average Tariff for the FY 2023-24 (P/U) (Approved)	135.64	76.51	78.84	139.64	79.40	97.430	86.07	93.49	

(ii) The Commission takes into cognizance the fact of recovery of excess deduction of non-tariff income in its order 65 of 2021 dated 05.09.2022 and has considered Rs 4.95 Cr in the AFC calculation for FY 2024-25.

(iii) Accordingly, the Commission approves ARR of Rs.524.81 Cr. at an average tariff of 93.67 P/kWh (against proposed ARR of Rs.559.571 Cr. and average tariff of 99.88 P/kWh).

58. **Reimbursements for FY 2024-25**

(a) Reimbursement of ARR & Tariff Application Fees and related Publication Expenses

(i) OHPC has submitted that the clause no.47 of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 regarding “Application and Publication Expenses” stipulates the following:

“The application filing fee and the expenses incurred on publication of notices in the application for approval of Tariff, may in discretion of the Commission, be allowed to be recovered by the generating company, directly from the beneficiaries.”

(ii) As per the Clause No.17 of the Commission’s Notification No.1992 dated 31.08.2009, the application fee has been fixed at Rs.5,000/- per MW for determination of tariff of conventional fuel-based plant/Hydel Plants, subject to maximum limit of Rs.25,00,000/- (Rupees Twenty-Five Lakhs Only). Accordingly, OHPC has submitted to allow Rs.25 Lakhs as application fee for the FY 2024-25.

OHPC has also proposed Rs2.00 Lakhs as reimbursement towards publication expenses for the FY 2024-25. Therefore, OHPC has proposed Rs.27 Lakhs to be reimbursed from GRIDCO, the details of which are given in the following table.

Table – 36
Application Fee & Publication Expenses

		(Rs. in Lakhs)
Sl. No.	Particulars	Amount to be reimbursed
1	Application fee for FY2023-24	25.00
2	Publication expenses for FY2023-24	2.00
	Total	27.00

(iii) The Commission approves Rs.27 lakhs as proposed by OHPC towards application fee and publication expenses, which is to be reimbursed from GRIDCO and pass through in the ARR of GRIDCO for the FY 2024-25.

(b) Reimbursement of Electricity Duty on Auxiliary consumption

(i) As per the agreed PPA, the taxes and duties including ED on auxiliary consumption etc payable by OHPC to the State Government and other statutory bodies shall be reimbursed by GRIDCO & passed on to ARR of GRIDCO for the FY 2024-25. Accordingly, GRIDCO will make payment against the supplementary bill raised by OHPC within 30 days of receipt of bills.

The Government of Odisha, Energy Department vide notification No.912 dated the 12.05.2017 has revised the rate of ED from 30 paisa per Unit to 55 paisa per Unit with effect from 12th May 2017. Accordingly, OHPC has computed and claimed ED for Rs.3.122 Cr for all power stations for FY 2024-25 as reimbursement from GRIDCO, the details of which is given in following Table:

Table - 37
ED payable by OHPC Power station for the FY 2024-25

Power Stations	Design Energy (in MU)	Proposed Percentage of Auxiliary Energy Consumption (in %)	Auxiliary Energy Consumption to be approved (in MU)	ED Rate Applicable (in Rs/Unit)	ED proposed for Reimbursement by OHPC (in Cr)
RHEP	525	1	5.25	0.55	0.289
UKHEP	832	1	8.32	0.55	0.458
BHEP	1183	1	11.83	0.55	0.651
HHEP	684	1	6.84	0.55	0.376
CHEP	490	1	4.90	0.55	0.270
UIHEP	1962	1	19.62	0.55	1.079
Total	5676	1	56.76	0.55	3.122

(ii) The Commission provisionally approves an amount of Rs.3.122 cr. as proposed by OHPC for reimbursement from GRIDCO in the FY 2024-25. GRIDCO is to reimburse the amount on actual basis after prudent check as and when claimed by OHPC with appropriate documentary evidences

(c) Reimbursement of License fee for use of water for generation of electricity:

(i) OHPC has submitted that as per the amendment made in Rule-23-A-(2) (f) of the Odisha Irrigation Rule, 2016 and published in Odisha Gazette on 27.09.2016, the license fee for drawl or allocation of water has been enhanced @10% per annum w.e.f. 1st day of April. Accordingly, the water cess @ 1.7 paise/unit for the FY 2023-24 was paid by OHPC at the notified rates and was reimbursed from GRIDCO. OHPC will pay Licence Fee @ 1.8 paise/ unit on water used for generation of electricity for FY 2024-25 which is projected in the following table.

