



6. Tariff design and approach for determination of MYT for Rihand and Matatila hydro power station

The tariff is structured on the following basis:

- 6.1. The data of GFA, Debt and Equity as on 31st March 2014, as approved by the Commission in the previous MYT order, has been considered as baseline data for calculation of tariff and ARR for the MYT period from FY 2014-15 to FY 2018-2019.
- 6.2. Depreciation has been allowed as provided in Regulation 44 (ii) in the UPERC Generation Tariff Regulations, 2014. The Depreciation has been considered on normative basis as derived from the approved values of GFA, Debt and Equity as on 31st March 2014.
- 6.3. Return on Equity has been considered as 15.5 % as provided in the UPERC Generation Tariff Regulations, 2014. The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loans at the beginning of each year and shall be adjusted based on actual loan each year accordingly. If there is no actual loan for a particular year but a normative loan is still outstanding, the last available weighted average of interest has been considered.
- 6.4. The O&M expenditure has been allowed as per the normative values provided in Regulation 44 (iv) of the UPERC Generation Tariff Regulations, 2014
- 6.5. Working capital requirement has been allowed as per Regulation 44 (v) of the UPERC Generation Tariff Regulations 2014. The rate of interest on working capital has been allowed on normative basis as the Bank Rate as on 1st April 2014 or as on 1st April of the year during the tariff period FY 2014-15 to FY 2018-19 in which the generating station or a unit thereof is declared under commercial operation, whichever is later.
- 6.6. Thus, the MYT for the Hydro Power Station of the Petitioner for FY 2014-2015 to FY 2018-2019 has been worked out adopting the above elaborated methodology.

**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
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**Multi Year Tariff
For
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Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for Rihand and Matatila (UPJVNL)



7. Rihand Hydro Station ARR and MYT UPJVNL Submission

7.1. In the Petition, UPJVNL has proposed the fixed charges for the electricity exported as given in the table below:

Table 7 Annual Fixed Charge Proposed by the Petitioner

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Design Energy (MU)	920	920	920	920	920
Auxiliary Consumption (MU)	11	11	11	11	11
Energy Sent Out (MU)	909	909	909	909	909
Fixed Charges (Rs. Cr.)	51.91	52.95	54.10	55.39	56.80
Unit Rate (₹ /kWh)	0.57	0.58	0.60	0.61	0.62

7.2. Component-wise description of the Fixed Charge has been tabulated as under:

Table 8 Component Wise Fixed Charge submitted by the Petitioner (in Rs. Crore)

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Depreciation	5.58	5.58	5.58	5.58	5.58
Interest on Loan	10.68	10.00	9.32	8.63	7.95
Return on Equity	8.84	8.84	8.84	8.84	8.84
Interest on Working Capital	1.95	2.03	2.11	2.20	2.29
O & M Expenses	24.85	26.50	28.26	30.13	32.13
TOTAL	51.91	52.95	54.10	55.39	56.80

8. ARR and MYT as determined by the Commission:

Capacity (Fixed) Charges

Provisions under Regulations

8.1. For determination of components of fixed charges for MYT period of FY 2014 - 15 to FY 2018 - 19, the Commission opines that the parameters provided under UPERC Generation Tariff Regulations, 2014 shall be considered. Hence, the Commission has decided to allow the components of fixed charges as below:

Table 9 Components of Fixed Charge

Particulars	Value	Remark
Return on equity	15.50%	As per the Regulations
Interest on loan	12.25%	As per the Regulations
O & M Expenses	Normative	As per the Regulations
Interest on working capital	13.50 %	As per the Regulations and Base rate of SBI as on 01 st April 2014
Depreciation	Normative	As per schedule of rates given in the Regulations

**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
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Gross fixed assets

8.2. The UPERC Generation Regulations, 2014, specifies that the Capital Cost of the project as on 01.04.2014 shall be the capital cost admitted by the Hon'ble Commission up to FY 2013-14. Accordingly, the Commission, in the instant petition has considered the value of Gross Fixed Assets for the power plant as on 01.04.2014 equivalent to value of Gross Fixed Assets as on 31.03.2014, as per UPERC MYT Order dated 20th October 2011 against Petition No. 661 of 2010.

