Revised

Aggregate Revenue Requirement

&

Tariff Proposal

for

FY 2023-24

Submitted by: -

Madhya Pradesh Power Management Company Limited
Shakti Bhawan, Vidyut Nagar, Jabalpur

Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited
Block No. 7, Shakti Bhawan, Vidyut Nagar, Jabalpur

Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited
Bijlee Nagar Colony, Nishtha Parisar, Govindpura, Bhopal

Madhya Pradesh Pashchim Kshetra Vidyut Vitaran Company Limited
GPH Compound, Polo Ground, Indore

BEFORE THE HON'BLE MADHYA PRADESH
ELECTRICITY REGULATORY COMMISSION, BHOPAL

Petition No. _____of 2022

(1) Madhya Pradesh Power Management Company Limited
Shakti Bhawan, Vidyut Nagar, Jabalpur (MP) --------- **Petitioner**

(2) Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited
Shakti Bhawan, Vidyut Nagar, Jabalpur (MP) --------- **Petitioner**

(3) Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited
GPH, Polo Ground, Indore (MP) --------- **Petitioner**

(4) Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited
Nishtha Parisar, Bijlee Nagar, Govindpura, Bhopal (MP) --------- **Petitioner**

IN THE MATTER OF:

Filing of Petition for Determination of Revised ARR for FY 2023-24 and Tariff Proposal for Distribution & Retail Supply Business for FY 2023-24 under the tariff principles laid down in the "Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 dated 03rd December 2021" and for MPPMCL and MPPoKVVCL, MPPaKVVCL & MPMKVVCL as the Distribution Licensee

The Applicants respectfully submit as under : -

1. Madhya Pradesh Power Management Company Ltd. is a Company incorporated under the Companies Act, 1956 (now Companies Act 2013) and having its registered office at Block No.11, Shakti Bhawan, Vidyut Nagar, Jabalpur.

2. Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Ltd. is a Company incorporated under the Companies Act, 1956 (now Companies Act 2013) and having its registered office at Block No.7, Shakti Bhawan, Vidyut Nagar, Jabalpur. The Petitioner is a deemed licensee under the Fifth Proviso to Section 14 of the Electricity Act, 2003. The area of supply of the Petitioner comprises Jabalpur, Rewa, Sagar and Shahdol Commissionary within the State of Madhya Pradesh ('MP').

3. Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Ltd. (MPMKVVCL) is a Company incorporated under the Companies Act, 1956 (now Companies Act 2013) and having its registered office at Nishtha Parisar, Bijlee Nagar Colony, Govindpura, Bhopal. The Petitioner is a deemed licensee under the Fifth Proviso to Section 14 of the Electricity Act, 2003. The area of supply of the Petitioner comprises Bhopal, Gwalior, Hoshangabad and Chambal Commissionery within the State of Madhya Pradesh ('MP').

4. Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Ltd. is a Company incorporated under the Companies Act, 1956 (now Companies Act 2013) and having its registered office at GPH, Polo Ground, Indore. The Petitioner is a deemed licensee under the Fifth Proviso to Section 14 of the Electricity Act, 2003. The area of supply of the Petitioner comprises Indore and Ujjain Commissionary within the State of Madhya Pradesh ('MP').

5. The Government of Madhya Pradesh ('GoMP or 'State Government'), vide an Order No. 3679 F₹-18-13- 2002 dated 31st May, 2005, published in the gazette of Madhya Pradesh dated 31st May 2005, have restructured the functions and undertakings of Generation, Transmission, Distribution and Retail Supply of electricity earlier carried out by the Madhya Pradesh State Electricity Board ('MPSEB' or the 'Board') and transferred the same to five Companies to function independently. The five Companies are as under:

   a. M.P. Power Generating Company Ltd., Jabalpur (MPPGCL) / (GENCO)
   b. M.P. Power Transmission Company Ltd., Jabalpur (MPPTCL) / (TRANSCO)
   c. M.P. Poorv Kshetra Vidyut Vitaran Company Ltd., Jabalpur (MPPKVVCL) / (EAST DISCOM)
   d. M.P. Madhya Kshetra Vidyut Vitaran Company Ltd. Bhopal (MPMKVVCL) / (CENTRAL DISCOM)
   e. M.P. Paschim Kshetra Vidyut Vitaran Company Ltd., Indore (MPPKVVCL) / (WEST DISCOM)

6. With the issuance of the said Order dated 31st May 2005, the Operation and Management Agreement that existed between MPSEB and the Five Companies came to end with effect from 1st June 2005. The three Vidyut Vitaran Companies viz. East Discom, Central Discom and West Discom, started functioning independently as Distribution Licensees in their respective area of license and from the said date are no longer operating as an agent of or on behalf of the Board, subject to Cash Flow Mechanism (CFM) provided in the said Order.

7. On 3rd June 2006, GoMP, in exercise of its power under Section 23 (Sub-section (1), (2) and (3)) and Section 56 (Sub-section (2)) of Madhya Pradesh Vidyut Sudhar Adhiniyam, 2000 read with Section 131 (Sub-sections (1), (2), (5), (6) and (7) of Electricity Act, 2003, effected the transfer of and vesting of the functions, properties, interests rights and obligations of MPSEB relating to the Bulk Purchase and Bulk Supply of Electricity in the State Government and simultaneously re-transferred and re-vested the same to MP Power Trading Company ('Tradeco' or 'MP Tradeco'). Since then, MP Tradeco is discharging the responsibilities of procurement of power in bulk and supplying to the three Discoms, including the Petitioner herein. The transfer was effected through "M.P. Electricity Reforms Transfer Scheme Rules 2006" (Transfer Scheme Rules) vide Notification No.3474 /FRS/17/XIII/2002 dtd. 3rd June 2006 (Transfer Scheme Rules).

8. In accordance with GoMP decision the name of MP Power Trading Company Ltd has been changed to MP Power Management Company Ltd. The MP Power Management Company

has been made holding companies for all the three DISCOMS of MP. The Registrar of Companies, MP has issued the Certificate of Incorporation consequent upon change of name on 10th April 2012. The MPPMCL has been vested with several of functions and power that were earlier vested with the erstwhile M.P. State Electricity Board.

9. GoMP has entrusted MPPMCL with the responsibility inter alia of representing the Discoms before the Commission with regard to filing the tariff petition and facilitating all proceedings thereon. The Management and Corporate functions agreement signed by the MPPMCL with the three Discoms of MP also provide for the same.

10. MPPMCL has signed "Management and Corporate Functions Agreement" on 05th June 2012, with the three Discoms of the State, wherein it has been agreed that MPPMCL shall perform inter alia the following functions of common nature for the Discoms:

    i. In consultation with Discoms, undertake long-term/ medium-term/short-term planning and assessment of the power purchase requirements for the three Discoms and explore opportunities for power procurement as per the regulations of MPERC;

    ii. Allocation of power among the Discoms from the forthcoming projects as per retail tariff order and as per the GoMP notification and further instructions in this regard;

    iii. Economic, reliable and cost-effective power procurement of Short-term, Medium-term and Long-term and sale of surplus power, if any, for the purpose of Banking / maximization of revenue;

    iv. Exploring opportunities for procurement of power on long-term and medium-term basis, procure power and finalizing Power Purchase Agreements (PPAs);

    v. The expenses of MPPMCL have been considered to be included as part of power purchase cost of the Discoms.

11. On 3rd December, 2021, the Hon'ble Commission notified the **"Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 (Hereinafter referred to as "Tariff Regulations, 2021 or "Regulations").** These Regulations are applicable for determination of Tariff for the Control Period, from FY 2022-23 to FY 2026-27.

12. On 31st March, 2021, the Hon'ble Commission issued Retail Supply Tariff Order for FY 2022-23 along with Aggregate Revenue Requirement (ARR) for entire Control Period (Hereinafter referred to as "MYT Order") in accordance with Regulation 8.7 of Tariff Regulations, 2021.

13. The sale for FY 2022-23 to FY 2026-27 approved in MYT Order was based on the last five years data from FY 2016-17 to FY 2020-21 and FY 2021-22 (up to August). However, the actual sales recorded in the first half of FY 2022-23 considerably varied against that of approved for FY 2022-23. The variation in actuals vis-à-vis approved may be due to the skewed sales recorded during the COVID-19 period. Similarly, the approved sale for FY 2023-24 will also substantially vary against the actual. The projections for FY 2023-24 therefore need to be revised to capture the actual growth.

14. Post COVID-19, there has been a sudden spurt in demand of power which may be attributable to increased economic growth which led to shortage of coal in the country. To address the demand-supply gap, MoP has issued notifications allowing blending of imported coal resulting in the increased power purchase cost. Due to this the ARR approved for FY 2023-24 needs to be revised.

15. The GoI has notified Revamped Distribution Sector Scheme (RDSS) for supporting DISCOMs to undertake reforms and improve performance in a time bound manner. MP Discoms have participated in the RDSS Scheme, the action plan of which has been approved by the MoP on 17th March 2022. The projections at the time of filing MYT Petition were based on the certain assumptions at that time. However, considering the recent development post approval of action plan the Petitioners have revised their CAPEX and capitalization part for FY 2023-24 due to various reasons as elaborated at appropriate section of this Petition. This revision in CAPEX and capitalization has necessitated revision in approved ARR for FY 2023-24.

16. Further, to address the variations in employee expenses, A&G expenses and other expenses of Discoms due to change inflation and audited data of FY 2021-22, the need has aroused to revise the above expenses which are also part of ARR.

17. The Regulation 7.2 of Tariff Regulations, 2021 allows the Licensees to file a revise ARR Petition and Tariff proposal for FY 2023-24.

18. In the backdrop of the above facts and circumstances, the present Petition is being made by the Petitioners (MPPMCL, East Discom, Central Discom and West Discom) under Section 61 and Section 62 (1) (d) of the Electricity Act 2003, read with the "Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021" for determination of the Revised ARR for FY 2023-24 and Tariff for distribution and Retail Supply Business for FY 2023-24.

19. The Revised ARR for FY 2023-24 & Tariff Proposal for FY 2023-24 has been prepared in accordance with the normative parameters and provisions as defined under Tariff Regulations 2021. The Petitioner has endeavoured to comply with the various legal and regulatory directions and stipulations applicable, including the directions given by the Hon'ble Commission in the Business Rules of the Commission, the Guidelines, previous ARR and Tariff Orders to the possible extent on the basis of actual and reasonable assumptions and within the limitations of availability of data.

20. It is submitted that as soon as the Retail Tariff Order becomes applicable, Green Energy Tariff, the voltage level and consumer category wise cross subsidy surcharge, additional surcharge, wheeling charges and transmission charges in respect of open access customers and captive consumers along with net metering should also be notified and made effective from the tariff application date.

21. Based on the information available, the Petitioner has made sincere efforts to comply with

the Regulations of the Hon'ble Commission and discharge its obligations to the best of its abilities and resources in its command. However, should any further material information become available during the process of determination, the Petitioner may be permitted to reserve the right to file such additional information and consequently amend/ revise the petition.

22. The Hon'ble Commission in previous year's order has referred to an Appellate Tribunal for Electricity (APTEL) judgment to determine the voltage level wise Cost of Supply in the state of MP. However, this judgment is to determine the voltage level wise cross subsidy surcharge and not consumer tariff. In the present petition, the Petitioners have proposed consumer category wise tariff in line with the National Tariff Policy, 2016 and amendments made therein. The Hon'ble Commission is requested to determine the voltage level and consumer category wise cross subsidy surcharge on the basis of the available data with the Distribution Licensees in accordance with the methodology suggested by the APTEL and also approved by Hon'ble Commission in its Retail Supply Tariff Order for FY 2021-22.

23. In line with Tariff Regulations 2021, the Revised ARR estimated for the FY 2023-24 is shown below:

Sr. no.	Particular	Unit	Revised ARR for FY 2023-24			
			MP State	East	Central	West
A	**Revenue**					
1	Revenue from sale of power at current Tariffs	Rs Cr	47,992	13,395	15,870	18,727
B	**Expenditure**					
1	Purchase of Power including MPPMCL Cost and Inter-State Transmission Charges	Rs Cr	35,022	7,694	10,472	16,855
2	Intra-State Transmission (MP Transco) Charges and SLDC Charges	Rs Cr	4,335	1,289	1,502	1,544
3	R&M Expense	Rs Cr	921	336	341	245
4	Employee Expenses	Rs Cr	4,190	1,443	1,326	1,422
5	A&G Expense	Rs Cr	409	129	134	145
6	Depreciation and Related debits	Rs Cr	1,037	296	395	346
7	Interest & Finance Charges	Rs Cr	1,090	413	446	231
8	Other Debits, Write-offs (Prior period and bad debts)	Rs Cr	6	2	2	2
9	**Total Expenses**	**Rs Cr**	**47,011**	**11,602**	**14,619**	**20,790**
10	RoE	Rs Cr	687	235	277	175
11	**Total Expenses Including RoE**	**Rs Cr**	**47,698**	**11,836**	**14,897**	**20,965**
12	Other income	Rs Cr	572	186	183	203
C	**Total ARR**	**Rs Cr**	**47,126**	**11,650**	**14,713**	**20,762**
D	**Revenue Gap**	**Rs Cr**	**(867)**	**(1,745)**	**(1,157)**	**2,035**
13	Impact of True Up GENCO*	Rs Cr	(1,016)	(339)	(339)	(339)
14	Impact of True Up TRANSCO#	Rs Cr	144	73	49	22
15	Impact of True Up claim of Discoms for FY 2021-22	Rs Cr	3,276	2,436	1,957	(1,117)
E	**Total Revenue Gap (including true up if any)**	**Rs Cr**	**1,537**	**425**	**510**	**602**

Sr. no.	Particular	Unit	Revised ARR for FY 2023-24			
			MP State	East	Central	West
F	**Total ARR including true up**	**Rs Cr**	**49,530**	**13,821**	**16,380**	**19,329**
G	Sales	MU	71,074	19,773	23,417	27,884
H	**Average Cost of Supply (incl. True-up)**	**Rs./Unit**	**6.97**	**6.99**	**7.00**	**6.93**

**As per MPGECO True-up Petition no. 66 of 2022 for FY 2020-21*
#As per MPERC True-up Order of Transmission Tariff of MPPTCL for FY 2020-21 in Petition No. 1/2022 dated 16th August, 2022

24. For the Distribution & Retail Supply Business of MP Discoms during FY 2023-24 the Petitioners have estimated a net revised ARR (including the available True-up's of MP Genco, MP Transco and MP Discoms) of Rs 49,530/- Crores for MP State, Rs.13,821/- Crores for East Discom, Rs 16,380/- Crores for Central Discom and Rs 19,329/- Crores for West Discom and a Revenue Gap of Rs 1,537/- Crores for MP State, Rs 425/- Crores for East Discom, Rs 510/- Crores for Central Discom and Rs 602/- Crores for West Discom respectively for FY 2023-24.

