

MSPGCL's Petition for Approval of
Final True-up for FY 2019-20, FY 2020-
21 & FY 2021-22, Annual Performance
Review of and Provisional True-up for
FY 2022-23 and Revised Aggregate
Revenue Requirement and Revised
Tariff for FY 2023-24 & FY 2024-25



**Maharashtra State Power Generation
Company Limited**

1 Executive Summary

1.1 Background and Scope of Petition

1.1.1 Maharashtra State Power Generation Company Limited (hereinafter referred to as MSPGCL or Petitioner) is a Company formed under the Government of Maharashtra General Resolution No. ELA- 003/P.K.8588/Bhag-2/Urja-5 dated January 24, 2005 with effect from June 6, 2005. The company is operating under the provisions envisaged in the Electricity Act 2003. MSPGCL is the largest state generation company in the country with an overall operating capacity of 12791 MW as on 31st March, 2022.

1.1.2 MSPGCL by means of this present petition submitting the following for the kind consideration of the Hon'ble Commission:

- a. True-up for FY 2019-20 - based on audited accounts and Tariff Regulations 2015.
- b. True-up for FY 2020-21 and FY 2021-22- based on audited accounts and Tariff Regulations 2019.
- c. Provisional True-up for FY 2022-23 – based on half yearly actuals (April to September) and projections for the balance period (October to March) and Tariff Regulations 2019.
- d. Projections of revised Aggregate Revenue Requirement and Tariff (MYT) for the balance control period FY 20-23-24 to FY 2024-25 based on principles provided in the Tariff Regulations 2019 and appropriate assumptions detailed in this petition.
- e. Provisional Tariff for upcoming Bhusawal Unit 6 (1x660 MW Thermal)

1.2 Truing up for FY 19-20, FY 20-21, FY 21-22 and Provisional True up for FY 22-23

1.2.1 The true-up for FY 2019-20, FY 2020-21 and FY 2021-22 has been considered based on the following principles:

- a. **True-up of Energy Charges** –The amount of energy charges had been approved in the respective orders were based on certain considerations of generation, assumptions regarding price and GCV of fuels and normative performance parameters. However, in real time, the overall generation, price and GCV of fuels and actual performance have varied. As per the regulations 2015, the price and GCV of fuel were to be considered at actuals. In subsequent regulation i.e. Tariff Regulation 2019, the GCV of fuel is derived on normative basis considered GCV-AS billed as the base. Accordingly, while showcasing the actual fuel expenses towards actual generation, the Petitioner has recomputed the energy charges that can be allowed under the normative framework. By comparing the actual fuel expenses vis-à-vis the revised normative

expenses, the Petitioner has submitted its true-up claims based on sharing mechanism as per relevant Tariff regulations.

- b. **Fixed charges** – the Petitioner has submitted the true-up of fixed charges based on the following principles:
- i. O & M Expenses – Comparison of normative expenses based on revision of escalation factor (applied on base expenses) and expenses as per audited accounts. Impact of pay revision has been shown in the relevant years additionally.
 - ii. Depreciation – Based on actual capitalization achieved during the years. Depreciation has been calculated on normative basis.
 - iii. Interest on loans – Weighted average rate of interest computed on the basis of the actual long term loan portfolio during the concerned year has been considered and the same have been applied on normative loan balances to arrive at the interest on loan. Addition of loan has been considered as per actual capitalization and repayment has been considered equivalent to depreciation as per regulations.
 - iv. Return on Equity (RoE) – The same is calculated as per rates prescribed in the respective regulations. From FY 2020-21 onwards, base ROE is worked out at 14% and incremental ROE has been claimed based on achievement of respective ramp up & MTBF targets as per Tariff Regulations.
 - v. Interest on working capital – calculated as per derivation of normative working capital requirement and interest rates as provided in respective tariff regulations.
 - vi. Other charges – other charges viz. water charges, lease rentals have been claimed as allowed under the Regulations/Orders of the Commission.
 - vii. Additional Expenses – Covid related expenses, impact of levy of Service Tax and GST on Lease Rentals, expenses incurred on restorations of hydro units affected due to flooding and incidental expenses towards Agricultural Feeder Solar Scheme have been detailed separately and included in the expenses for the respective years.

1.2.2 The ARR derived in combination to the above after sharing of gains/losses, adjustments in fixed cost recovery due to Availability factor and auxiliary consumptions has been compared with the overall revenue earned during the year to arrive at the final true-up amount for the respective years.

1.2.3 The overall true-up for 2019-20, 2020-21 and 2021-22 is provided in the table below:

Table 1: Actual Expense and Final Entitlement for FY 2019-20 (Rs Crore)

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
	A	B	C=B-A	D=1/3rd of (Gain)/Loss	E=A+D
Expenses side summary					
Return on Equity	1,685.55				1,685.55
Interest on Loan	1,891.93				1,891.93
Depreciation	2,079.36				2,079.36
O&M expenses	2,801.15	3,183.54	382.39	127.46	2,928.61
Pay revision arrears (Pay out of FY 18-19 1st installement)		89.84			89.84
Pay revision		181.14			181.14
Water Charges		128.30			128.30
Other Charges		202.43			202.43
Interest on Working Capital	564.98	723.87	158.88	52.96	617.94
Less: Non-Tariff Income		83.71			83.71
Annual Fixed Charges			-		9,721.39
Income Tax		-	-		-
Idle Capacity Charges (RSD)	36.26				36.26
Hydro Lease Rent	580.71				580.71
Fuel Cost	13,394.61	13,819.06	424.45	141.48	13,536.09
Aggregate Revenue Requirement			-		23,874.46
AFC Reduction					1,543.99
Net Revenue Requirement					22,330.47
Revenue from sale of power		21,935.03			21,935.03
Revenue loss/(gain) due to higher/lower auxiliary consumption			152.34	50.00	50.00
Revenue for true-up					21,985.04
Revenue Gap/(Surplus)					345.44

