

Summary of ARR & Tariff Filings

Submitted by

OHPC

For

FY 2023-24

SUMMARY OF ARR PROPOSAL OF OHPC FOR FY 2023-24

1. Installed Capacity

The installed capacity of various Hydro Stations owned by Odisha Hydro Power Corporation (OHPC) is 2099.8(2039.8 + 60) MW including Odisha share of Machkund. The Installed Capacity of MHEP is 120MW (i.e. 17MW x 3 = 51MW and 23MW x 3 = 69MW). So the 50% Odisha Share from MHEP being 60 MW, has been considered for computation of total installed capacity of OHPC.

2. Design Energy of OHPC Stations

The Design Energy (DE) of a Hydro Power Station is an important parameter for determination of Tariff. The approved Design Energy of OHPC Power Stations for the FY 2022-23 is given in the table below:

**Table -1:
Design energy approved for FY 2022-23**

(in MU)

Sl. No.	Name of the Power Station	Design Energy (DE)	Design Energy for sale
1	RHEP	525.00	519.75
2	UKHEP	832.00	823.68
3	BHEP	1183.00	1171.17
4	HHEP	684.00	660.52
5	CHEP	490.00	485.10
6	UIHEP	1962.00	1942.38
Sub Total of Old Power Stations		5676.00	5602.60
7	MHEP	262.50	259.875
Total		5938.50	5862.475

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

Table-2

(in MU)

Sl. No.	Name of the Power Station	Design Energy (DE)	Saleable Design Energy (DE)	Actual Gen. of 2017-18	Actual Gen. of 2018-19	Actual Gen. of 2019-20	Actual Gen. of 2020-21	Actual Gen. of 2021-22
1	RHEP	525.00	519.75	762.54	745.97	647.71	980.77	866.36
2	UKHEP	832.00	823.68	675.65	923.88	813.04	771.26	450.90
3	BHEP	1183.00	1171.17	1475.07	1677.63	1510.40	1594.30	1026.65
4	HHEP	684.00	677.16	614.07	380.69	502.25	597.39	714.26
5	CHEP	490.00	485.10	219.11	158.51	234.0	322.37	268.42
6	UIHEP	1962.00	1942.38	1740.82	2142.60	2234.19	1713.10	1155.19
Total		5676.00	5619.24	5487.26	6028.68	6004.23	5979.19	4481.78

Status of Secondary Fund as on 31.03.2021 OHPC has calculated the revenue earning out of sale of secondary energy from FY 1996-97 to FY 2021-22. As observed the secondary energy fund has always remained in deficit, which is approximately Rs 125.031Cr.

OHPC has received Rs 4.53Cr from the industrial units utilizing water from different reservoirs towards compensation for the loss of generation during the FY 2014-15. Some of

the industries have also paid some amount towards the energy compensation during the current period. Accordingly, OHPC have received total amount Rs19.8396 Crs from HHEP, Burla up to September 2022 & Rs 0.5284 Crs from CHEP, Chiplima upto October 2022. Though OHPC was adjusting this amount in the secondary energy fund, but CAG of India has observed to keep this compensation in a separate account, as the matter is under sub-judice in the Court of Law.

Revision of Design Energy of HHEP and CHEP:

OHPC is constantly losing energy charges for 78MU (i.e., 31.0MU for restriction up to 595ft RL & another 47MU for restriction from 595ft to around 600ft RL) every year on account of restriction in generation from Hirakud reservoir below 600ft. R.L by DoWR, Govt. of Odisha

Pending decision from DoE/ DoWR, OHPC has not considered reduction in Design Energy of HHEP, Burla & CHEP, Chiplima due to restriction in Generation at HHEP, Burla below RL 595ft in Hirakud Reservoir.

Considering the above facts, OHPC proposes the following Design Energy for its Power stations for computation of tariff for the FY 2023-24.

Table-3
Proposed Design Energy for FY 2023-24

Sl. No.	Name of the Power Station	Design Energy approved for FY2022-23	Saleable Design Energy approved for FY 2022-23	(in MU)	
				Design Energy proposed for FY 2023-24	Saleable Design Energy proposed for FY 2023-24
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

OHPC pray before the Hon'ble Commission to approve the proposed Saleable Design Energy of different power stations of OHPC for FY 2023-24 as furnished in the Table above. Further the deficit of secondary energy fund amounting to Rs 125.031Cr may kindly be recognized.

3. Reservoir Level and Anticipated Generation for FY 2023-24

The Reservoir Level of OHPC Power Stations as on 15.11.21 vis-à-vis on 15.11.22 is given below:

Table – 4:

Reservoir level of power stations

Sl. No.	Reservoirs	As on 15.11.2021	As on 15.11.2022
1.	Rengali	122.33 mtr.	122.62 mtr.
2.	Kolab	851.76 mtr.	855.55 mtr.
3.	Balimela	1483.80 ft.	1482.80 ft.
4.	Hirakud	629.23 ft.	628.43 ft.
5.	Indravati	631.31 mtr.	637.94 mtr.

The actual generation of different Power Stations under OHPC from 01.04.2022 up to 15.11.2022 and anticipated generation up to 31.03.2023 for the FY 2022-23 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 is furnished below.

**Table – 5:
Actual /Anticipated Energy Generation**

Sl. No.	Name of the power stations	Actual generation from 01.04.22 up to 15.11.22 (in MU)	Anticipated generation from 16.11.22 to 31.03.23 based on DoWR & DoE Schedule (in MU)	Total Anticipated generation for the FY 2022-23 based on DoWR & DoE Schedule (in MU)
1.	RHEP	597.905	323.00	920.905
2.	UKHEP	289.359	235.00	524.359
3.	BHEP	782.3656	353.00	1135.365
4.	HHEP	796.415	105.00	901.415
5.	CHEP	258.334	83.00	341.334
6.	UIHEP	1034.069	441.00	1475.069
Total		3758.448	1540.00	5298.448

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 Hon'ble Commission.