25. Shri Lokesh Malviya, DGM (Revenue Management) of MPPMCL; Shri B.P. Patel, General Manager (Commercial) of MPPoKVVCL; Shri D.P. Ahirwar, Chief General Manager (Regulatory Affairs) of MPMKVVCL and Shri Shailendra Jain, Deputy Director (Commercial) of MPPaKVVCL have been authorized to execute and file all the documents on behalf of the respective petitioner in this regard. Accordingly, the current petition filing is signed and verified by, and backed by the affidavit of respective authorized signatories.

PRAYER

The Petitioners hereby prays to the Hon'ble Commission to:

a) To invoke the power conferred to it under Section 62 of the Electricity Act, 2003, and to admit the Petition seeking approval of revised ARR for FY 2023-24 & Tariff Petition for FY 2023-24;

b) To approve the net ARR of **Rs. 49,530/- Crores for MP State** (Rs. 13,821/- Crores for East Discom, Rs. 16,380 /- Crores for Central Discom and Rs. 19,329 /- Crores for West Discom) and a Revenue Gap of **Rs. 1,537/- Crores for MP State** (Rs. 425/- Crores for East Discom, Rs.510/- Crores for Central Discom and Rs.602/- Crores for West Discom) for FY 2023-24;

c) To approve the CAPEX & Capitalisation and additional OPEX as proposed by the Petitioners;

d) To allow kVAh based billing for HT category consumers;

e) To consider and approve Petitioners' Tariff proposal for FY 2023-24 to recover the costs for the ensuing year and to determine & approve the separate Tariff for Metro Rail;

f) To consider the Automatic Recovery of Fuel and Power Purchase Cost Adjustment Surcharge, and to determine Wheeling Charges, Voltage level and Consumer category-wise Cross Subsidy Surcharge, Additional Surcharge and Transmission Charges for Open Access consumers and Captive consumers along with Net-metering on the basis of ARR petition for FY 2023-24 and make applicable w.e.f. the application date of the revised tariff;

g) Considering the aforesaid facts and circumstances the Hon'ble Commission may be pleased to allow expenses of MPPMCL as stated to be allowed and include them as a part of power purchase cost of three Discom's to meet the ends of justice;

h) To grant other relief as the Hon'ble Commission may consider appropriate;

i) To condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioners to add/ change/ modify/ alter this filing and make further submissions as may be required at a later stage;

j) To Pass such an order as the Hon'ble Commission deems fit and proper in the facts and circumstances of the case in the interest of justice.

Date: 30th **November 2022**

Shri Lokesh Malviya
DGM (Revenue Management)
MP Power Management Co. Ltd.,
Jabalpur

Shri B.P. Patel
GM (Commercial)
MP Poorv Kshetra Vidyut Vitaran
Co. Ltd, Jabalpur

Shri D.P. Ahirwar
CGM (Regulatory Affairs)
MP Madhya Kshetra Vidyut Vitaran
Co. Ltd, Bhopal

Shri Shailendra Jain
Dy. Director (Commercial)
MP Paschim Kshetra Vidyut Vitaran
Co. Ltd, Indore

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Notes and Abbreviations

In this Petition:

- ✓ ***All currency figures used in this Petition, unless specifically stated otherwise, are in*** ₹ ***Crores.***

Abbreviation	Full Description
ARR	Aggregate Revenue Requirement
APTEL	Appellate Tribunal for Electricity
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Stations
Co-gen	Cogeneration Power Plant
CPP	Captive Power Plant
EA – 2003	The Electricity Act 2003
ERLDC	Eastern Regional Load Dispatch Committee
ERPC	Eastern Regional Power Committee
FY	Financial Year
GFA	Gross Fixed Assets
GoMP	Government of Madhya Pradesh
GoI	Government of India
HT/ HV	High Tension/ High Voltage
IPPs	Independent Power Producers
kV / KVA	Kilo Volt / Kilo Volt Ampere
kW	Kilo Watt
LT/LV	Low Tension/ Low Voltage
MoP	Ministry of Power, Government of India
MPSEB	Madhya Pradesh State Electricity Board
MPERC	Madhya Pradesh Electricity Regulatory Commission
MPMKVVCL	Madhya Pradesh Madhya Kshetra Vidyut Vitran Company Limited
MPPaKVVCL	Madhya Pradesh Paschim Kshetra Vidyut Vitran Company Limited
MPPoKVVCL	Madhya Pradesh Poorv Kshetra Vidyut Vitran Company Limited
MPPMCL	Madhya Pradesh Power Management Company Limited
MPPGCL	Madhya Pradesh Power Generation Company Limited
MPPTCL	Madhya Pradesh Power Transmission Company Limited
MU	Million Units
NCE / NCES	Non-Conventional Energy Sources
PGCIL	Power Grid Corporation India Limited
SSGS	State Sector Generating Stations
SLDC	State Load Dispatch Centre
STOA	Short Term Open Access
TO	Tariff Order
WRLDC	Western Regional Load Dispatch Committee
WRPC	Western Regional Power Committee

List of Tables

A1: CONTENTS OF THIS PETITION AND METHODOLOGY ADOPTED IN FILING OF THIS PETITION (INCLUDING CONSTRAINTS)

1.1 Contents

1.1.1 The contents of this Petition provide detailed rationale against individual elements constituting the ARR for FY 2023-24 & Tariff Proposal for FY 2023-24 based on Tariff Regulations, 2021. The various elements explained in this Petition are as follows:

a. Energy Sales
b. Distribution Loss and Energy Requirement
c. Power Purchase from various sources to meet the Energy Requirement
d. Computation of Other Expenses
    i. O&M Expenses
    ii. Investment Plan
    iii. Depreciation
    iv. Interest & Finance Charges
    v. Interest on Working Capital
    vi. Interest on Security Deposit
    vii. Return on Equity
    viii. Bad Debts
    ix. MPPMCL Cost/ (Income)
    x. Other Expenses if any
    xi. Other Income & Non-Tariff Income
e. Computation of Total ARR
f. Computation of Category wise Revenue collection
g. Determination of Deficit/(Surplus) between Revenue and Expenses
h. Tariff Proposal for FY 2023-24 and its Salient Features
i. Introduction to kVAh billing
j. Voltage Wise Cost of Supply
k. Wheeling Charges, Cross Subsidy Surcharge & Additional Surcharge
l. Net Metering Charges
m. Fuel Cost Adjustment Charge
n. Compliance of Directives
o. Green Energy Tariff

1.2 Methodology

1.2.1 The Petitioners are submitting the revised ARR for FY 2023-24 & Tariff Proposal for FY 2023-24 on the basis of actual and reasonable assumptions within the purview of the Electricity Act, 2003, Tariff Regulations, 2021. This Petition consists of details of

projected expenditures envisaged by the Petitioner and details of expected revenue leading to revenue deficit/ (surplus) for the FY 22023-24. It is humbly requested to the Hon'ble Commission to approve the revised ARR for FY 2023-24 & Tariff Petition for FY 2023-24 as claimed by the Petitioners in accordance with the applicable Regulations while issuing the Tariff Order for FY 2023-24.

1.3 **For Reference**

- FY 2021-22 or FY 22 is from 01st April 21 to 31st March 22 (Actual)
- FY 2022-23 or FY 23 is from 01st April 22 to 31st March 23 (Re-Estimate)
- FY 2023-24 or FY 24 is from 01st April 23 to 31st March 24 (Projected)

A2: REGULATORY REQUIREMENT OF FILING OF THIS PETITION

2.1 Regulations

Regulation 7.2 of Madhya Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 dated 03rd December 2021 mandate the Discoms to file a revised ARR Petition and Tariff Proposal for FY 2023-24. The relevant extract from the said Regulation is as extracted below:

"7.2 The following Petitions for true-up, ARR & Tariff are to be filed by the Applicant under these Regulations:

Timelines	***Scope of the Petition***
30 November, 2022	*(a) True-up of FY 2021-22*;* *(b) Revenue gap or revenue surplus for FY 2023-24 based on the Revised ARR and true-up for FT 2021-22;* *(c) Tariff proposals for FY 2023-24*

**The true-up for FY 2020-21 and FY 2021-22 shall be as per MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2015 and its amendments thereof, however, filing have to be made by 30th November of the respective years as per these Regulations.*

Based on the above, this Petition has been prepared based on the provisions of MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 dated 03rd December 2021- Applicable from FY 2022-23 to FY 2026-27.

A3: ESTIMATION OF SALES

3.1 Sales forecast as projected by the Petitioners

3.1.1 The Petitioners would like to submit that as per Regulation 18 of Tariff Regulations, 2021, sales mix and quantum of sales are considered as uncontrollable. The reason being that there are various factors, which can have an impact on the actual consumption of electricity and are often beyond the control of the Licensee, such as, economic climate, weather conditions, force-majeure events like natural disasters, change in consumption mix, Government Policy, etc.

3.1.2 The Hon'ble Commission in its MYT Order dated 31st March, 2021, has approved the sales for each year of the Control Period, i.e., from FY 2022-23 to 2026-27. Further, the sales as approved in MYT Order were based on the last five years data from FY 2016-17 to FY 2020-21 and FY 2021-22 (up to August). However, now the actual sales data of complete FY 2021-22 and also for FY 2022-23 up to the month of August 2022 is available with the Licensee. Hence, it is necessary to capture the latest trend in consumer sales, demand or load in order to have a realistic projection for FY 2023-24.

3.1.3 Accordingly, for the purpose of projection of sales for FY 2023-24, the distribution licensees have considered the past growth trends for each consumer category. It is submitted that historical trend method has proved to be reasonably accurate and well accepted method for estimating the load, number of consumers and energy consumption. Further, as per Regulation 25.1 of Tariff Regulations, 2021 category wise and slab wise sales are to be determined based on the actual/audited data of the preceding three years. However, the preceding three years include COVID-19 year as well. Hence, in order to normalize the abnormal effect of COVID-19 on sales projections, the Petitioners have taken preceding five years data, i.e., form FY 2017-18 to FY 2021-22 and the sales data of FY 2022-23 up to the month of August 2022.

3.1.4 Category wise and slab wise actual data of the sale of electricity, number of consumers, connected / contracted load, etc. as per the Annual R15 statement corresponding to said period are taken and Compounded Annual Growth Rates (CAGR) of sales have been computed from the past sales for each category and sub-category. The approach being followed is as under:

(a) Analyse 5-year, 4-year, 3-year and 2-year CAGRs and Year-on-Year growth rate in Number of Consumers, Sales and Demand of each category and its sub-categories in respect of Urban & Rural consumers separately

(b) After analysis of the data, appropriate / reasonable growth rates have been assumed for future consumer forecasts from the past CAGRs of the Category/Sub-category by the three Discoms

(c) During the analysis if an abnormal growth rate (high or low), relative to the current trend, is observed, then the same is normalized for the purpose of projection for ensuing year

(d) In cases where the past data shows a declining trend, a nil growth has been considered

(e) The growth rate assumed is then applied on sales per consumer / sales per kW and connected load while forecasting the connected load, number of consumer and sales in each category/sub-category

3.1.5 The Petitioners have considered the specific consumption, i.e., consumption per consumer and / or consumption per unit load which is the basic forecasting variable and is widely used in load and energy sales forecasting. The basic intent in using this model is that the specific consumption per consumer and / or consumption per unit load captures the trends and variations in the usage of electricity over a growth cycle more precisely. This method has been recommended by the C.E.A. also.

3.1.6 The projections for each tariff category and the relevant assumptions of the three Discoms have been discussed in the following sections. The overall sales forecast is as follows:

Table 1: Energy Sales (MUs)

TC	Category	East Discom			Central Discom			West Discom			MP State		
		FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
LV 1	Domestic	5,447	5,721	6,043	5,718	6,119	6,599	5,724	6,003	6,328	16,889	17,844	18,970
LV 2	Non-Domestic	986	1,159	1,281	1,023	1,146	1,285	1,137	1,226	1,332	3,146	3,531	3,897
LV 3	WW & Street Light	385	394	409	397	421	457	458	497	536	1,240	1,311	1,402
LV 4	LT Industrial	411	495	568	296	315	339	674	727	792	1,381	1,537	1,699
LV 5.1	Agriculture Irrigation Pumps	6,644	6,978	7,326	9,031	9,395	9,749	10,571	10,964	11,596	26,245	27,336	28,671
LV 5.2	Agriculture related Use	8	10	13	5	5	6	3	3	4	16	19	23
LV6	LT EV	0	0	0	0	0	0	0	0	0	0	0	0
	Total (LT)	**13,880**	**14,756**	**15,640**	**16,469**	**17,402**	**18,435**	**18,568**	**19,421**	**20,587**	**48,917**	**51,578**	**54,662**
HV 1	Railway Traction	-	55	55	0	55	55	-	-	-	0	111	111
HV 2	Coal Mines	466	475	483	23	23	23	-	-	-	489	497	506
HV 3.1	Industrial	2,242	2,490	2,788	3546	3750	3966	4,500	4,940	5,422	10,289	11,180	12,176
HV 3.2	Non-Industrial	233	267	308	404	424	444	438	489	548	1,075	1,180	1,300
HV 4	Seasonal	9	9	9	2	2	2	10	10	10	21	21	21
HV 5	Public Water Works	135	150	167	254	274	295	593	638	688	981	1,061	1,149
HV 5	Irrigation	14	24	48	22	23	25	392	511	545	429	559	619
HV 5	Other Agricultural	17	24	35	9	9	10	9	10	11	35	43	55
HV 6	Bulk Residential Users	235	236	237	153	154	155	28	30	32	416	420	425
HV 7	Start Up Power	1.23	1	1	3	3	3	21	22	24	24	26	28
HV 8	HT EV	-	2	2	0	3	3	1	16	17	1	21	23
	Total (HT)	**3,353**	**3,733**	**4,133**	**4,416**	**4,720**	**4,982**	**5,992**	**6,665**	**7,297**	**13,760**	**15,118**	**16,412**
	TOTAL LT+HT	**17,233**	**18,489**	**19,773**	**20,885**	**22,121**	**23,417**	**24,559**	**26,086**	**27,884**	**62,678**	**66,696**	**71,074**

3.2 Category-wise sales Projection.

The methodology adopted by the petitioners for category-wise projection of sales for FY 2023-24 is elaborated in detail in the following paras:

3.2.1 LV-1: Domestic

Assumptions for Projecting Unmetered Domestic Sales

The projections for consumption of un-metered domestic connections, in this petition, have been considered as NIL for urban areas (since all domestic consumers in urban areas have been metered).