8.3. Further the Commission has not considered any additional capitalization during the control period as the same would be later claimed by the UPJVNL in True-up Petition:

Table 10 Gross Fixed Assets Summary of Rihand (in Rs. Crore)

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Opening GFA	190.15	190.15	190.15	190.15	190.15
Capitalization	-	-	-	-	-
Closing GFA	190.15	190.15	190.15	190.15	190.15

Depreciation

8.4. The UPERC Generation Regulations, 2014 provides that the depreciation shall be calculated for each year of the tariff period, on the value of Capital Cost of the assets admitted by the Commission. It further states that the depreciation shall be calculated on the historical cost of the asset and in case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets. The rate of depreciation shall continue to be charged at the rate specified in Appendix III till cumulative depreciation reaches 70%. Thereafter the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

8.5. Accordingly, the Commission has worked out the allowable depreciation for the control period from FY 2014-15 to FY 2018-19 on value of Gross Fixed Assets at the beginning of FY 2014-15. The Commission has considered full year depreciation on the value of Gross Fixed Assets as on 1st April, 2015 and half yearly depreciation on the value of additions in the fixed assets during the year, if any, being in line with the provisions of the UPERC Generation Regulations, 2014.

**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
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**Table 11 Asset-wise plant-wise breakup of closing GFA balances for as on 31.03.2014
in Rs. Cr.**

Particulars	Rihand
Land & Land Rights	0.09
Temporary Structure	-
Buildings	1.70
hydraulic Works	28.62
Other Civil works	1.69
Plant & Machinery	151.00
Lines, Cables, Networks Etc.	0.97
Vehicles	5.66
Furniture & Fixtures	0.13
Office Equipments	0.15
Capital Spares at Generating Stations	0.08
Electric Equipments	-
Survey Equipments	-
Tools & Tackles	0.01
Electric Installation	0.00
Steel Shuttering	-
Library Book	0.00
Wooden Frames	-
Wireless Set	-
Computers	0.05
TOTAL	190.15

**Table 12 Rihand HPS- Depreciation Summary for the Control Period of FY 2014-15 to
FY 2018-19 (in Rs. Crore)**

Particulars	Dep Rate	2014-15		2015-16		2016-17		2017-18		2018-19	
		GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep
Land & Land Rights	-	0.09	-	0.09	-	0.09	-	0.09	-	0.09	-
Temporary Structure	2.57%	-	-	-	-	-	-	-	-	-	-
Buildings	2.57%	1.70	0.04	1.70	0.04	1.70	0.04	1.70	0.04	1.70	0.04
hydraulic Works	1.80%	28.62	0.52	28.62	0.52	28.62	0.52	28.62	0.52	28.62	0.52
Other Civil works	2.57%	1.69	0.04	1.69	0.04	1.69	0.04	1.69	0.04	1.69	0.04
Plant & Machinery	2.57%	151.00	3.88	151.00	3.88	151.00	3.88	151.00	3.88	151.00	3.88
Lines, Cables, Networks Etc.	6.00%	0.97	0.06	0.97	0.06	0.97	0.06	0.97	0.06	0.97	0.06
Vehicles	18.00%	5.66	1.02	5.66	1.02	5.66	1.02	5.66	1.02	5.66	1.02
Furniture & Fixtures	6.00%	0.13	0.01	0.13	0.01	0.13	0.01	0.13	0.01	0.13	0.01

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**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
Rihand and Matatila (UPJVNL)**



Particulars	Dep Rate	2014-15		2015-16		2016-17		2017-18		2018-19	
		GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep
Office Equipment	6.00%	0.15	0.01	0.15	0.01	0.15	0.01	0.15	0.01	0.15	0.01
Capital Spares at Generating Stations	2.57%	0.08	0.00	0.08	0.00	0.08	0.00	0.08	0.00	0.08	0.00
Electric Equipments	2.57%	-	-	-	-	-	-	-	-	-	-
Survey Equipments	2.57%	-	-	-	-	-	-	-	-	-	-
Tools & Tackles	2.57%	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00
Electric Installation	2.57%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steel Shuttering	3.60%	-	-	-	-	-	-	-	-	-	-
Library Book	2.57%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wooden Frames	18.00%	-	-	-	-	-	-	-	-	-	-
Wireless Set	3.60%	-	-	-	-	-	-	-	-	-	-
Computers	2.57%	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.00
TOTAL		190.15	5.58	190.15	5.58	190.15	5.58	190.15	5.58	190.15	5.58