Table - 38
Licence Fee on water used for generation of electricity for OHPC Power station for FY 2024-25

Power Stations	Design Energy (in MU)	Licence fee for use of water as Proposed by OHPC @Rs 0.018/kWh of Generation (in Cr)	Remarks
RHEP	525	0.945	OHPC will claim reimbursement @Rs 0.018/kWh on basis of actual generation of each Power Station.
UKHEP	832	1.458	
BHEP	1183	2.129	
HHEP	684	1.231	
CHEP	490	0.882	
UIHEP	1962	3.532	
Total	5676	10.217	

(ii) The Commission provisionally approves an amount of Rs.10.217 cr. as proposed by OHPC for reimbursement from GRIDCO in the FY 2024-25 based on the design energy of various power stations of OHPC. OHPC will claim reimbursement on the basis of actual generation of each power station of OHPC.

GRIDCO is to reimburse the amount on actual basis after prudent check as and when claimed by OHPC with appropriate documentary evidences.

(d) Reimbursement of SLDC Charges

- (i) OHPC has submitted that Fees & charges of SLDC has been escalated @5.72% over the previous year approved charges to arrive at the charges payable for FY 2024-25. Accordingly, Rs.1.6344 Cr. has been proposed as fees & charges of SLDC payable by OHPC based on expected average available Capacity of 1798.80 MW (as per ARR order of SLDC) from OHPC's Power Stations for the FY 2024-25 considering the shutdown of different generating units on account of Renovation & Modernization & other planned maintenance.
- (ii) The Commission after analysis provisionally approves Rs.2.08 Cr to be reimbursed from GRIDCO by OHPC towards payment of SLDC's fees & charges for the FY 2024-25 considering 1798.80 MW as average available Capacity from OHPC power Stations for the FY 2024-25. GRIDCO is to reimburse the amount on actual basis after prudent check as and when claimed by OHPC with appropriate documentary evidences.

(e) Reimbursement of contribution made to ERPC

- (i) OHPC has submitted that it is contributing towards ERPC establishment fund & ERPC fund from the FY 2006-07 onwards as per their demand note. Presently, OHPC is paying Rs.15 Lakhs towards contribution to ERPC Establishment Fund and Rs. 1 Lakh towards contribution to ERPC Fund on an annual basis. Expecting the above claim of ERPC, OHPC has proposed Rs.16.0 Lakhs as a pass-through in the tariff for FY 2024-25 to be reimbursed from GRIDCO. Any excess claim (above Rs.16.0 Lakhs) made by ERPC for the FY 2024-25 will be claimed as additional reimbursement in the subsequent Tariff year.
- (ii) The Commission approves Rs.16 lakhs for payment towards ERPC contribution for the FY 2024-25, which is to be reimbursed from GRIDCO. GRIDCO is to reimburse the amount on actual basis after prudent check as and when claimed by OHPC with appropriate documentary evidences.

(f) Income Tax

- (i) OHPC has submitted that the Clause No. 21 of OERC (Terms & Conditions for Determination of Generation Tariff) Regulations, 2020 regarding Tax on Income stipulates the following:
"Income tax of the Generating Company shall be recovered from the beneficiaries. This will exclude income tax on other income streams (income from non-generation and non-transmission business.)"
- (ii) OHPC has submitted for approval of Rs 17.02 Cr towards reimbursement of Income tax for FY 2024-25 and unapproved/differential Income tax for FY 2023-24 based on the audited accounts of FY 2021-22 amounting to Rs 1.33 Cr. Further in total OHPC has submitted for approval of Rs 18.35 Cr (Rs 17.02Cr +

Rs 1.33Cr) towards reimbursement of Income tax from Gridco as per Para-20 above.