After factoring the growth in consumers, the following projections have been arrived at for LV-1 category:

Table 2: Energy Sales for LV 1 (MUs)

Area	Sub Category	East Discom			Central Discom			West Discom			MP State		
		FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Urban	Metered	2,200	2,326	2,458	2,943	3,072	3,207	2,708	2,837	2,972	7,851	8,235	8,637
Urban	Un-metered	0	0	0	0	0	0	0	0	0	0	0	0
Urban	Temporary	20	23	26	21	25	29	39	44	49	81	92	104
Urban	**Total**	**2,220**	**2,349**	**2,484**	**2,964**	**3,097**	**3,236**	**2,747**	**2,881**	**3,021**	**7,931**	**8,326**	**8,741**
Rural	Metered	2,916	3,091	3,276	2,448	2,751	3,092	2,941	3,090	3,273	8,305	8,932	9,641
Rural	Un-metered	307	278	278	303	268	268	29	23	23	639	569	569
Rural	Temporary	3	4	5	3	3	3	7	9	10	14	16	18
Rural	**Total**	**3,227**	**3,372**	**3,558**	**2,754**	**3,023**	**3,364**	**2,977**	**3,123**	**3,307**	**8,958**	**9,517**	**10,228**
Total	Metered	5,116	5,416	5,734	5,391	5,823	6,299	5,649	5,927	6,245	16,156	17,167	18,278
Total	Un-metered	307	278	278	303	268	268	29	23	23	639	569	569
Total	Temporary	24	27	31	24	28	32	46	53	59	94	108	123
Total	**Total**	**5,447**	**5,721**	**6,043**	**5,718**	**6,119**	**6,599**	**5,724**	**6,003**	**6,328**	**16,889**	**17,844**	**18,970**

3.2.1.1 East Discom

The growth percentages assumed for the category for the FY 2023-24 are as shown below:

Table 3: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Metered	Consumer	3.65%	3-year CAGR considered	2.87%	3-year CAGR considered
	Average Load (kW)	6.49%	4-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	1.99%	3-year CAGR considered	3.25%	4-year CAGR considered
Un-metered	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Temporary	Consumer	12.89%	5-year CAGR considered	45.95%	3-year CAGR considered
	Average Load (kW)	6.66%	4-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.1.2 Central Discom

The growth percentages assumed for the category for the FY 2023-24 are as shown below:

Table 4: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Metered	Consumer	3.32%	3-year CAGR considered	3.83%	Nominal Growth Considered
	Average Load (kW)	4.94%	5-year CAGR considered	8.37%	Nominal Growth Considered
	Average consumption per consumer per month	1.04%	3-year CAGR considered	8.23%	Nominal Growth Considered
Un-metered	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Temporary	Consumer	16.79%	5-year CAGR considered	10.92%	5-year CAGR considered
	Average Load per Consumer	12.68%	5-year CAGR considered	4.06%	5-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	1.17%	4-year CAGR considered

3.2.1.3 **West Discom**

The growth percentages assumed for the category for the FY 2023-24 are as shown below:

Table 5: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Metered	Consumer	2.70%	3-year CAGR considered	0.88%	1-year CAGR considered
	Average Load (kW)	2.66%	2-year CAGR considered	2.20%	2-year CAGR considered
	Average consumption per consumer per month	2.00%	Nominal Growth Considered	5.00%	Nominal Growth Considered
Un-metered	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Temporary	Consumer	21.09%	3-year CAGR considered	10.00%	Nominal Growth Considered
	Average Load (kW)	16.80%	3-year CAGR considered	14.79%	2-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.2 LV-2: Non-Domestic

3.2.2.1 The future projections for FY 2023-24 are as below:

Table 6 : Energy Sales for LV 2 (MUs)

Sub-category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Metered	954	1118	1236	979	1096	1227	1,085	1,166	1,266	3,018	3,379	3,729
Temporary	32	41	45	44	50	58	52	60	66	128	151	168
Total	**986**	**1,159**	**1,281**	**1,023**	**1,146**	**1,285**	**1,137**	**1,226**	**1,332**	**3,146**	**3,531**	**3,897**

3.2.2.2 **East Discom**

The growth percentages assumed for the category are as shown below:

Table 7: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Metered	Consumer	3.49%	3-year CAGR considered	9.79%	2-year CAGR considered
	Average Load (kW) per Consumer	2.28%	3-year CAGR considered	5.06%	3-year CAGR considered
	Average consumption per kW per month	2.00%	Nominal Growth Considered	0.35%	5 Month Variation considered

Area	Category	Urban		Rural	
Temporary	Consumer	8.72%	4-year CAGR considered	7.60%	3-year CAGR considered
	Average Load (kW) per Consumer	FALSE	1-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.2.3 **Central Discom**

The growth percentages assumed for the category are as shown below:

Table 8: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Metered	Consumer	5.34%	3-year CAGR considered	12.28%	2-year CAGR considered
	Average Load (kW) per Consumer	5.43%	5-year CAGR considered	1.80%	3-year CAGR considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	0.38%	5-year CAGR considered
Temporary	Consumer	10.36%	3-year CAGR considered	7.35%	1-year CAGR considered
	Average Load (kW) per Consumer	6.49%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.2.4 **West Discom**

The growth percentages assumed for the category are as shown below:

Table 9: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Metered	Consumer	2.89%	1-year CAGR considered	9.59%	3-year CAGR considered
	Average Load (kW) per Consumer	1.32%	Nominal Growth Considered	1.30%	1-year CAGR considered
	Average consumption per kW per month	3.00%	Nominal Growth Considered	0.82%	1-year CAGR considered
Temporary	Consumer	8.65%	3-year CAGR considered	10.00%	Nominal Growth Considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	1.00%	Nominal Growth Considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.3 LV-3.1: Public Water Works & Street Light

The projections for FY 2023-24 for Public water works are as follows:

Table 10: Energy Sales for LV 3.1 (MUs)

Sub Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Municipal Corpn.	29	29	30	99	105	111	54	56	58	181	190	199
Nagar Panchayat	67	73	80	75	78	82	53	56	60	195	208	223
Gram Panchayat	142	142	142	111	122	137	193	213	233	446	476	511
Temporary	6	6	6	4	4	2	6	6	6	15	16	14
Total	**244**	**250**	**258**	**288**	**308**	**332**	**305**	**331**	**357**	**838**	**890**	**947**

The projections for FY 2023-24 for Street Lights are as follows:

Table 11: Energy Sales for LV 3.2 (MUs)

Sub Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Municipal Corp.	48	48	50	62	64	73	69	76	83	179	188	207
Nagar Panchayat	52	52	53	40	41	42	39	42	46	131	135	141
Gram Panchayat	41	44	47	6	8	9	45	48	50	92	99	107
Total	**140**	**143**	**151**	**108**	**113**	**125**	**153**	**166**	**179**	**402**	**422**	**455**

3.2.3.1 **Public Water Works**

3.2.3.1.1 **East Discom**

The growth percentages assumed for the category are as shown below:

Table 12: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Municipal Corporation	Consumer	1.24%	1-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.17%	2-year CAGR considered	7.69%	3-year CAGR considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Nagar Panchayat	Consumer	4.03%	2-year CAGR considered	7.09%	1-year CAGR considered
	Average Load (kW) per Consumer	0.78%	5-year CAGR considered	4.40%	3-year CAGR considered
	Average consumption per consumer per month	4.32%	1-year CAGR considered	0.00%	No growth rate has been considered

Area	Category	Urban		Rural	
Gram Panchayat	Consumer	0.00%	No growth rate has been considered	13.29%	3-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	3.44%	2-year CAGR considered
Temporary	Consumer	1.10%	1-year CAGR considered	10.53%	2-year CAGR considered
	Average Load (kW) per Consumer	3.55%	3-year CAGR considered	3.58%	1-year CAGR considered
	Average consumption per consumer per month	12.65%	3-year CAGR considered	2.77%	2-year CAGR considered

3.2.3.1.2 **Central Discom**

The growth percentages assumed for the category are as shown below:

Table 13: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Municipal Corporation	Consumer	6.40%	5-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Nagar Panchayat	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Gram Panchayat	Consumer	0.00%	No growth rate has been considered	10.00%	Nominal Growth Considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.65%	4-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Temporary	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.3.1.3 **West Discom**

The growth percentages assumed for the category are as shown below:

Table 14: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Municipal Corporation	Consumer	3.00%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	1.00%	Nominal Growth Considered	10.61%	1-year CAGR considered
	Average consumption	0.00%	No growth rate has	0.00%	No growth rate has

Area	Category	Urban		Rural	
	per kW per month		been considered		been considered
Nagar Panchayat	Consumer	3.00%	5 Month Variation considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	2.51%	1-year CAGR considered	5.84%	1-year CAGR considered
	Average consumption per consumer per month	1.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
Gram Panchayat	Consumer	0.00%	No growth rate has been considered	8.00%	Nominal Growth Considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	1.48%	Nominal Growth Considered
	Average consumption per consumer per month	1.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
Temporary	Consumer	0.18%	3-year CAGR considered	4.00%	Nominal Growth Considered
	Average Load (kW) per Consumer	1.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.3.2 **LV-3.2: Street Light**

3.2.3.2.1 **East Discom**

The growth percentages assumed for the category are as shown below:

Table 15: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Municipal Corporation	Consumer	9.13%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Nagar Panchayat	Consumer	5.28%	2-year CAGR considered	1.75%	3-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Gram Panchayat	Consumer	0.00%	No growth rate has been considered	5.25%	1-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	10.28%	2-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	10.01%	2-year CAGR considered

3.2.3.2.2 **Central Discom**

The growth percentages assumed for the category are as shown below:

Table 16: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Municipal	Consumer	11.08%	5-year CAGR	0.00%	No growth rate has

Area	Category	Urban		Rural	
Corporation			considered		been considered
	Average Load (kW) per Consumer	2.11%	5-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Nagar Panchayat	Consumer	2.68%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Gram Panchayat	Consumer	0.00%	No growth rate has been considered	8.57%	2-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	1.84%	3-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.3.2.3 **West Discom**

The growth percentages assumed for the category are as shown below:

Table 17: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Municipal Corporation	Consumer	8.67%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per kW per month	1.15%	2-year CAGR considered	0.00%	No growth rate has been considered
Nagar Panchayat	Consumer	6.05%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	7.00%	Nominal Growth Considered
	Average consumption per consumer per month	2.00%	Nominal Growth Considered	2.00%	Nominal Growth Considered
Gram Panchayat	Consumer	0.00%	No growth rate has been considered	0.18%	5 Month Variation considered
	Average Load (kW) per Consumer	1.44%	2-year CAGR considered	1.84%	1-year CAGR considered
	Average consumption per consumer per month	1.00%	No growth rate has been considered	4.00%	Nominal Growth Considered

3.2.4 LV-4. Industrial

The projections for FY 2023-24 for LV 4.1 Non- Seasonal Industrial are as follows:

Table 18: Energy Sales for LV-4.1 (MUs)

Subcategory	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Up to 25HP	177.5	210.4	233.4	143.9	149.0	154.2	250.1	264.6	280.0	571.4	624.0	667.7
Above 25HP to 100HP	120.4	134.3	146.2	105.1	109.9	114.9	239.5	252.0	267.5	464.9	496.2	528.7
Above 100HP	103.6	136.4	170.3	43.2	50.1	63.5	178.8	204.4	237.4	325.6	390.9	471.1
Temporary LT Ind.	8.7	13.0	17.1	3.4	4.8	5.0	1.6	2.2	2.7	13.6	19.9	24.8
Total	**410.1**	**494.1**	**567.0**	**295.5**	**313.7**	**337.7**	**669.9**	**723.2**	**787.6**	**1,375.5**	**1,531.0**	**1,692.3**

The projections for FY 2023-24 for LV 4.2 Seasonal Industrial are as follows:

Table 19: Energy Sales for LV-4.2 (MUs)

Subcategory	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Up to 25HP	0.2	0.2	0.2	0.1	0.2	0.2	1.7	1.8	1.9	2.0	2.2	2.3
Above 25HP to 100HP	0.3	0.2	0.2	0.5	1.0	1.0	1.6	1.7	1.8	2.4	3.0	3.0
Above 100HP	0.5	0.4	0.4	0.0	0.0	0.0	0.7	0.7	0.7	1.1	1.1	1.1
Total	**0.9**	**0.8**	**0.9**	**0.6**	**1.2**	**1.2**	**4.0**	**4.2**	**4.3**	**5.6**	**6.2**	**6.5**

3.2.4.1 **LV-4.1 Non- Seasonal Industrial**

3.2.4.1.1 **East Discom**

The assumptions for sales forecast for the category are given below:

Table 20: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Upto 25HP	Consumer	1.60%	1-year CAGR considered	6.33%	1-year CAGR considered
	Average Load (kW) per Consumer	3.00%	Nominal Growth Considered	3.00%	Nominal Growth Considered
	Average consumption per kW per month	3.00%	Nominal Growth Considered	3.00%	Nominal Growth Considered
Above 25HP to 100HP	Consumer	1.05%	2-year CAGR considered	4.70%	1-year CAGR considered
	Average Load (kW) per Consumer	3.00%	Nominal Growth Considered	3.00%	Nominal Growth Considered

Area	Category	Urban		Rural	
	Average consumption per consumer per month	3.00%	Nominal Growth Considered	3.00%	Nominal Growth Considered
Above 100HP	Consumer	20.40%	3-year CAGR considered	15.63%	1-year CAGR considered
	Average Load (kW) per Consumer	3.00%	Nominal Growth Considered	3.00%	Nominal Growth Considered
	Average consumption per consumer per month	3.00%	Nominal Growth Considered	3.00%	Nominal Growth Considered
Temporary	Consumer	6.00%	Nominal Growth Considered	29.26%	4-year CAGR considered
	Average Load (kW) per Consumer	2.00%	Nominal Growth Considered	2.00%	Nominal Growth Considered
	Average consumption per consumer per month	2.00%	Nominal Growth Considered	2.00%	Nominal Growth Considered

3.2.4.1.2 **Central Discom**

The growth percentages assumed are as follows:

Table 21: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Upto 25HP	Consumer	2.06%	2-year CAGR considered	3.10%	1-year CAGR considered
	Average Load (kW) per Consumer	0.56%	2-year CAGR considered	1.87%	5-year CAGR considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Above 25HP to 100HP	Consumer	3.35%	5-year CAGR considered	10.19%	1-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Above 100HP	Consumer	20.47%	4-year CAGR considered	37.72%	1-year CAGR considered
	Average Load (kW) per Consumer	0.09%	2-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Temporary	Consumer	26.84%	4-year CAGR considered	43.87%	1-year CAGR considered
	Average Load (kW) per Consumer	1.88%	4-year CAGR considered	0.40%	4-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.4.1.3 **West Discom**

The growth percentages assumed are as follows:

Table 22: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Upto 25HP	Consumer	0.00%	No growth rate has been considered	0.38%	1-year CAGR considered

Area	Category	Urban		Rural	
	Average Load (kW) per Consumer	0.86%	1-year CAGR considered	1.85%	1-year CAGR considered
	Average consumption per kW per month	5.00%	Nominal Growth Considered	3.29%	1-year CAGR considered
Above 25HP to 100HP	Consumer	2.64%	3-year CAGR considered	2.55%	1-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	1.00%	Nominal Growth Considered
	Average consumption per consumer per month	3.00%	Nominal Growth Considered	5.00%	Nominal Growth Considered
Above 100HP	Consumer	9.34%	3-year CAGR considered	14.03%	1-year CAGR considered
	Average Load (kW) per Consumer	0.25%	1-year CAGR considered	0.41%	1-year CAGR considered
	Average consumption per consumer per month	4.00%	Nominal Growth Considered	6.59%	2-year CAGR considered
Temporary	Consumer	0.00%	No growth rate has been considered	11.59%	2-year CAGR considered
	Average Load (kW) per Consumer	7.00%	Nominal Growth Considered	17.67%	2-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.4.2 **LV-4.2: Seasonal Industrial**