Interest on Loan Capital

8.6. Regulation 44(i) of UPERC Generation Regulations, 2014 prescribes the provisions for calculation of normative interest on loans for the purpose of determination of Annual Revenue Requirement of the power project. The opening loan balance as on 01.04.2014 has been considered equivalent to the closing loan balance for FY 2013-14. Thereafter the normative loan addition during the year has been computed at 70% of the total additional capitalization proposed during the year, considering the normative debt: equity ratio of 70:30.

8.7. The Commission has considered the repayment during the year equivalent to the normative depreciation for the year being in line with the methodology prescribed in the UPERC Generation Regulations, 2014. For computation of interest charges on such normative debt, the Commission has considered the same interest rate @12.25% as considered by the Hon'ble Commission in the previous Tariff Order dated 20th October, 2011.

Table 13 Rihand summary of Interest on Loan for the Control Period in Rs. Cr.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Opening Balance	90.00	84.42	78.84	73.26	67.68
Additions	-	-	-	-	-
Repayments	5.58	5.58	5.58	5.58	5.58
Closing Balance	84.42	78.84	73.26	67.68	62.10
Average Net Loan	87.21	81.63	76.05	70.47	64.89
Interest on Loan	10.68	10.00	9.32	8.63	7.95

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Return on Equity

8.8. Regulation 44(iii) of UPERC Generation Regulations, 2014 prescribes the provisions for calculation of return on equity for the purpose of determination of Annual Revenue Requirement of the power project. The opening equity balance as on 01.04.2014 has been considered equivalent to the closing equity balance for FY 2013-14. Thereafter the normative equity addition during the year has been computed at 30% of the total additional capitalization proposed during the year, considering the normative debt: equity ratio of 70:30.

8.9. As per the UPERC (Terms and Conditions of Generation Tariff) Regulations, 2014 equity would be eligible for return when the asset is commissioned. The table below provides the summary of equity base eligible for return and the Return on Equity considered by the Commission for the control period. The Return on Equity has been computed @ 15.5% as specified in the Regulation 44(iii) of UPERC (Terms and Conditions of Tariff) Regulations 2014 for the MYT period of FY 2014-15 to FY 2018-19.

Table 14 Return on Equity for the Control Period in Rs. Cr.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Equity Base	57.06	57.06	57.06	57.06	57.06
Return on Equity @15.5%	8.84	8.84	8.84	8.84	8.84

Operation & Maintenance Expenses

8.10. Para 44 (iv) of UPERC (Terms & Conditions of Generation Tariff) Regulations 2014 deals with the allowance of O&M expenses. The Commission in the UPERC (Terms and Conditions of Generation Tariff) Regulations 2014 – Para 44 (iv)(a) have prescribed that the normative values of operation and maintenance expenses including insurance for FY 2014-15, shall be derived from values approved by the Commission for FY 2013-14 escalated by 6.64%. Based on above prescription the O&M expenses projected for all the power station for the control period is as per table below:

Table 15 Projected O&M expense for the Control Period in Rs. Cr.

Particulars	O&M Expenses
FY 2014-15	24.85
FY 2015-16	26.50

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Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for Rihand and Matatila (UPJVNL)



FY 2016-17	28.26
FY 2017-18	30.13
FY 2018-19	32.13
Total	141.87

Interest on Working Capital

8.11. Based on the above, the computation of interest on working capital for the control period are as per table below:

Table 16 Interest on Working Capital for the Control Period in Rs. Cr.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
O & M Expenses	2.07	2.21	2.35	2.51	2.68
Maintenance Spares	3.73	3.97	4.24	4.52	4.82
Receivables	8.65	8.82	9.02	9.23	9.47
Total Working Capital	14.45	15.01	15.61	16.26	16.96
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	1.95	2.03	2.11	2.20	2.29

Summary of Total Fixed Cost & Unit Rates for the Control Period

8.12. The fixed cost & the Unit Rates of the Petitioner's Hydro power plants for the control period under consideration works out at as under:

Table 17 Annual Fived Cost and Unit Rates for the Control Period in Rs. Cr.

