

# **Analysis of ARR & Tariff Proposal of OHPC for FY 2013-14**

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# Presentation Outline

- ARR & Tariff Proposed by OHPC for FY 2013-14
- Comparison of ARR parameters & tariff with previous year's (2012-13) approved ARR
- Observations and suggestions on the current ARR & tariff filings (2013-14)
- Conclusion

# Installed Capacity of OHPC Stations

<b>Sl. No.</b>	<b>Name of the Power Stations</b>	<b>Installed Capacity (2012-13) MW</b>	<b>Installed Capacity (2013-14) MW</b>
1	Hirakud (HHEP)	275.50	275.50
2	Chiplima(CHEP )	72.00	72.00
3	Balimela (BHEP )	510.00	510.00
4	Rengali ( RHEP)	250.00	250.00
5	Upper Kolab (UKHEP )	320.00	320.00
6	Upper Indravati (UIHEP )	600.00	600.00
7	Machhakund (30% Orissa share)	34.50	34.50
<b>Total</b>		<b>2062.00</b>	<b>2062.00</b>

# Design Energy of OHPC Stations

Sl. No.	Name of the Power Stations	Design Energy (DE) (in MU)	Design Energy for sale (MU) (Approved for FY 2012-13)	Design Energy Proposed for sale (MU) FY 2013-14
1	HHEP	684.00	677.16	677.16
2	CHEP	490.00	485.10	485.10
3	BHEP	1183.00	1171.17	1171.17
4	RHEP	525.00	519.75	519.75
5	UKHEP	832.00	823.68	823.68
6	UIHEP	1962.00	1942.38	1942.38
<b>Total</b>		<b>5676.00</b>	<b>5619.24</b>	<b>5619.24</b>
<b>Machhakund</b>		<b>262.50</b>		

# Proposed Project Cost for ARR 2013-14 (in Rs Cr)

Sl No.	Name of Power Station	Historical cost of asset as on 01.04.1996	Revalued cost of asset as on 01.04.1996	Reduction of assets during the FY 2011-12	Reduced historical cost as on 01.04.1996	Reduced revalued cost as on 01.04.1996
(1)	(2)	(3)	(4)	(5)	(6) = (3) – (5)	(7) = (4) – (5)
1	HHEP	72.75	130.16	6.07	66.68	124.09
2	CHEP	92.23	165.01	0.70	91.53	164.31
3	BHEP	115.42	334.66	0.03	115.39	334.63
4	RHEP	91.09	259.01	0.00	91.09	259.01
5	UKHEP	108.31	307.96	0.00	108.31	307.96
<b>Total (Old PS)</b>		<b>479.80</b>	<b>1196.80</b>	<b>6.80</b>	<b>473.00</b>	<b>1190.00</b>

# Proposed Project Cost for ARR 2013-14 (in Rs. Cr) (Contd.)

Sl. No (1)	Power Stations (2)	Reduced historical cost of assets as on 01.04.96 (3)	Reduced revalued Cost of assets as on 01.04.96 (4)	New additions up to 31.03.2013 (5)	Project cost for 2013-14 for tariff (based on reduced original cost) (6) = (3)+(5)	Project cost (based on revalued cost) (7) = 4+5
1	HHEP	66.68	124.09	201.42	268.10	325.51
2	CHEP	91.53	164.31	42.98	134.51	207.29
3	BHEP	115.39	334.63	211.69	327.08	546.32
4	RHEP	91.09	259.01	32.16	123.25	291.17
5	UKHEP	108.31	307.96	14.11	122.42	322.07
	<b>Total Old PS</b>	<b>473.00</b>	<b>1190.00</b>	<b>502.36</b>	<b>975.36</b>	<b>1692.36</b>
6	UIHEP	<b>Approved project cost</b>				<b>1194.79</b>