The future projections are as follows:

3.2.4.2.1 **East Discom**

The growth percentages assumed are as follows:

Table 23: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Upto 25HP	Consumer	2.15%	2-year CAGR considered	10.06%	3-year CAGR considered
	Average Load (kW) per Consumer	3.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Average consumption per kW per month	3.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
Above 25HP to 100HP	Consumer	4.66%	4-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	3.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	3.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
Above 100HP	Consumer	18.92%	4-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	3.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	3.00%	Nominal Growth Considered	0.00%	No growth rate has been considered

3.2.4.2.2 **Central Discom**

The growth percentages assumed are as follows:

Table 24: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Upto 25HP	Consumer	18.75%	1-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	4.35%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Above 25HP to 100HP	Consumer	5.01%	3-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
Above 100HP	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.4.2.3 **West Discom**

The growth rates assumed are as follows:

Table 25: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Upto 25HP	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	2.00%	Nominal Growth Considered	3.86%	1-year CAGR considered
	Average consumption per kW per month	0.00%	No growth rate has been considered	7.00%	Nominal Growth Considered
Above 25HP to 100HP	Consumer	2.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	4.17%	1-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
Above 100HP	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.5 LV-5.1: Agricultural

The projections for LV 5.1 Agricultural category are as follows

Table 26: Energy Sales for LV 5.1 (MUs)

Area	Sub-category	East Discom			Central Discom			West Discom			MP State		
		FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Urban	Metered General	7	7	7	54	88	91	19	20	22	80	115	120
Urban	Metered Temporary	1	1	1	7	8	8	1	1	1	9	10	10
Urban	Unmetered General	276	283	297	183	184	184	159	158	158	618	625	640
Urban	Unmetered Temporary	23	24	25	4	4	4	15	16	17	42	44	46
Urban	**Total**	**306**	**315**	**330**	**249**	**284**	**288**	**193**	**196**	**198**	**749**	**794**	**816**
Rural	Metered General	2	2	2	7	10	10	4	7	7	13	18	20
Rural	Metered Temporary	1	1	1	5	5	5	1	1	1	6	7	7
Rural	Unmetered General	6,069	6,381	6,700	8,595	8,917	9,263	10,153	10,520	11,144	24817	25819	27108
Rural	Unmetered Temporary	266	279	293	175	178	182	219	241	245	660	698	721
Rural	**Total**	**6,338**	**6,663**	**6,996**	**8,782**	**9,111**	**9,461**	**10,377**	**10,769**	**11,398**	**25497**	**26542**	**27854**
Total	Metered General	9	8	9	62	98	102	23	27	29	93	133	140
Total	Metered Temporary	2	2	2	12	13	13	1	2	2	15	16	17
Total	Unmetered General	6,345	6,664	6,997	8,778	9,101	9,447	10,312	10,678	11,303	25435	26444	27747
Total	Unmetered Temporary	289	303	318	179	183	186	234	257	262	702	743	767
Total	**Total**	**6,644**	**6,978**	**7,326**	**9,031**	**9,395**	**9,749**	**10,571**	**10,964**	**11,596**	**26245**	**27336**	**28671**

3.2.5.1 For Temporary Metered & Temporary Permanent Connections, the estimation of Consumers and Load has been carried out on Monthly basis instead of directly applying the growth rate to annual figures. For unmetered temporary agriculture consumers under this category, the assessed consumption is considered as per the norms stipulated by Hon'ble Commission in the Tariff order for FY 2021-22. The same is shown as below:

Table 27: Phase Wise Assessment for Un-metered Temporary Agriculture Connections

Phase	Figures in Unit	
	Urban	Rural
	2023-24	2023-24
Three Phase	220	195
Single Phase	230	205

3.2.5.2 The month-wise segregation of norms for assessed consumption of unmetered permanent agricultural connections are as shown below:

Table 28: Phase Wise Assessment for Unmetered Permanent Agriculture Connections

Figures in Unit	Three Phase		Single Phase	
Months	**Urban**	**Rural**	**Urban**	**Rural**
April	95	95	95	95
May	95	95	95	95
June	95	95	95	95
July	95	95	95	95
Aug	95	95	95	95
Sept	95	95	95	95
Oct	170	170	180	180
Nov	170	170	180	180
Dec	170	170	180	180
Jan	170	170	180	180
Feb	170	170	180	180
March	170	170	180	180

3.2.5.3 The Hon'ble Commission had increased the normative units for permanent agriculture consumers in the Tariff Order for FY 2018-19 from 1560 Units to 1650 Units per HP per Annum. Till FY 2013-14, agriculture pump consumers were being supplied with 8 Hrs of electricity per day in groups. From FY 2014-15, feeder separation work started and as a result 10 Hours of electricity was supplied on daily basis on separated feeders to agriculture consumers whereas for mixed feeders it was on 24 Hours supply. On mixed feeders there are many agriculture pump connections that are being supplied by more than 20 Hours of supply.

3.2.5.4 **East Discom**

The growth rates assumed for future projections and revised estimates for this category by East Discom are as follows:

Table 29: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Metered General	Consumer	5%	Nominal Growth Considered	5%	Nominal Growth Considered
	Load	3%	Nominal Growth Considered	3%	Nominal Growth Considered
	Consumption	5%	Nominal Growth Considered	5%	Nominal Growth Considered

Area	Category	Urban		Rural	
Unmetered Permanent	Consumer	5%	Nominal Growth Considered	5%	Nominal Growth Considered
	Load	5%	Nominal Growth Considered	5%	Nominal Growth Considered
	Consumption	5%	Nominal Growth Considered	5%	Nominal Growth Considered
Metered Temporary	Consumer	5%	Nominal Growth Considered	5%	Nominal Growth Considered
	Load	5%	Nominal Growth Considered	5%	Nominal Growth Considered
	Consumption	5%	Nominal Growth Considered	5%	Nominal Growth Considered

3.2.5.5 **Central Discom**

The growth rates assumed for future projections and revised estimates for this category by Central Discom are as follows:

Table 30: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Metered General	Consumer	1%	Nominal Growth Considered	5%	Nominal Growth Considered
	Load	4%	Nominal Growth Considered	3%	Nominal Growth Considered
	Consumption	4%	Nominal Growth Considered	3%	Nominal Growth Considered
Unmetered Permanent	Consumer	0%	No growth rate has been considered	4%	Nominal Growth Considered
	Load	0%	No growth rate has been considered	4%	Nominal Growth Considered
	Consumption	0%	No growth rate has been considered	4%	Nominal Growth Considered
Metered Temporary	Consumer	10%	Nominal Growth Considered	20%	Nominal Growth Considered
	Load	8%	Nominal Growth Considered	14%	Nominal Growth Considered
	Consumption	5%	Nominal Growth Considered	5%	Nominal Growth Considered

3.2.5.6 **West Discom**

With the conversion of most of the Agricultural Temporary Connections to Permanent Unmetered Connections under Mukhya Mantri Sthayi Krishi Pump Yojna (MMSKPY) introduced in 2016, the petitioner has taken zero growth in FY 2023-24.

Table 31: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Metered General	Consumer	2%	Nominal Growth Considered	2%	Nominal Growth Considered
	Load	4%	Nominal Growth Considered	4%	Nominal Growth Considered
	Consumption	9%	Nominal Growth Considered	11%	Nominal Growth Considered
Unmetered Permanent	Consumer	0%	No growth rate has been considered	1%	Nominal Growth Considered
	Load	0%	No growth rate has been considered	4%	Nominal Growth Considered
	Consumption	0%	No growth rate has been considered	6%	Nominal Growth Considered

Area	Category	Urban		Rural	
Metered Temporary	Consumer	2%	Nominal Growth Considered	2%	Nominal Growth Considered
	Load	2%	Nominal Growth Considered	2%	Nominal Growth Considered
	Consumption	15%	Nominal Growth Considered	0.00%	No growth rate has been considered

3.2.6 LV-5.2: Other agricultural Use

The projections for LV 5.2 Agricultural category are as follows:

Table 32: Energy Sales for LV 5.2 (MUs)

Sub-category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Upto 20HP	4.19	4.70	5.32	3.43	3.65	3.90	3.04	3.33	3.59	10.66	11.68	12.81
greater than 20HP	3.50	5.15	7.69	1.54	1.74	1.97	1.85	1.99	2.13	6.89	8.88	11.80
Temporary	0.05	0.05	0.05	0.09	0.09	0.09	0.04	0.05	0.05	0.18	0.19	0.19
Total	**7.75**	**9.90**	**13.07**	**5.06**	**5.47**	**5.96**	**4.94**	**5.37**	**5.77**	**17.74**	**20.74**	**24.80**

3.2.6.1 **East Discom**

The growth rates assumed for future projections and revised estimates for this category by East Discom are as follows:

Table 33: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Up to 3HP	Consumer	1.00%	1-year CAGR considered	9.57%	3-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	5.73%	3-year CAGR considered
	Average consumption per kW per month	1.00%	1-year CAGR considered	5.73%	3-year CAGR considered
Above 3HP to 5HP	Consumer	13.95%	1-year CAGR considered	12.45%	3-year CAGR considered
	Average Load (kW) per Consumer	14.19%	1-year CAGR considered	12.52%	3-year CAGR considered
	Average consumption per consumer per month	37.40%	1-year CAGR considered	2.33%	3-year CAGR considered
Above 5HP to 10HP	Consumer	0.00%	No growth rate has been considered	19.96%	3-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	20.03%	3-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	20.09%	3-year CAGR considered
Above 10HP to 20HP	Consumer	12.29%	2-year CAGR considered	20.38%	3-year CAGR considered
	Average Load (kW) per Consumer	12.08%	2-year CAGR considered	20.45%	3-year CAGR considered
	Average consumption per consumer per month	11.04%	1-year CAGR considered	21.38%	3-year CAGR considered
Above 20HP	Consumer	0.00%	No growth rate has been considered	32.85%	3-year CAGR considered
	Average Load (kW) per	3.06%	1-year CAGR	33.59%	3-year CAGR

Area	Category	Urban		Rural	
	Consumer		considered		considered
	Average consumption per consumer per month	4.63%	3-year CAGR considered	55.96%	3-year CAGR considered
Temporary	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.6.2 **Central Discom**

The growth rates assumed for future projections and revised estimates for this category by Central Discom are as follows:

Table 34: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Up to 3HP	Consumer	7.46%	4-year CAGR considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	8.06%	4-year CAGR considered	0.00%	No growth rate has been considered
	Average consumption per kW per month	21.68%	5-year CAGR considered	0.00%	No growth rate has been considered
Above 3HP to 5HP	Consumer	3.26%	5-year CAGR considered	4.51%	4-year CAGR considered
	Average Load (kW) per Consumer	3.57%	5-year CAGR considered	3.51%	4-year CAGR considered
	Average consumption per consumer per month	0.96%	4-year CAGR considered	1.73%	5-year CAGR considered
Above 5HP to 10HP	Consumer	0.50%	5-year CAGR considered	2.08%	3-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	1.11%	5-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	1.99%	5-year CAGR considered
Above 10HP to 20HP	Consumer	24.57%	5-year CAGR considered	29.66%	4-year CAGR considered
	Average Load (kW) per Consumer	24.09%	5-year CAGR considered	28.76%	4-year CAGR considered
	Average consumption per consumer per month	16.28%	5-year CAGR considered	21.87%	5-year CAGR considered
Above 20HP	Consumer	12.89%	5-year CAGR considered	14.29%	5-year CAGR considered
	Average Load (kW) per Consumer	5.38%	5-year CAGR considered	19.92%	5-year CAGR considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	16.07%	3-year CAGR considered
Temporary	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.6.3 **West Discom**

The growth rates assumed for future projections and revised estimates for this category by West Discom are as follows:

Table 35: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Up to 3HP	Consumer	10.94%	2-year CAGR considered	14.29%	1-year CAGR considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	16.13%	1-year CAGR considered
	Average consumption per kW per month	6.23%	3-year CAGR considered	17.72%	1-year CAGR considered
Above 3HP to 5HP	Consumer	7.28%	Nominal Growth Considered	6.67%	5 Month Variation considered
	Average Load (kW) per Consumer	5.00%	Nominal Growth Considered	8.81%	5 Month Variation considered
	Average consumption per consumer per month	0.00%	No growth rate has been considered	10.00%	Nominal Growth Considered
Above 5HP to 10HP	Consumer	2.50%	3-year CAGR considered	8.70%	5 Month Variation considered
	Average Load (kW) per Consumer	1.95%	3-year CAGR considered	4.86%	1-year CAGR considered
	Average consumption per consumer per month	11.30%	3-year CAGR considered	9.57%	3-year CAGR considered
Above 10HP to 20HP	Consumer	10.00%	Nominal Growth Considered	7.69%	1-year CAGR considered
	Average Load (kW) per Consumer	10.36%	Nominal Growth Considered	5.75%	1-year CAGR considered
	Average consumption per consumer per month	3.82%	3-year CAGR considered	10.00%	Nominal Growth Considered
Above 20HP	Consumer	17.57%	3-year CAGR considered	10.00%	Nominal Growth Considered
	Average Load (kW) per Consumer	16.05%	3-year CAGR considered	9.35%	2-year CAGR considered
	Average consumption per consumer per month	9.77%	2-year CAGR considered	5.00%	Nominal Growth Considered
Temporary	Consumer	0.00%	No growth rate has been considered	10.00%	Nominal Growth Considered
	Average Load (kW) per Consumer	0.00%	No growth rate has been considered	5.26%	5 Month Variation considered
	Average consumption per consumer per month	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered

3.2.7 LV-6 E- Vehicle / E-Rickshaw Charging Station

The projection of sales for this category is as follows:

Table 36: Energy Sales for LV 6 (MUs)

Sub-category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
LV-6 EV Charging Stations	-	0.11	0.13	-	0.00	0.02	0.18	0.10	0.10	0.10	0.10	0.23

3.2.7.1 East Discom

The growth rates assumed for future projections are as follows:

Table 37: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
Metered	Consumer	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	20.00%	Nominal Growth Considered	0.00%	No growth rate has been considered

3.2.7.2 Central Discom

The growth rates assumed for future projections are as follows:-

Table 38: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
Metered	Consumer	100.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
	Load (kW)	100.00%	Nominal Growth Considered	15.00%	Nominal Growth Considered
	Units (MUS)	25.00%	Nominal Growth Considered	15.00%	Nominal Growth Considered

3.2.7.3 West Discom

The growth rates assumed for future projections are as follows:

Table 39: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
Metered	Consumer	100.00%	Nominal Growth Considered	5.00%	Nominal Growth Considered
	Load (kW)	162.75%	Average Growth has been Considered	5.00%	Nominal Growth Considered
	Units (MUS)	100.00%	Nominal Growth Considered	5.00%	Nominal Growth Considered

3.2.8 HV-1: Railway Traction

The Petitioners have signed a contract with Railways in FY 2020-21 for on-demand supply of electricity. Considering the development activities across corridor between Itarsi and Katni new connections are expected for Central and East Discoms. Accordingly, the sales projection for this category is as follows:

Table 40: Energy Sales for HV 1 (MUs)

Sub-Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
HV-1 Railway Traction	-	55.32	55.32	-	55.32	55.32	-	-	-	-	**110.64**	**110.64**

3.2.8.1 **East Discom**

There has been no sale to Railways in FY 2017-18 to 2021-22 and FY 2022-23 till date. However, owing to the new contract signed with Railways, and looking at the historic trend of sales from the time when, Railways used to draw power from Discom's, One Connection of 10,000 kVA is expected in the year FY 2022-23. With a load factor of 30% and power factor of 0.95, approximately 55 MUs worth of sales is expected.