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5.58	5.58	5.58	5.58	5.58
Interest on Loan	10.68	10.00	9.32	8.63	7.95
Return on Equity	8.84	8.84	8.84	8.84	8.84
Interest on Working Capital	1.95	2.03	2.11	2.20	2.29
O & M Expenses	24.85	26.50	28.26	30.13	32.13
TOTAL	51.91	52.95	54.10	55.39	56.80
Energy Sent Out (MU)	909	909	909	909	909
Unit Rate (Rs. /kWh)	0.57	0.58	0.60	0.61	0.62

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**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
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**Multi Year Tariff
For
Matatila Hydro Power Station
For
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Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for Rihand and Matatila (UPJVNL)



9. Matatila Hydro Station ARR and MYT UPJVNL Submission

9.1. In the Petition, UPJVNL has proposed the fixed charges for the electricity sent out as given in the table below:

Table 18 Annual Fixed Charge Proposed by the Petitioner

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Design Energy (MU)	123	123	123	123	123
Auxiliary Consumption (MU)	2	2	2	2	2
Energy Sent Out (MU)	121	121	121	121	121
Fixed Charges (Rs./Cr.)	8.42	8.71	9.02	9.37	9.74
Unit Rate (Rs./kWh)	0.70	0.72	0.75	0.77	0.80

9.2. Component-wise description of the Fixed Charges has been tabulated as under:

Table 19 Component Wise Fixed Charge submitted by the Petitioner (in Rs. Crore)

S. N.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	Depreciation	0.77	0.77	0.77	0.77	0.77
2	Interest on Loan	0.79	0.69	0.60	0.50	0.41
3	Return on Equity	0.98	0.98	0.98	0.98	0.98
4	Interest on Working Capital	0.36	0.38	0.40	0.42	0.44
5	O & M Expenses	5.51	5.88	6.27	6.69	7.13
	TOTAL:	8.42	8.71	9.02	9.37	9.74

10. ARR and MYT as determined by the Commission:

Capacity (Fixed) Charges

Provisions under Regulations:

10.1. For determination of components of fixed charges for MYT period of FY 2014 - 15 to FY 2018 - 19, the Commission opines that the parameters provided under UPERC Generation Tariff Regulations, 2014 shall be considered. Hence, the Commission has decided to allow the components of fixed charges as below:

Table 20 Components of Fixed Charge

Particulars	Value	Remark
Return on equity	15.50%	As per the Regulations
Interest on loan	12.25%	As per the Regulations
O & M Expenses	Normative	As per the Regulations

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**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
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Interest on working capital	13.50 %	As per the Regulations and Base rate of SBI as on 01 st April 2014
Depreciation	Normative	As per schedule of rates given in the Regulations

Gross Fixed Assets

10.2. The UPERC Generation Regulations, 2014, specifies that the Capital Cost of the project as on 01.04.2014 shall be the capital cost admitted by the Hon'ble Commission up to FY 2013-14. Accordingly, the Commission has considered the value of Gross Fixed Assets for the power plant as on 01.04.2014 equivalent to value of Gross Fixed Assets as on 31.03.2014, as per UPERC MYT Order dated 20th October 2011 against Petition No. 661 of 2010.

10.3. Further the Commission has not considered any additional capitalization during the control period as the same would be later claimed by the UPJVNL in True-up Petition:

Table 21 Station-wise Gross Fixed Assets Summary in Rs. Cr.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Opening GFA	21.09	21.09	21.09	21.09	21.09
Capitalization	-	-	-	-	-
Closing GFA	21.09	21.09	21.09	21.09	21.09

Depreciation

10.4. The UPERC Generation Regulations, 2014 provides that the depreciation shall be calculated for each year of the tariff period, on the value of Capital Cost of the assets admitted by the Commission. It further states that the depreciation shall be calculated on the historical cost of the asset and in case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets. The rate of depreciation shall continue to be charged at the rate specified in Appendix III till cumulative depreciation reaches 70%. Thereafter the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for Rihand and Matatila (UPJVNL)



10.5. Accordingly, the worked out allowable depreciation for the control period from FY 2014-15 to FY 2018-19 is based on value of Gross Fixed Assets at the beginning of FY 2014-15.