4. Project Cost

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) had approved the same. Further, Hon'ble Commission, in the order dated 20.03.2008 has approved Rs. 1195.42 Crs. 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 Crores as per the Notification No. 1068 Dtd. 29.01.2003 of DoE, GoO.

Hon'ble OERC had approved New Addition of Old Power Stations of OHPC from 01.04.1996 to 31.03.2021 as Rs 721.264Crs and that of UIHEP as Rs1251.419Crs. So, total approved new addition upto FY 2020-21 was Rs1972.679Crs.

OHPC had incurred new addition of Rs228.171Crs (Rs195.621Crs for old power stations & Rs 32.549Crs for UIHEP) as per INDAS-2015 audited accounts for FY2021-22. Similarly, OHPC has proposed additional capitalization towards Capital work in Progress (Estimated Additional Capital Expenditure) for FY2022-23 amounting to Rs147.562Crs & Capital work in Progress (Estimated

Additional Capital Expenditure) for FY2023-24 amounting to Rs38.81CrS respectively for different power stations of OHPC.

Considering the total approved capitalization up to FY 2020-21 & audited expenditure for FY2021-22 on account of Additional Capitalization and Estimated additional capital expenditure for FY2022-23 and FY2023-24, Decapitalization & PSDF grant as described above the Project Cost considered for Computation of Tariff for FY2023-24 are furnished in the Table below

**Table-6:
Project Cost for tariff Calculation for FY 2023-24 (in Rs. Cr.)**

Name of the power stations	Historic Cost as on 01.04.1996	Asset reduction during FY 2011-12 to FY 2021-22	Less PSDF grant during FY2021-22	New additions proposed in Tariff calculation & New Addition of UIHEP excluding Original Project Cost FY 2023-24	Project Cost considered Tariff calculation based on Historic Cost
1	2	3	4	5	6=2+5-3-4
RHEP	91.09	0.089	0.000	64.06	155.06
UKHEP	108.31	0.494	0.609	32.529	139.74
BHEP	115.42	7.214	1.169	348.679	455.72
HHEP	72.75	14.261	0.425	453.805	511.87
CHEP	92.23	6.928	0.011	158.911	244.20
Sub Total	479.80	28.986	2.214	1057.984	1506.59
UIHEP	1194.79 (approved project cost)	4.912	1.161	134.441	1323.16
Total	1674.59	33.898	3.375	1192.425	2829.75

Note: Project cost approved for UIHEP is Rs 1194.79.Cr

5. Determination of Annual Fixed Cost

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

The Annual Fixed Cost of a hydro generating station shall consist of the following components:

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

a. Return on equity (ROE):

Based on the Commission's tariff order dtd 19th April, 2002 and subsequent government notification the ROE to OHPC was allowed on new investments made after 01.04.1996. According to Clause No. 20(2) of OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2020,

income tax of the Generating Company shall be recovered from the beneficiaries (income tax on other income streams shall not be considered).

Return on Equity is calculated @15.5% of Equity Capital for old power stations of OHPC & @16% of Equity Capital for UIHEP as per provisions stipulated in OERC (Terms & Condition for Determination of Generation Tariff) Regulations 2020 with a provision of reimbursement of Income Tax paid for the FY 2021-22.

**Table – 7:
Computation of RoE for different power stations of OHPC for FY 2023-24
(in Rs. cr.)**

Name of the Power Station	Capital Addition considered for RoE upto FY 2023-24 (in Crs)	Share of Equity (%)	Value of Equity capital (in Crs)	ROE @15.5% for old Power Station & @16% for UIHEP for 2023-24 (in Crs)	RoE approved by OERC for 2022-23 (in Crs)
1	2	3	4=2*3	5=15.5% or 16% of 4	6
RHEP	64.06	30	19.218	2.979	2.944
UKHEP	31.92	30	9.577	1.484	1.294
BHEP	347.51	30	104.254	16.159	10.530
HHEP	453.38	30	136.014	21.082	13.200
CHEP	158.90	30	47.671	7.389	5.570
UIHEP	1323.16	25&30	337.453	53.993	50.313
Total	2378.94		654.187	103.086	83.852

Thus, OHPC has appealed before the Commission to approve Rs.103.086Crs. as RoE for FY 2023-24 for different power stations of OHPC.

b. Interest on loan

The loan liabilities on OHPC consist of state Government loan, PFC loans and Normative Loans. The State Government loan liabilities outstanding as on 01.04.1996 is given in the table below:

**Table – 8:
Loan liabilities transferred to OHPC by State Govt.**

Sl. No.	Description of loan	Amount as on 01.04.1996
1.	9.8% loan	39.20
2.	13% loan (UIHEP)	497.86
3.	Interest free loan (UIHEP)	132.14
4.	13% loan (Potteru)	14.30
5.	Zero Coupon Bond-I	383.10
6.	Zero Coupon Bond-II	383.10

Normative Loans -Though, 9.8% State Govt. loan has been repaid, the normative loans of the respective units are still pending. The normative loans of CHEP, RHEP & UKHEP is considered @

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 @ 9.6 % for FY 2023-24 based on PFC interest rate applicable to BHEP. Similarly, the normative loan of HHEP, Burla is considered @ 8.75 % for FY 2023-24 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 2021-22& estimated Additional Capital Expenditure for FY2022-23 are considered @7% being the prevailing rate of interest for State Govt. Loan as per the OERC tariff norms.

