



TARIFF ORDER
TRUE-UP FOR FY 2021-22
APR REVIEW FOR FY 2022-23
DETERMINATION OF AGGREGATE REVENUE REQUIREMENT &
Multi Year TARIFF ORDER FOR 3rd CONTROL PERIOD
FY 2023-24 to FY 2027-28
AND
RETAIL TARIFF ORDER FOR FY 2023-24
OF
MANIPUR STATE POWER DISTRIBUTION COMPANY LIMITED

Petition (ARR & Tariff) No.03 of 2022

JOINT ELECTRICITY REGULATORY COMMISSION
FOR MANIPUR AND MIZORAM

CONTENTS

ORDER	1
1. Introduction	7
1.1. JERC for Manipur and Mizoram (JERC, M&M)	7
1.2. Manipur State Power Distribution Company Ltd (MSPDCL)	9
2. Summary of ARR and Tariff Petition for FY 2023-24	11
2.1. Aggregate Revenue Requirement (ARR)	11
3. Power Sector in Manipur- An Overview	14
3.1. Geographical Reality	14
3.2. Power Supply	14
3.3. Distribution Loss	17
3.4. Consumer Profile	18
3.5. Demand	19
3.6. Energy Audit	19
3.7. Energy Metering	19
4. Public Hearing Process	20
4.1. Introduction	20
4.2. Public Hearing	20
4.3. Proceedings of Public Hearing	20
5. Final True up for FY 2021-22	24
5.1. Background	24
5.2. Energy Sales	24
5.3. Energy Balance and Transmission & Distribution loss	26
5.4. Energy Purchase	30
5.5. Power Purchase Cost	31
5.6. Transmission Charges	34
5.7. Operation and Maintenance Expenses	35
5.7.1 Employee Cost	36
5.7.2 R&M Expenses	37
5.7.3 Administration and General Expenses	38
5.8. Interest on Working Capital	40
5.9. Gross Fixed Assets and Depreciation	41
5.10. Interest on Loan	43
5.11. Return on Equity	44
5.12. Write-Off of Bad Debts	45
5.13. Non-Tariff Income	45
5.14. Aggregate Revenue Requirement	46
Revenue Gap	48
6. Annual Performance Review for FY 2022-23	53
6.1. Background	53
6.2. Energy sales	53
6.3. Energy Balance and Transmission & Distribution Loss	54
6.4. Energy Purchase and procurement cost	58
6.5. Transmission Charges	60
6.6. Operation & Maintenance Expenses	61
6.7. Interest on Working Capital	62
6.8. Gross Fixed Assets and Depreciation	63
6.9. Interest on Loan	65
6.10. Return on Equity	66

6.11. Non-Tariff income	67
6.12. Aggregate Revenue Requirement	68
6.13. Revenue Gap	69
7. ARR & Retail Tariff proposal for FY 2023-24 to FY 2027-28	74
7.1. Background	74
7.2. Energy Sales	75
7.2.1 Approach for Sales	75
7.2.2 Summary for growth and projections	75
7.2.3 Category-wise energy sold	75
7.3. Consumer Profile	79
7.4. Connected Load	81
7.5. T&D loss.....	82
7.6. Energy Balance	84
7.7. Power Purchase Quantum and Cost	88
7.7.1 Power Purchase Quantum.....	89
7.7.2 Power Purchase Cost	90
7.7.3 Renewable Purchase Obligations (RPO)	96
7.8. Transmission Charges	100
7.9. Operation and Maintenance Expenses	102
7.9.1 Employee Expenses.....	102
7.9.2 R&M Expenses	103
7.9.3 A&G Expenses	104
7.10. Capitalisation Capital Expenditure Plan.....	105
7.11. Gross Fixed Assets & Depreciation.....	107
7.12. Interest and Finance charges.....	110
7.13. Interest on Working Capital	112
7.14. Return on Equity	114
7.15. Non-Tariff Income	114
7.16. True-Up surplus adjustments	115
7.17. Aggregate Revenue Requirement	115
7.18. Revenue at existing tariff	118
8. Tariff determination for FY 2023-24	120
8.1. ARR for FY 2023-24	120
8.2. Revenue for FY 2023-24.....	120
8.3. Revenue gap for FY 2023-24	120
8.4. Tariff Proposal for FY 2023-24	121
8.5. Government Subsidy/ Support.....	124
9. Tariff Principles and Design	128
9.1. Background	128
9.2. Tariffs Proposed by the MSPDCL and Approved by the Commission	130
10. Wheeling Charges for FY 2023-24	136
10.1. Background	136
10.2. ARR for wheeling business projected by MSPDCL.....	136
10.3. Wheeling Tariff	138
11. Directives	140
11.1. General.....	140
12. Fuel and Power Purchase Cost Adjustment.....	172
12.1. Background	172
TARIFF SCHEDULE.....	178
ANNEXURES	203
ANNEXURE - I.....	205

ANNEXURE - II	215
ANNEXURE – III	1
ANNEXURE – IV	3
Annexure-V.....	4
Annexure-VII.....	Error! Bookmark not defined.

