

***Summary of ARR & Tariff Filings***

Submitted by

***OHPC***

For

***FY 2019-20***

## SUMMARY OF ARR PROPOSAL OF OHPC FOR FY 2019-20

### 1. Installed Capacity

The total installed capacity of various Hydro Stations owned by the Orissa Hydro Power Corporation (OHPC) is reduced due to repair and maintenance (R&M) work undertaken in Balimela (BHEP) of OHPC. The installed capacity of different generating stations as reported by OHPC for the FY 2019-20 is given in table – 1 below. The Odisha share of Machhkundis same as previous year at 36 MW as the actual installed capacity of MHEP has been reported as 120 MW by the MHEP authorities.

**Table – 1: Installed capacity of OHPC stations for PAFM calculation**

Sl. No.	Name of the Power Station	Installed Capacity Approved for FY 2018-19	Installed Capacity for FY 2019-20
1	Rengali (RHEP)	250.00MW	250.00MW
2	Upper Kolab(UKHEP)	320.00MW	320.00MW
3	Balimela(BHEP)	390.0MW ( for R&M of Unit 1&2 )	<ul style="list-style-type: none"> <li>• 330MW from 01.04.2019 to 20.05.2019(as approved period of R&amp;M of Unit-1 will be completed on 05.02.2019 &amp; Unit-2 will be completed on 20.05.2019)</li> <li>• 390MW from 21.05.2019 to 31.03.2020(Approved date of synchronization of Unit-1 &amp; 2 are 05.02.2019 &amp; 21.05.2019 respectively) (As zero date for R&amp;M of Unit -3 to 4 starts on 01.04.2019).</li> </ul>
4	Burla (HHEP)	238.00MW (from 16.02.2018 onwards as per the approved period of S/D of Unit-6)	275.50MW
		275.50MW (from 24.04.2018 onwards as per the approved period of S/D of Unit-5)	
5	Chiplima (CHEP)	72.00MW (from 16.06.2017 onwards as per the approved period of shut-down of Unit- 3)	72.00 MW
6	Upper Indravati (UIHEP)	600.00MW	600.00MW
7	Machhakund (30% Orissa share)	36.00MW	36.00MW

## 2. Design Energy of OHPC Stations

The Design Energy (DE) of a Hydro Power Station is an important parameter for determination of tariff. The OHPC has appealed to the commission to reduce the Design Energy of HHEP, Burla & CHEP, Chiplima as these generating stations are consistently unable to generate their Annual Design Energy due to restriction in generation below 595 ft RL of the Hirakud reservoir and consequently OHPC is unable to recover the Annual Energy Charges in full. The OHPC has been waiting for decisions from Department of Energy (DoE) / Department of Water Resources (DoWR) on reduction of design energy in respect of HHEP and CHEP. However, in the absence of any decision in this regard, OHPC has not considered reduction in design energy of HHEP and CHEP.

OHPC has deducted 16.644MU of allocation to CSEB from the saleable design energy of HHEP, Burla and has considered 660.516MU or say 660.52MU as saleable energy for computation of Tariff of HHEP, Burla for FY2019-20.

Based on the Review petition & subsequent submission in the rejoinder, OHPC has reduced 2% from its generation towards auxiliary energy consumption to arrive the saleable design energy of different power stations of OHPC for FY2019-20.

The proposed hydro power station wise design energy for FY 2019-20 is given in the following table.

**Table -2: Design energy for FY 2019-20**

(in MU)

Sl. No.	Name of the Power Station	Design Energy approved for FY2018-19	Design Energy for sale for FY 2018-19	Design Energy proposed for FY 2019-20	Design Energy for sale for FY 2019-20
1	RHEP	525.00	519.75	525.00	514.5
2	UKHEP	832.00	823.68	832.00	815.36
3	BHEP	1183.00	1171.17	1183.00	1159.34
4	HHEP	684.00	677.16	<b>684.00</b>	<b>653.676</b>
5	CHEP	490.00	485.10	<b>490.00</b>	<b>480.2</b>
<b>Sub Total of Old Power Stations</b>		<b>3714.00</b>	<b>3676.86</b>	<b>3714.00</b>	<b>3623.076</b>
6	UIHEP	1962.00	1942.38	1962.00	1922.76
<b>Total</b>		<b>5676.00</b>	<b>5619.24</b>	<b>5676.00</b>	<b>5545.836</b>

## 3. Reservoir Level and Anticipated Generation for FY 2019-20

The reservoir level of Power Stations reported by OHPC as on 31.10.2018 vis-à-vis on 31.10.2017 is given in table – 3 below:

**Table – 3: Reservoir level of power stations**

Sl. No.	Reservoirs	As on 31.10.2017	As on 31.10.2018
1.	Rengali	123.26 mtr	118.75mtr.
2.	Kolab	854.06 mtr.	855.96mtr.
3.	Balimela	1486.60 ft.	1511.70ft.
4.	Hirakud	629.29 ft.	627.17ft.
5.	Indravati	636.44 mtr.	639.46mtr.

The actual generation of different Power Stations under OHPC from 01.04.2018 up to 31.10.2018 and anticipated generation up to 31.03.2019 for the FY 2018-19 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 – 4:Actual /Anticipated Energy Generation**

Sl. No.	Name of the power stations	Actual generation from 01.04.18 up to 31.10.18 (in MU)	Anticipated generation from 01.11.18 to 31.03.19 based on DoWR& DoE Schedule (in MU)	Total Anticipated generation for the FY 2018-19 based on DoWR& DoE Schedule (in MU)	RL likely to be achieved as on 31.03.19 as per generation Schedule
1.	RHEP	658.18	130.08	788.26	113.93mtr.
2.	UKHEP	611.02	348.00	959.02	850.63mtr.
3.	BHEP	1197.26	685.20	1882.46	1480.80ft.
4.	HHEP	301.67	90.84	392.51	612.49ft.
5.	CHEP	109.81	54.60	164.41	-
6.	UIHEP	1422.75	708.72	2131.47	632.44mtr.
Total		4300.69	2017.44	6318.13	-

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. The present deficit of the secondary energy fund of OHPC as a whole is about **Rs. 261.283Crs.**

#### **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. 254/96dtd. 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.