# Proposed ARR & Tariff for 2013-14 (in Rs. Cr) without up-valuation of assets

Components of ARR / Tariff	<b>RHEP</b>	<b>UKHEP</b>	<b>BHEP</b>	<b>HHEP</b>	<b>CHEP</b>	<b>UIHEP</b>	<b>Total</b>
Existing Salable Design energy (MU)	519.75	823.68	1171.17	677.16	485.10	1942.38	<b>5619.24</b>
<b>(Rs. Cr)</b>							
Interest on Loan	1.65	0.50	6.44	1.81	0.97	0.00	11.37
Depreciation	3.17	3.15	15.17	6.89	3.46	30.23	62.07
Return on equity	1.87	0.82	12.31	9.76	2.50	57.88	85.13
O&M Expenses	31.92	23.13	45.08	40.69	17.06	58.80	216.67
Interest on working capital	2.06	1.49	3.52	2.88	1.19	5.68	16.81
<b>Total ARR ( Crs)</b>	<b>40.67</b>	<b>29.08</b>	<b>82.52</b>	<b>62.03</b>	<b>25.16</b>	<b>152.59</b>	<b>392.05</b>
<b>Average Tariff (P/U) for existing D.E.</b>	<b>78.25</b>	<b>35.30</b>	<b>70.46</b>	<b>91.50</b>	<b>51.87</b>	<b>78.56</b>	<b>69.77</b>

# Proposed ARR & Tariff for 2013-14 (in Rs. Cr) considering up-valuation of assets

Components of ARR / Tariff	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
Existing Salable Design energy (MU)	519.75	823.68	1171.17	677.16	485.10	1942.38	5619.24
<b>(Rs. Cr)</b>							
Interest on Loan	1.65	0.50	6.44	1.81	0.97	33.98	45.35
Depreciation	7.48	8.28	15.17	8.37	5.33	30.23	74.85
Return on equity	16.93	18.72	31.76	15.77	12.05	57.88	153.10
O&M Expenses	31.92	23.13	45.08	40.69	17.06	58.80	216.67
Interest on working capital	2.54	2.06	4.00	3.06	1.47	6.52	19.65
<b>Total ARR ( Crs)</b>	<b>60.52</b>	<b>52.69</b>	<b>102.45</b>	<b>69.69</b>	<b>36.88</b>	<b>187.40</b>	<b>509.62</b>
<b>Average Tariff (P/U) for existing D.E.</b>	<b>116.43</b>	<b>63.96</b>	<b>87.47</b>	<b>102.92</b>	<b>76.02</b>	<b>96.48</b>	<b>90.69</b>



# Proposed tariff for Machhakund HEP

- Tariff for 50% Orissa share (262.50MU) for FY 2013-14 - **30.80 P/unit**
- Tariff approved by Commission for FY 2012-13- **30.51 P/U**
- Proposed increase in tariff for FY 2013-14 - **0.95%**

# Proposed Capacity charge and Energy charge (FY 2013-14) without up-valuation of assets

<b>Sl. No.</b>	<b>Name of the Power Stations</b>	<b>Capacity charge (Rs crore)</b>	<b>Energy Charge Rate (P/U)</b>
1	HHEP	31.015	45.8
2	CHEP	12.58	25.93
3	BHEP	41.26	35.23
4	RHEP	20.335	39.12
5	UKHEP	14.54	17.65
6	UIHEP	76.295	39.28

# Proposed Capacity charge and Energy charge (FY 2013-14) considering up-valuation of assets

<b>Sl. No.</b>	<b>Name of the Power Stations</b>	<b>Capacity charge (Rs crore)</b>	<b>Energy Charge Rate (P/U)</b>
1	HHEP	34.845	51.45
2	CHEP	18.44	38.01
3	BHEP	51.225	43.74
4	RHEP	30.26	58.22
5	UKHEP	26.345	31.98
6	UIHEP	93.70	48.24