Table 2: Actual Expense and Final Entitlement for FY 2020-21 (Rs Crore)

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
	A	B	C=B-A	D=1/3rd of (Gain)/Loss	E=A+D
Expenses side summary					
Return on Equity	1600.62				1,600.62
Interest on Loan	1,757.03				1,757.03
Depreciation	2,122.56				2,122.56
O&M expenses	2,641.22	2,605.55	-35.67	-23.78	2,617.44
Pay revision arrears (Pay out of FY 18-19 2nd installement)		81.50			81.50
Pay revision		186.05			186.05
Water Charges		262.11			262.11
Other Charges		238.89			238.89
Interest on Working Capital	518.87	923.73	404.86	134.95	653.82
Less: Non-Tariff Income		52.15			52.15
Annual Fixed Charges					9467.87
Income Tax		0			0.00
Idle Capacity Charges (RSD)					0.00
Hydro Lease Rent	566.05				566.05
Fuel Cost	11,902.58	12,398.46	495.88	165.29	12067.87
Aggregate Revenue Requirement					22101.79
AFC Reduction					950.38
Net Revenue Requirement					21151.41
Revenue from sale of power		20,093.40			20093.40
Revenue loss due to higher auxiliary consumption			96.21	28.70	28.70
Revenue for true-up					20122.10
Revenue Gap/(Surplus)					1029.31

Table 3: Actual Expense and Final Entitlement for FY 2021-22 (Rs. Crore)

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
	A	B	C=B-A	D=1/3rd of (Gain)/Loss	E=A+D
Expenses side summary					
Return on Equity	1,617.73				1,617.73
Interest on Loan	1,552.72				1,552.72
Depreciation	1,880.16				1,880.16
O&M expenses	2,741.52	3,191.75	450.22	150.07	2,891.60
Pay revision		193.37			193.37
Water Charges		288.61			288.61
Other Charges		278.17			278.17
Interest on Working Capital	504.15	1,184.86	680.71	226.90	731.05
Less: Non-Tariff Income		133.07			133.07
Annual Fixed Charges			-		9,300.35
Income Tax		-	-		-
Idle Capacity Charges (RSD)		-	-		-
Hydro Lease Rent	553.70				553.70
Fuel Cost	13,170.63	14,419.97	1,249.34	416.45	13,587.07
Aggregate Revenue Requirement			-		23,441.13
AFC Reduction			-		1,682.68
Net Revenue Requirement			-		21,758.44
Revenue from sale of power		21,128.33			21,128.33
Revenue loss due to higher auxiliary consumption			187.96	58.64	58.64
Revenue for true-up			-		21,186.97
Revenue Gap/(Surplus)			-		571.48

1.2.4 Carrying cost on the true-up amount

1.2.4.1 MSPGCL has proposed the following calculations for working out the carrying cost on the true-up amounts for FY 2019-20 to FY 21-22:

Table 4: Summary of True up and carrying cost on Revenue gap/Surplus (Rs Crore)

FY	Description	Computation of Carrying Cost					Total Including Carrying Cost
		Year	FY 21	FY 22	FY 23	FY 24	
		Rs Crore	8.57%	8.95%	8.95%	8.95%	
FY 20	Final True-up FY 20	345.44	14.81	30.91	30.91	15.46	437.52
FY 21	Final True-up FY 21	1,029.31	-	46.06	92.11	46.06	1,213.53
FY 22	Final True-up FY 22	571.48	-	-	25.57	25.57	622.62
Total		1,946.22	14.81	76.97	148.59	87.08	2,273.67

1.2.5 Additional Elements included in True-up

1.2.5.1 MSPGCL had preferred the review on MERC Order No. 296 of 2019, In response to Review Petition filed by MSPGCL, the Hon'ble Commission has issued Review Order (Case No. 180 of 2020) on 30.03.2020. Besides the true-up submissions of the respective years, the Petitioner is also submitting additional claims for the following elements as allowed in the Review order:

Issue No.	Issue description	Commission's ruling/outcome of Order
I	Non consideration of impact of revised Liquidated Damage amount on approved capital cost for Khaperkheda Unit 5 for the period FY 2017-18 onwards	Opening GFA amount restated and allowed consequential benefits on ROE, Interest on Loan and depreciation. However, allowed the recovery as a part of Mid-Term Review.
III	Computational error in approved O&M Expenses of Uran	Approved revised O&M expenses and allowed recovery of the impact of revised O&M as a part of Mid-Term Review Petition.
IV	Computational error in Operation & Maintenance (O&M) Expenses of Bhusawal and Koradi for Full Operating Capacity	Approved revised O&M expense from FY 17-18 to FY 24-25 and allowed the recovery of the impact of the revised O&M amount as a part of Mid-Term Review Petition.
VI	Approval of Reserve Shutdown Charges for Parli Unit 4 & 5 lower than projected	MSPGCL is directed to submit the complete details of retired units including GFA, Accumulated depreciation, Revenue from sale of scrap etc for parli Unit 4 & 5 and

Issue No.	Issue description	Commission's ruling/outcome of Order
		directed to submit actual details of pay revision for all the stations.
VII	Non consideration of Undischarged Liability charges for Koradi Unit 8-10, Chandrapur 8-9 and Parli Unit 8	MSPGCL is directed to submit complete details of undischarged liabilities, status of liquidated damages and its impact on AFC in MTR Petition.
VIII	Error in computation of depreciation on Hydro assets (Other Capital Expenses Group no.11)	MSPGCL is directed to provide correct details of depreciation of Hydro assets from FY 2017-18, FY 2018-19 and FY 2019-20 in MTR Petition.
IX	Consideration in repayment of Interest on Loan	Allowed to submit depreciation and interest on loan computation based on above allowed issues.
XI	Impact of Interest on Working Capital	Allowed to claim revised working of interest on working capital as part of MTR Petition.
XII	Approval of Other Charges for Hydro for FY 2017-18	Issue allowed for review and allowed recovery as part of MTR Petition.