OHPC has considered additional capitalization as per clause no. 3.4 of OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014 and extra additional capitalization on account of amended Companies (Ind AS) Rules to be considered under OERC norms. Considering the above factors, the total additional capitalization for an amount of Rs. 87.77 Cr. as per the audited account for FY 2017-18 has been considered for FY 2017-18.

The adjustment of cost of assets during the period from FY 2011-12 to FY 2015-16 on account of de-capitalization of asset for an amount of Rs9.38 Cr has been approved by Commission in the earlier tariff order of OHPC.

There is de-capitalization of Rs 0.40 Cr in case of old power stations of OHPC & Rs. 1.488 Cr in case of UIHEP for FY 2017-18. The historic cost after decapitalization as on 31.03.2018 is shown in the table 5 below . Hence the total decapitalization of Power Stations during the FY 2011-12 to FY 2017-18 comes to Rs18.51 Cr which has been deducted from the original Historic Cost as on 01.04.1996.The project cost of OHPC power stations considered for computation of ARR & tariff for the FY 2019-20 is given in the table below:

**Table-5: Project Cost for tariff Calculation for FY 2019-20**

(in Rs. Cr.)

Name of the power stations	Historic Cost as on 01.04.1996	Asset reduction during FY 2011-12 to FY 2017-18	Approved New additions up to 31.03.2017	New additions proposed in Tariff calculation FY 2019-20 (Unapproved Cap. Of 2016-17 + Cap. Of 2017-18)	Total New Addition upto 2017-18	Project Cost considered Tariff calculation based on Historic Cost
1	2	3	4	5	6=4+5	7=2+6-3
RHEP	91.09	<b>0.08</b>	57.81	<b>1.25</b>	59.06	150.07
UKHEP	108.31	<b>0.46</b>	19.28	<b>1.13</b>	20.41	128.26
BHEP	115.42	<b>0.33</b>	215.86	<b>5.12</b>	220.98	336.07
HHEP	72.75	<b>11.50</b>	220.12	<b>42.18</b>	262.30	323.55
CHEP	92.23	<b>1.27</b>	48.12	<b>2.07</b>	50.19	141.15
<b>Sub Total</b>	<b>479.80</b>	<b>13.64</b>	561.19	<b>51.75</b>	<b>612.94</b>	<b>1079.10</b>

Name of the power stations	Historic Cost as on 01.04.19 96	Asset reduction during FY 2011-12 to FY 2017-18	Approved New additions up to 31.03.2017	New additions proposed in Tariff calculation FY 2019-20 (Unapproved Cap. Of 2016-17 + Cap. Of 2017-18)	Total New Addition upto 2017-18	Project Cost considered Tariff calculation based on Historic Cost
UIHEP	1194.79	<b>4.868</b>	5.56	<b>36.02</b>	41.58	1231.50
<b>Total</b>	<b>1674.59</b>	<b>18.51</b>	566.75	<b>87.77</b>	<b>654.52</b>	<b>2310.60</b>

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

#### 5. Determination of Annual Fixed Cost

OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2014 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

##### a. Return on equity (ROE):

Based on the Commission's tariff order dtd 19<sup>th</sup> April, 2002 and subsequent government notification the ROE to OHPC was allowed on new investments made after 01.04.1996. According to Clause No. 4.5 & 4.6 of OERC (Terms and conditions for determination of Generation Tariff) Regulations, 2014 the Return on Equity shall be computed @16% of the equity amount. Also as per the provisions made in the said clause the income tax of the Generating Company shall be recovered from the beneficiaries (income tax on other income streams shall not be considered).

OHPC has considered 30% of additional capitalization in UIHEP as equity base. Further OHPC has considered equity base as 30% of the revalued cost of old power stations as on

01.04.1996 along with additional capitalization from 1996-97 to 2016-17 and audited cost for capitalization and decapitalization for FY 2017-18. 30% of this additional capitalization is considered as equity base.

Moreover, OHPC has paid Rs. 29.28 Crs. towards income tax for FY 2017-18 on the core business.

**Table – 7: Computation of RoE for different power stations of OHPC for FY 2019-20**  
(in Rs. cr.)

Name of the Power Station	Capital Addition after 01.04.1996 upto 31.03.2017 approved (in Crs)	Capital Addition for the FY 2017-18 audited (in Crs)	Capital Addition considered for RoE for FY 2019-20 (in Crs)	Share of Equity (%)	Value of Equity capital (in Crs)	ROE @16% Proposed for 2019-20 (in Crs)	RoE approved by OERC for 2018-19 (in Crs)
1	2	3	4=2+3	5	6=4*5	7=16% of 6	8
RHEP	57.81	<b>1.25</b>	59.06	30	17.719	2.835	2.775
UKHEP	19.28	<b>1.13</b>	20.41	30	6.123	0.980	0.925
BHEP	215.86	<b>5.12</b>	220.98	30	66.293	10.607	10.361
HHEP	220.12	<b>42.18</b>	262.30	30	78.689	12.590	10.566
CHEP	48.12	<b>2.07</b>	50.19	30	15.058	2.409	2.310
UIHEP	1196.94	<b>36.02</b>	1231.50	25&30	309.955	49.593	47.922
Total	1756.67	<b>87.77</b>	1844.44		493.837	<b>79.014</b>	<b>74.859</b>

Thus, OHPC has appealed before the Commission to approve Rs. 74.859Crs. as RoE for FY 2019-20 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.**  
(Rs.inCrs)

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

Commission in the para 65 of Tariff approval of OHPC for the FY 2018-19 has stated as follows:

“.....Government of Odisha communicated its suggestions/views/comments on various issues involving tariff setting for the year 2018-19 including subsidy / subvention and other important matters having a direct bearing on fixation of tariff for the year 2018-19 vide their letter No.ELC-OERC-03/2018/2253 dated 12.03.2018.

*“Regarding the issue of up-valuation of assets pertaining to OPTCL, Generators and other licensees the Government for the time being agrees with the 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-quo on up-valuation till 2018-19.”*

Considering the difference in opinion in the debt servicing of the government investment in UIHEP between the DoE, GoO and the Commission, OHPC is of the view that, both DoE, GoO and the Commission may agree to a single decision which will not put OHPC into trouble in Tariff computation of OHPC Power Stations.