3.2.8.2 **Central Discom**

There has been no sale to Railways in FY 2017-18 to 2021-22 and FY 2022-23. However, owing to the new contract signed with Railways, and looking at the historic trend of sales from the time when, Railways used to draw power from Discom's, One Connection of 10,000 kVA is expected in the year FY 2022-23. With a load factor of 30% and power factor of 0.95, approximately 55 MUs worth of sales is expected.

HV -2: Coal Mines

The projection of sales for this category is as shown below:

Table 41: Energy Sales for HV 2 (MUs)

Sub-Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
132 kV	227.9	232.8	237.9	-	-	-	-	-	-	227.9	232.8	237.9
33 kV	236.5	240.1	243.7	22.6	22.6	22.6	-	-	-	259.2	262.7	266.3
11 kV	1.7	1.7	1.7	-	-	-	-	-	-	1.7	1.7	1.7
Total	**466.1**	**474.6**	**483.3**	**22.6**	**22.6**	**22.6**	**-**	**-**	**-**	**488.7**	**497.2**	**505.9**

3.2.8.3 **East Discom**

Table 42: Growth Percentage Assumption East Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	2.18%	3-year CAGR considered	0.00%	No growth rate has been considered
33 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	2.09%	1-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	2.09%	1-year CAGR considered	0.00%	No growth rate has been considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.8.4 Central Discom

No Growth has been considered except nominal growth in urban area.

Table 43: Growth Percentage Assumption Central Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.8.5 West Discom

West Discom lacks any consumer base for this category.

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.9 HV 3: Industrial and Non-Industrial

The future projections are as follows:

Table 44: Energy Sales for HV 3 (MUs)

Sub-Category		East Discom			Central Discom			West Discom			MP State		
		FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Industrial - Unit (MU)	440/220 kV	282.2	313.4	349.3	-	-	-	28.9	28.9	28.9	311.1	342.3	378.2
	132 kV	867.4	867.4	867.4	1,875.7	1,984.1	2,098.9	1,176.5	1,294.8	1,424.3	3,919.6	4,146.3	4,390.5
	33 kV	964.4	1,167.5	1,415.1	1,607.9	1,701.2	1,800.6	3,094.3	3,403.8	3,744.1	5,666.7	6,272.5	6,959.8
	11 kV	128.4	141.5	155.9	62.8	64.7	66.8	200.8	212.4	224.9	391.9	418.6	447.5
	Total	**2,242.4**	**2,489.8**	**2,787.7**	**3,546.4**	**3,750.0**	**3,966.2**	**4,500.5**	**4,939.8**	**5,422.3**	**10,289.3**	**11,179.7**	**12,176.1**
Non Industrial - Unit (MU)	132 kV	0.3	0.4	0.7	0.1	0.1	0.1	37.1	42.9	49.5	37.5	43.4	50.3
	33 kV	154.0	177.9	206.6	299.8	314.3	329.4	289.9	322.5	359.9	743.7	814.6	895.9
	11 kV	78.5	88.8	100.5	104.5	109.6	114.9	110.7	123.8	138.5	293.7	322.1	353.9
	Total	**232.8**	**267.1**	**307.7**	**404.4**	**424.0**	**444.5**	**437.7**	**489.1**	**547.9**	**1,074.9**	**1,180.2**	**1,300.1**

3.2.9.1 **East Discom**

The assumptions for sales forecast for the Industrial category HV 3.1 are as given below:

Table 45: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
440/220 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	14.84%	1-year CAGR considered	0.00%	No growth rate has been considered
132 kV	Consumer	0.00%	No growth rate has been considered	15.47%	2-year CAGR considered
	Load (kW)	5.00%	No growth rate has been considered	4.27%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	16.42%	1-year CAGR considered	9.11%	2-year CAGR considered
	Load (kW)	8.00%	1-year CAGR considered	11.73%	2-year CAGR considered
	Units (MUS)	23.62%	1-year CAGR considered	14.08%	2-year CAGR considered
11 kV	Consumer	7.93%	1-year CAGR considered	1.75%	2-year CAGR considered
	Load (kW)	0.66%	1-year CAGR considered	0.91%	2-year CAGR considered
	Units (MUS)	9.46%	1-year CAGR considered	12.72%	2-year CAGR considered

The assumptions for sales forecast for the non-Industrial category HV 3.2 are as given below:

Table 46: Growth Percentage Assumption East Discom

Area	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

Area	Category	Urban		Rural	
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	54.41%	1-year CAGR considered	0.00%	No growth rate has been considered
33 kV	Consumer	6.96%	1-year CAGR considered	4.17%	2-year CAGR considered
	Load (kW)	1.55%	1-year CAGR considered	5.67%	2-year CAGR considered
	Units (MUS)	10.09%	1-year CAGR considered	27.44%	2-year CAGR considered
11 kV	Consumer	4.17%	1-year CAGR considered	1.18%	2-year CAGR considered
	Load (kW)	6.37%	1-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	14.38%	1-year CAGR considered	3.10%	2-year CAGR considered

3.2.9.2 **Central Discom**

The assumptions for sales forecast for the Industrial category HV 3.1 are as given below:

Table 47: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
440/220 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	8.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	6.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
33 kV	Consumer	5.54%	3-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	6.11%	5-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	6.92%	5-year CAGR considered	2.66%	5-year CAGR considered
11 kV	Consumer	4.67%	5 Month Variation considered	5.59%	5-year CAGR considered
	Load (kW)	4.15%	5-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	3.29%	5-year CAGR considered	0.51%	4-year CAGR considered

The assumptions for sales forecast for the non-Industrial category HV 3.2 are as given in the Table below:

Table 48: Growth Percentage Assumption Central Discom

Area	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	5.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	6.56%	1-year CAGR considered	3.03%	1-year CAGR considered
	Load (kW)	3.04%	2-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
11 kV	Consumer	5.05%	5 Month Variation considered	2.71%	5-year CAGR considered
	Load (kW)	2.28%	3-year CAGR considered	6.35%	5-year CAGR considered
	Units (MUS)	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered

3.2.9.3 **West Discom**

The assumptions for sales forecast for the Industrial category HV 3.1 are as given below:

Table 49: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
440/220 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	5.00%	Nominal Growth Considered
132 kV	Consumer	0.00%	No growth rate has been considered	2.00%	Nominal Growth Considered
	Load (kW)	8.00%	2-year CAGR considered	10.00%	Nominal Growth Considered
	Units (MUS)	10.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
33 kV	Consumer	3.53%	3-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	8.00%	2-year CAGR considered	10.00%	Nominal Growth Considered
	Units (MUS)	10.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
11 kV	Consumer	5.57%	3-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	6.62%	1-year CAGR considered	6.00%	Nominal Growth Considered
	Units (MUS)	5.52%	3-year CAGR considered	13.00%	Nominal Growth Considered

The assumptions for sales forecast for the Non- Industrial category HV 3.2 are as given below:

Table 50: Growth Percentage Assumption West Discom

Area	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	15.46%	1-year CAGR considered	0.00%	No growth rate has been considered
33 kV	Consumer	6.52%	2-year CAGR considered	6.58%	No growth rate has been considered
	Load (kW)	5.92%	3-year CAGR considered	6.90%	3-year CAGR considered
	Units (MUS)	12.00%	Nominal Growth Considered	7.69%	Nominal Growth Considered
11 kV	Consumer	3.47%	3-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	3.62%	3-year CAGR considered	4.74%	3-year CAGR considered
	Units (MUS)	12.00%	Nominal Growth Considered	7.69%	Nominal Growth Considered

3.2.10 HV 4: Seasonal

The future projections are as follows:

Table 51: Energy Sales for HV 4 (MUs)

Sub-Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
33 kV	7.76	7.76	7.76	1.54	1.56	1.58	7.17	7.17	7.17	16.46	16.48	16.50
11 kV	1.13	1.13	1.13	0.38	0.38	0.38	2.53	2.80	3.15	4.05	4.32	4.67
Total	**8.89**	**8.89**	**8.89**	**1.92**	**1.94**	**1.96**	**9.70**	**9.96**	**10.31**	**20.51**	**20.80**	**21.17**

3.2.10.1 **East Discom**

The assumptions for sales forecast for the category are given below:

Table 52: Growth Percentage Assumption East Discom

Voltage level	Category	Urban		Rural	
33 kV	Consumer	9.09%	1-year CAGR considered	9.54%	2-year CAGR considered
	Load (kW)	12.49%	1-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.10.2 **Central Discom**

The assumptions for sales forecast for the category are given below:

Table 53: Growth Percentage Assumption Central Discom

Voltage level	Category	Urban		Rural	
33 kV	Consumer	0.00%	No growth rate has been considered	2.00%	Nominal Growth Considered
	Load (kW)	10.00%	Nominal Growth Considered	2.00%	Nominal Growth Considered
	Units (MUS)	0.00%	No growth rate has been considered	2.00%	Nominal Growth Considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.10.3 **West Discom**

The assumptions for sales forecast for the category are given below:

Table 54: Growth Percentage Assumption West Discom

Voltage level	Category	Urban		Rural	
33 kV	Consumer	0.00%	No growth rate has been considered	4.08%	2-year CAGR considered
	Load (kW)	0.00%	No growth rate has been considered	5.76%	Nominal Growth Considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
11 kV	Consumer	0.00%	No growth rate has been considered	133.33%	Nominal Growth Considered
	Load (kW)	0.00%	No growth rate has been considered	38.55%	3-year CAGR considered
	Units (MUS)	3.00%	Nominal Growth Considered	39.28%	2-year CAGR considered

3.2.11 HV 5: Water Works, Lift Irrigation & Other Agricultural use

The future projections are as follows:

Table 55: Energy Sales for HV 5 (MUs)

Sub-Category		East Discom			Central Discom			West Discom			MP State		
		FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
Irrigation - Units (MU)	132 kV	-	-	-	0.8	0.8	0.8	211.4	231.8	256.2	212.2	232.6	257.0
	33 kV	14.4	24.3	48.1	20.8	22.2	24.4	181.0	190.0	199.5	216.2	236.6	272.1
	11 kV	0.0	0.0	0.0	0.2	0.2	0.2	-	89.1	89.1	0.3	89.4	89.4
	Total	**14.4**	**24.3**	**48.1**	**21.8**	**23.3**	**25.5**	**392.4**	**511.0**	**544.9**	**428.7**	**558.6**	**618.5**
Water Works - Units (MU)	132 kV	0.5	0.8	1.5	61.5	62.1	62.7	401.4	421.9	443.4	463.3	484.8	507.6
	33 kV	123.6	137.6	153.4	178.9	197.2	217.3	179.8	203.6	230.9	482.4	538.4	601.6
	11 kV	10.5	11.1	11.8	13.6	14.4	15.1	11.6	12.4	13.2	35.7	37.8	40.1

Sub-Category		East Discom			Central Discom			West Discom			MP State		
		FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
	Total	**134.5**	**149.6**	**166.6**	**254.0**	**273.6**	**295.2**	**592.8**	**637.9**	**687.5**	**981.3**	**1,061.1**	**1,149.3**
Other than Agricultural -Units (MU)	132 kV	-	-	-	-	-	-	-	-	-	-	-	-
	33 kV	4.3	4.3	4.3	7.4	7.7	8.0	0.6	0.6	0.7	12.3	12.7	13.0
	11 kV	12.6	19.3	30.5	1.4	1.5	1.6	8.8	9.5	10.2	22.9	30.3	42.3
	Total	**17.0**	**23.6**	**34.8**	**8.8**	**9.2**	**9.6**	**9.4**	**10.1**	**10.9**	**35.2**	**42.9**	**55.3**

3.2.11.1 **East Discom**

The growth percentages for sales forecast for the HT Water Works category are given below:

Table 56: Growth Percentage Assumption East Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	79.80%	3-year CAGR considered
33 kV	Consumer	20.89%	2-year CAGR considered	6.90%	2-year CAGR considered
	Load (kW)	19.48%	2-year CAGR considered	9.58%	2-year CAGR considered
	Units (MUS)	9.80%	3-year CAGR considered	14.01%	3-year CAGR considered
11 kV	Consumer	7.61%	2-year CAGR considered	6.90%	2-year CAGR considered
	Load (kW)	2.93%	2-year CAGR considered	3.86%	2-year CAGR considered
	Units (MUS)	6.73%	3-year CAGR considered	2.23%	3-year CAGR considered

The growth percentages for sales forecast for the HT – Irrigation category are given below:

Table 57: Growth Percentage Assumption East Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	25.00%	1-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	153.67%	1-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	143.93%	1-year CAGR considered	2.86%	1-year CAGR considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

The growth percentages for sales forecast for the HT – Other Agricultural category are given below:

Table 58: Growth Percentage Assumption East Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
11 kV	Consumer	0.00%	No growth rate has been considered	25.74%	4-year CAGR considered
	Load (kW)	24.97%	4-year CAGR considered	67.37%	4-year CAGR considered
	Units (MUS)	25.99%	4-year CAGR considered	85.55%	5-year CAGR considered

3.2.11.2 **Central Discom**

The growth percentages for sales forecast for the HT water works category are given below:

Table 59: Growth Percentage Assumption Central Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	1.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
33 kV	Consumer	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	10.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
	Units (MUS)	10.58%	3-year CAGR considered	5.00%	Nominal Growth Considered
11 kV	Consumer	5.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
	Load (kW)	5.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
	Units (MUS)	5.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered

The growth percentages for sales forecast for the HT Irrigation category are given below:

Table 60: Growth Percentage Assumption Central Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	10.00%	Nominal Growth Considered	3.71%	5-year CAGR considered
	Load (kW)	2.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
	Units (MUS)	10.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered
11 kV	Consumer	10.00%	Nominal Growth Considered	8.45%	5-year CAGR considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

The growth percentages for sales forecast for the HT- Other Agricultural category are given below:

Table 61: Growth Percentage Assumption Central Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	2.00%	Nominal Growth Considered	5.00%	Nominal Growth Considered
	Load (kW)	0.00%	No growth rate has been considered	5.00%	Nominal Growth Considered
	Units (MUS)	0.00%	No growth rate has been considered	9.93%	2-year CAGR considered
11 kV	Consumer	2.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	3.36%	Nominal Growth Considered	10.00%	Nominal Growth Considered
	Units (MUS)	7.93%	3-year CAGR considered	1.00%	Nominal Growth Considered