- (iii) The Commission has examined the Audited Accounts of OHPC for the FY 2022-23. From the audited accounts, it is observed that the Gross profit reflected in Profit & Loss account for FY 2022-23 is Rs 213.21 Cr and Income for other business is 184.24 Cr. Accordingly the Commission calculated the Income tax reimbursement of Rs 7.29 Cr for FY 2024-25 based on audited accounts of FY 2022-23 as per Clause 21 of the Regulation. The calculation is mentioned in the below table;

Table -39

Calculation of Income tax Reimbursement for FY 2024-25 based on audited accounts of FY 2022-23.

(Rs. Cr)

As per Regulation clause 21	
Gross Profit as per P&L for FY 2022-23	213.21
Less Other Income	184.24
Profit from Core Business	28.97
Income tax on Core Business @ 25.168%	7.29

- (i) The Commission has examined the Audited Accounts of OHPC for the FY 2021-22. From the audited accounts, it is observed that the Gross profit reflected in Profit & Loss account for FY 2021-22 is Rs 122.83 Cr and Income from other business is 96.545 Cr. Accordingly the Commission calculated the Income tax reimbursement of Rs 6.62 Cr for FY 2023-24 based on audited accounts of FY 2021-22 as per Clause 21 of the Regulation, the details of which is given in the Table below:

Table -40

Calculation of Income tax Reimbursement for FY 2023-24 based on audited accounts of FY 2021-22

(Rs. Cr)

As per Regulation clause 21	
Gross Profit as per P&L	122.83
Less Other Income	96.545
Profit from Core Business	26.285
Income tax on Core Business @ 25.168%	6.62

- (ii) The Commission observes that in Case no 74 of 2022 OHPC had claimed an excess Income tax reimbursement of Rs.18.56 Cr from GRIDCO for Previous years. The Commission, after taking into cognizance of the fact, redetermines the Income tax reimbursement for FY 2023-24 amounting to excess recovery of Rs.11.94 Cr (Rs.18.56 Cr – Rs 6.62 Cr).

59. The details of reimbursement claim from GRIDCO for FY 2024-25 by OHPC towards ED on auxiliary consumption, license fee for use of water for generation of electricity,

SLDC charges, Application fee and publication expenses, ERPC Charges and Income Tax on Core business are summarized in the table below:

Table –41
Details of Reimbursement from GRIDCO for the FY 2024-25 (Rs. Cr.)

Component of Costs	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
(a) License fee for use of water for generation of electricity for FY 2024-25.	0.945	1.458	2.129	1.231	0.882	3.532	10.217
(b) ED on Auxiliary Energy Consumption for FY2024-25.	0.289	0.458	0.651	0.376	0.27	1.079	3.122
(c) SLDC charges for FY 2024-25.							2.09
(d) Application fees and publication expenses for FY2024-25							0.27
(e) ERPC charges for FY2024-25							0.16
(f) Income Tax reimbursement as per Audited Account of FY 2022-23							7.29
(g) Recalculated Income Tax reimbursement for 2023-24 as per Audited Account of FY2021-22							-11.94
Total							11.21

In view of the above submission of OHPC, the Commission approves total reimbursement of Rs.11.21 Cr. From GRIDCO and the above expenditure is to be included in GRIDCO's ARR for the FY 2024-25.

60. Two-Part Tariff

- (a) As per Clause No. 28 of the OERC (Terms & Conditions for Determination of Generation Tariff) Regulation, 2020, the Annual Fixed Cost (AFC) of a power station shall be recovered on monthly basis under Capacity Charge (inclusive of incentives) & Energy Charge, which is to be shared in the ratio of 50:50. Further, as per Clause No.28(11) of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020,

“The computation and payment of capacity charge and energy charge for existing plants of OHPC will be as determined by the Commission from time to time.”

- (b) Accordingly, the Annual Capacity Charges (ACC), Annual Energy Charges (AEC) and Energy Charge Rate (ECR) of different power stations of OHPC for the FY 2024-25 is shown in the following table:

Table- 42
Capacity Charge and Energy Charge of OHPC Power Stations approved by the
Commission for the FY2024-25

Proposed Energy Charge, Capacity Charge & Energy Charge Rate of different Power Station of OHPC for FY2024-25					
Name of the Power Stations	Annual Fixed Cost	Annual Capacity Charges (Rs in Cr.)	Annual Energy Charges (Rs in Cr.)	Saleble Design Energy (in MU)	Energy Charge Rate(P/U)
RHEP, Rengali	68.168	34.084	34.084	519.75	65.578
UKHEP, Baraniput	63.021	31.510	31.510	823.68	38.256
BHEP, Balimela	96.035	48.018	48.018	1171.17	41.000
HHEP, Burla	95.339	47.670	47.670	660.52 (*)	72.170
CHEP, Chiplima	40.350	20.175	20.175	485.10	41.589
UIHEP, Mukhiguda	161.896	80.948	80.948	1942.38	41.675