**Table – 9: Present Status of UIHEP Govt. Loan based on the approvals of Hon’ble OERC**

(Rs. In Cr.)

Original Approved Project Cost	1195.42
Project cost after deducting the infirm power cost	1194.79
Equity @25%	298.70
Govt. Loan of UIHEP	497.86
Depreciation allowed from 2010-11 to 2018-19 @ Rs30.23 Crore	272.07
Loan Repayment made till FY 2017 -18 & to be paid for FY2018-19	272.07
Balance Outstanding Loan as on 01.04.2019	225.79Crore (Considering Depreciation allowed)
Cumulative interest on UIHEP Govt. Loan from FY 2006-07 to FY 2018-19 @ 7%	367.35 Crore(Govt. proposed to consider as regulatory asset )
Cumulative interest on normative loan from FY 2001-02 to FY 2018-19@ 7%	107.36 Crore (Not paid)

PFC loan of Rs320.00 Cr. has already been repaid in full by FY 2009-10.OHPC has so far paid Rs241.84 Cr to Govt. by March 2018. The depreciation approved for FY 2018-19 for Rs 30.23Cr shall be paid by the end of this Financial Year 2018-19 .Interest on UIHEP Loan has been provided by OHPC in its books of account every year as per the direction of the Commission in the tariff order of OHPC for FY2014-15. So, the cumulative interest of UIHEP, Govt. Loan up to FY 2018-19 stands at Rs367.35Cr.



Status of UIHEP Loan Liability as on 31.03.2019

- i) PFC loan of Rs319.49 Crs repaid.
- ii) Govt. Loan of Rs 497.86Cr. shall stand repaid, Normative Loan of Rs 78.74Cr. shall stand repaid.
- iii) Cumulative depreciation passed in the Tariff Upto FY2028-29 shall be Rs319.49Cr +Rs497.86Cr + Rs78.74Cr = Rs896.09Cr.(stands repaid)
- iv) Balance Depreciation to be recovered within the balance useful life i.e. upto FY2034-35 = Rs1075.311Crs(90% of project cost) – Rs896.09Cr( Cumm. Dep. Recovered) = Rs179.22Cr.(not recovered)----- (a)
- v) Cumulative Interest on Govt. Loan of UIHEP not approved by Commission shall stand at Rs426.64Cr.(not recovered) ----- (b)
- vi) Cumulative Interest on normative loan not approved by the Commission shall stand at Rs 155.36Cr.(not recovered) ----- (c)

Commission in the Para 131 of Compendium of Tariff Order of OHPC for FY 2013-14 has observed that this loan repayment may start after *the total repayment of Govt. loan as approved above, at the same rate of Rs.30.23 Cr. each year i.e. beginning with 2026-27. The interest component will be considered after the total repayment of the principal in line with the Govt. loans.*

If above order of OERC is to be carried out, total liability of UIHEP Loan as on 01.01.2029 will be Rs761.22Cr, which has to be recovered between FY 2029-30 to FY2034-35 (i.e. the balance useful life period of the UIHEP, project).

In order to avoid sharp hike in the tariff to the tune of 50 paise per unit for UIHEP the OHPC proposes to OERC to consider the repayment of interest of UIHEP Govt. Loan & UIHEP Normative Loan of Rs 78.74Crs in the ARR of OHPC from FY2018-19 onwards to reduce sharp rise in Tariff towards the fag end of Project Life when the R&M of these Units will be due.

OHPC further proposes that the Commission may consider the claim of DoE, GoO and recognize the Accumulated interest of Govt. Loan of UIHEP upto FY2017-18 as Regulatory Asset & decide its repayment in suitable instalment and in line with the suggestion of the DoE, GoO, the accumulated interest of Normative Loan of UIHEP may also be recognized as Regulatory Asset & its repayment in suitable instalment may be decided.

If the Commission doesnot agree to the proposals of OHPC as above, then a suitable plan may be approved so as to clear all interest liability as well as recovery of 90% of the project cost within the Useful life period.

**Table 10: OHPC prayer before the commission to approve in the tariff for the FY 2019-20**

1.	Rs 30.23Crs towards Principal Repayment of UIHEP Govt. Loan.
2.	Rs 14.747Crs towards Interest Repayment of UIHEP Govt. Loan.
3.	Rs 5.51Crs towards Interest Repayment of UIHEP Normative Loan of Project Cost.
4.	Declare the accumulated Interest of Rs 367.35Crs as on 31.03.2019 on the UIHEP Govt. Loan as the Regulatory Asset.
5.	Declare the accumulated Interest of Rs 107.36Crs as on 31.03.2019 on the UIHEP Normative Loan of Project Cost as the Regulatory Asset.
6.	Pass through of the 1 <sup>st</sup> Installment (to be decided by the Hon'ble Commission) of the above Regulatory Asset as under sl. No. 4 & 5 in the tariff of 2019-20.

**Normative Loans** - The normative loans of CHEP, RHEP & UKHEP is considered @ 9.8% as per Clause No. 4.13 of OERC (Terms & Conditions for determination of Generation Tariff) Regulation, 2014. The normative loan of BHEP, Balimela is considered @ 9.6 % for FY 2019-20 based on PFC interest rate applicable to BHEP. Similarly, the normative loan of HHEP, Burla is considered @ 8.75 % for FY 2019-20 based on PFC interest rate applicable to HHEP, Burla.

The accumulated interest on UIHEP normative loan calculated upto 31.03.2019 will be Rs. 107.36Crore at the prevailing rate of interest of State Govt. Loan @7% as per the orders of Hon'ble Commission.