3.2.11.3 **West Discom**

The growth percentages for sales forecast for the HT Water Works category are given below:

Table 62: Growth Percentage Assumption West Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	5.10%	1-year CAGR considered
33 kV	Consumer	7.96%	1-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	8.27%	2-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	15.33%	3-year CAGR considered	4.29%	1-year CAGR considered
11 kV	Consumer	9.49%	3-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	4.89%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	7.62%	3-year CAGR considered	6.23%	1-year CAGR considered

The growth percentages for sales forecast for the HT Irrigation category are given below:

Table 63: Growth Percentage Assumption West Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	6.42%	5-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	20.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
33 kV	Consumer	0.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	16.86%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	4.97%	1-year CAGR considered	5.00%	Nominal Growth Considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

The growth percentages for sales forecast for the HT- Other Agricultural category are given below:

Table 64: Growth Percentage Assumption West Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 kV	Consumer	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	4.69%	3-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
11 kV	Consumer	2.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	5.72%	2-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	7.52%	2-year CAGR considered	0.00%	No growth rate has been considered

3.2.12 HV 6: Bulk Residential users

The future projections are as follows:

Table 65: Energy Sales for HV 6 (MUs)

Sub-Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
132 KV							-	-	-	-	-	-
33 kV	220.3	221.0	221.7	136.6	136.6	136.6	22.0	24.1	26.3	379.0	381.8	384.7
11 kV	15.1	15.1	15.1	16.5	17.6	18.8	5.5	5.8	6.1	37.0	38.5	40.0
Total	**235.4**	**236.1**	**236.8**	**153.1**	**154.2**	**155.4**	**27.5**	**29.9**	**32.4**	**416.0**	**420.2**	**424.7**

3.2.12.1 **East Discom**

The assumptions for sales forecast for the category are given below:

Table 66: Growth Percentage Assumption East Discom

Voltage level	Category	Urban		Rural	
33 kV	Consumer	0.00%	No growth rate has been considered	6.27%	3-year CAGR considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	1.59%	3-year CAGR considered
11 kV	Consumer	3.39%	3-year CAGR considered	0.00%	No growth rate has been considered
	Load (kW)	1.78%	3-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.12.2 **Central Discom**

The assumptions for sales forecast for the category are given below:

Table 67: Growth Percentage Assumption Central Discom

Voltage level	Category	Urban		Rural	
33 kV	Consumer	2.50%	5 Month Variation considered	0.00%	No growth rate has been considered
	Load (kW)	3.08%	2-year CAGR considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
11 kV	Consumer	2.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	5.00%	Nominal Growth Considered	35.23%	3-year CAGR considered
	Units (MUS)	13.23%	5 Month Variation considered	4.86%	2-year CAGR considered

3.2.12.3 **West Discom**

The assumptions for sales forecast for the category are given below:

Table 68: Growth Percentage Assumption West Discom

Voltage level	Category	Urban		Rural	
33 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	5.00%	Nominal Growth Considered	1.87%	3-year CAGR considered
	Units (MUS)	9.48%	1-year CAGR considered	5.00%	Nominal Growth Considered
11 kV	Consumer	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	5.30%	Nominal Growth Considered	0.00%	No growth rate has been considered

3.2.13 HV-7: Requirement of Power for Generators Connected to the grid

The future projections are as follows:

Table 69: Requirement of Power for Generators Connected to the grid (MUs)

Sub-Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
132 KV	-	-	-	2.56	2.61	2.67	20.64	22.06	23.62	23.21	24.67	26.29
33 kV	-	-	-	-	-	-	-	-	-	-	-	-
11 kV	1.23	1.34	1.46	-	-	-	-	-	-	1.23	1.34	1.46
Total	**1.23**	**1.34**	**1.46**	**2.56**	**2.61**	**2.67**	**20.64**	**22.06**	**23.62**	**24.43**	**26.01**	**27.74**

3.2.13.1 **East Discom**

The assumptions for sales forecast for the category are given below:

Table 70: Growth Percentage Assumption East Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
33 KV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
11 kV	Consumer	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered

3.2.13.2 **Central Discom**

The assumptions for sales forecast for the category are given below:

Table 71: Growth Percentage Assumption Central Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	1.00%	Nominal Growth Considered	2.00%	Nominal Growth Considered
	Units (MUS)	2.00%	Nominal Growth Considered	2.00%	Nominal Growth Considered
33 KV	Consumer	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
11 kV	Consumer	5.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.13.3 **West Discom**

The assumptions for sales forecast for the category are given below:

Table 72: Growth Percentage Assumption West Discom

Voltage level	Category	Urban		Rural	
132 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
33 KV	Consumer	20.00%	Nominal Growth Considered	15.00%	Nominal Growth Considered
	Load (kW)	0.00%	No growth rate has been considered	5.00%	Nominal Growth Considered
	Units (MUS)	20.00%	Nominal Growth Considered	20.00%	Nominal Growth Considered
11 kV	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Units (MUS)	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered

3.2.14 HV-8 E- Vehicle / E-Rickshaws Charging Station

The projection of sales for this category is as follows:

Table 73: Energy Sales for HV 8 (MUs)

Sub-Category	East Discom			Central Discom			West Discom			MP State		
	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)	FY 22	FY 23 (RE)	FY 24 (Proj.)
LV- 8 EV Charging Stations	**-**	**2.01**	**2.10**	**-**	**3.04**	**3.35**	**1.28**	**15.70**	**17.27**	**1.28**	**20.75**	**22.71**

3.2.14.1 **East Discom**

The growth rates assumed for future projections are as follows:-

Table 74: Growth Percentage Assumption East Discom

Sub Category	Category	Urban		Rural	
Metered	Consumer	0.00%	No growth rate has been considered	0.00%	No growth rate has been considered
	Load (kW)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	10.00%	Nominal Growth Considered	8.00%	Nominal Growth Considered

3.2.14.2 **Central Discom**

The growth rates assumed for future projections are as follows: -

Table 75: Growth Percentage Assumption Central Discom

Sub Category	Category	Urban		Rural	
Metered	Consumer	5.00%	Nominal Growth Considered	5.00%	Nominal Growth Considered
	Load (kW)	10.00%	Nominal Growth Considered	5.00%	Nominal Growth Considered
	Units (MUS)	10.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered

3.2.14.3 **West Discom**

The growth rates assumed for future projections are as follows:-

Table 76: Growth Percentage Assumption West Discom

Sub Category	Category	Urban		Rural	
Metered	Consumer	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Load (kW)	10.00%	Nominal Growth Considered	0.00%	No growth rate has been considered
	Units (MUS)	10.00%	Nominal Growth Considered	10.00%	Nominal Growth Considered

A4: ENERGY REQUIREMENT AT DISCOM BOUNDARY & EX-BUS REQUIREMENT

4.1 Conversion of Annual Sales into Monthly Sales

4.1.1 The annual sales of the Discoms have been converted into monthly sales using the sales profile actually observed in the past five years including FY 2021-22 for each Discom. This profile is then used to compute monthly sales for FY 2023-24. The profiling for all Discoms is given in the table below:

Table 77: Month wise Sales Profile

Month-wise Sales Profile Mix (%)														
Sr.no.	**Discom**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Total**
1	**FY 2021-22 (Actual)**													
a	East	7.07%	7.23%	7.53%	7.56%	7.60%	7.53%	9.25%	9.15%	9.27%	9.49%	9.25%	9.06%	100.00%
b	Central	7.10%	7.05%	7.42%	7.61%	7.41%	7.35%	9.33%	9.17%	9.21%	9.48%	9.48%	9.41%	100.00%
c	West	7.21%	7.00%	7.54%	7.46%	7.27%	7.31%	9.23%	9.22%	9.37%	9.42%	9.58%	9.40%	100.00%
2	**FY 2022-23 (Re-Estimate)**													
a	East	7.63%	7.91%	8.07%	7.66%	7.43%	7.41%	8.82%	8.88%	9.06%	9.25%	9.03%	8.85%	100.00%
b	Central	7.62%	7.63%	7.99%	7.81%	7.51%	7.21%	8.90%	8.98%	8.95%	9.16%	9.17%	9.08%	100.00%
c	West	7.49%	7.70%	8.05%	7.60%	7.21%	6.90%	8.94%	9.16%	9.20%	9.28%	9.35%	9.12%	100.00%
3	**FY 2023-24 (Projected)**													
a	East	7.03%	7.64%	7.60%	7.40%	7.49%	7.60%	9.04%	9.10%	9.28%	9.48%	9.25%	9.07%	100.00%
b	Central	6.68%	7.23%	7.65%	7.61%	7.44%	7.44%	9.18%	9.26%	9.23%	9.45%	9.46%	9.37%	100.00%
c	West	6.79%	7.27%	7.61%	7.40%	7.18%	7.10%	9.20%	9.42%	9.47%	9.55%	9.62%	9.39%	100.00%

4.2 Distribution Losses

Hon'ble Commission in its Tariff Regulations, 2021 had notified normative distribution loss levels for the MYT period FY 2022-23 to FY 2026-27. The distribution loss level trajectory as specified in the Regulations is given in the table below:

Table 78: Trajectory of normative Distribution Losses (%)

Sr.no.	Discom	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
1	East Discom	15.75%	15.50%	15.25%	15.00%	14.75%
2	Central Discom	16.75%	16.50%	16.25%	16.00%	15.75%
3	West Discom	14.75%	14.50%	14.25%	14.00%	13.75%

The actual losses of the Discom's for FY 2021-22 have been observed at 27.40% for East Discom, 24.67% for Central Discom and 11.61% for West Discom. However, for the purpose of the instant petition the normative loss targets as specified by the Commission in Tariff Regulations' 2021 have been considered for computation of revised Energy Balance and power purchase costs of Discoms for FY 2023-24.

4.3 Intra State Transmission Losses

The Discoms have considered the actual Intra-state Transmission Losses of 2.63% for FY 2021-22 as reported by MPPTCL to the MPPMCL. The same has been considered for FY 2023-24 also.

4.4 Inter-State Transmission Losses

4.4.1 Hon'ble CERC notified CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020 on 04th May,2020; w.e.f. 1st November,2020. As per clause (10) of these regulations, transmission losses for ISTS shall be calculated on all India average basis for each week, from Monday to Sunday. Accordingly, the actual Inter-state Transmission losses as reported during the FY 2021-22 by the National Load Dispatch Centre applicable for Eastern Region Plants, Central Region Plants and Western Region Plants. (https://posoco.in/side-menu-pages/applicable-transmission-losses/transmission-losses-2021-22/).

4.4.2 ISTS losses for FY 2021-22 were 3.42% , on the same basis the Discoms have considered 3.47% for power stations under the Western, Northern & Eastern Region respectively which is based on last 52 weeks moving average losses (17th October 2021 – 23rd October 22) for FY 2023-24.

4.5 Energy Requirement at Discom Boundary and Ex-Bus Requirement

4.5.1 The annual distribution loss trajectory is converted into monthly loss trajectory based on the standard deviations of monthly losses from the cumulative annual losses during the past 5 years. In this method, the actual monthly loss levels and the cumulative annual losses of the Discoms for the past years are taken and standard deviation of loss

levels of each month from the cumulative annual average has been calculated. The monthly standard deviations are then used to calculate the monthly loss levels using the annual MPERC loss level trajectory.

4.5.2 As a result, the annual energy requirement at the Discom boundary is grossed up by a higher loss figure than observed as per the MPERC loss trajectory. The energy requirement is computed for all three Discoms and MP state at the state boundary as shown in tables below:

Table 79: Monthly Energy Requirement- Discom & Ex-Bus (MUs) for FY 2023-24 (projected)

Sr.no.	Particulars	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
1	**Sales**	**4,847**	**5,232**	**5,419**	**5,311**	**5,226**	**5,224**	**6,502**	**6,597**	**6,636**	**6,750**	**6,726**	**6,604**	**71,074**
a	*East*	1,389	1,511	1,504	1,464	1,481	1,502	1,788	1,800	1,835	1,875	1,829	1,794	19,773
b	*Central*	1,564	1,692	1,792	1,783	1,742	1,743	2,149	2,169	2,161	2,213	2,215	2,193	23,417
c	*West*	1,894	2,028	2,123	2,064	2,002	1,979	2,565	2,628	2,640	2,663	2,681	2,617	27,884
2	**Distribution Loss (%)**													
a	*East*	22.50%	20.09%	9.08%	17.73%	17.69%	17.79%	11.07%	14.89%	18.94%	13.40%	11.55%	11.28%	15.50%
b	*Central*	22.97%	21.22%	7.70%	18.09%	19.23%	19.22%	14.14%	17.39%	23.94%	17.10%	10.57%	6.44%	16.50%
c	*West*	20.03%	23.14%	12.60%	7.37%	1.20%	2.05%	6.17%	17.87%	25.44%	25.72%	18.25%	14.18%	14.50%
3	**Distribution Loss**	**1,344**	**1,446**	**606**	**873**	**757**	**781**	**745**	**1,343**	**2,009**	**1,669**	**1,099**	**811**	**13,485**
a	*East*	403	380	150	315	318	325	223	315	429	290	239	228	3,615
b	*Central*	467	456	150	394	415	415	354	457	680	456	262	151	4,655
c	*West*	474	610	306	164	24	41	169	572	901	922	599	432	5,215
4	**Energy at Discom Periphery**	**6,191**	**6,678**	**6,025**	**6,184**	**5,983**	**6,005**	**7,247**	**7,940**	**8,645**	**8,419**	**7,825**	**7,416**	**84,559**
a	*East*	1,792	1,892	1,654	1,779	1,800	1,828	2,010	2,115	2,264	2,165	2,068	2,022	23,388
b	*Central*	2,031	2,148	1,942	2,176	2,157	2,157	2,503	2,626	2,841	2,669	2,477	2,344	28,071
c	*West*	2,368	2,638	2,429	2,228	2,027	2,020	2,733	3,199	3,541	3,585	3,280	3,049	33,099
5	**State Transmission Losses**	**167**	**180**	**163**	**167**	**162**	**162**	**196**	**214**	**234**	**227**	**211**	**200**	**2,284**
a	*East*	48	51	45	48	49	49	54	57	61	58	56	55	632
b	*Central*	55	58	52	59	58	58	68	71	77	72	67	63	758
c	*West*	64	71	66	60	55	55	74	86	96	97	89	82	894
6	**Energy at State Boundary**	**6,358**	**6,858**	**6,188**	**6,351**	**6,145**	**6,167**	**7,443**	**8,155**	**8,879**	**8,646**	**8,037**	**7,616**	**86,843**
a	*East*	1,841	1,943	1,698	1,828	1,848	1,877	2,064	2,172	2,325	2,223	2,124	2,077	24,020
b	*Central*	2,086	2,206	1,994	2,235	2,215	2,216	2,571	2,697	2,918	2,741	2,543	2,407	28,829
c	*West*	2,432	2,710	2,495	2,288	2,081	2,075	2,807	3,286	3,637	3,682	3,369	3,132	33,993
7	**External /PGCIL Losses**	**111**	**112**	**116**	**118**	**108**	**110**	**134**	**127**	**161**	**160**	**127**	**127**	**1,513**
a	*East*	32	32	32	34	33	34	37	34	42	41	33	35	419
b	*Central*	37	36	37	42	39	40	46	42	53	51	40	40	503
c	*West*	43	44	47	43	37	37	51	51	66	68	53	52	592
8	**Energy Requirement (Ex-Bus)**	**6,470**	**6,971**	**6,304**	**6,470**	**6,253**	**6,277**	**7,577**	**8,282**	**9,040**	**8,806**	**8,163**	**7,743**	**88,356**
a	*East*	1,873	1,974	1,730	1,862	1,881	1,910	2,102	2,206	2,367	2,264	2,158	2,111	24,439
b	*Central*	2,122	2,242	2,032	2,277	2,254	2,255	2,617	2,739	2,971	2,792	2,584	2,447	29,332
c	*West*	2,474	2,754	2,541	2,331	2,118	2,112	2,858	3,337	3,703	3,750	3,422	3,184	34,585