(*) Excluding 16.644 MU energy sold to CSPDCL

- (b) The recovery of Capacity Charge and Energy Charge for a calendar month shall be as per the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020. Again, the full recovery of capacity charge shall be based on the NAPAF of the power station. The Commission, vide its order in Case No.52 of 2019, has fixed the NAPAF of different power stations of OHPC for the control period, 2019-20 to 2023-24. OHPC has considered the NAPAF of different power stations of OHPC for the FY 2024-25 for computation of Capacity Charges which shall be considered as mentioned in the Table below:

Table-43

Normative Plant Availability factor of OHPC for FY 2024-25

Power Stations	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP
NAPAF (%)	80	87	87	75	75	88

61. Tariff for CSPDCL on drawl of power from HHEP, Burla

- a) The erstwhile Chhattisgarh State Electricity Board (CSEB), presently Chhattisgarh State Power Distribution Company Limited (CSPDCL) is drawing 5MW of power from Hirakud generating station as share of Chhattisgarh State (erstwhile share holder being Madhya Pradesh) and is taking a plea since the FY 2006-07 to pay the energy charges at the tariff approved by the Commission for HHEP and applicable to the consumers of Odisha, considering this as a supportive measure extended by the Govt. of Odisha. This tariff is considerably lower than the actual cost of generations from HHEP and billing is made to them as per the Minutes of Meeting dtd. 24.12.2004.
- b) CSPDCL has suggested that as power is being purchased from a hydel power project situated in Odisha it has a status of inter-state project, as such tariff should be decided in accordance with norms approved by Central Electricity

Regulatory Commission. It is further jointly agreed that Odisha State Electricity Regulatory Commission shall be requested to decide the tariff from 2006-07 onwards in accordance to regulation notified by CERC, treating HHEP Burla as an inter-state entity.

- c) Presently it is decided that from 2008-09 onwards CSPDCL shall pay at a rate as approved by OERC provisionally till the rate approved by appropriate Commission and afterwards necessary adjustment shall be done in accordance with the law.
- a. Accordingly, as per the request of OHPC the Commission has provisionally fixed the ECR of billing to CSPDCL for the FY 2015-16 to FY 2023-24, OHPC has computed the provisional tariff of Rs.199.506 P/kWh for billing of Energy to CSPDCL for the coming FY 2024-25 as per the CERC (Terms and Conditions of Tariff) Regulation, 2019 as furnished in the table below;

Table -44

Tariff for CSPDCL for 2024-25

Details of Expenses HHEP	Amount (Rs in Cr)
Saleable Design Energy of HHEP (in MU)	677.16
Project Cost (Up-valued cost as on 01.04.1996 + Capitalization up to 31.03.2023 - Decapitalization)	533.31Cr
Return on Equity (@ 18.7086%)	29.93
Interest on Loan	11.50
Depreciation (@ 5.28%)	28.16
O & M expenses (Escalated @ 4.77%)	61.78
Interest on Working Capital (@ 12.0%)	3.73
Total ARR	135.10
Average Tariff (p/u)	199.506

- d) The Commission, after considering the above calculation, approves the average tariff of 199.506 p/u for HHEP for billing to CSPDCL for FY 2024-25. The Commission has considered the impact of the sale of power to CSPDCL from HHEP as 5 MW/16.644 MU. The Commission observed that the revenue likely to be earned from the sale of 5MW of power to CSPDCL is around 3.321 Cr. Therefore, the Commission in this ARR calculation has deducted 16.644 MU of power from the saleable energy of HHEP and revenue of Rs 3.321 Cr. from ARR of HHEP to arrive at the average tariff of OHPC stations.