Hence, based on the earlier directions of Hon'ble OERC, OHPC has not considered the impact of interest on Govt Loan & Normative Loan of UIHEP in the Tariff Calculation of OHPC for the FY2023-24. 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.

**Table-10:
Statement of Outstanding Loan & Interest thereon for the FY 2023-24**

Sl. No.	Source of Loan	Loan O/S as on 01.04.2023	Interest on Loan for the FY 2023-24
1	State Govt. Loan of UIHEP @7%*	104.87	0.00
2	Normative Loan of Rs78.74Cr for UIHEP,Mukhiguda @ 7%	78.74	0.00
3	Normative Loan for Add. Cap. FY2017-18 to FY 2021-22, CWIP for FY2022-23 & FY2023-24 excluding FY2020-21 of CHEP@ 9.80%	28.28	2.61
4	Normative Loan for Add. Cap. FY2017-18 to FY 2021-22 & CWIP FY2022-23 for UKHEP@ 9.80%	6.07	0.51
5	Normative Loan for Add. Cap. FY2017-18 to FY 2020-21 HHEP@ 8.75%	17.75	1.14
6	Normative Loan for Add. Cap. FY2017-18 to FY2020-21 BHEP@ 9.6%	3.13	0.23
7	Normative Loan for Add. Cap.FY 2017-18 to FY 2021-22 RHEP@ 9.80%	3.04	0.25
8	Normative Loan for Add. Cap.FY 2017-18 to FY 2021-22; CWIP for FY2022-23 UIHEP@ 7.0%	70.53	4.50
9	Normative Loan for R&M of Unit #2, Rengali @ 9.80%	1.64	0.08
10	Normative Loan for R&M of Unit #3 & Add. Cap. For FY2020-21, CHEP, Chiplima @ 9.80%	39.31	3.64
11	Normative Loan for R&M of Unit #5 & 6 and Add. Cap. For FY2021-22, Add Cap towards CWIP for FY2022-23 of HHEP, Burla @ 8.75%	118.65	9.86
12	Normative Loan for R&M of Unit #1 & 2 and Add. Cap. For FY2021-22, Add Cap towards CWIP for FY2022-23 BHEP, Balimela @ 9.6%	84.74	7.73
Total		556.75	30.557

The Power Station wise interest on loan as described above is given below:

**Table-11:
Interest on loan of different power house of OHPC (Rs. Cr.)**

Sl. No.	Source of loan	Interest on loan for FY 2023-24						(Rs. In Crs)
		RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	TOTAL
1.	Normative loan	0.335	0.508	7.958	11.006	6.251	4.499	30.557
2.	Govt. Loan	-	-	-	-	-	-	-
Total		0.335	0.508	7.958	11.006	6.251	4.499	30.557

Therefore, OHPC prays before the Hon'ble Commission to approve Rs 30.557Crs. in the tariff of OHPC for the FY2023-24 for payment of Interest towards Normative Loans of the different Power Stations of OHPC as mentioned in the above table.

- c. **Depreciation:** Depreciation is the refund of capital subscribed and is a constant charge against an asset to create a fund for its replacement.

The comparative statement for actual repayment of loans and depreciation @2.57% for the FY 2023-24 are shown in the Table below to arrive at the depreciation amount to be claimed in the ARR & Tariff of OHPC for the FY 2023-24.

**Table -12:
Depreciation Claim for the FY 2023-24 (Rs. in Crs)**

Sl. No.	Power Stations	Project Cost	Depreciation @ 2.57%	Loan Repayment	Depreciation Claimed for the FY2023-24	Remark
1.	RHEP	155.06	3.99	2.51	3.99	Depreciation @ 2.57%
2.	UKHEP	139.74	3.59	1.77	3.59	Depreciation @ 2.57%
3.	BHEP	455.72	11.72	9.96	11.72	Depreciation @ 2.57%
4.	HHEP	511.87	13.16	20.79	20.79	Equal to loan Repayment
5.	CHEP	244.20	6.28	7.61	7.61	Equal to loan Repayment
6.	UIHEP	1323.16	34.01	42.75	42.75	Equal to loan Repayment
Total		2829.75	72.73	85.39	90.45	

OHPC prays before Commission to approve Rs. 90.45 Cr towards depreciation for FY 2023-24.

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

O & M Expenses has been calculated as per the Generation Tariff Regulations, 2020. Accordingly, OHPC for computation of O&M Expense of different power stations of OHPC for the FY 2023-24 has escalated the average actual O&M expenses for FY 2020-21 & FY2021-22 @ 5.72% for FY2022-23 & FY2023-24 as per the principle adopted by the Hon'ble Commission in the tariff orders of OHPC for the FY2022-23 mentioned above.

It may be noted here that Hon'ble OERC has deducted an amount of Rs10.012Cr 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 2022-23. Assuming the same principle, OHPC has deducted Rs11.07Cr from the escalated O&M expenses of UIHEP for the FY 2023-24.

Table- 13:
Statement of O & M Expenses for different power stations of OHPC for FY2023-24
(Rs.in Cr.)

Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	CO	Total
1	O & M expenses for FY 2022-23 Approved by OERC.	63.33	47.74	45.34	50.46	23.19	230.07	76.14	41.85	348.05
2	O & M expenses for FY 2020-21 as per Audited Account	50.67	42.46	42.78	49.69	22.12	207.72	68.72	45.08	321.52
3	O & M expenses for FY 2021-22 as per Audited Account	47.84	42.78	42.06	42.90	20.25	195.83	62.22	46.55	304.60
4	Average O&M expenses (2020-21 & 2021-22)	49.255	42.62	42.42	46.295	21.185	201.775	65.47	45.815	313.06
5	Escalation @5.72% for FY2022-23	52.07	45.06	44.85	48.94	22.40	213.32	69.21	48.44	330.97
6	Escalation @5.72% for FY2023-24	55.05	47.64	47.41	51.74	23.18	230.07	73.17	51.21	349.90
7	Corporate Office expenses apportioned to different units under OHPC based on Installed Capacity	6.28	8.03	12.80	7.22	1.81	36.14	15.06	51.21	
8	Total O & M Expenses for the	61.33	55.67	60.21	58.97	25.49	261.66	88.24		349.90

Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	CO	Total
	FY 2023-24									
Less: Amount Received from DoWR.										
9	Less : Income to be received from DOWR towards dam maintenance of UIHEP							(-) 11.07		(-) 11.07
6	Total O&M Expenses for the FY 2023-24.	61.33	55.67	60.21	58.97	25.49	261.66	77.166		338.828

OHPC prays before the Hon'ble Commission to approve Rs338.828Crs towards O&M Expenses for the FY 2023-24 for the different Power Stations of OHPC as mentioned in the above table.

e. Interest on Working Capital

Hon'ble OERC has stipulated the following regarding rate of interest on working capital for OHPC at clause no. 24(3) of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020.

Table -14 below summarizes the station wise interest on working capital as proposed by the OHPC for FY 2023-24.

**Table- 14:
Interest on Working Capital for FY 2023-24**

(Rs. in Crs)									
Sl. No	Description	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
1	Receivables of fixed cost for 45 days	8.72	7.79	12.13	14.09	5.89	48.62	22.43	71.06
2	Maintenance spares @ 15% of O&M expenses	9.20	8.35	9.03	8.85	3.82	39.25	11.57	50.82
3	O&M expenses for one month	5.11	4.64	5.02	4.91	2.12	21.81	6.43	28.24
4	Total working capital	23.03	20.78	26.18	27.85	11.84	109.68	40.44	150.12
5	Interest on working capital calculated @ 10.00%	2.303	2.078	2.618	2.785	1.184	10.968	4.044	15.012

OHPC prays before the Hon'ble Commission to approve Rs 15.012 Crs towards Interest on Working Capital for the FY 2023-24 for the different Power Stations of OHPC as mentioned in the above table.

f. INCOME TAX

Hon'ble Commission at clause no. 21 of the OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 under the head Tax on Income.

OHPC is entitled to get reimbursement of Rs 21.89 Crs towards income tax for FY 2021-22 on core business. Hence, Hon'ble OERC may approve a total reimbursement claim for an amount of Rs 21.89 Crs from GRIDCO in the Tariff of OHPC for FY 2023-24 towards

reimbursement of Income Tax as per the Audited Accounts of FY2021-22. This amount may be accordingly provided in the ARR of GRIDCO.

g. NON- TARIFF Income

Clause 41 , 26 (1) of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2020 specifies that 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.

Table -15 Non-Tariff Income of different Power Stations of OHPC for FY 2023-24

Sl. No	Description	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
1	Rent of land & buildings	0.025	0.002	0.003	0.013	0.003	0.004	0.05
2	Sale of scrap	1.820	1.027	1.300	8.176	4.983	5.104	22.41
3	Advertisement	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Total deductible Non-Tariff Income	1.845	1.029	1.303	8.189	4.986	5.108	22.46
5	50% of total deductible Non- Tariff Income to be considered in ARR	0.923	0.515	0.652	4.095	2.493	2.554	11.23

OHPC pray before commission to approve the deductible non-tariff income of Rs11.23Crs different power stations for the FY2023-24.

Further OHPC has adjusted Rs4.954Crs (i.e. Rs24.77Crs/5= Rs4.954Crs) as 1st instalment of recovery of excess Non-Tariff income deducted by Hon'ble OERC in the FY2021-22 as per Order dtd 05.09.2022 in Case No. 65 of 2021

Annual Revenue Requirement (ARR) & Tariff for the FY 2023-24

Based on the above parameters the power station wise ARR and tariff of OHPC have been calculated for the FY 2023-24as follows:

The values of ARR along with its different components and the average tariff computed considering the Saleable Design Energy of 5602.60MU for the FY 2023-24 is shown in the table below.

Table-16:

Station wise ARR and Tariff for the FY 2023-24 considering saleable D.E. of 5602.60MU

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
(Rs. in Crs.)								
Return on Equity	2.979	1.484	16.159	21.082	7.389	49.094	53.993	103.09
Interest on Loan	0.335	0.508	7.958	11.006	6.251	26.058	4.499	30.56
Depreciation	3.99	3.59	11.72	20.79	7.61	47.700	42.745	90.45
O&M Expenses	61.327	55.668	60.214	58.967	25.485	261.662	77.166	338.83

Details expenses	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
Interest on working capital	2.303	2.078	2.618	2.785	1.184	10.968	4.044	15.012
Total Cost	70.934	63.329	98.670	114.631	47.919	395.482	182.447	577.929
Less Non-Tariff Income as per Audited Account for FY2021-22	0.923	0.515	0.652	4.095	2.493	8.676	2.554	11.230
Adjustment of recovery of 1 st 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				3.524		3.524		3.524
Total ARR for FY2023-24	70.618	63.591	99.257	107.711	45.601	386.777	181.350	568.127
Average Tariff (p/u)	135.87	77.20	84.75	163.07	94.00	105.67	93.36	101.40

6. Two-Part Tariff

As per clause no. 28 of the OERC (Terms and conditions for determination of Generation Tariff) Regulation 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.