4.5.3 The ex-bus energy to be purchased during FY 2023-24 (Normative & Actual Losses) is shown in the following table:

Table 80: Energy Requirement at Normative Distribution Losses (MUs)

Sr. no.	Particulars	At Normative Distribution loss level											
		M.P. State			East Discom			Central Discom			West Discom		
		FY 22	FY 23	FY 24	FY 22	FY 23	FY 24	FY 22	FY 23	FY 24	FY 22	FY 23	FY 24
1	**Sales (MUs)**	**62,678**	**66,696**	**71,074**	**17,233**	**18,489**	**19,773**	**20,885**	**22,121**	**23,417**	**24,559**	**26,086**	**27,884**
a	*LT*	48,917	51,578	54,662	13,880	14,756	15,640	16,469	17,402	18,434	18,568	19,421	20,587
b	*HT*	13,760	15,118	16,412	3,353	3,733	4,133	4,416	4,720	4,982	5,992	6,665	7,297
2	**Distribution Losses**												
a	*%*	**16.04%**	**16.25%**	**15.95%**	**16.00%**	**15.75%**	**15.50%**	**17.00%**	**16.75%**	**16.50%**	**14.00%**	**14.75%**	**14.50%**
b	*MUs*	11,973	12,938	13,485	3,268	3,460	3,615	4,311	4,502	4,655	4,394	4,976	5,215
3	**Energy Requirement at Discom Boundary (MUs)**	74,651	79,635	84,559	20,502	21,949	23,388	25,196	26,624	28,071	28,953	31,062	33,099
4	**State Transmission Losses**												
a	*%*	**2.63%**	**2.63%**	**2.63%**	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%
b	*MUs*	2,016	2,151	2,284	554	593	632	681	719	758	782	839	894
5	**Energy Requirement at State Boundary (MUs)**	76,667	81,786	86,843	**21,055**	**22,542**	**24,020**	**25,876**	**27,343**	**28,829**	**29,735**	**31,901**	**33,993**
6	**External/PGCIL Losses**												
d	*MUs*	1,663	1,774	1,513	455	487	419	560	591	503	648	695	592
7	**Energy Requirement Ex-Bus**	**78,330**	**83,559**	**88,356**	**21,511**	**23,029**	**24,439**	**26,436**	**27,934**	**29,332**	**30,383**	**32,596**	**34,585**

Table 81: Energy Requirement at Actual Distribution Losses (MUs)

Sr. no.	Particulars	At Actual Distribution loss level											
		M.P. State			East Discom			Central Discom			West Discom		
		FY 22	FY 23	FY 24	FY 22	FY 23	FY 24	FY 22	FY 23	FY 24	FY 22	FY 23	FY 24
1	**Sales (MUs)**	**62,678**	**66,696**	**71,074**	**17,233**	**18,489**	**19,773**	**20,885**	**22,121**	**23,417**	**24,559**	**26,086**	**27,884**
a	*LT*	48,917	51,578	54,662	13,880	14,756	15,640	16,469	17,402	18,434	18,568	19,421	20,587
b	*HT*	13,760	15,118	16,412	3,353	3,733	4,133	4,416	4,720	4,982	5,992	6,665	7,297
2	**Distribution Losses**												
a	*%*	**20.91%**	**20.92%**	**20.91%**	**27.40%**	**27.40%**	**27.40%**	**24.67%**	**24.67%**	**24.67%**	**11.61%**	**11.61%**	**11.61%**
b	*MUs*	16,568	17,647	18,792	6,503	6,976	7,461	6,841	7,246	7,670	3,225	3,425	3,661
3	**Energy Requirement at Discom Boundary (MUs)**	79,246	84,344	89,866	23,736	25,465	27,234	27,726	29,367	31,087	27,784	29,512	31,546
4	**State Transmission Losses**												
a	*%*	**2.63%**	**2.63%**	**2.63%**	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%
b	*MUs*	2,140	2,278	2,427	641	688	736	749	793	840	750	797	852
5	**Energy Requirement at State Boundary (MUs)**	81,386	86,622	92,293	**24,377**	**26,153**	**27,969**	**28,475**	**30,161**	**31,926**	**28,535**	**30,309**	**32,398**
6	**External/PGCIL Losses**												
d	*MUs*	1,618	1,618	1,618	476	476	476	513	513	513	629	629	629
7	**Energy Requirement Ex-Bus**	**83,004**	**88,240**	**93,911**	**24,853**	**26,629**	**28,445**	**28,988**	**30,674**	**32,439**	**29,163**	**30,937**	**33,026**

4.5.4 **It is prayed to the Hon'ble Commission to approve energy requirement as shown above.**

A5: ASSESSMENT OF AVAILABILITY

5.1 Availability Assessment- Existing and Upcoming

5.1.1 The Discoms have broadly categorised the sources of energy into State-Owned Generation, i.e., Generation from MPPGCL (MP Genco), Allocation (firm and non-firm) from Central Generating Stations (CGS), Independent Power Producers (IPPs), Biomass, Wind, Hydro and Solar Power Plants etc.

5.1.2 This section details the availability of power and related costs for the ensuing years for the state of Madhya Pradesh. The forecast takes into account the following aspects:

- Existing long term allocated generation capacity of MP.
- New generation capacity additions during the FY 2023-24 for MPPGCL, Central Sector, Joint venture and by Private players awarded through competitive bidding
- Impact of generation capacity allocation in WR, NR and ER

5.1.3 Based on the above available information, power purchase for the ensuing years has been forecasted. The same has been detailed in the subsequent sections. We further submit that new Central and State Generating Plants are scheduled to commence generation from FY 2023-24 as follows:

Table 82: Upcoming Conventional Stations and Other Technical Parameters

Sr.no.	Particulars	Capacity (MW)	PLF/DE/CUF Considered	MP Share (%)	MP Share (MW)	Energy Availability (MU)	CoD
1	NHPC Lower Subanshiri HEP	8x250	As per the Design Energy	5%	104	73	Sep-23 (Unit-1 & 2) Dec-23 (Unit-3 & 4)

Table 83: Fixed & Variable Charges of upcoming Stations

Sr. no.	Particulars	Fixed Cost	Basis	Variable Cost in Rs. Per Unit	Basis
1	NHPC Lower Subansiri HEP	0	Fixed Cost has not been considered in the instant Petition. However, as the fixed cost is determined by the Concerned Commission, It will be considered accordingly.	5.09	Levelised Tariff is considered.

5.1.4 Allocation of Power to the state of MP, from Central Sector stations is as per **Western Regional Power Committee** in their letter No. WRPC/Comml-I/6/Alloc/2022/10680 dated 13th Oct'2022 and from **Eastern Region** NTPC Kahalgaon-2 vide GoI MoP letter no. 5/31/2006-Th.2 dated 21st February 2007 **and Northern Region** as per Northern Regional Power Committee letter no. NRPC/OPR/103/02/2022 dated 14th Oct' 2022 and communication held with their concerned office. Allocation from MP Genco and

other sources have been considered based on inputs provided and latest updates from their concerned office**.**

5.1.5 The various stations both new and existing in which share has been allocated to MPPMCL on behalf of Discoms are listed in the table below.

Table 84: Contracted Capacity – MP State (Existing & New)

Sl No	Source	Plant Capacity (MW)	MP's Share in %	MP's Share in MW
1	Amarkantak TPS Ph-III	210	100%	210
2	Satpura TPS Ph-II & III	830	100%	830
3	Satpura TPS Ph-IV	500	100%	500
4	SGTPS Ph-I & II	840	100%	840
5	SGTPS Ph-III	500	100%	500
6	Shri Singaji STPS Phase-I	1,200	100%	1,200
7	Shri Singaji STPS Phase-II	1,320	100%	1,320
A	**Total (MP Genco Thermal-MP Share)**	**5,400**		**5,400**
8	Rani Awanti Bai Sagar, Bargi HPS	90	100%	90
9	Bansagar Ph I HPS (Tons)	315	100%	315
10	Bansagar Ph-II HPS (Silpara)	30	100%	30
11	Bansagar Ph-III HPS (Deolond)	60	100%	60
12	Bansagar Ph-IV HPS (Jhinna)	20	100%	20
13	Birsinghpur HPS	20	100%	20
14	Madikheda HPS	60	100%	60
15	Rajghat HPS	45	60%	27
16	Gandhisagar HPS	115	50%	58
17	Ranapratap Sagar HPS	172	50%	86
18	Jawahar Sagar HPS	99	50%	50
19	Pench HPS	160	67%	107
B	**Total (MP Genco Hydel)**	**1,186**		**922**
20	NHDC Indira Sagar HPS	1,000	100%	1,000
21	NHDC Omkareshwar HPS	520	100%	520
22	NVDA Sardar Sarovar HPS	1,450	57%	827
23	Rihand HPS	300	15%	45
24	Matatila HPS	31	33%	10
25	SJVN Rampur HPS	412	31%	128
26	SJVN Jhakri HPS	1,500	0%	2
27	Tehri HPS	1,000	0%	2
28	Koteshwar HPP	400	0%	1
29	NHPC Parbati III	520	0%	1
30	NHPC Chamera II	300	0%	1
31	NHPC Chamera III	231	0%	1
32	NHPC Dulhasti	390	0%	1
33	NHPC Dhauliganga	280	0%	1
34	NHPC Sewa II	120	0%	0
35	NHPC Uri II	240	0%	1

Sl No	Source	Plant Capacity (MW)	MP's Share in %	MP's Share in MW
36	NHPC Kishanganga	330	0%	1
37	NTPC Koldam HPP I	800	0%	1
38	NTPC Singrauli Small HPP	8	0%	0
39	NHPC Lower Subansiri HEP (Unit-1 to Unit-8)	2,000	5%	100
C	**Total (JV Hydel & Other Hydel)**	**11,832**		**2,642**
40	NTPC Korba	2,100	23%	473
41	NTPC Korba III	500	10%	48
42	NTPC Vindyachal I	1,260	22%	275
43	NTPC Vindyachal II	1,000	21%	207
44	NTPC Vindyachal III	1,000	15%	155
45	NTPC Vindyachal IV	1,000	18%	183
46	NTPC Vindyachal V Unit 1	500	18%	89
47	NTPC Sipat I	1,980	11%	209
48	NTPC Sipat II	1,000	11%	115
49	NTPC Mouda I	1,000	1%	12
50	NTPC Mouda II Unit 1	1,320	1%	16
51	NTPC Solapur STPS	1,320	16%	208
52	NTPC Gadarwara STPS, Unit-1	800	31%	247
53	NTPC Lara STPS, Raigarh, Unit I	800	11%	89
54	NTPC Khargone STPS, Unit-I & II	1,320	52%	685
55	NTPC Kawas GPP	656	21%	140
56	NTPC Gandhar GPP	657	18%	117
57	KAPP Kakrapar	440	25%	111
58	TAPP Tarapur	1,080	21%	231
59	NTPC Gadarwara STPS, Unit-2	800	31%	247
60	NTPC Lara STPS, Raigarh, Unit II	800	11%	89
D	**Total WR Region**	**21,334**		**3,946**
61	NTPC Kahalgaon II	1,500	5%	74
62	LoI through DVC Chandrapur	500	40%	200
63	LoI through DVC Durgapur	1,000	10%	100
E	**Total ER Region**	**3,000**		**374**
63	Auraiya APM (NR)	663	0.25%	2
64	National Capital Thermal Power Station Dadri-II (NR)	980	0.25%	2
65	Dadri APM (NR)	830	0.25%	2
66	Indira Gandhi STPS (Jhajjar) (NR)	1,500	0.13%	2
67	Anta APM (NR)	419	0.25%	1
68	Unchahar I (NR)	420	0.08%	0
69	Unchahar III (NR)	210	0.25%	1
70	Unchahar II (NR)	420	0.25%	1
71	Singrauli (NR)	2,000	0.20%	4
72	Rihand III (NR)	1,000	0.24%	2
73	Rihand I (NR)	1,000	0.21%	2
74	Rihand II (NR)	1,000	0.23%	2

Sl No	Source	Plant Capacity (MW)	MP's Share in %	MP's Share in MW
75	Dulhasti (NR)	390	0.25%	1
76	Parbati III (NR)	520	0.25%	1
77	Tehri I (NR)	1,000	0.17%	2
78	Koldam (NR)	800	0.12%	1
79	URI II (NR)	240	0.00%	0
80	Sewa II (NR)	120	0.24%	0
81	Chamera III (NR)	231	0.30%	1
82	Kishanganga (NR)	330	0.25%	1
83	Koteshwar (NR)	400	0.17%	1
84	Rampur HEP (NR)	412	0.15%	1
85	Nathpa-Jhakri (NR)	1,500	0.16%	2
86	Dhauliganga (NR)	280	0.25%	1
87	Chamera II (NR)	300	0.30%	1
88	NAPS	440	0.24%	1
89	RAPS - B	440	0.00%	0
90	RAPS - C	440	0.25%	1
91	Dadri I	840	0.00%	0
92	Dadri Solar	5	0.00%	0
93	BTPS	705	0.00%	0
94	RGPPL	540	0.00%	0
95	Unchahar IV	500	0.25%	1
96	Singrauli HEP	8	0.25%	0
97	MEJA	1,320	0.13%	2
98	Tanda	660	0.17%	1
F	**Total NR Region**	**22,863**		**40**
99	Torrent Power	1,148	4%	50
100	BLA Power, Unit-I & II	90	35%	32
101	Jaypee Bina Power	500	70%	350
102	Lanco Amarkantak TPS Unit 1	300	100%	300
103	Reliance UMPP, Sasan	3,960	38%	1,485
104	Essar Power STPS	1,200	5%	60
105	Jaiprakash Power STPS, Nigri	1,320	38%	495
106	MB Power STPS, Unit-I	600	35%	210
107	MB Power STPS, Unit-II	600	35%	210
108	Jhabua Power STPS, Unit-1	600	35%	210
G	**Total (IPPs)**	**10,318**		**3,402**
109	Renewable Energy (Solar)	3,578	100%	3,578
110	Renewable Energy (other than Solar)	2,548	100%	2,548
H	**Total Renewable Energy**	**6,126**		**6,126**
I	**Grand Total**	**82,058**		**22,851**

5.1.6 As can be seen from the above table, some relevant information for FY 2023-24 are as follows:

- As submitted in the previous year's ARR Petitions, MPPMCL has already decided

to foreclose the PPAs with DVC for 400 MW from DVC (MTPS & CTPS) and 100 MW (DTPS) w.e.f. 01st March 2018 & 15th May 2017 respectively. As such no regular power is being scheduled from these stations after the said date. However, since Sept-2020, power on STOA basis is being scheduled from 100 MW DVC (DTPS) through LOI dtd.10.07.2020. Similarly, LOI for 200MW from DVC (CTPS) on STOA basis has also been issued on 10.07.2020. Thus, costs of these plants have also been considered while calculating the power purchase cost for FY 2023-24 to 2026-27.