# **Comparison of ARR parameters and Tariff with Previous year ARR (FY 12-13) approved by Commission**

# Comparison of components of ARR (Without up-valuation of assets) (Rs in Cr)

Component of ARR	HHEP		CHEP		BHEP		RHEP		UKHEP		UIHEP	
	2012-13 (A)	2013-14 (P)	2012-13 (A)	2013-14 (P)	2012-13 (A)	2013-14 (P)	2012-13 (A)	2013-14 (P)	2012-13 (A)	2013-14 (P)	2012-13 (A)	2013-14 (P)
<b>Return of Equity</b>	9.75	9.76	2.49	2.50	12.19	12.31	0.22	1.87	0.82	0.82	57.88	57.88
<b>Interest on loan</b>	2.39	1.81	1.19	0.97	7.67	6.44	0.00	1.65	0.64	0.50	0.00	0.00
<b>Depreciation</b>	7.05	6.89	3.47	3.46	16.71	15.17	2.44	3.17	3.15	3.15	30.23	30.23
<b>O&amp;M</b>	40.75	40.69	17.08	17.06	46.17	45.08	33.10	31.92	24.08	23.13	59.99	58.80
<b>Interest on WC</b>	2.95	2.88	1.21	1.19	3.71	3.52	2.07	2.06	1.57	1.49	5.85	5.68
<b>Total ARR</b>	62.89	62.03	25.45	25.16	86.45	82.52	37.83	40.67	30.25	29.08	153.96	152.59
<b>% increase</b>		<b>-0.01</b>		<b>-0.01</b>		<b>-0.05</b>		<b>0.07</b>		<b>-0.03</b>		<b>-0.01</b>

# Percentage increase in Tariff over 2012-13 (Without up-valuation of assets)

Sl. No.	Name of the Power Stations	Average tariff in 2010-11 (P/U) (approved)	Average tariff (P/U) FY 2011-12 (approved )	Average tariff (P/U) FY 2012-13 (approved)	Average tariff (P/U) FY 2013-14 (proposed)	(Increase in Paisa/ Unit) / Percentage increase over 2012-13
1	<b>HHEP</b>	89.54	89.10	92.87	91.50	(-1.37) -1.48%
2	<b>CHEP</b>	46.98	50.07	52.47	51.87	(-0.6) -1.14%
3	<b>BHEP</b>	58.41	71.79	73.82	70.46	(-3.36) -4.55%
4	<b>RHEP</b>	69.09	69.31	72.79	78.25	(5.46) 7.50%
5	<b>UKHEP</b>	33.17	33.36	36.73	35.30	(-1.43) -1.80%
6	<b>UIHEP</b>	75.59	77.21	79.26	78.56	(-0.7) -0.8%

# Percentage increase in Tariff over 2012-13 considering present saleable design energy

During FY 2013-14, OHPC proposes to sale an estimated energy of 5619.24 MU at an average tariff of 69.77 P/ unit without up-valuation of assets

During FY 2012-13 , same unit supply was approved by Commission at an average tariff of 70.62 P/kWh

**Over all reduction of 1.2% claimed by OHPC for OHPC HEP. Including Machhakund HEP the decrease will be 1.16%**

# Comparison of two-part tariff

Sl. No	Name of the Power Stations	Approved tariff 2012-13		Proposed tariff 2013-14	
		Capacity charge (Rs crore)	Energy Charge (P/U)	Capacity charge (Rs crore)	Energy Charge (P/U)
1	HHEP	31.445	46.437	34.845	51.45
2	CHEP	12.725	26.232	18.44	38.01
3	BHEP	43.225	36.908	51.225	43.74
4	RHEP	18.915	36.392	30.26	58.22
5	UKHEP	15.125	18.363	26.345	31.98
6	UIHEP	76.980	39.632	93.70	48.24



# **Observations and suggestions on the ARR & Tariff filing of OHPC for FY 2013-14**

# Design Energy vs actual /anticipated generation in FY 2012-13

Name of HEP	Commission's Approval for FY 12-13 (MU)	Anticipated generation as per OHPC for FY 12-13 , taking actual from 4/12 to 11/12 (MU)	Remarks
HHEP	684.00	721.34	5.46% more
CHEP	490.00	306.88	37.37% less
BHEP	1183.00	656.53	44.50% less
RHEP	525.00	744.97	41.9% more
UKHEP	832.00	467.2	43.84% less
UIHEP	1962.00	1710.66	12.81% less
Total	5676.00	4607.58	18.82% less