1.2.5.2 The cumulative impact of the Review Order (Case No 180 of 2020) (excluding carrying cost is provided in the table below for the issue VII, for which impact is claimed separately:

Table 5: Summary of the review Order Impact for FY 17-18 (Rs Crore)

Issue no.		I	IV	IV	VI	III	VIII	Total
Ref.	Particulars Stations	KPKD-5	Bhusawal	Koradi	Parli 4&5	Uran	Hydro	
Approved in Case no. 296 of 2019	O&M Expenses		70.12	165.07	5.24	69.64		310.07
	Return on Equity	51.74						51.74
	Interest on Loan	141.27			5.96		4.34	151.57
	Depreciation	172.09			7.15		6.98	186.22
Revised working	O&M Expenses	-	75.32	165.34	5.24	71.77	-	317.68
	Return on Equity	52.42	-	-	-	-	-	52.42
	Interest on Loan	145.11	-	-	4.70	-	4.38	154.18
	Depreciation	174.19	-	-	25.13	-	11.51	210.82
Differential impact to be claimed in MTR	O&M Expenses	-	5.20	0.26	0.00	2.13	-	7.60
	Return on Equity	0.68	-	-	-	-	-	0.68
	Interest on Loan	3.84	-	-	-1.26	-	0.04	2.62
	Depreciation	2.09	-	-	17.98	-	4.53	24.60
	Total	6.61	5.20	0.26	16.72	2.13	4.57	35.50

Table 6: Summary of the review Order Impact for FY 18-19 (Rs Crore)

Issue no.	-	I	IV	IV	VI	III	VIII	Total
Ref.	Particulars Stations	KPKD-5	Bhusawal	Koradi	Parli 4&5	Uran	Hydro	
Approved in Case no. 296 of 2019	O&M Expenses		71.88	169.20	5.37	71.38		317.83
	Return on Equity	109.23						109.23
	Interest on Loan	129.50			6.77		4.66	140.94
	Depreciation	174.22			7.15		7.49	188.86
Revised working	O&M Expenses	-	77.21	169.47	5.37	73.57	-	325.62
	Return on Equity	110.63	-	-	-	-	-	110.63
	Interest on Loan	132.20	-	-	2.91	-	4.89	140.01
	Depreciation	176.31	-	-	25.13	-	10.43	211.87
Differential impact to be claimed in MTR	O&M Expenses	-	5.33	0.27	0.00	2.19	-	7.79
	Return on Equity	1.41	-	-	-	-	-	1.41
	Interest on Loan	2.70	-	-	-3.86	-	0.23	-0.93
	Depreciation	2.09	-	-	17.98	-	2.94	23.01
	Total	6.20	5.33	0.27	14.12	2.19	3.17	31.28

- 1.2.5.3 Basis the above, the Petitioner has accordingly worked out the carrying cost on the aforesaid additional elements till mid of FY 2023-24
- 1.2.5.4 Apart from the above, the Petitioner has included the impact of Order in Case 127 of 2021 and 128 of 2021 wherein the Change in Law claims for Case IV contracts have been approved by the Hon'ble Commission. Basis the details shared in this petition, the overall amount has been worked out as Rs.77.56 Crore excluding carrying cost. The amount inclusive of carrying cost is Rs 85.39 crore.
- 1.2.5.5 MSPGCL submits that carrying cost for the other recoveries on account of change in law for Case IV (Case No. 127 and 128 of 2021) and issue no. VII of Review Order is computed separately. Hence, true-up amount to be recovered towards revenue gap/surplus for FY 2019-20 to FY 21-22 and impact of review Order (Case No. 180 of 2020) in FY 2023-24 is summarised below:

Table 7: Working of true up amount to be recovered towards revenue gap/surplus for FY 2019-20 to FY 21-22 along with other recoveries (Rs Crore)