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

Capacity charge (CC) = AFC x 0.5 x NDM/NDY x (PAFM/NAPAF) in Rupees.

$$PAFM = 10000 \times \sum_{i=1} DC_i \{N \times IC \times (100 - Aux)\} \%$$

i=1

- 2) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary, during the calendar month on ex-power plant basis at the computed energy charge rate.

Total energy charge payable to the generating company for a month shall be

{(Energy charge rate in Rs./ Kwh) x (Schedule energy (ex-bus)) for the month in Kwh}

The actual energy sent out (Ex-bus) is considered as the scheduled energy (Ex-bus) for OHPC Power Stations

- 3) Energy charge rate (ECR) in Rupees per Kwh on ex-bus plant basis for a hydro generating station shall be determined up to three decimal places based on the following formula, subject to provisions in clause (4.41) of OERC (Terms and Conditions for determination of Generation Tariff regulations) 2014.

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

Accordingly, annual capacity charges, annual energy charges and energy charge rate of different power stations of OHPC for FY 2023-24 is shown below.

Table-17:
Capacity charge and energy charge of OHPC power stations for FY 2023-24

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	70.618	35.309	35.309	519.75	67.934
UKHEP, Baraniput	63.591	31.795	31.795	823.68	38.601
BHEP, Balimela	99.257	49.628	49.628	1171.17	42.375
HHEP, Burla	107.711	53.856	53.856	660.52	81.535
CHEP, Chiplima	45.601	22.801	22.801	485.10	47.002
UIHEP, Mukhiguda	181.350	90.675	90.675	1942.38	46.682

OHPC prays before the Hon'ble Commission to approve the AFC, ACC, AEC & ECR of its power stations as indicated in Table above for the FY 2023-24.

7. Application Fee and Publication Expenses

As per the OERC tariff regulation 2020, 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. As per the Commission notification no. 1992 dated 31.08.2009 in the clause no. 17. Hon'ble OERC may kindly approve Rs 26.70 Lakhs to be reimbursed from GRIDCO.

Table -18:
Application Fees and Publication Expenses FY 2023-24 (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

8. Electricity Duty on Auxiliary Consumption

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.

Accordingly, OHPC has computed ED @55paise per Unit for all power station for FY 2023-24 as reimbursement.

Table-19:
ED claim for OHPC power station for FY 2023-24 (Rs. in Crs)

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 @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

Hence, OHPC pray before the Hon'ble OERC to approve reimbursement of ED amounting to Rs3.122Cr for the FY 2023-24 from GRIDCO which may kindly be provisioned in the ARR.

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

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.

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.

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 FY2022-23and got reimbursed from GRIDCO. Accordingly OHPC shall pay Licence Fee on water used for generation of electricity for FY 2023-24 @1.7paise/ unit

Table –20:
License fee for Consumption of water for generation of electricity FY 2023-24 (Rs. in Crs)

Power Stations	Design Energy (in MU)	Licence Fee on water Proposed by OHPC @0.017Rs/Kwh of Generation (in Crs)	Remarks
RHEP	525	0.893	OHPC will claim reimbursement @Rs 0.017/Kwh on actual generation of each Power Station.
UKHEP	832	1.414	
BHEP	1183	2.011	
HHEP	684	1.163	
CHEP	490	0.833	
UIHEP	1962	3.335	
Total	5676	9.649	

Hence, OHPC prays before the Hon'ble Commission for approval of provisional amount of Rs9.649Cr towards License fee mentioned in the table above 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 FY2023-24.

10. SLDC Charges

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 and market operation charges.

The Commission has provisionally approved for Rs.1.47Cr. for the FY 2022-23, 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 2023-24, the previous year approved charges applicable to OHPC has been escalated @5.72% to arrive at the charges payable by OHPC for the FY 2023-24.

Accordingly, Rs.1.554Crs. has provisionally been considered as fees & charges of SLDC payable by OHPC on the average available Installed Capacity of 1681 MW.

11. Reimbursement of Contribution Made to ERPC

Annually OHPC is paying Rs15 Lakhs towards contribution to ERPC Establishment Fund & Rs1.00 Lakh towards contribution to ERPC Fund. Assuming the same claim of ERPC, OHPC has claimed this amount of Rs 16.0 Lakhs as a pass through in the tariff for FY 2023-24 to be reimbursed from GRIDCO. Any excess claim (above Rs16.0 Lakhs) made by ERPC for the FY 2023-24 will be claimed as additional reimbursement in the subsequent Tariff year.

12. Income Tax

Income Tax paid by OHPC for the FY2021-22 is detailed below:

**Table-21:
Income Tax paid by OHPC for the FY 2021-22**

SL.No	Particulars Amount	Amount (Rs. in crore)
1	Total Other Income (for FY 2021-22)	108.03
2	Less: Reimbursement of Income Tax from GRIDCO	(-) 35.19
3	Less: Dam Share from DOWR (against O&M expenses)	(-) 11.07
4	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)	(-) 11.23
5	Net other income (i.e., non-tariff income) on which Income Tax should not be reimbursed {5=1-2-3-4}	50.54
6	Income tax @ 25.168% on the above net other income as shown above (Item No. 5)	12.71991
7	Total income tax paid by OHPC	34.61
8	Income tax on Generation Business (which is to be reimbursed as per Regulation 21) (item 7 – item 6)	21.89009

Accordingly, OHPC is entitled to get reimbursement of Rs 21.89Crs towards income tax for FY 2021-22 on core income. OHPC prays for total reimbursement claim for an amount of Rs 21.89Crs from GRIDCO in the Tariff of OHPC for FY 2023-24 towards reimbursement of Income Tax as per the Audited Accounts of FY2021-22.