**OHPC prays before the Commission to include the interest on normative loan for the FY 2018-19 amounting to Rs. 5.51 Crs. in the ARR and designate the accumulated interest amounting to Rs.101.85 Crs from the FY 2001-02 to FY 2016-17 on Normative Loan of Rs.78.74Crs as Regulatory Asset and fix suitable installment as pass through in the tariff for the FY 2018-19 in order to reduce the future tariff burden.**

The interest on outstanding loans payable by OHPC for the FY 2019-20 is given in table –11 below: -

**Table-11:(Statement of Outstanding Loans and Interest there on)**

(Rs. in Crs.)			
Sl. No.	Source of Loan	Loan Outstanding as on 01.04.19	Interest on Average Net Loan for the FY 2019-20
1.	State Govt. Loan of UIHEP @7%	225.79	14.75
2.	Normative loan for Addl. Capitalization FY 2013-14 to FY 2017-18 of CHEP, Chiplima @ 9.8%	2.27	0.19
3.	Normative loan for Addl. Capitalization FY 2013-14 to FY 2017-18 of Upper Kolab @ 9.8%	1.50	0.12
4.	Normative loan for Addl. Capitalization FY 2013-14 to 2017-18 of HHEP @ 8.75%	35.78	2.78

Sl. No.	Source of Loan	Loan Outstanding as on 01.04.19	Interest on Average Net Loan for the FY 2019-20
5.	Normative loan for Addl. Capitalization FY 2013-14 to FY 2017-18 of Balimela @ 9.6%	4.64	0.39
6.	Normative loan for Unit -1, R&M, Rengali @ 9.8%	7.10	0.61
7.	Normative loan for Unit -2, R&M, Rengali @ 9.8%	8.19	0.72
7.	Normative loan for Addl. Capitalization FY 2013-14 to 2017-18 of RHEP, Rengali @ 9.8%	1.50	0.12
8.	Normative loan for Addl. Capitalization FY 2013-14 and FY 2017-18 of UIHEP, Mukhiguda @ 7%	26.78	1.67
10.	Normative loan of UIHEP, Mukhiguda for Rs 78.74Cr @ 7%	78.74	5.51
	<b>Total</b>	<b>392.28</b>	<b>26.85</b>

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

**Table-12: Interest on loan of different power house of OHPC**

(Rs. Cr.)

Sl. No.	Source of loan	Interest on loan for FY 2019-20						(Rs. In Crs)
		RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	TOTAL
1.	Normative loan	1.455	0.115	0.388	2.779	0.188	7.182	12.108
2.	Govt. Loan	-	-	-	-	-	14.747	14.747
	<b>Total</b>	1.455	0.115	0.388	2.779	0.188	21.930	<b>26.855</b>

Thus OHPC prays before the Commission to approve Rs26.855 Cr. in the tariff of OHPC for the FY2019-20 for payment of Interest towards Govt. Loan, and 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.

Honorable Commission at clause no. 4.21 of OERC (Terms and Conditions for determination of generation tariff) Regulations, 2014 has specified 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.”**

OHPC has computed depreciation for the FY 2019-20 @ 2.57% on the Historic project cost as on 01.04.1996 (excluding de-capitalization) plus an additional capitalization w.e.f. 01.04.1996 up to FY 2017-18 The Unit wise depreciation so calculated is compared with the Loan repayment and the amount whichever is higher is considered as depreciation for Tariff computation.

UIHEP depreciation is calculated based on straight line method following which 90% of the project cost shall be recovered on the last year of the project life i.e., FY 2034-35. By the way Hon’ble Commission is allowing Rs30.23Cr annually under depreciation for repayment of State Govt. loan starting from the FY2010-11 onwards as per the order at Para No. 131 of the Compendium of OHPC Tariff Order for FY 2013-14.

For depreciation on the additional capitalization up to 2016-17 and for additional capitalization of FY 2017-18(Audited), OHPC has calculated the normative loan repayment of different power stations as per the terms approved by the OERC.

The comparative statement for actual repayment of loans and depreciation @2.57% for the FY 2018-19 as shown in the Table – 13 below to arrive at the depreciation amount to be claimed in the ARR & Tariff of OHPC for the FY 2019-20 .

**Table -13: Depreciation Claim for the FY 2019-20**

**(Rs in Crs)**

Sl. No.	Power Stations	Project Cost	Loan Repayment Amount	Depreciation @ 2.57%	Depreciation Claimed	Remark
1.	RHEP	150.07	3.90	3.86	3.90	Equal to loan Repayment
2.	UKHEP	128.26	0.65	3.30	3.30	Depreciation @ 2.57%
3.	BHEP	336.07	1.20	8.64	8.64	Depreciation @ 2.57%
4.	HHEP	323.55	8.03	8.32	8.32	Depreciation @ 2.57%
5.	CHEP	141.15	0.69	3.63	3.63	Depreciation @ 2.57%
6.	UIHEP	1231.50	36.05	31.65	36.05	Equal to loan Repayment
Total		2310.6	50.52	59.38	<b>63.82</b>	

**OHPC prays before Commission to approve Rs. 63.82 Cr towards depreciation for FY 2019-20.**

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

O & M Expenses has been calculated as per the Generation Tariff Regulations, 2014 and escalated @ 5.72 % on previous years approved O&M expenses. On this principle O&M expenses for FY 2019-20 comes to Rs. 374.16 Cr. It has been decided in the tariff Order for FY 2015-16 that the Department of Water Resource share of dam maintenance receivable by OHPC is to be deducted from total O&M expenses of OHPC. Accordingly, Rs. 10.38 Crore has been deducted from approved O&M expenses of UIHEP of Rs. 77.504 Cr. in FY 2017-18. Thus the Commission approved total O&M Expenses at Rs. 323.803 Cr. Subsequently, OHPC has escalated O&M expenses for FY 2017-18 @5.72% to arrive at O&M expenses of different power stations of OHPC for FY 2018-19.

The Commission has deducted Rs. 10.97Cr from O&M expenses of UIHEP Makhiguda on account of dam maintenance expenses receivable from DoWR for the FY 2017-18. Assuming the same principle OHPC has deducted Rs. 10.38 from the escalated O&M expenses of UIHEP for FY 2019-20.