FY	Description	Computation of Carrying Cost											Total Including Carrying
		Year	FY15	FY16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	
		Rs Crore	14.45%	14.05%	10.79%	10.13%	9.89%	9.66%	8.57%	8.95%	8.95%	8.95%	
FY14	Bhusawal 4-5 (on a/c of LD)	2.02	0.15	0.28	0.22	0.20	0.20	0.20	0.17	0.18	0.18	0.09	3.90
FY15		11.52		0.81	1.24	1.17	1.14	1.11	0.99	1.03	1.03	0.52	20.55
FY16		11.27			0.61	1.14	1.11	1.09	0.97	1.01	1.01	0.50	18.71
FY17		9.00				0.46	0.89	0.87	0.77	0.81	0.81	0.40	14.00
FY18		8.22					0.41	0.79	0.70	0.74	0.74	0.37	11.96
FY19		9.03						0.44	0.77	0.81	0.81	0.40	12.26
FY17		8.38				0.42	0.83	0.81	0.72	0.75	0.75	0.37	13.03
FY18		47.99					2.37	4.63	4.11	4.29	4.29	2.15	69.84
FY19		56.31						2.72	4.83	5.04	5.04	2.52	76.45
FY18		23.36					1.16	2.26	2.00	2.09	2.09	1.05	34.00
FY19	30.05						1.45	2.58	2.69	2.69	1.34	40.80	
FY 18	Parli 8 (Issue No. VII in Case NO. 180 of 2020)	0.39					0.02	0.04	0.03	0.03	0.02	0.56	
FY 19		4.96					0.24	0.42	0.44	0.44	0.22	6.73	
FY 18	Review Order Impact (other than issue No. VII)	33.94					1.68	3.28	2.91	3.04	3.04	1.52	49.39
FY 19		31.52						1.52	2.70	2.82	2.82	1.41	42.79
FY 20	CMAG (administrative expense)	11.56							0.50	1.03	1.03	0.52	14.64
FY 21		1.07								0.05	0.10	0.05	1.26
FY 22		1.11							0.05		0.05	0.05	1.25
FY 21	Claim of service tax liabilities Payment to WRD, GoM from FY 09-10 to FY 14-15 (Case No. 168 of 2020)	130.46								5.84	11.67	5.84	153.81
FY 22	Claim of service tax - FY 12-13 to 1st Qtr of FY 2017-18 for Ghatghar PSS and service tax liability for Jul-2017 to December 2017 (Case No. 132 of 2021)	199.32									8.92	8.92	217.16
FY 22	GST Liability for July 2017 to Dec 2017 (Case No. 132 of 2021)	46.31									2.07	2.07	50.45
FY 20	Final True-up FY 20	345.44							14.81	30.91	30.91	15.46	437.52
FY 21	Final True-up FY 21	1,029.31								46.06	92.11	46.06	1,213.53
FY 22	Final True-up FY 22	571.48									25.57	25.57	622.62
Total		2,623.98	0.15	1.09	2.07	3.39	9.80	21.44	40.03	109.65	198.21	117.41	3,127.22

Impact of recovery towards change in law with regard to Case IV, Phase-I and II computed separately

Note: Following expenses are included in actual expense in respective years. However, MSPGCL sought claim of the same at actuals or sought additional normative expense to be allowed separately.

- a) Compensation to deceased employee/labour during covid period, deferment of interest for FY20-21 and FY 21-22
- b) Additional claim on account of flooding events at Vaitarna Bhatghar and Tillari
- c) Deferment of Interest during Covid period (FY 20-21)
- d) Installation of Oxygen generation plants at Ambajogai/ Parbhani/ Paras:
- e) Chief Minister Agricultural Feeder Solar Scheme expenses
- f) Labour wage revision impact
- g) Compensation for SHR and Aux. consumption deterioration during backing down for Oct 20 to Mar21
- h) Additional cost for additional oil consumption due to additional start up beyond 7 events per years, on account of RSD/Zero schedule 'shutdown' instructions.
- i) Additional cost on account of additional secondary fuel oil consumption from FY 2019-20 to FY 21-22 during outage due to grid issues
- j) Separation of HO expenses from the Total O&M expenses for a station for computation of entitlement against normative O&M expenses.

1.2.6 Provisional True-up for 2022-23:

1.2.6.1 The summary of ARR and provisional true-up for FY 2022-23 is provided in the table below:

Table 8: Summary of ARR for FY 2022-23 (Rs. crore)

Particulars	Revised Normative	Revised estimated	Net entitlement
	A	B	C
Expenses side summary			
Return on Equity	1,627.28		1,627.28
Interest on Loan	1,440.10		1,440.10
Depreciation	2,038.70		2,038.70
O&M expenses	3,453.44		3,453.44
Water Charges		297.27	297.27
Other Charges		278.17	278.17
Interest on Working Capital	751.20		751.20
Less: Non-Tariff Income		260.27	260.27
Annual Fixed Charges			9,625.89
Income Tax	-	-	-
Idle Capacity Charges (RSD)	-	-	-
Hydro Lease Rent		541.19	541.19
Fuel Cost	21,795.26	-	21,795.26
Aggregate Revenue Requirement			31,962.34
AFC Reduction\$			1,123.65
Net Revenue Requirement			30,838.69
Revenue from sale of power^		31,962.34	31,962.34
Revenue loss due to higher auxiliary consumption			
Revenue for true-up			31,962.34
Revenue Gap/(Surplus)			-1,123.65

1.3 Revised MYT for the balance control period FY 2023-24 to FY 2024-25

1.3.1 Key aspects for the remaining years of the control period include the following aspects:

- a. Fuel Utilisation Considerations
- b. Capital Expenditure and capitalization for the ensuing years of the control period.
- c. Balance useful life of certain vintage projects
- d. Operational parameters

The same are briefly explained in the paragraphs below:

1.3.2 Fuel Utilisation Considerations for FY 24 and FY 25

1.3.2.1 As part of the Petition, the Petitioner has provided a detailed Revised Fuel Utilisation Plan. The key submissions are summarised below which are leading to major deviations in energy charges at normative parameters:

- In MYT, the Petitioner had envisaged usage 37 MMT of coal from WCL, 3.98 MMT from MCL, 6.71 MMT from SECL and around 4.57 MMT from SCCL. Besides ~17 MMT of washed coal was envisaged in the plan. To meet the shortfall a usage of 3 MMT imported coal was further considered in the submissions at an average landed price of ~Rs 7000/MT.
- In FY 2022-23 and beyond, the Petitioner has now considered 34 MMT coal from WCL, 4.62 MMT from MCL, 6.29 MMT from SECL and around 4-6 MMT from SCCL. Besides ~20 MMT of washed coal has been considered in the plan. To meet the shortfall, usage of 2 MMT extendable upto 1.6 MMT imported coal has been further envisaged. In the submission, the usage currently considered is around 3 MMT.
- It may be appreciated that the landed price of imported coal has been floating in the range of Rs 16000-18000/MMT which is the key reason for increase in energy charges of the station. As per Petitioner's estimates, the overall thermal cost of Mahagenco could be lower by Rs 0.50/kWh in case the imported coal price resumes normalcy and other sources of coal as envisaged in the submission are available to the stations.
- Besides, there has been a proposed increase of 40% in the Bridge linkage price of 8 MMT coal by WCL. Further, SCCL has proposed supply of 6 MMT coal at an increased rate of 20% above the notified prices.
- It is also imperative that the supply of WCL coal has a large contribution of cost plus coal which was initially envisaged at 4MMT in the MYT submission.
- Petitioner also has a mandate for usage of biomass pellets in the stations based on the directives from the Government of India. Although, the Petitioner has invited interest from the parties for supply of such pellets, the materialisation, rates for the same will be shared as part of the Fuel Adjustment Charges submissions subsequently.
- The expected supply from Gare Palma is expected to commence from October 2023 (~0.25 MMT). Since this supply will replace the bridge linkage coal, no additional impact has been considered for such replacement. The Petitioner craves leave to submit such details at a later stage when the actual supply

commences from the mine. The current status of development of the mines is provided in the FUP section of this petition.

1.3.3 Capital Expenditure and capitalization for the ensuing years of the control period

1.3.3.1 The Petitioner has proposed the following capitalisation plan for the balance years of the control period. As explained subsequently, the capital expenditure/capitalisation comprises of schemes meant for improvement of performance as also towards statutory compliances towards implementation of wet/dry Flue gas Desulphurisation units in the stations which comprise of bulk of the proposed capitalisation.

1.3.3.2 The schemes proposed for FY 23-24 & FY 24-25 are provisional as of now. MSPGCL is in the process of preparing DPRs for such schemes and the DPRs for the proposed schemes for FY 23-24 & FY 24-25 will be submitted to Hon'ble Commission for "in-principle" approval in accordance with MERC Capex Regulations, 2022.

Table 9: Actual/proposed capitalization vis-à-vis approved capitalization during the control period (Rs. crore)

Sr. No.	Station	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24		FY 2024-25	
		MYT	MTR	MYT	MTR	MYT	MTR	MYT	MTR	MYT	MTR	MYT	MTR
		Approved	Submission	Approved	Submission	Approved	Submission	Approved	Submission	Approved	Submission	Approved	Submission
1	Bhusawal	1.59	3.71	11.00	6.17	5.50	1.80	5.50	-	3.24	5.54	3.24	-
2	Bhusawal 4-5	121.36	131.03	46.69	2.67	47.61	38.21	47.61	18.62	21.40	71.13	21.40	1,058.15
3	Chandrapur 3-7	166.57	54.12	145.70	59.89	169.86	397.58	69.74	211.89	34.17	411.92	34.17	1,710.56
4	Chandrapur 8&9	182.00	10.42	187.13	70.85	83.18	225.94	83.18	158.42	44.83	324.18	44.83	343.23
5	Koradi 6-7	257.99	41.25	65.31	112.31	84.26	8.67	84.26	49.47	72.77	120.30	72.77	251.45
6	Koradi 8,9,10	411.05	214.99	159.96	209.07	122.20	245.19	122.20	350.01	58.28	177.32	58.28	2,110.13
7	Khaparkheda 1-4	65.70	12.01	188.22	13.96	99.31	33.25	47.05	45.77	15.30	649.54	15.30	356.29
8	Khaparkheda 5	78.51	5.55	112.71	23.13	29.34	75.51	29.34	22.53	29.17	342.38	29.17	425.79
9	Nashik 3-5	48.75	34.47	32.76	5.25	28.98	10.04	21.55	6.19	13.80	49.98	13.80	83.04
10	Paras 3-4	94.74	10.77	30.05	11.78	24.52	26.95	24.52	82.64	24.52	49.14	24.52	580.18
11	Parli 6-7	55.80	53.64	93.62	26.41	46.81	63.39	46.81	38.15	8.08	27.39	8.08	1,017.98
12	Parli U 8	37.53	7.11	64.57	13.54	32.28	25.45	32.28	103.68	9.37	7.57	9.37	222.39
13	Uran	-	0.87	66.07	8.18	51.35	0.15	33.04	34.55	2.14	114.04	2.14	25.67
14	Koyna Hydro	12.41	7.85	22.68	10.73	101.49	6.29	12.31	37.95	2.47	34.94	2.47	109.61
15	Bhira Hydra	1.20	0.04	0.33	0.91	0.16	0.25	0.16	1.91	0.13	-	0.13	-
16	Tillari Hydro	-	0.01	2.59	0.13	1.30	0.01	1.30	2.45	0.79	-	0.79	-
17	SHP Hydro	9.54	4.84	28.45	2.59	17.58	1.92	17.58	24.41	4.25	65.00	4.25	34.54
18	Parli 4-5	-	-	-	-	0.08	-	-	-	-	0.08	-	0.08
	Total	1,544.75	592.70	1,257.82	577.56	945.81	1,160.61	678.51	1,188.64	344.80	2,450.37	344.80	8,329.01

1.3.4 Balance useful life of certain vintage projects

1.3.4.1 Considering the supply surplus condition prevailing during FY 15-16 to FY 18-19, MSPGCL had considered installation of Bhusawal Unit # 6 (1 X 660 MW) as replacement project against Bhusawal Units # 2 & 3 and Nashik Unit # 3 (each 210MW unit), considering the vintage of these old units. Accordingly, it was planned at that time that after COD of Bhusawal Unit # 6, these 3 old units will be declared retired. Bhusawal U#2 was accordingly retired in line with this approach. Further, considering the actual plant conditions, MSPGCL had decided that Nashik Unit # 5 to be retired instead of Unit # 3 of Nashik, after COD of Bhusawal Unit # 6.