13. Details of Reimbursement Cost:

Total reimbursement cost claimed for the FY 2023-24 is given in the table below.

**Table 22:
Details of Reimbursement for FY 2023-24**

Component of Costs	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
<i>(a) License fee for use of water for generation of electricity for FY 2023-24.</i>	0.893	1.414	2.011	1.163	0.833	3.335	9.649
<i>(b) ED on Auxiliary Energy Consumption for FY2023-24.</i>	0.289	0.458	0.651	0.376	0.270	1.079	3.122
<i>(c) SLDC charges for FY 2023-24.</i>							1.554
<i>(d) Application fees and publication expenses for FY2023-24</i>							0.270
<i>(e) ERPC charges for FY2023-24</i>							0.160
<i>(f) Income Tax as per Audited Account of FY 2021-22</i>							21.89
Total							36.645

Thus, the Commission may approve the total reimbursement of Rs**36.645**Cr. as proposed by OHPC in table above. The above expenditure may be included in GRIDCO's ARR and hence shown as revenue requirement in OHPC filing for FY 2023-24.

14. Tariff for Energy Billing to CSPDCL:

The erstwhile Chhattisgarh State Electricity Board (CSEB), presently Chhattisgarh State Power Distribution Company Limited (CSPDCL) drawing energy from Hirakud generation towards 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 Hon'ble 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 dtd. 24.12.2004.

Hon'ble Commission have provisionally fixed the ECR for billing to CSPDCL for the FY 2015-16 to FY 2022-23. OHPC for ensuing FY 2023-24 has computed the tariff for billing of Energy to CSPDCL as per the CERC (Terms and Conditions of Tariff) Regulation'2019 as furnished at Table below.

**Table 23:
Tariff for CSPDCL for 2023-24**

Details of Expenses HHEP	Amount (Rs in Crs)
Salable Design Energy of HHEP (in MU)	677.16
Project Cost (Up-valued cost as on 01.04.1996 + Capitalization up to 31.03.2021 - Decapitalization)	569.45Cr
Return on Equity (@ 25.168%)	43.00
Interest on Loan	13.51
Depreciation (@ 5.28%)	30.07
O & M expenses (Escalated @ 4.77%)	58.83
Interest on Working Capital (@ 10.50%)	3.35

Total ARR	148.75
Average Tariff (p/u)	219.674

OHPC prays Hon'ble Commission approve the tariff for energy billing to CSPDCL @219.674 paisa/unit for the FY 2023-24.

15. Annual Revenue Requirement & Tariff for Machhkund H.E. (Jt.) Scheme

The total expected annual expenditure towards 50% power purchase cost from MHEP is calculated to be Rs. 30.3983 Crores for FY 2023-24. The cost per unit is Rs 1.169 considering drawal of 50% share of saleable design energy of Machkund i.e. 259.875 MU. The Final bill received from APGENCO towards 50% share of O&M expenditure applying escalation factor payable by OHPC to APGENCO for FY 2023-24 amounting to Rs 30.3983 Crores

**Table-24:
Projected Tariff of Machhkund H. E. (J) Scheme for FY 2023-24**

PROJECTED TARIFF OF MACHHKUND (JT.) HEP FOR 2023-24	
	2023-24
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
Drawal 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 2021-22.	1.1177
	(Rs. in Crs.)
1. Total Audited Cost of O&M Bill of MHEP (Jt.) for the FY 2021-22	54.3944
2. 50% O&M Expenditure share (Orissa share of Actual O&M Expenditure for 2021-22)	27.1972
3. O&M Expenditure for FY 2023-24 applying the escalation factor	30.3983
4. Total Expected Expenditure during the FY 2023-24	30.3983
5. Tariff (Paise/Kwh)	116.972
OHPC shall raise monthly energy bills to GRIDCO at the tariff Rs 1.169/kWh during the FY 2023-24 to make payment of O&M cost to APGENCO thereof as per the new Agreement subject to final reconciliation at the year end.	
Reimbursements of Statutory Dues/Duty/Cess as applicable shall be considered under the O&M Expenses	

16. Normative Plant Availability Factor (NAPAF)

Hon'ble OERC in Case No. 52 of 2019 had fixed the NAPAF of different power stations for the control period 2019-20 to 2023-24 as follows :

**Table-25:
Normative Plant Availability Factor proposed by OHPC for FY 2023-24**

In view of the above Order, the NAPAF of different power stations of OHPC for the FY 2023-24 for computation of Capacity Charges shall be considered as mentioned in the Table below:

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

17. TRUING UP:

Hon'ble OERC in the Final Order of Truing Up of OHPC power stations from FY1996-97 to FY2015-16 (Case No55 of 2019) & in the Review Petition of the Truing Up Order (Case No. 11 of 2022), that Commission, in case of OHPC generating stations, ARR & Tariff application is being filed by OHPC each year considering the capitalization/additional capitalization incurred and to be incurred during the year which is being approved by the Commission in the tariff orders.

OHPC pray before the Hon'ble OERC to approve estimated additional capital expenditure for FY2022-23 & FY2023-24 in the Tariff Order of OHPC for the FY2023-24. This shall enable OHPC for truing up of FY2023-24 when Audited Account is prepared in FY2024-25.