Govt. of Odisha has already approved 7th Pay Commission’s pay structure for the State Govt. Employees w.e.f 01.01.2016. OHPC has calculated the financial impact on account of implementing the 7th Pay Commissions pay-structure. However, the Commission in the Tariff Order of OHPC for the FY 2018-19 has directed as under:

*“The Commission has analyzed the proposal of OHPC and observed that OHPC has not yet formally decided to implement the arrear payments with due concurrence from the State Govt. It may be implemented in the coming financial year. The issue of payment of arrear in this regard shall be decided by the Commission at appropriate time once the revised scale is implemented. For calculation of O & M expenses for FY 2018-19 the impact of arrear payments and terminal liabilities have not been considered. “*

The Station-wise O&M expenses proposed by OHPC for FY 2018-19 is presented in the table – 14 below:

**Table- 14: Statement of O & M Expenses for different power stations of OHPC for FY 2019-20**

**(Rs.in Cr.)**

Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	CO	Total
1	O & M expenses for FY 2018-19 Approved	50.69	38.19	72.66	76.80	17.58	255.92	73.45	24.55	353.92

Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	CO	Total
	by OERC.									
2	O & M expenses for FY 2019-20 with escalation @ 5.72% over FY 2018-19	53.59	40.37	76.82	81.19	18.59	270.56	77.65	25.95	374.16
3	Corporate Office expenses apportioned to different units under OHPC based on Design Energy	2.40	3.80	5.41	3.13	2.24	16.98	8.97	25.95	
4	Total O & M Expenses for the FY 2019-20	<b>55.99</b>	<b>44.179</b>	<b>82.226</b>	<b>84.321</b>	<b>20.826</b>	<b>287.541</b>	<b>86.623</b>		<b>374.164</b>
<b>Less: Amount Received from DoWR.</b>										
5	Less : Income to be received from DOWR towards dam maintenance of UIHEP							(-) <b>10.38</b>		(-) <b>10.38</b>
6	<b>Total O&amp;M</b>	<b>55.99</b>	<b>44.179</b>	<b>82.226</b>	<b>84.321</b>	<b>20.826</b>	<b>287.541</b>	<b>76.239</b>		<b>363.780</b>

Sl. No.	Particulars	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	CO	Total
	<b>Expenses for the FY 2019-20.</b>									

**OHPC prays before the Commission to approve Rs. 363.78 Cr towards O&M expenses for FY 2019-20.**

**e. Interest on Working Capital**

As per OERC Tariff Regulation 2014, the basis for calculation of working capital shall include the following:

1. Receivables equivalent to two months of fixed cost.
2. Maintenance spares @ 15% of operational and maintenance expenses
3. Operation and maintenance expenses for one month.

The rate of interest on working capital considered is the SBI MCLR<sup>1</sup>@ 8.15 % as on 1<sup>st</sup> April, 2018 plus 300 basis points which turns out to be 11%.In accordance with OERC guidelines, the interest on working capital shall be payable on normative basis.

Table -15 below summarizes the station wise interest on working capital as proposed by the OHPC for FY 2019-20.

**Table- 15: Interest on Working Capital for FY 2019-20**

(Rs. in Crs)

Sl. No	Description	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
1	Receivables equivalent to two months of fixed cost	11.15	8.44	17.66	18.71	4.69	60.65	31.55	92.20
2	Maintenance spares @ 15% of O&M expenses	8.40	6.63	12.33	12.65	3.12	43.13	11.44	54.57
3	O&M expenses for one month	4.67	3.68	6.85	7.03	1.74	23.96	6.35	30.32
4	Total working capital	24.21	18.75	36.85	38.39	9.55	127.74	49.34	177.08
5	Interest on working capital calculated @ 11.15%	<b>2.669</b>	<b>2.091</b>	<b>4.108</b>	<b>4.280</b>	<b>1.064</b>	<b>14.243</b>	<b>5.502</b>	<b>19.745</b>

<sup>1</sup> Marginal Cost of Funds based Lending Rate (MCLR)

OHPC has prayed before the Commission to approve **Rs. 19.745 Cr.** towards interest on working capital for FY 2019-20.

### **Annual Revenue Requirement (ARR) & Tariff for the FY 2019-20**

Based on the above parameters the power station wise ARR and tariff of OHPC have been calculated for the FY 2019-20 as follows:

The values of ARR along with its different components and the average tariff computed considering the Saleable Design Energy of 5602.60 MU for the FY 2019-20 is shown in the table – 16 below.

**Table-16: Station wise ARR and Tariff for the FY 2019-20 considering saleable D.E. of 5602.60 MU**

Details expenses	RHEP	UKHEP	BHEP	HHEP	CHEP	Sub Total	UIHEP	Total
Existing Saleable Design Energy (MU)	514.50	815.36	1159.34	653.68	480.20	3623.08	1922.76	5545.84
(Rs. in Crs.)								
Return on Equity	2.835	0.980	10.607	12.590	2.409	29.421	49.593	79.014
Interest on Loan	1.455	0.115	0.388	2.779	0.188	4.925	21.930	26.855
Depreciation	3.895	3.296	8.637	8.315	3.628	27.771	36.051	63.823
O&M Expenses	55.990	44.179	82.226	84.321	20.826	287.541	76.239	363.780
Interest on working capital	2.669	2.091	4.108	4.280	1.064	14.243	5.502	19.745
<b>Total ARR</b>	<b>66.875</b>	<b>50.661</b>	<b>105.965</b>	<b>112.286</b>	<b>28.116</b>	<b>363.902</b>	<b>189.314</b>	<b>553.216</b>
<b>Average Tariff (p/u)</b>	<b>129.98</b>	<b>62.13</b>	<b>91.40</b>	<b>171.78</b>	<b>58.55</b>	<b>100.44</b>	<b>98.46</b>	<b>99.75</b>

### **6. Two-Part Tariff**

As per clause 4.36 to 4.4 of the OERC (Terms and conditions for determination of Generation Tariff) Regulation 2014, 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.

Where, AFC= Annual Fixed Cost specified for the year in rupees

NAPAF= Normative Annual Plant Availability Factor in percentage

NDM = Number of days in the month

NDY = Number of days in the year

PAFM= Plant Availability Factor achieved during the month in percentage.

The PAFM shall be computed in accordance with the following formula:

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

Where,

Aux = Normative auxiliary energy consumption in percentage

N = No of days in the month

IC = Installed capacity in MW of the complete generating station

DC<sub>i</sub> = Declared Capacity (in ex-bus MW) for the i<sup>th</sup> day of the month which the station can deliver for at least (3) hours, as certified by the nodal load dispatch centre after the day is over.

- 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}

- 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.

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

Where,

DE = Annual design energy specified for the hydro generating station in MWh, subject to provisions in Clause-(6) of Schedule-22 of CERC tariff regulations 2014.

Accordingly, annual capacity charges, annual energy charges and energy charge rate of different power stations of OHPC for FY 2019-20 is shown below.