1.3.4.2 However, in the last few months, there is a continuous rise in power demand and the situation of supply surplus is now changed to supply deficit. In view of the projected increase in demand the Central Electricity Authority has requested all generating companies to assess the possibility of keeping the old thermal stations

in service till FY 2029-30 by making the necessary Renovation & Modernization. MSPGCL is of the view that considering the current power deficit situation communication received from CEA, Nashik Unit # 5 and Bhusawal Unit # 3 can be kept in service by carrying out RLA study and necessary civil work re-enforcement based on concurrence of MSEDCL. MSPGCL has initiated the proposal of continuation of these units by communicating the same to MSEDCL and request for their concurrence.

1.3.4.3 In view of these developments, for the purpose of revised generation projections for FY 23-24 & FY 24-25, MSPGCL has considered Nashik Unit # 5 and Bhusawal Unit # 3 to remain in service, even after COD for Bhusawal Unit # 6 subject to MSEDCL's concurrence.

1.3.4.4 It is further to submit that MSPGCL is also planning to undertake Remaining Life Assessment (RLA) for all the thermal units, especially 210 MW units, which have completed life more than 25 years. Such RLA will help in assessment of Renovation and modernisation (R & M) needs for keeping these units in service for further 8-10 years. As per MSPGCL's preliminary assessment, such essential R&M works can be carried out through capital expenditure of approx. Rs. 1 Cr/MW. After such assessment of R&M needs, MSPGCL will approach this Hon'ble Commission for in-principle approval for such schemes as per the applicable regulatory provisions.

1.3.4.5 In case of any change in these assumptions during the proceedings for this petition, MSPGCL will communicate the same to the Hon'ble Commission accordingly.

1.3.4.6 Also, in case of change in decision in this regard, after issue of the revised tariff order for FY 23-24 & FY 24-25, especially for retirement of Nashik Unit # 5 after declaration of COD of Bhusawal Unit # 6, MSPGCL will claim the AFC for the remaining units at Nashik TPS in pro-rata manner and will submit the data for actual AFC claims during the final true-up petition for the relevant period.

1.3.5 **Operational Performance and Tariff for the balance control period, FY 2023-24 to FY 2024-25:**

1.3.5.1 The Petitioner has envisaged normative performance for all the stations except for the following three cases:

- **SHR for Koradi 6** – the guaranteed SHR for the unit is 2350 kCal/kWh which has been approved by the Hon'ble Commission. The Petitioner submits that even for the new generating stations, an allowance of 4.5% from the design SHR is allowed in order to factor local operating conditions and deviations in overall quality of coal and associated parameters. Accordingly, it is requested that the normative SHR may kindly be considered as $2350 \times 1.045 = 2456 \text{ kCal/kWh}$.
- **Auxiliary Consumption of Koradi 6** – With respect to Koradi Unit-6, the Petitioner submits that the Auxiliary consumption norm approved for Koradi Units # 6 & 7 as combined group

was 10.81%. This included auxiliary consumption purely for Koradi # 6, purely for Koradi Unit # 7 and for common auxiliaries for Units # 6 & 7. After the retirement of Koradi Unit # 7, there is no loading of auxiliaries specific to Koradi Unit # 7. However, there are some common systems/ auxiliaries like WTP, CHP, OHP, Service building etc. which are essential to be kept in service with loading of the same on Koradi Unit # 6 only. Even though the expected auxiliary consumption for Koradi Unit # 6 on stand-alone basis after R & M works was at 9%, it does not include the burden of common auxiliaries. As per MSPGCL's assessment the burden of such common auxiliaries is around 1.5% to 2%. Thus MSPGCL will request Hon'ble Commission to give relaxation in Auxiliary Consumption norm for Koradi Unit # 6. MSPGCL has already undertaken an exercise for carrying out Electrical System Energy audit for the Koradi Unit # 6 for the purpose of assessment of exact impact of common auxiliaries and for assessment of achievable auxiliary consumption for Koradi Unit #6. MSPGCL will request Hon'ble Commission to allow it to submit the report during the proceedings in the present petition and accordingly approve the revised auxiliary consumption norm for Koradi Unit # 6, since the retirement of Koradi Unit # 7.

- **Normative Availability and Auxiliary consumption for Khaperkheda Units I-IV** – The Petitioner submits that the design GCV of Khaperkheda units range from 3500- 4400 kCal/kg. The GCV of domestic coal is far below this required limit. While the Petitioner is trying to improve the GCV via usage of washed and imported coal however there are constraints of achieving homogenous blending and overall restrictions of blending more than 15% imported coal in Indian Boilers as per CEA. Accordingly, it is practically difficult for the Petitioner to adhere to the normative limits of availability. On account of low coal GCV, additional mills and other auxiliaries are stretched leading to higher auxiliary consumption than the norms. It is however submitted that for the purpose of working out the energy charges, the Petitioner has considered the prevailing normative parameters. However, it is requested that the Hon'ble Commission may kindly consider the submission made by the Petitioner and allow such relaxation in the performance parameters of these stations.
- **Availability of Uran** – It is submitted that although the machines are technically available, however, the availability of Uran is constrained by the availability of cheaper domestic gas. In the absence of utilisation of RLNG, it is requested that the norm for availability may be considered at actuals.