62. Aggregate Revenue Requirement and Tariff for Machhakund H.E. Project

- (a) OHPC in the ARR application has stated that Machhakund HE Project (a joint venture project between Andhra Pradesh and Odisha Government) is almost 60 years old and it was proposed to go for Renovation and Modernisation of all the six units in phases and up-gradation, wherever possible, taking into account the existing water conductor system. As per the original Inter-State Agreement

signed between the two States in the year 1945, Government of Andhra Pradesh (GoAP) and Government of Odisha have share in the ratio of 70:30 from Machhakund Hydro Electric Project (MHEP) and as per the inter-state supplementary agreement signed between both the Governments in the year 1978, Government of Odisha had an option to draw additional 20% power at a cost of Rs. 0.08 per KWh.

- (b) A new inter-state agreement was signed between Govt. of Odisha / OHPC and Govt. of Andhra Pradesh / APGENCO on 23rd October 2020. As per the provisions of this agreement, for acquiring additional 20% share of the Joint Scheme, Govt. of Odisha / OHPC shall make payment of Rs.27.42 Cr to Govt. of AP/APGENCO considering 20% of the present depreciated cost of the project and share of expenditure on account of RM & U works for all the generating units along with auxiliaries and switchyard system in the ratio of 50:50.
- (c) As per the terms of the new Agreement, it is agreed at Clause No. 7 that; *“The Original Agreement dated 14.01.1945 with modifications shall continue to be applicable together with this agreement upon its execution. The agreement dated 15.12.1978 shall stand superseded and become unenforceable.”* Accordingly, the billing by APGENCO to OHPC @ 8 paise/unit for the energy drawl by Odisha beyond 30% up to 50% shall be discontinued along with the computation of share of annual audited O&M expenditure of MHEP between the two States basing on the maximum demand in MW during the year.
- (d) Now as per the new agreement dated 23-10- 2020, after payment of Rs.27.42 Cr, Govt of Odisha / OHPC shall have 50% legitimate share of MHEP Joint Scheme and shall draw the share of power on real time basis and make payment of 50% share of the cost of O&M charges as may be required / actually incurred for the project every year. OHPC shall raise monthly energy bills to GRIDCO in respect of Odisha’s share of energy available from MHEP including the power drawn through the distribution network connected to MHEP.
- (e) OHPC has stated that MHEP(JV) being a fully depreciated project, and presently, in absence of any tariff mechanism for recovery of the investments, all expenditure of MHEP is being considered under O & M expenditure and shared between the two States (Andhra Pradesh & Odisha) on annual basis. Accordingly, the 50% share of the total audited O&M Expenses of Rs. 28.7506

Cr for the FY 2022-23 has been escalated twice @ 5.72 % per year to arrive at the share of Govt. of Odisha / OHPC for FY 2024-25 payable to State of Andhra Pradesh / APGENCO (i.e. Rs.32.133 Cr). The cost per unit is Rs 1.23651 considering drawl of 50% share of saleable design energy of Machhakund i.e. 259.875 MU.

- (f) The calculation of projected tariff by OHPC for MHEP for the FY 2024-25 is given in the table below:

Table -45

PROJECTED TARIFF OF MACHHKUND (JT.) HEP FOR 2024-25	
	2024-25
Present Installed Capacity of MHEP (Jt.) Scheme (MW)	120
(50%) Odisha Share as per New Agreement dated 23.10.2020 (MW)	60
Design Energy of MHEP for Generation (MU)	525
Normative Auxiliary Energy Consumption (AUX) (%)	1%
Normative Auxiliary Energy Consumption (AUX) (MU)	5.25
Saleable Design Energy for sharing between Andhra Pradesh & Odisha (MU)	519.75
(50%) Saleable Design Energy Share of Odisha (MU)	259.875
Drawl of Total Share of Odisha Energy by GRIDCO (MU)	259.875
O&M Escalation factor @ 5.72 % for two years over the O&M Bill of MHEP for FY 2022-23.	1.1177
	(Rs. in Cr)
1. Total Audited Cost of O&M Bill of MHEP (Jt.) for the FY 2022-23	57.5011
2. 50% O&M Expenditure share (Orissa share of Actual O&M Expenditure for 2022-23)	28.7506
3. O&M Expenditure for FY 2024-25 applying the escalation factor of 1.1177	32.1337
4. Total Expected Expenditure during the FY 2024-25	32.1337
5. Provisional Tariff (Paise/Kwh)	123.651
Reimbursements of Statutory Dues/Duty/Cess as applicable shall be considered under the O&M Expenses	

- (g) The Commission has scrutinized the proposal of OHPC and approves a tariff of 123.651 paisa/kWh for energy drawl of 259.875 MU against 50% share of Odisha for the FY 2024-25. OHPC shall raise monthly bill accordingly to GRIDCO subject to year-end adjustment as per existing practice.