**Table-22: Capacity charge and energy charge of OHPC power stations for FY 2019-20**

Name of the power stations	Annual Fixed Cost (ARR) (Rs. in Crs)	Annual Capacity Charge (ACC) (Rs. in Crs)	Annual Energy Charge (AEC) (Rs. in Crs)	Salable design energy ( MU )	Energy Charge Rate (ECR) (in p/u)
RHEP	66.875	33.437	33.437	514.50	64.990
UKHEP	50.661	25.330	25.330	815.36	31.067
BHEP	105.965	52.983	52.983	1159.34	45.701
HHEP	112.286	56.143	56.143	653.68	85.888
CHEP	28.116	14.058	14.058	480.20	29.275
UIHEP	189.314	94.657	94.657	1922.76	49.230

#### 7. Application Fee and Publication Expenses

As per the OERC tariff regulation 2014, 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, 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). Further, the OHPC has incurred Rs. 0.84815 lakhs as against approved Rs. 1 lakh for publication expenses in FY 2018-19. Due to implementation of GST, the publication expenses may likely to be increased. As per above provision, the application fee and publication expenses proposed by OHPC for FY 2019-20 are given in table – 17 below.

**Table -17: Application Fees and Publication Expenses**

(Rs. In lakhs)

Sl. No.	Application fee	Publication expenses	Total
1	25.00	1.20	26.20

#### 8. Electricity Duty on Auxiliary Consumption

As per the agreed PPA between OHPC and GRIDCO, the taxes and duties including electricity duty (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. The Rate of Electricity Duty / Unit have been revised from 30 paisa per Unit to 55 paisa per Unit with effect from 12<sup>th</sup> May, 2017 as per the Gazette Notification No. 912dtd. 12.05.2017.

As per the Odisha Electricity (Duty) Amendment Act, 2016 vide their Gazette Notification No. 1981 Dtd. 05.11.2016, the electricity duty (ED) on Auxiliary Energy Consumption shall be paid on auxiliary equipment consumption and the transformer losses within the power stations.

During FY 2018-19, OHPC had made an in house study of the higher auxiliary energy consumption of its different Power Stations. The auxiliary equipment consumption of different power stations were found within 0.5% of gross generation but the transformer losses found to be of the order of 1.5% of gross generation. So the actual Auxiliary Energy Consumption (AUX) of OHPC Power Stations are remaining at 2% of the gross generation. Hence OHPC prays before the Hon'ble Commission to approve the Auxiliary Energy Consumption (Auxiliary Equipment Consumption + Transformer Loss) as 2% of the Gross Generation and accordingly allow reimbursement of ED paid on AUX from GRIDCO limiting to 2% at the yearend

In view of the above OHPC claims the following as Reimbursement of Electricity Duty for its different power stations for the FY 2019-20 and prays before the Hon'ble Commission for reimbursement of the same from GRIDCO.

**Table-19:ED claim for OHPC power station for FY 2019-20**

							(Rs. in Crs)
Description	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
ED on Auxiliary Energy Consumption for FY 2019-20	0.578	0.915	1.301	0.752	0.539	2.158	<b>6.244</b>

Hence, OHPC pray before the Hon'ble OERC to approve reimbursement of ED paid on the Auxiliary Equipment Consumption limiting to 2% of the Annual gross generation and approve to reimburse the actual ED paid on transformer loss from GRIDCO. Accordingly, an amount of Rs 6.244 Cr may kindly be provisioned in the ARR of GRIDCO.

#### **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 to the tune of Rs. 5.676 Crs. based on design energy which is to be reimbursed to OHPC by GRIDCO.

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 is paying @Rs. 0.011/KWh w.e.f 01.04.2017 as Licence Fee on water used for generation of electricity from all Hydro Electric Project and getting it reimbursed from GRIDCO.

OHPC in its Tariff submission had claimed Licence Fee on water used for generation of electricity from all Hydro Electric Project @1paise/ Kwh for the FY 2017-18 which was approved by Hon'ble OERC. But due to the enforcement of the above Notification, OHPC is paying water cess/tax @1.1paise/ Kwh for FY 2017-18 and @1.2 paise/kWh for FY 2018-19

and got reimbursed from GRIDCO. OHPC propose 1.3 paise/kWh as water cess/tax for FY 2019-20

**Table –19:License fee for Consumption of water for generation of electricity FY 2019-20  
(Rs. in Crs)**

Description	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
Licence Fee on water used for generation of electricity for FY 2018-19	0.683	1.082	1.538	0.889	0.637	2.551	<b>7.38</b>

Hence, OHPC prays before the Commission for approval of total amount of Rs 7.38 Cr as Reimbursement of License Fee from GRIDCO for the FY 2019-20.

#### 10. SLDC Charges

As per OERC (fees & charges of state load dispatch centre 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. Hon'ble Commission has fixed Rs 8922.26/MW/Annum to be collected from generators towards annual charges of SLDC.

The Commission has approved Rs 1.57Cr. for the FY 2018-19. Since OHPC has not received the ARR, fees & charges of SLDC for the FY 2019-20, the previous year rate of @Rs9432.62 per MW per annum fees & charges applicable to OHPC has been escalated @5.72% to arrive at the charges payable by OHPC for the FY 2019-20. Accordingly, OHPC proposes Rs. 1.6978Crs. as SLDC charges for FY 2019-20.

#### 11. Reimbursement of Contribution Made to ERPC

OHPC has paid Rs. 15 lakhs towards contribution to ERPC establishment fund and Rs. 1 lakh towards contribution to ERPC fund. Assuming the same claim of ERPC, OHPC has claimed Rs. 16 lakh as a pass through in the tariff for FY 2019-20 to be reimbursed from GRIDCO. OHPC requested to provide this amount in ARR of GRIDCO

#### 12. Income Tax

OHPC has paid Rs. 29.28 Cr. Towards income tax for FY 2017-18 on operational income of Rs. 543.79 Cr. which is a core business. Thus OHPC prays before the Commission to allow the same to be reimbursed from GRIDCO in the Tariff of OHPC for FY 2019-20 towards income tax as per the audited accounts of FY 2017-18

#### 13. Details of Reimbursement Cost:

Total reimbursement cost claimed for the FY 2019-20 is given in the table – 21 below.