1.3.5.2 Basis the above, the energy charges projected by the Petitioner are summarised below for reference:

Table 10: Projected station wise variable charges for FY 23-24 and FY 24-25 (Rs. kWh)

Particulars	FY 2023-24	FY 2024-25
Bhusawal	4.506	4.731
Chandrapur	3.872	4.066
Khaperkheda	3.936	4.133
Koradi	3.623	3.805
Nashik	5.067	5.321
Uran	8.557	8.985
Paras Units 3 & 4	3.292	3.456
Parli Units 6 & 7	4.493	4.717
Khaperkheda Unit 5	3.782	3.971
Bhusawal Units 4 & 5	4.135	4.342
Koradi Units 8, 9 & 10	3.464	3.638
Chandrapur Units 8 & 9	3.848	4.040
Parli Unit 8	4.623	4.854

1.3.5.3 The basic considerations for fixed cost in the MYT period are summarized below:

- O & M expenses – actual expenses for the last three years considered and escalated at 2.71%. Impact of pay revision has been considered separately since the same is not included in the base expenses. Rationale for consideration of actual O & M expenses are provided in the petition.
- Depreciation- calculated on the basis of projected closing balance for 2022-23 and proposed capitalization.
- Interest on loans- calculated on the basis of loan portfolio as existing in FY 2022-23.
- Interest on working capital – based on norms in the regulations and interest rate as per approach prescribed in the regulations
- ROE – as per tariff regulations (14% as base ROE grossed up with MAT rate)
- Tax – MAT rate has been considered for grossing up of ROE.
- NTI – as per proposed income for 2022-23
- Expenses for units under RSD are detailed separately

1.3.5.4 The Summary of ARR for the balance period of 4th Control Period for the existing units is provided in the tables below:

Table 11: Projected station wise Annual Fixed Charges (Rs. crore)

Particulars	FY 2023-24	FY 2024-25
Bhusawal	176.27	181.93
Chandrapur	1219.08	1464.05
Khaperkheda	706.15	791.75
Koradi	331.98	362.89
Nashik	490.27	584.25
Uran	226.14	380.51
Paras Units 3 & 4	543.31	670.55
Parli Units 6 & 7	470.18	630.60
Khaperkheda Unit 5	573.61	623.42
Bhusawal Units 4 & 5	1067.58	1139.57
Koradi Units 8, 9 & 10	2417.87	2559.72
Chandrapur Units 8 & 9	1215.09	1247.97
Parli Unit 8	396.96	411.03
Total	9,834.50	11,048.23

Table 12: Summary of Total ARR for Stations for FY 2023-24 and FY 24-25

Particulars	FY 2023-24	FY 2024-25
Bhusawal	772.97	808.47
Chandrapur	6,317.04	6,816.92
Khaperkheda	2,939.85	3,137.14
Koradi	850.06	906.87
Nashik	2,491.67	2,685.72
Uran	1,520.29	1,739.37
Paras Units 3 & 4	1,651.07	1,833.69
Parli Units 6 & 7	1,986.50	2,222.74
Khaperkheda Unit 5	1,900.85	2,017.02
Bhusawal Units 4 & 5	3,960.16	4,176.78
Koradi Units 8, 9 & 10	7,217.03	7,598.84
Chandrapur Units 8 & 9	3,919.55	4,087.65
Parli Unit 8	1,186.91	1,240.47
Pune SHP	363.81	374.90
Bhira	7.70	7.96
Koyna	434.59	443.90
Tillari	16.62	17.16
Total	37,536.67	40,115.58

1.3.6 Provisional Tariff for Bhusawal Unit 6:

1.3.6.1 The Petitioner envisages that Unit 6 of Bhusawal is expected to get commissioned during FY 2023-24. Accordingly, the Petitioner is requesting for approval of provisional tariff of the unit since its commissioning till the final tariff is determined by the Hon'ble Commission. The details of the project are shared in detail in the later part of the petition.

1.3.6.2 The overall fixed charges and energy charges for the new supercritical units is provided below for reference:

Sr. No.	Particulars	FY 2023-24	FY 2024-25
		Provisional tariff	Provisional tariff
1	Capacity (Fixed) Charges (Rs. Crore)	1,065.84	1,145.58
2	Energy Charge Rate ex-bus (Rs./kWh)	2.809	2.865