# Capitalization of asset during 2012-13

Sl. No.	Name of the Power Stations	Historical cost of Asset as on 01.04.96 (Cr)	New additions 1996-2012 (Cr) (approved)	Proposed new additions 1996-2013 (Cr)	Additional Capitalization during 2012-13 (Cr)
1	HHEP	72.75	201.20	201.41	0.21
2	CHEP	92.23	42.82	42.98	0.16
3	BHEP	115.42	209.62	211.69	2.07
4	RHEP	91.09	3.61	32.16	28.55
5	UKHEP	108.31	14.11	14.11	0.00
<b>Total</b>					<b>30.99</b>

# Return on equity

## Observations & submission

- The RoE is allowed on new capital addition made by OHPC from 1 April 1996 to end of preceding FY of ARR.
- Expenditure of 30.99 Cr on account of capitalization of assets during 2012-13 needs to be verified on the basis of actual status of work.
- Capital expenditure on account of purchase of runner for unit no. 1 of RHEP should not be allowed in the ARR of 2013-14 before the runner is put under operation.
- Hon. Commission may consider the RoE on account of additional capitalization in FY 12-13 to pass through in the ARR after verifying the cost and status of the work.

# Interest on Loan

Source of loan	Interest on loan claimed by OHPC ( FY 2013-14) (in Cr)						Total
	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	
PFC loan	-	-	3.93	1.38	-	-	5.31
Normative Loan	1.65	0.50	1.87	-	0.97	-	4.98
G.C.	-	-	0.64	0.44	-	-	1.08
	1.65	0.50	6.44	1.81	0.97	-	11.37

## **Observations**

- Normative loan for RHEP (17.75 Cr) on account of R&M of Unit -1 is claimed
- Normative loan for UKHEP (5.78 Cr) on account of replacement of stator is claimed .

**Suggestions :** The normative loan are notional loan , interest is claimed for equity infusion in excess of 30% - Hon. Commission may defer in some of the loans to reduce the OHPC tariff.

# Depreciation

- It is noticed that Commission used to calculate depreciation limiting to principal repayment (@ 2.57% of project cost admitted for the financial year of ARR submission)
- Loan Repayment and Depreciation claimed by OHP C for **FY 2013-14**

Name of HEP	Loan Repayment (Cr)	Depreciation (cr)	Remark
RHEP	1.78	3.17	2.57%
UKHEP	1.45	3.15	2.57%
BHEP	15.17	8.41	Extended to loan repayment
HHEP	6.52	6.89	2.57%
CHEP	2.31	3.46	2.57%
UIHEP	30.23	30.23	Spread over useful life of the plant

**Depreciation should be allowed to the extent of loan repayment**

# O& M expenses

## **Observation**

- OHPC has claimed O& M expenses as per CERC 2009 regulation (5.72 % escalation on previous year's O&M) and thereafter added various Arrear salary and terminal liabilities

## **Submission**

- May be approved as proposed by OHPC

# Interest on Working capital

## Submission

- OHPC is claiming interest on working capital on normative basis as per provision under CERC Tariff Regulation 2009.
- The audited account annexed with OHPC ARR show net profit of Rs 76.31 Cr during FY 2011-12.
- OHPC may not require to avail loan for working capital requirement. Therefore, interest on working capital may not be allowed as pass through in ARR of FY 2013-14.



## Other observations

- The Commission in FY 2011-12 tariff order directed OHPC to seek expert opinion with regard to de-silting of Hirakud reservoir – OHPC may furnish the action taken report .
- Unit - 1 of RHEP was under R&M since 25.11.2009. As per Hon OERC directives the capacity charge of the RHEP needs to be reduced from the annual capacity charge claim of OHPC for the period the unit is kept un-operational .

# In Conclusion

- Hon Commission may consider the suggestions of consumer counsel with regard to additional capitalization for FY 2010-11, interest on loan , depreciation, interest on working capital against submission of OHPC.
- Hon Commission may quantify the monetary gain to OHPC on account of Capacity charge of unit 1 of RHEP ( for un-operational period) and reduce it from the ARR of FY 2012-13 of OHPC.

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# Thank You