18. COMPLIANCE TO THE DIRECTIVES AS PER ARR AND TARIFF ORDER OF OHPC FOR FY 2022-23

PARA NO	DIRECTIVES OF OERC	COMPLIANCE
66(a)	Odisha is not renewable rich state. In near future there is no substantial addition of generation from hydro/thermal source. 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 power demand in upcoming years. OHPC along with OPGC may plan accordingly so that there would not be shortage of power to meet the demand of the State of Odisha. OHPC may take pro-active steps for capacity addition and plan accordingly in consultation with	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. (i) Upper Indravati PSP with Installed Capacity of 600MW and annual generation of 729 MU is proposed near the existing UIHEP. (ii) Upper Kolab PSP with Installed capacity of 320MW and annual generation of 506.60 MU is proposed near the existing UKHEP. (iii) Balimela PSP with installed capacity 500 MW and annual generation of 1095 MU is proposed near the existing BHEP (iv) Kharag Hydro Electric Project with installed capacity 63 MW and annual generation of 233.5MU is proposed at

	<p>Government of Odisha and GRIDCO. Long term generation planning study should be carried out along with OPTCL for development of power evacuation system.”</p>	<p>Kandhamal District. (v) Salki Hydro Electric Project with installed capacity 44 MW and annual generation of 68.95MU is proposed at Boudh District</p>
<p>66(b)</p>	<p>Considering the large scale penetration/ integration of RE sources, 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 not only provide the cleanest form of energy to balance the intermittency nature of RE generation but also would help in socio-economic development of people of the State of Odisha. Further, to meet the peak demand and base load during night time there would be requirement of coal based and hydro based plant until Round the Clock (RTC) supply is available through RE sources.”</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 729 MU is proposed near the existing UIHEP.</p> <p>(ii) Upper Kolab PSP with Installed capacity of 320MW and annual generation of 506.60 MU is proposed near the existing UKHEP.</p> <p>(iii) Balimela PSP with installed capacity 500 MW and annual generation of 1095 MU is proposed near the existing BHEP.</p> <p>(iv) Kharag Hydro Electric Project with installed capacity 63 MW and annual generation of 233.5MU is proposed at Kandhamal District.</p> <p>(vi) Salki Hydro Electric Project with installed capacity 44 MW and annual generation of 68.95MU is proposed at Boudh District.</p> <p>GEDCOL was formed on 18.04.2013 (Govt. of Odisha Gazette Notification. 532, dated.26.03.2013) as a public company under provisions of the Companies Act, 1956 as a wholly owned subsidiary company of OHPC Ltd to promote renewable energy in the state. The following are the main objectives of GEDCOL.</p> <ol style="list-style-type: none"> i. 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. ii. To plan, organize, implement, maintain and operate renewable energy projects to generate and sell electric power anywhere in India. <p>GEDCOL is the Member-Convenor of the State Technical Committee (STC) constituted for of one (1) MW and above On-Grid Solar &</p>

		Hybrid Power Projects it has facilitated sanction of projects of total capacity 1792 MW which has been cleared by STC, out of that 430 MW has been commissioned.
66 (c)(i)	Steps being taken for R&M of existing old hydro plant (other than uprating of Unit-1, 2, 5, 6 of HHEP enhancing installed capacity from 37.5MW to 43.65 MW) based on Residual Life Assessment (RLA) study, which would add generation with minimum investment and without any environmental issues.	<p><u>Status</u> RLA /LE / Uprating study and Preparation of DPR for R&M of Unit-7 of HHEP, Burla, & Unit-1 to Unit-5 (05 units) of RHEP, Rengali. RLA /LE study and Preparation of DPR for R&M of Unit-1 to Unit-4 (04Units) of UKHEP, Bariniput</p> <p><u>Specification</u> <u>Unit-7 of HHEP, Burla</u> 1x37.5MW Year of Mfg.1990 Turbine - Hitachi, Japan, Generator - Hitachi, Japan.</p> <p><u>Unit-1 to 5 of RHEP, Rengali</u> 5 x 50 MW Year of Mfg.1985-92 Turbine - BHEL, India, Generator - BHEL,India.</p> <p><u>Unit-1 to 4 of UKHEP, Bariniput</u> 4 x 80 MW Year of Mfg.1988-93 Turbine - BHEL, India, Generator - BHEL,India.</p> <p><u>Scope of work</u> To conduct Residual Life Assessment &Life extension and Uprating Study on Turbine, Generator, Auxiliaries and Civil Structures (excluding Dam &stop-log Gate) related to Unit and to conduct Scientific study at Site and preparation of DPR for Renovation and Modernization or Renovation, Modernization &Uprating of Unit 7 of HHEP, Burla and Unit-1 to Unit-5 (05 units) of RHEP, Rengali. The schedule year of completion is FY2024-25. To conduct Residual Life Assessment &Life extension on Turbine, Generator, Auxiliaries and Civil Structures (excluding Dam &stop-log Gate) related to Unit and to conduct Scientific study at Site and preparation of DPR for Renovation and Modernization or Renovation of Unit-1 to Unit-4 (04Units) of UKHEP, Bariniput. The schedule year of completion is FY2024-25.</p> <p><u>Estimated cost:</u> Unit-7 of HHEP, Burla: Rs 90Lakhs Unit-1 to 5 of RHEP, Rengali:</p>