1.4 Prayers:

1.4.1 The Petitioner respectfully prays the Hon'ble Commission to:

- i. Admit this Petition;
- ii. Grant an expeditious hearing of this Petition;
- iii. Consider the submissions made in context of following issues in **FY 2019-20** and approve the ARR & truing up for the year, along with following specific issues
 - a. Relaxation in target availability factor for Uran GTPS on account of Gas supply shortages,
 - b. Approval of additional O & M expenses, over and above the normative expenses, towards the impact due to increase in labour wage rates as per GoM notification.
- iv. Consider the submissions made in context of following issues in **FY 2020-21** and approve the ARR & truing up for the year, along with following specific issues
 - a. Relaxation in target availability factor for Uran GTPS on account of Gas supply shortages,
 - b. Approve the additional expenses incurred on ex-gratia salutation compensation to employees / labour deceased under the Covid-19 related unforeseen, uncontrollable, "force majeure" situation and additional interest paid on long term loans due to deferment of instalments under Covid-19 recovery difficulties
- v. Consider the submission made in context of **FY 2021-22** and approve the ARR and truing up for the year, along with following specific issues
 - a. Target availability for Uran GTPS on account of gas supply shortage,
 - b. Approve the additional expenses incurred on ex-gratia solatium compensation to employees / labour deceased under the Covid-19 related unforeseen, uncontrollable, "force majeure" situation and additional expenses incurred on installation of oxygen generation plants at Ambajogai, Parbhani, Paras, Khaperkheda.
 - c. Consider the submissions made in the context of retirement of assets after retirement of Koradi Unit # 7 and approval of relaxed auxiliary consumption norm for Koradi Unit # 6;
- vi. Work out the Truing up/sharing of gains and losses for FY 2020-21 and FY 21-22 after excluding the impact of one time Covid related expenses
- vii. Consider the submission made in context of revised projections for FY 2022-23 and approve the revised ARR and provisional truing up for the year, along with following specific issues
 - a. Target availability for Uran GTPS on account of gas supply shortage,
 - b. Consider the additional expenses incurred towards installation of oxygen generation plants at Ambejogai, Parbhani, Paras, Khaperkheda
 - c. Consider the submission regarding allowing capitalisation of spares due to "change in classification";

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- viii. Consider the revised Fuel Utilisation Plan for FY 2022-23 (Oct'22 to Mar'23) and FY 2023-24 to FY 2024-25 and approve the same;
 - ix. Consider the difficulties raised regarding achieving target availability factor of 85% at Khaperkheda Units # 1 & 2 and approve relaxed target availability of 80% for these units by applying powers available to Hon'ble Commission for "Removal of Difficulties" and "Power to relax";
 - x. Consider the submissions made in reference for keeping Nashik Unit # 5 and Bhusawal Unit # 3 after declaration of COD for Bhusawal Unit # 6 (1 X 660 MW) unit and approve the AFC for these units accordingly;
 - xi. Consider the difficulties raised by MSPGCL in reference to provisions in Regulation 50.6 of MYT Regulations, 2019 regarding consideration of "As billed GCV" for Energy Charge computation and provide necessary additional margin while computing the GCV (Moisture corrected "As Received Basis") from the GCV (Equilibrated moisture As billed basis) for calculation of energy charge, by applying powers available to Hon'ble Commission for "Removal of Difficulties" and "Power to relax";
 - xii. Consider the submissions made by MSPGCL **in reference to the actual O & M expenses for the new units** and inadequacy of the normative O & M costs approved by Hon'ble Commission and approve higher O & M norms for these units as proposed by MSPGCL, by applying powers available to Hon'ble Commission for "Removal of Difficulties" and "Power to relax";
 - xiii. Consider the submissions made in context of Revised Annual Revenue Requirements and revised projected tariff for the remaining years under 4th Control Period i.e. FY 2023-24 to FY 2024-25 and approve the same;
 - xiv. To allow MSPGCL to carry out the pending approved capital expenditure for the new units at Koradi, Chandrapur and Parli and complete capitalization before 31.03.2024;
 - xv. Consider submission made regarding compensation for additional oil consumption and loss of availability on account of unit forced outages due to transmission system problems;
 - xvi. Allow MSPGCL to recover the following true up amounts allowed under various previous orders issued by the Hon'ble Commission, wherein Hon'ble Commission had directed MSPGCL to raise the claims in Mid Term Review petitions
 - a. Impact on capital cost approved for Bhusawal Units # 4&5 considering the actual LD recovery and approval of differential AFC accordingly,
 - b. Impact of discharge of Undischarged liabilities on the capital cost approved for Koradi Units # 8 to 10, Chandrapur Units # 8,9 & Parli Unit # 8 and approval of differential AFC accordingly,
 - c. Recovery of expenses incurred by MSPGCL on the Solar power plants under Chief Minister Agricultural Feeder Scheme,

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- d. Pending recovery of “Change In Law” costs for Case IV Phase I contract with M/s DIL,
 - e. Pending recovery of “Change In Law” costs for Case IV Phase II contract with M/s DIL,
 - f. Recovery of the Service Tax and GST claims from M/S WRD on the Lease rent for the Hydro stations operated by MSPGCL,
- xvii. Consider the submissions made in reference to Liquidated Damages finalised for Koradi Units # 8, 9,10 and approve the additional capital cost as on COD by reassessing the sharing of liquidated damages carried out in the order dated 14.12.2017 in Case No. 59 of 2017 and subsequently approve the differential AFC for the years since COD;
 - xviii. Issue necessary directions /guidelines, as it may deem fit, for regulatory submissions regarding procedure to be adopted for transportation of ash as per MoEF notification and MoP advisory;
 - xix. Issue necessary directives regarding consideration of parameters for usage of bio-mass pallets for co-firing in coal based power plants;
 - xx. Consider the submissions made in reference to the estimated capital cost for the Bhusawal Unit # 6 project and approve the provisional tariff for the unit on the basis of the submissions made in line with the provisions under MERC MYT Regulations, 2019;
 - xxi. Consider the submissions with respect to treatment of HO allocation in O&M charges and approve the charges as detailed separately under True-Up section.
 - xxii. Allow carrying cost as submitted on various issues for the different years;
 - xxiii. Condone any shortcomings/ deficiencies in the petition and allow MSPGCL to submit additional information/ data at a later stage as may be required;
 - xxiv. Provide the workable excel model used by the Hon’ble Commission for approval of True up amount and tariff of the Petitioner.