- (h) The summary of ARR and generation tariff for different generating stations of OHPC excluding Machhakund as approved by the Commission for FY 2024-25 is given in the Table below:

Table – 46

Summary of ARR and generation tariff of OHPC Approved by the Commission for the FY 2024-25

	Year	RHEP, Rengali	UKHEP, Baraniput	BHEP, Balimela	HHEP, Burla	CHEP, Chiplima	OHPC Old Stations	UIHEP, Mukhiguda	OHPC Total
ARR (Rs Cr)	Approved FY 2023-24	70.5	63.02	92.34	92.24	38.52	356.62	167.18	523.80
	Proposed FY 2024-25	78.09	76.76	103.85	93.23	38.98	390.895	168.68	559.57
	Approved FY 2024-25	68.17	63.02	96.04	95.34	40.35	362.91	161.90	524.81
Saleable Design Energy (in MU)	Approved FY 2023-24	519.75	823.68	1171.17	660.52	485.10	3660.22	1942.38	5602.60
	Proposed FY 2024-25	519.75	823.68	1171.17	660.52	485.10	3660.22	1942.38	5602.60
	Approved FY 2024-25	519.75	823.68	1171.17	660.52	485.10	3660.22	1942.38	5602.60
Capacity Charges/ Energy Charge (Rs in Crs.)	Approved FY 2023-24	35.25	31.51	46.17	46.12	19.26	178.31	83.59	261.90
	Proposed FY 2024-25	39.04	38.38	51.92	46.61	19.49	195.448	84.34	279.786
	Approved FY 2024-25	34.08	31.51	48.02	47.67	20.17	181.4569	80.95	262.405
Average Tariff (P/U)	Approved FY 2023-24	135.64	76.51	78.84	139.64	79.40	97.43	86.07	93.49
	Proposed FY 2024-25	150.24	93.19	88.67	141.14	80.36	106.80	86.84	99.88
	Approved FY 2024-25	131.15	76.51	82.00	144.34	83.18	99.15	83.35	93.67
Energy Charge Rate(P/U)	Approved FY 2023-24	67.82	38.25	39.42	69.82	39.70	48.71	43.04	46.75
	Proposed FY 2024-25	75.12	46.59	44.33	70.57	40.18	53.398	43.42	49.94
	Approved FY 2024-25	65.58	38.26	41.00	72.17	41.59	49.575	41.67	46.84

The unit cost of energy from Machhakund as approved by the Commission is 123.651 P/kWh for FY 2024-25.

- (i) The ARR has been approved for the FY 2024-25 (i.e. from 01.04.2024 to 31.03.2025) and the tariff now approved shall be effective from **01.04.2024** and shall be in force until further orders.

63. Directives of the Commission

- (a) The Design Energy of UKHEP, BHEP, UIHEP, and CHEP has come down over the years. The reason for less generation shall be submitted to the Commission for each HEP along with actual generation (in MU) in last ten (10) years.
- (b) OHPC shall submit the status of capital maintenance of Unit 1&2 of Chiplima Power House and Repair & Renovation of power channel from Burla Power House to Chiplima Power House for which huge amount has been approved by the Commission.
- (c) OHPC shall submit the present status and the completion schedule of Kharag HEP (63 MU), pump storage projects associated with UIHEP, UKHEP, BHEP and nine (9) off the river closed loop PSP.
- (d) OHPC shall submit the status of implementation of floating solar projects on the existing reservoirs.
- (e) OHPC shall submit brief details of any major Forced Outage of HEP, reasons thereof and remedial measures taken to avoid repetition of such incidence in future.

64. The application of OHPC in Case No. 111/2023 for approval of its Aggregate Revenue Requirement and fixation of generation tariff of its different power stations for the FY 2024-25 is accordingly disposed of.

Sd/-

**(S.K. RAY MOHAPATRA)
MEMBER**

Sd/-

**(G. MOHAPATRA)
OFFICIATING CHAIRPERSON**