		Rs 2 Crores 90Lakhs Unit-1 to 4 of UKHEP, Bariniput Rs 2 Crores 40Lakhs <u>Present Status</u> Tender was published and sale of tender from Dt.26.09.2022 to 16.11.2022. Last date of receipt of Pre bid Queries on 17.10.2022. Last date and time for submission of tender document is up to 16.11.2022 (01:00 P.M.) and opening of techno commercial bid on Dt.16.11.2022. 3:30p.m.
66 (c)(ii)	Future plan for generation addition either in form of Run of the River (RoR) scheme/ pondage-based scheme & PSS.	The detail future plan for development of new project of OHPC is enclosed.
66 (c)(iii)	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 problems etc., are not available with OHPC. • There is problem of silt deposition in the approach channel of Intake tunnel, Mohulpatna of UIHEP. • As per the estimate of M/s OCC Ltd., 121998.62 CuM of silt & debris was found to be deposited in the approach channel of UIHEP. • The works of removal of silt & debris of the approach channel of UIHEP is being undertaken by M/S OCC Ltd. amounting to Rs 30, 96, 82,395/- (including cost of survey, GST, PMC @ 10% & contingency charges) and work is in progress.
66 (c)(iv)	Installation of early warning system to deal with cloud burst, flash floods, dam brake event etc. for large project as per CEA (Safety Requirement for Construction, Operation & Maintenance of Electric Plants & Electric Lines) Regulation as amended from time to time.	OHPC does not come under CEA list of vulnerable power houses. The Early Warning System such as blowing of Siren minimum 30 minutes ahead spinning of machines i.e. release of water to tail race through power houses, is scrupulously followed. Power house wise with disaster mitigation action plan have been prepared and are in place. Detailed facts regarding EWS system at OHPC power house are as follows. <u>(i) Early Warning System in Down Stream of Power House</u>

As a measure of early warning in all Power Houses of OHPC there are siren arrangements and are regularly blown before spinning of first one/two machines when down side river/power channel is empty. Sirens are blown minimum 30 minutes ahead of spinning and are audible to long distance of 2 to 3 Kilometers. There is no habitation/ encroachment in river down side in all the power houses.

Every Power House has their Emergency Action and Disaster Management Plan as per the Disaster Management Act 2005, Govt. of Odisha, and the same are reviewed from time to time.

(ii) Early Warning System in Up Stream of Power House

- There is no EWS in-operation or under construction projects upstream to OHPC projects except Hirakud and Balimela.
- Machhkund Project is at the upstream of Balimela which is also a Joint Venture of Odisha & APGENCO.
- Kalma Barrage of Chhattisgarh is situated at the upstream of Hirakud Reservoir. Water release from Kalma Barrage is monitored by WR Deptt.
- Flood Control and Management of river basin of Odisha is under the jurisdiction of, and is being carried out by the WR Department in Odisha.
- OHPC has major reservoir-based Power Houses such as Hirakud, Rengali, Kolab, Indravati, Balimela and primary purpose of these reservoirs are flood control.
- WR Deptt. has flood forecasting, warning & control stations located at 11 stations across Odisha covering all major & medium river basins.
- WR Deptt. have inflow forecasting system with modern technique such as telemetry system. Readings of river gauges, discharge and rainfall etc. of various water bodies in all basins are collected. They also collect hydro meteorological data from State Depts., IMD & other agencies as per CWC norms. Wireless communication network is being maintained between gauge stations located at different places.

		<ul style="list-style-type: none"> • There are adequate Gauge & Discharge stations in different rivers of Odisha. Basin wise travel times of flood water in different rivers from control structures/important gauge stations to other stations have been worked out so that advance warning of flood can be made. • Forecast message and warnings are prepared and communicated to Field Functionaries / District Administrations to take necessary precautionary measures. • WR Deptt. follows the Rule Curve and maintains adequate cushion in all reservoirs as a measure of flood control and management. • WR Deptt. has established a Flood Management Information System (FMIS) which works as a Central Control & Command Station. • It provided real time information on early flood warning, possible inundation by using advanced Remote Sensing & Geographical Information System. • OHPC functions in close coordination with WR Department as far as Flood Control and Irrigation related matters are concerned. Hence as installation of EWS at upstream side is under the purview of WR Department and installation of the same by OHPC will not solve any purpose and accordingly OHPC may be exempted from its implementation work.
66 (c)(v)	Details of secondary energy fund and utilization of such fund.	The status of secondary energy fund of different power stations of OHPC from 01.04.1996 to 31.03.2022 is provided for kind appraisal of Hon'ble commission. As on 31.03.2022 the overall secondary energy fund of OHPC is Rs125.031CrS (negative).

19. PRAYER

OHPC pray before the Hon'ble Commission to kindly approve the following in the ARR & Tariff Order of OHPC Power Stations for the FY 2023-24:

- i) The ARR amounting to Rs 568.127Cr. of OHPC Power Stations at an average tariff @ 101.40 Paise/Unit.
- ii) The ACC, AEC & ECR of different Power Stations of OHPC.
- iii) The miscellaneous reimbursement of Rs 36.645Crore by OHPC from GRIDCO.
- iv) The tariff for energy billing to CSPDCL @ 2.19674Rs / kWh considering Up-valued cost of HHEP and the norms of CERC (Terms & Conditions of Tariff) Regulations, 2019.
- v) The tariff of MHEP (Joint Scheme) @ 1.16972 Rs/unit with provision of Rs 30.3983 Crores in the ARR of OHPC & GRIDCO to enable OHPC to make payment of O&M cost to APGENCO as per the new Agreement.
- vi) The average available Installed Capacity as 1681 MW for payment of SLDC charges.
- vii) Approval of Schedule of Payment for recovery of 90% of Project Cost along with interest in respect of UIHEP;
- viii) To approve useful life of Unit-5&6 HHEP after RM&U works and Unit-1 &2 of BHEP after R&M works for 35years as per the recommendation of OEM.