Table 22 Asset-wise plant-wise breakup of closing GFA balances for as on 31.03.2014 in Rs. Cr.

Particulars	Matatila
Land & Land Rights	0.02
Temporary Structure	-
Buildings	0.36
hydraulic Works	6.29
Other Civil works	3.76
Plant & Machinery	8.52
Lines, Cables, Networks Etc.	0.29
Vehicles	1.74
Furniture & Fixtures	0.03
Office Equipments	0.05
Capital Spares at Generating Stations	0.02
Electric Equipments	-
Survey Equipments	-
Tools & Tackles	0.00
Electric Installation	0.00
Steel Shuttering	-
Library Book	0.00
Wooden Frames	-
Wireless Set	-
Computers	0.00
TOTAL	21.09

10.6. The rates of depreciation prescribed in Appendix 3 of the Generation Tariff Regulations have been considered.

Table 23 Matatila HPS- Depreciation Summary for the Control Period of FY 2014-15 to FY 2018-19 (in Rs. Crore)

Particulars	Dep Rate	2014-15		2015-16		2016-17		2017-18		2018-19	
		GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep
Land & Land Rights	-	0.02	-	0.02	-	0.02	-	0.02	-	0.02	-

**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
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Particulars	Dep Rate	2014-15		2015-16		2016-17		2017-18		2018-19	
		GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep	GFA	Dep
Temporary Structure	2.57%	-	-	-	-	-	-	-	-	-	-
Buildings	2.57%	0.36	0.01	0.36	0.01	0.36	0.01	0.36	0.01	0.36	0.01
hydraulic Works	1.80%	6.29	0.11	6.29	0.11	6.29	0.11	6.29	0.11	6.29	0.11
Other Civil works	2.57%	3.76	0.10	3.76	0.10	3.76	0.10	3.76	0.10	3.76	0.10
Plant & Machinery	2.57%	8.52	0.22	8.52	0.22	8.52	0.22	8.52	0.22	8.52	0.22
Lines, Cables, Networks Etc.	6.00%	0.29	0.02	0.29	0.02	0.29	0.02	0.29	0.02	0.29	0.02
Vehicles	18.00%	1.74	0.31	1.74	0.31	1.74	0.31	1.74	0.31	1.74	0.31
Furniture & Fixtures	6.00%	0.03	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.03	0.00
Office Equipments	6.00%	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.00
Capital Spares at Generating Stations	2.57%	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00
Electric Equipment	2.57%	-	-	-	-	-	-	-	-	-	-
Survey Equipment	2.57%	-	-	-	-	-	-	-	-	-	-
Tools & Tackles	2.57%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric Installation	2.57%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steel Shuttering	3.60%	-	-	-	-	-	-	-	-	-	-
Library Book	2.57%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wooden Frames	18.00%	-	-	-	-	-	-	-	-	-	-
Wireless Set	3.60%	-	-	-	-	-	-	-	-	-	-
Computers	2.57%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		21.09	0.77	21.09	0.77	21.09	0.77	21.09	0.77	21.09	0.77

Interest on Loan Capital

10.7. Regulation 44(i) of UPERC Generation Regulations, 2014 prescribes the provisions for calculation of normative interest on loans for the purpose of determination of Annual Revenue Requirement of the power project. The opening loan balance as on 01.04.2014 has been considered equivalent to the closing loan balance for FY 2013-14. Thereafter the normative loan addition during the year has been computed at 70% of the total additional capitalization proposed during the year, considering the normative debt: equity ratio of 70:30. Further, the Commission has considered the repayment during the year equivalent to the normative depreciation for the year being in line with the methodology prescribed in the UPERC Generation Regulations, 2014.

10.8. For computation of interest charges on such normative debt, the Commission has considered the same interest rate @12.25% as considered in the previous Tariff Order dated 20th October, 2011.