**Table 20 :Details of Reimbursement for FY 2019-20**

(a) License fee for use of water	0.683	1.082	1.538	0.889	0.637	2.551	<b>7.380</b>
<b>Component of Costs</b>	<b>RHEP</b>	<b>UKHEP</b>	<b>BHEP</b>	<b>HHEP</b>	<b>CHEP</b>	<b>UIHEP</b>	<b>Total</b>

for generation of electricity for FY 2018-19.							
(b) ED on Auxiliary Consumption for FY2018-19.	0.578	0.915	1.301	0.752	0.539	2.158	<b>6.244</b>
(c) SLDC charges							<b>1.6978</b>
(e) Application fees and publication expenses							<b>0.262</b>
(f) ERPC charges							<b>0.16</b>
(g) Income Tax as per Audit Account of FY 2017-18							<b>29.28</b>
<b>Total</b>							<b>45.0238</b>

OHPC prays before the Commission to approve total reimbursement of RS. 45.02 Crs. Proposed by OHPC. The above expenditure may be included in GRIDCO's ARR and hence shown as revenue requirement in OHPC filing for FY 2019-20.

#### **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.

Presently it is decided that from 2008-09 onwards CSPDCL shall pay at a rate as approved by OERC provisionally till the rate is approved by appropriate Commission and afterwards necessary adjustment shall be done in accordance to law.

For coming FY 2019-20 , OHPC has computed the tariff for billing of Energy to CSPDCL as per the CERC (Terms and Conditions of Tariff) Regulation 2014 as furnished at Table-6 below.

#### **Tariff for CSPDCL for 2019-20**

<b>Details of Expenses HHEP</b>	<b>Amount (Rs in Crs)</b>
Salable Design Energy of HHEP	677.16 MU
Project Cost (Up-valued cost as on 01.04.1996 + Capitalization up to 31.03.2018 - Decapitalization)	383.73Cr
Return on Equity (@ 24.9962%)	29.05
Interest on Loan	7.25
Depreciation (@ 5.28%)	20.26
O & M expenses (Escalated @ 6.64%)	92.01

Interest on Working Capital (@ 11.0%)	5.42
Total ARR	153.99
Average Tariff (p/u)	229.73

OHPC prays Hon'ble Commission approve the tariff for energy billing to CSPDCL @ 229.73 paisa/unit for the FY 2019-20.

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

Machhkund Hydro Electric Project is a joint scheme of Government of Andhra Pradesh and Government of Orissa with 70% and 30% shares respectively, with option of Government of Orissa to draw an additional 20% power (105 MU) at a cost of Rs. 0.08 per unit as per the interstate supplementary agreement in the year 1978 between Government of Andhra Pradesh and Government of Orissa. The proposed tariff of 78.5098 Paisa/Unit of Orissa drawl of Machhkund power for FY 2017-18 has been computed on cost reimbursement basis. The tariff proposed by OHPC is based on assumption that GRIDCO will draw power up to 50% of design energy of Machhkund equivalent to 262.50 MU.

**Table-20: Projected Tariff of Machhkund H. E. (J) Scheme for FY 2019-20**

Installed Capacity (MW)	120.00 MW
Odisha share as per Original Agreement (30%)	36.00 MW
Energy for sharing between Andhra Pradesh & Odisha	525.00 MU
Expected Energy Drawl by Odisha (50%)	262.50 MU
Energy Drawl of 30% of Odisha share	157.50 MU
Purchase of Power up to 20% as per Supplementary Agreement	105.00 MU
O&M Escalation factor @ 6.64% for year for 2 years	1.1372
	<u>(Rs. in Crs)</u>
1. O&M Exp. (Odisha share of O&M Exp. For FY 17-18)	11.1107
2. O&M Exp for FY 2019-20 with escalation of 6.64% for 2017-18 & 2018-19	12.6352
3. Power purchase cost of additional 20% above 30% Orissa Share (105MU x 0.008)	0.84
4. Total Annual Expenditure (2 +3)	13.4752
5. Tariff (Paise/Kwh)	<b>51.334</b>
Note: The tariff is calculated on cost reimbursement basis. Any penalty for over drawl of power by M/s GRIDCO above 50% limit shall be paid directly to APGENCO separately by GRIDCO.	

### 16. Normative Plant Availability Factor (NAPAF)

Hon'ble Commission in the Tariff order of OHPC dated 22.03.2014 vide case no. 81/2013 has approved the NAPAF of OHPC stations for the control period from 01.04.2014 to 31.03.2019 as given in the table below.

**Table-23: Normative Plant Availability Factor approved by Commission for FY 2014-19**

Power Stations	HHEP	CHEP	BHEP	RHEP	UKHEP	UIHEP
NAPAF (%)	78	75	83	75	87	88

OHPC submitted that due to aging of HEPs, OHPC power stations are not in a position to recover their ACC( Annual Capacity Charges) at NAPAF target fixed by Hon'ble Commission. It is further submitted that the availability of power stations in the last five years shall be considered as benchmark for OHPC and necessary relaxation may be made in fixing the NAPAF for optimum recovery of Capacity Charges during the FY 2019-20 to FY 2023-24.

**Table-24: Normative Plant Availability Factor proposed by OHPC for FY 2019-20**

Power Stations	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP
NAPAF (%)	70	80	80	65	65	85

### 17. Status of Approved Capital Maintenance of Different Power Stations of OHPC

Hon'ble Commission approved 06 Nos. of proposals on Capital Maintenance in the Tariff Order for the FY 2015-16 and advised OHPC to take up the Capital Maintenance of the generating units which are due for capital maintenance as per the operating manual/manufactures guidelines and also with due approval of OHPC Board. Similarly one proposal on Capital Maintenance had been approved by Hon'ble OERC in the Tariff Order of OHPC for FY2017-18.

**Table-25: Status of Pending Capital Maintenance work of OHPC**

Sl. No	Power Station & Unit approved under Capital Maintenance	Zero Date (in consultation with SLDC)	Approved Period	Present Status
1.	Unit-II RHEP, Rengali	Not yet finalized	122days	To be taken up after due planning.
2.	Unit-IV UKHEP, Baraniput	Not yet finalized	185days	To be taken up after due planning.

### 18. Proposal of Capital Maintenance Work to be executed in FY 2019-20

OHPC has proposed following Capital maintenance work to be carried out during FY 2019-20 and sought in principle approval of the Hon'ble Commission for the same .