LIST OF TABLES

Table 2.1: Projected ARR for Control period of FY2023-24 to FY 2027-28	11
Table 3.1: Energy Allocation in Megawatts from all Outside State sources	15
Table 3.2: Energy Purchase for FY 2021-22 (MU)	16
Table 3.3: Distribution Network as on 31.3.2021	17
Table 3.4: Number of consumers and connected load of MSPDCL for FY 2021-22	18
Table 5.1: Category-wise Energy Sales (MU) for FY 2021-22	24
Table 5.2: Category wise retail sales approved by the Commission for FY 2021-22.....	25
Table 5.3: Actual Transmission and Distribution Losses for FY 2021-22	26
Table 5.4: Transmission and Distribution Losses for FY 2021-22.....	26
Table 5.5: Energy balance (MU) for FY 2021-22	28
Table 5.6: Distribution loss & Energy Balance approved by Commission for FY2021-22	29
Table 5.7: Energy Purchase for FY 2021-22 (MU).....	30
Table 5.8: Power Purchase Cost for FY 2021-22 (Rs. Crore).....	31
Table 5.9: Power Purchase Approved by Commission for true-up purpose of FY2021-22	33
Table 5.10: Transmission Charges for FY 2021-22 (Rs. Crore)	35
Table 5.11: Employee Expenses for FY 2021-22 (Rs. Crore)	36
Table 5.12: Actual Employee Strength of MSPDCL in FY 2021-22	36
Table 5.13: Break-up of R&M Expenses for FY 2021-22 (Rs. Crore)	37
Table 5.14: R&M Expenses for FY 2021-22 (Rs. Crore).....	37
Table 5.15: A&G Expenses for FY 2021-22 (Rs. Crore)	38
Table 5.16: A&G Expenses for FY 2021-22 (Rs. Crore)	39
Table 5.17: Actual O&M Expenses for FY 2021-22 (Rs. Crore).....	39
Table 5.18: Actual O&M Expenses for FY 2020-21 (Rs. Crore)	39
Table 5.19: Interest on Working Capital for FY 2021-22 (Rs. Crore).....	40
Table 5.20: Actual Depreciation for FY 2021-22 (Rs. Crore).....	41
Table 5.21: Depreciation for FY 2021-22 (Rs. Crore)	41
Table 5.22: Break-up of Loan for FY 2021-22 (Rs. Crore)	43
Table 5.23: Interest on Loan for FY 2021-22 (Rs. Crore)	43
Table 5.24: Return on Equity for FY 2021-22 (Rs. Crore)	44
Table 5.25: Break-up of Non-tariff Income for FY 2021-22 (Rs. Crore).....	46
Table 5.26: Non-tariff Income for FY 2021-22 (Rs. Crore).....	46
Table 5.27: Aggregate Revenue Requirement for FY 2021-22 (Rs. Crore)	46
Table 5.28: Commission approved ARR after True-Up (Rs. Crore)	47
Table 5.29: Revenue Gap for FY 2021-22 (Rs. Crore)	48
Table 6.1: Category-wise Energy Sales (MU).....	53
Table 6.2: Transmission and Distribution Losses	54
Table 6.3: Transmission and Distribution Losses for APR of FY 2022-23.....	55
Table 6.4: Energy balance (MU) for APR FY 2022-23	56
Table 6.5: Power Purchase Cost and Quantum for APR FY 2022-23	58
Table 6.6: Power Purchase Cost and Quantum for APR FY 2022-23 by Commission	60
Table 6.7: Transmission charges for APR FY 2022-23.....	61
Table 6.8: O&M Expenses for APR FY 2022-23.....	61
Table 6.9: O&M Expenses approved by the Commission for FY2022-23	62
Table 6.10: IoWC for APR FY 2022-23	62
Table 6.11: GFA for APR FY 2022-23	64
Table 6.12: Depreciation for APR FY 2022-23.....	64
Table 6.13: - Depreciation for FY 2022-23 by the Commission.....	65
Table 6.14: GFA for APR FY 2022-23	65