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Rihand and Matatila (UPJVNL)**



Table 24 Matatila summary of Interest on Loan for the Control Period in Rs. Cr.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Opening Balance	7.00	6.23	5.45	4.68	3.90
Additions	-	-	-	-	-
Repayments	0.77	0.77	0.77	0.77	0.77
Closing Balance	6.23	5.45	4.68	3.90	3.13
Average Net Loan	6.61	5.84	5.07	4.29	3.52
Interest on Loan	0.81	0.72	0.62	0.53	0.43

Return on Equity

10.9. Regulation 44(iii) of UPERC Generation Regulations, 2014 prescribes the provisions for calculation of return on equity for the purpose of determination of Annual Revenue Requirement of the power project. The opening equity balance as on 01.04.2014 has been considered equivalent to the closing equity balance for FY 2013-14. Thereafter the normative equity addition during the year has been computed at 30% of the total additional capitalization proposed during the year, considering the normative debt: equity ratio of 70:30.

10.10. As per the UPERC (Terms and Conditions of Generation Tariff) Regulations, 2014 equity would be eligible for return when the asset is commissioned. The Return on Equity has been computed @ 15.5% as specified in the Regulation 44(iii) of UPERC (Terms and Conditions of Tariff) Regulations 2014 for the MYT period of FY 2014-15 to FY 2018-19. Summary of the equity balances, additions along with return on equity claimed is summarized in Table below:

Table 25 Return on Equity for the Control Period in Rs. Cr.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Equity Base	6.33	6.33	6.33	6.33	6.33
Return on Equity @15.5%	0.98	0.98	0.98	0.98	0.98

Operation & Maintenance Expenses

10.11. Para 44 (iv) of UPERC (Terms & Conditions of Generation Tariff) Regulations 2014 deals with the allowance of O&M expenses. The Commission in the UPERC (Terms and Conditions of Generation Tariff) Regulations 2014 - Para 44 (iv)(a) have prescribed that the normative values of operation and maintenance expenses including insurance for FY 2014-15, shall be derived from values approved by the

**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
Rihand and Matatila (UPJVNL)**



Commission for FY 2013-14 escalated by 6.64%. Based on above prescription the O&M expenses projected for all the power station for the control period is as per table below:

Table 26 Projected O&M expense for the Control Period in Rs. Cr.

Particulars	O&M Expenses
FY 2014-15	5.51
FY 2015-16	5.88
FY 2016-17	6.27
FY 2017-18	6.69
FY 2018-19	7.13
Total	31.48

Interest on Working Capital

10.12. The rate of interest has been taken at 13.50% being the interest as specified by the State Bank of India on 01.04.2014 plus 350 basis points. Based on the above, the computation of interest on working capital for the control period for kind consideration and approval of the Hon'ble Commission are as per table below:

Table 27 Interest on Working Capital for the Control Period in Rs. Cr.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
O & M Expenses	0.46	0.49	0.52	0.56	0.59
Maintenance Spares	0.83	0.88	0.94	1.00	1.07
Receivables	1.40	1.45	1.50	1.56	1.62
Total Working Capital	2.69	2.82	2.97	3.12	3.29
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	0.36	0.38	0.40	0.42	0.44

Summary of Total Fixed Cost & Unit Rates for the Control Period

10.13. In view of the above submissions, the fixed cost & the Unit Rates of the Petitioner's Hydro power plants for the control period under consideration works out at as under:

Table 28 Annual Fixed Cost and Unit Rates for the Control Period in Rs. Cr.

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.77	0.77	0.77	0.77	0.77

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**Multi Year Tariff and ARR for FY 2014-15 to FY 2018-19 for
Rihand and Matatila (UPJVNL)**



Interest on Loan	0.79	0.69	0.60	0.50	0.41
Return on Equity	0.98	0.98	0.98	0.98	0.98
Interest on Working Capital	0.36	0.38	0.40	0.42	0.44
O & M Expenses	5.51	5.88	6.27	6.69	7.13
TOTAL:	8.42	8.71	9.02	9.37	9.74
Energy Sent Out (MU)	121	121	121	121	121
Unit Rate (Rs./kWh)	0.70	0.72	0.75	0.77	0.80

11. Allocation of Fixed Charges

Rihand Hydro Power Station- Petitioner's Submission

11.1. The UPJVNL had to make available to the Madhya Pradesh 15% of the power at Ex-bus based on the energy generated at Rihand Power Station. Further, as per the direction of 6th meeting of Central Zonal Counsel held at Nanital on 1st and 2nd July, 1963, the power will made available at cost price plus 5% and the price so worked out shall be acceptable to the concerned beneficiaries.