**Table-25: Proposed Capital Maintenance work during FY 2019-20**

Sr No	Name of Power Station	Unit	Estimated Cost	Duration
1	UIHEP	Unit -2	26.82 Cr	6 months
2	RHEP	Unit 4 & 5	16 lakh	46 days
3	UIHEP, Mukhiguda	Unit -IV	50.28 Cr	4 months
4	Construction of 220/33 KV with station Xmer with accessories at UKHEP	-	3.83 Cr	-
5	Implementation of ERP system in OHPC		30 Cr	

### 19. PROPOSAL ON PROCUREMENT OF GENERATOR TRANSFORMERS UNDER CAPITAL SPARES FOR DIFFERENT POWER STATIONS OF OHPC

As per the decision of the 145<sup>th</sup> BoD of OHPC, OHPC pray before the Commission for in-principle approval for procurement & replacement of minimum of 01 Nos. of Generator Transformer for each power station & to keep the used GT as back-up for any eventuality that may arise, as the present GTs at CHEP, RHEP, UKHEP & HHEP are very old and are of lower efficiency. In view of the above proposals on different Capital Maintenance work along with procurement of Capital spares are submitted in the table below for kind approval of the Commission.

**Table-26: Capital Maintenance work along with procurement of Capital spares**

Generating Unit	Name of the Work/ Critical Spares	Tentative Period of Shut Down	Estimated Cost
<b>UIHEP</b>	Capital Maintenance of Unit-II of UIHEP, Mukhiguda for replacement of underwater parts such as guide vanes along with bushes, facing plates and stationary & rotating labyrinth seal etc.	6 months	Rs.26,81,65,947/-
	Capital Maintenance of Unit-IV of UIHEP, Mukhiguda for Design, Manufacturing and Supply of new stator and replacement of old Stator of Unit No – 4 and & replacement of critical Spare parts along with service.	4 months	Rs.50,28,81,883/-
<b>RHEP</b>	Capital Maintenance of Unit-4 of RHEP, Rengali for installation of new DAVR system.	46 days	Rs 1,08,00,000/- each.
	Capital Maintenance of Unit-5 of RHEP, Rengali for installation of new DAVR	46 days	



	system.		
<b>UKHEP</b>	Construction of 220/33 KV Sub-Station with Station Transformer of 7.5 MVA and Control Panel with accessories along with extension of existing 220 KV Bay of UKHEP Bay	-	Rs 3.83Crs.
<b>OHPC</b>	Implementation of ERP System in different Power Houses of OHPC including Corporate Office.	-	Rs 30.00 Crore
<b>RHEP,CH EP,UKHEP ,HHEP</b>	Procurement of One No. of generator transformer under capital spare for each Power Station.	-	<ul style="list-style-type: none"> <li>• For CHEP: Rs2,14,76,000/-</li> <li>• For UKHEP: Rs5,44,86,500/-</li> <li>• For RHEP: Rs4,57,25,000/-</li> </ul>

OHPC requested the Commission for in principle approval for the above work.

## 20. PROPOSAL FOR CAPITAL CIVIL WORKS FOR FY2019-20

OHPC submitted that as most of the civil infrastructures are more than 50 to 60 years old, OHPC proposes to take up the capital civil works of different units for providing better office and residential dwelling conditions along with repair of spillway, surplus escape, forebay of CHEP Chiplima.

**Table 27: List of Capital Civil works for Financial Year 2019-20**

<b>Sl. No.</b>	<b>Name of the work.</b>	<b>Amount (in Rs.)</b>
1.	Construction of 12 nos. of 'D' type qrs., at CHEP, Chiplima	3.59 crores.
2.	Construction of office building, at UIHEP, Mukhiguda	5.45 crores.
3.	Construction of 2-0 nos. of 'D' type qrs., at BHEP, Balimela	5.00 crores.
4.	Construction of Multi storied commercial complex at OHPC Training Center, Bhubaneswar.	80.00 crores.
5.	Repair of spillway, surplus escape, forebay, of CHEP, Chiplima	200.00 crores.
6.	Construction of Shakti Bhawan - (Details of payment to OPTCL not available with Tech. wing.)	80.00 crores.
7.	Construction of multi storied commercial complex on plot no.324 (Pt.) Khata no.-619 Chandrasekharpur, BBSR.	70.00 crores.
8.	Construction of New Officers' Club at BHEP, Balimela	0.50 crores

## **PRAYER**

OHPC prays before the Commission to kindly approve the following in the ARR & Tariff Order of OHPC Power Stations for the FY 2019-20:

1. The ARR amounting to Rs 553.216Cr. of OHPC Power Stations for the FY 2019-20 at an average tariff @ 99.75 p/u.
2. The miscellaneous reimbursement of Rs45.0238 Cr by OHPC from GRIDCO.
3. The tariff for energy billing to CSPDCL at 229.73 paisa per Kwh considering Up-valued asset of HHEP and the norms of CERC (Terms & Conditions of Tariff) Regulations, 2014.
4. Recognize the following as Regulatory Asset:
  - a) Accumulated interest of UIHEP Govt. Loan from 2006-07 to 2018-19 = Rs.367.35Cr.
  - b) Accumulated interest on Normative Loan of UIHEP from 2001-02 to 2017-18 Rs.107.36Cr.
  - c) Realization of Rs. 262.139 Crs. towards Hydrology Failure (negative fund for Secondary energy) from FY 1996-97 to FY 2017-18.
5. Suitable decision in allowing interest on the above recognized Regulatory Asset.
6. The average available Installed Capacity as 1800 MW for payment of SLDC charges during the FY 2019-20.
7. Revision of Saleable Design Energy of different power stations of OHPC considering Auxiliary Energy Consumption (AUX) as 2% of Design Energy.
8. To approve the Capital Maintenance proposal of different generating units of OHPC.
9. In principle approval for procurement and replacement of minimum of 01no. of Generator Transformer for CHEP, RHEP, UKHEP & HHEP in the 1st phase of procurement & to keep the used GT as back-up to meet the emergency situations.  
To approve the proposals for Capital Civil works along with ERP System of OHPC.
10. To approve the proposed NAPAF as shown in the Table No 33 above for the different power stations under OHPC for the next block period of FY 2019-20 to FY2023-24.