Matatila Hydro Power Station- Petitioner's Submission

11.2. The UPJVNL had make available to the Madhya Pradesh 1/3rd of the power based on the energy available at Matatila at Ex-bus. Further, as per the direction of 6th meeting of Central Zonal Counsel held at Nanital on 1st and 2nd July, 1963, the power will made available at cost price plus 5% and the price so worked out shall be acceptable to the concerned beneficiaries.

MPPMCL submission dated 25.11.2022

11.3. It has been receiving its share of power from Rihand and Matatila HPS. However, the present being only a share of power, UPJVNL is only entitled to O&M charges as per CERCs orders and not the Tariff as sought to be claimed in the present Petition. It was an admitted position right from the inception that the 2nd Respondent is entitled to share of power generated by the two stations viz. Rihand and Matatila on account of compensation for lost of forests, lands and villages in the State of MP. The parties had agreed that share in supply of power shall be at the cost of power generated + 5%.

Commission's View

11.4. As per the PPA dated 18.12.2000, the obligation of supply of power to some other States, as per the mutual agreement entered into or to be entered into in the future was to be discharged by UPPCL. In generation of Rihand and Matatila hydro power stations the share of Madhya Pradesh State is 15% and 33 1/3 %

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respectively and the energy to the extent of their share is being drawn through the Western Regional Load Dispatch Centre (WRLDC) and Northern Regional Load Dispatch Centre (NRLDC). It is clear that MPPCL has been receiving its share of power but intends to pay only O&M Charges as the parties had agreed that share in supply of power shall be at the cost of power generated +5% as being followed for Matatila Project located in Madhya Pradesh.

- 11.5. **The Commission has noted that although the supply is continuing till date but neither any PPA has been entered with MPPMCL nor any billing has been done for the supplied energy. On this issue, the Commission directs UPJVNL and UPPCL to ensure the necessary PPAs for supply of energy with MP within 3 months from the date of this Tariff Order.**

12. Other Provisions

I. Recovery of Statutory levies and Tax on Income etc.

- 12.1. In addition to the above tariff, UPJVNL is allowed to recover the payment of statutory charges like service tax, rates and taxes and regulatory fee paid to the Commission etc., on production of details of actual payments made and duly supported with the certificate of the Statutory Auditors.

II. Incentive

- 12.2. Incentive as applicable shall be calculated according to the provisions of the relevant UPERC (Terms and Conditions of Generation tariff) Regulations as defined for the different periods.

III. Billing & Payment

- 12.3. Billing and Payment of Capacity Charges shall be done under provisions of Regulation 51 of UPERC (Terms and Conditions of Generation Tariff) Regulations, 2014.

IV. Finalization of GFA and submission of True-up Petition

- 12.4. The Petitioner should ensure that the GFA balances for the hydro power stations are finalized at the earliest. Post finalization, the Petitioner should submit the True-up Petition for the years as per the provisions of the Regulations. The generating company shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred duly audited and certified by the auditors.



13. Implementation of the Order

- 13.1. This order shall be reckoned to have come into effect from 01.04.2014 and shall remain effective till 31.03.2019 for the Multi Year Tariff period of F.Y. 2014-15 to FY 2018-19 for Rihand and Matatila hydro power station.
- 13.2. UPJVNL is entitled to raise the bills as per the tariff order under provisions of UPERC (Terms & Conditions of Generation Tariff) Regulations as prevalent from time to time.

The Petition is hereby disposed of.

(Vinod Kumar Srivastava)

Member (Law)

(Raj Pratap Singh)

Chairman

Place: Lucknow

Dated: 30.01.2023