- During FY 2022-23, power from Essar (5%), BLA & Sugen Torrent Generating Stations has been scheduled following MoD whereas in the Tariff Order for FY 2022-23 whereas Hon'ble Commission had not considered availability and the cost thereon from these plants. It is humbly submitted that the power purchase expenditure incurred on these plants will be submitted before the Hon'ble Commission in the true up of FY 2022-23. It is further humbly submitted before the Hon'ble Commission that for FY 2023-23 to FY 2026-27, the availability from these plants has been considered as the PPAs with these plants remain in force.

5.2 Ex-Bus Availability

5.2.1 For the purpose of estimating the Ex-bus availability petitioners have considered the provisional energy received in FY 2022-23 to FY 2026-27. The total Ex-Bus Availability from the existing allocated stations as well as the future capacity additions which are expected to become operational during FY 2026-27 as discussed in previous sections is as given below:

Table 85: Ex-Bus Availability (MUs) Plant Source Wise for FY 2023-24

Sr.no.	Particulars	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
1	Amarkantak TPS Ph-III	142	147	142	147	66	(0)	147	142	147	147	137	147	1,511
2	Satpura TPS Ph-II & III	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Satpura TPS Ph-IV	320	330	320	330	256	147	275	320	330	330	309	330	3,597
4	SGTPS Ph-I & II	354	317	339	316	381	315	431	417	431	431	403	431	4,566
5	SGTPS Ph-III	288	298	288	298	298	288	298	288	298	298	279	298	3,519
6	Shri Singaji STPS Phase-I	796	822	796	520	416	462	602	796	822	822	769	822	8,444
7	Shri Singaji STPS Phase-II	909	939	909	810	266	420	433	909	939	939	878	939	9,289
A	**Total (MP Genco Thermal-MP Share)**	**2,808**	**2,853**	**2,793**	**2,420**	**1,683**	**1,632**	**2,187**	**2,871**	**2,967**	**2,967**	**2,776**	**2,967**	**30,926**
8	Rani Awanti Bai Sagar, Bargi HPS	26	25	28	30	38	57	42	32	32	32	27	26	395
9	Bansagar Ph I HPS (Tons)	76	75	82	89	111	168	123	96	96	96	79	78	1,167
10	Bansagar Ph-II HPS (Silpara)	6	6	7	7	9	13	10	8	8	8	6	6	93
11	Bansagar Ph-III HPS (Deolond)	6	6	7	8	9	14	10	8	8	8	7	7	100
12	Bansagar Ph-IV HPS (Jhinna)	6	6	6	7	9	13	10	8	8	8	6	6	92
13	Birsinghpur HPS	3	3	3	3	4	6	5	4	4	4	3	3	44
14	Madikheda HPS	7	7	8	8	10	16	12	9	9	9	8	7	110
15	Rajghat HPS	3	3	3	3	4	6	5	4	4	4	3	3	43
16	Gandhisagar HPS	7	7	7	8	10	15	11	9	9	9	7	7	104
17	Ranapratap Sagar HPS	9	9	9	10	13	19	14	11	11	11	9	9	134
18	Jawahar Sagar HPS	8	8	9	9	12	18	13	10	10	10	8	8	124
19	Pench HPS	13	13	14	15	19	29	21	16	16	16	14	13	199
B	**Total (MP Genco Hydel)**	**169**	**167**	**182**	**198**	**248**	**375**	**274**	**214**	**214**	**214**	**177**	**175**	**2,606**
20	NHDC Indira Sagar HPS	128	126	138	149	187	283	206	161	161	161	134	132	1,966
21	NHDC Omkareshwar HPS	75	74	81	88	110	167	122	95	95	95	79	78	1,158
22	NVDA Sardar Sarovar HPS	104	103	112	122	153	231	169	132	132	132	109	108	1,607
23	Rihand HPS	6	6	7	7	9	14	10	8	8	8	6	6	94
24	Matatila HPS	2	2	2	2	3	4	3	2	2	2	2	2	29
25	SJVN Rampur HPS	0	0	0	0	0	0	0	0	0	0	0	0	2

Sr.no.	Particulars	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
26	SJVN Jhakri HPS	1	1	1	1	1	1	1	1	1	1	1	1	9
27	Tehri HPS	0	0	0	0	1	1	1	1	1	1	0	0	6
28	Koteshwar HPP	0	0	0	0	0	0	0	0	0	0	0	0	2
29	NHPC Parbati III	0	0	0	0	0	1	0	0	0	0	0	0	5
30	NHPC Chamera II	0	0	0	0	0	0	0	0	0	0	0	0	3
31	NHPC Chamera III	0	0	0	0	0	0	0	0	0	0	0	0	2
32	NHPC Dulhasti	0	0	0	0	0	1	0	0	0	0	0	0	4
33	NHPC Dhauliganga	0	0	0	0	0	0	0	0	0	0	0	0	3
34	NHPC Sewa II	0	0	0	0	0	0	0	0	0	0	0	0	1
35	NHPC Uri II	-	-	-	-	-	-	-	-	-	-	-	-	-
36	NHPC Kishanganga	0	0	0	0	0	0	0	0	0	0	0	0	3
37	NTPC Koldam HPP I	0	0	0	0	0	0	0	0	0	0	0	0	3
38	NTPC Singrauli Small HPP	0	0	0	0	0	0	0	0	0	0	0	0	0
39	NHPC Lower Subansiri HEP	-	-	-	-	-	-	12	12	12	37	37	38	148
C	**Total (JV Hydel & Other Hydel)**	**318**	**313**	**343**	**372**	**465**	**705**	**526**	**414**	**414**	**438**	**370**	**366**	**5,045**
40	NTPC Korba	263	295	286	246	220	286	284	267	295	295	276	282	3,295
41	NTPC Korba III	43	33	36	44	44	43	44	43	44	44	42	44	506
42	NTPC Vindyachal I	238	224	263	251	215	232	272	223	239	272	254	272	2,955
43	NTPC Vindyachal II	190	197	190	197	153	108	197	190	197	197	184	197	2,196
44	NTPC Vindyachal III	148	153	74	103	153	148	153	148	153	153	143	153	1,682
45	NTPC Vindyachal IV	168	85	146	173	173	168	173	168	173	173	162	173	1,937
46	NTPC Vindyachal V Unit 1	87	90	87	90	90	87	90	87	90	90	74	-	966
47	NTPC Sipat I	62	133	202	209	209	202	209	202	209	209	196	209	2,253
48	NTPC Sipat II	69	120	117	120	120	117	120	117	120	120	70	65	1,276
49	NTPC Mouda I	12	12	12	12	12	12	12	12	12	12	6	10	135
50	NTPC Mouda II Unit 1	16	17	16	17	17	16	17	7	7	10	16	17	172
51	NTPC Solapur STPS	202	208	202	6	208	202	208	202	208	208	195	208	2,257
52	NTPC Gadarwara STPS, Unit-1	479	495	479	495	495	479	495	479	495	495	463	495	5,841
53	NTPC Lara STPS, Raigarh, Unit I	108	112	108	94	58	108	112	108	112	112	105	112	1,248

Sr.no.	Particulars	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
54	NTPC Khargone STPS, Unit-I & II	20	399	440	455	455	440	455	440	455	455	426	379	4,819
55	NTPC Kawas GPP	-	-	-	-	-	-	-	-	-	-	-	-	-
56	NTPC Gandhar GPP	-	-	-	-	-	-	-	-	-	-	-	-	-
57	KAPP Kakrapar	62	64	62	64	64	62	64	62	61	64	38	64	730
58	TAPP Tarapur	129	126	129	133	133	129	133	129	133	133	79	133	1,518
D	**Total WR Region**	**2,295**	**2,763**	**2,848**	**2,710**	**2,821**	**2,838**	**3,039**	**2,884**	**3,004**	**3,043**	**2,728**	**2,812**	**33,784**
59	NTPC Kahalgaon I	-	-	-	-	-	-	-	-	-	-	-	-	-
60	NTPC Kahalgaon II	43	43	42	45	43	43	45	43	45	45	42	45	521
61	NTPC Farakka	-	-	-	-	-	-	-	-	-	-	-	-	-
62	NTPC Talcher	-	-	-	-	-	-	-	-	-	-	-	-	-
63	NTPC Barh	-	-	-	-	-	-	-	-	-	-	-	-	-
64	DVC (MTPS & CTPS)	17	18	17	18	18	17	18	17	18	18	17	18	211
65	DVC (DTPS)	40	42	40	42	42	40	42	40	42	42	39	42	493
E	**Total ER Region**	**101**	**103**	**99**	**104**	**103**	**101**	**104**	**101**	**104**	**104**	**97**	**104**	**1,224**
66	NTPC Auraiya GPP	1	1	1	1	1	1	1	1	1	1	1	1	12
67	NTPC Dadri GPP	1	1	1	1	1	1	1	1	1	1	1	1	15
68	NTPC Anta GPP	1	1	1	1	1	1	1	1	1	1	1	1	7
69	NTPC Firoz Gandhi Unchahar I	0	0	0	0	0	0	0	0	0	0	0	0	2
70	NTPC Firoz Gandhi Unchahar II	1	1	1	1	1	1	1	1	1	1	1	1	7
71	NTPC Firoz Gandhi Unchahar III	0	0	0	0	0	0	0	0	0	0	0	0	4
72	NTPC Firoz Gandhi Unchahar IV	1	1	1	1	1	1	1	1	1	1	1	1	9
73	NTPC Rihand TPS-I	1	1	1	1	1	1	1	1	1	1	1	1	15
74	NTPC Rihand TPS-II	1	1	1	1	1	1	1	1	1	1	1	1	16
75	NTPC Rihand TPS-III	1	1	1	1	1	1	1	1	1	1	1	1	17
76	NTPC NCTP Dadri II	1	1	1	1	1	1	1	1	1	1	1	1	16
77	NTPC Singrauli	2	2	2	2	2	2	2	2	2	2	2	2	28
78	NTPC IGPS I Jhajjar	1	1	1	1	1	1	1	1	1	1	1	1	14
79	MEJA Urja Nigam	0	1	0	1	1	0	1	0	1	1	0	1	6

Sr.no.	Particulars	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
80	NTPC Tanda	1	1	1	1	1	1	1	1	1	1	1	1	8
81	NTPC Badarpur	-	-	-	-	-	-	-	-	-	-	-	-	-
82	Rajasthan (NPCIL)	1	1	1	1	1	1	1	1	1	1	1	1	8
83	NARORA (NPCIL)	1	1	1	1	1	1	1	1	1	1	1	1	7
F	**Total NR Region**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**15**	**16**	**191**
84	Torrent Power	19	20	19	20	20	19	20	19	13	14	16	17	214
85	BLA Power, Unit-I & II	16	17	16	17	10	14	17	16	17	17	16	17	189
86	Jaypee Bina Power	211	154	211	145	190	180	218	211	218	218	204	218	2,378
87	Lanco Amarkantak TPS Unit 1	178	183	178	183	56	178	183	178	183	183	172	183	2,038
88	Reliance UMPP, Sasan	892	720	778	871	808	816	947	917	947	947	886	922	10,450
89	Essar Power STPS	37	25	37	38	38	37	38	37	38	38	36	25	422
90	Jaiprakash Power STPS, Nigri	303	313	303	105	313	303	313	303	313	313	292	313	3,483
91	MB Power STPS, Unit-I	133	138	133	138	61	97	138	133	138	138	129	101	1,478
92	MB Power STPS, Unit-II	133	138	133	138	61	97	138	133	138	138	129	101	1,478
93	Jhabua Power STPS, Unit-1	130	135	130	135	24	130	135	130	135	135	126	135	1,478
94	DB Power STPS Unit-1	-	-	-	-	-	-	-	-	-	-	-	-	-
95	Pench Thermal Energy, Unit-1	-	-	-	-	-	-	-	-	-	-	-	-	-
G	**Total (IPPs)**	**2,052**	**1,842**	**1,938**	**1,788**	**1,579**	**1,870**	**2,146**	**2,077**	**2,139**	**2,141**	**2,005**	**2,032**	**23,608**
96	Renewable Energy (Solar)	1,089	1,165	816	765	745	735	714	714	714	787	950	1,103	10,298
97	Renewable Energy (other than Solar)	524	678	623	631	634	469	450	450	450	469	518	569	6,465
H	**Total Renewable Energy**	**1,613**	**1,843**	**1,440**	**1,396**	**1,379**	**1,204**	**1,164**	**1,164**	**1,164**	**1,256**	**1,468**	**1,672**	**16,763**
I	**Grand Total**	**9,372**	**9,900**	**9,659**	**9,006**	**8,294**	**8,740**	**9,456**	**9,740**	**10,022**	**10,180**	**9,635**	**10,144**	**114,148**

5.3 Renewable Purchase Obligation

5.3.1 Hon'ble Commission vide notification dated 02.11.2021 had notified the MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy), (Revision-II), Regulations, 2021 wherein it had specified the RPO obligation. The Hon'ble Commission had considered procurement of power from renewable energy sources through PPA or short-term market to ensure RPO compliance. In the said Regulation, while defining the RPO percentage in compliance from Solar and Other than Solar, the Hon'ble Commission specified that as percentage of their annual procurement of electrical energy excluding consumption met from hydro sources of power during the financial year.

5.3.2 The clause 3.1 of the MPERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations , 2021 is stipulated below:

"The minimum quantum of electricity to be procured by obligated entities from generators of renewable energy sources of Energy including Co-generation from Renewable energy sources of energy expressed as percentage of their total annual procurement of electrical energy excluding consumption met from hydro sources of power during the financial year shall be as under".

5.3.3 As can be verified from the above Regulation, Hon'ble Commission defined a percentage of RPO on Ex-Bus Requirement by excluding Hydel sources of power in the Tariff Regulations, 2021. The Petitioner, in view of the RPO targets as specified under Tariff Regulations, 2021 vide notification dated 12th November 2021 & National Tariff Policy, 2016 had made an arrangement under various PPA for its compliance. As result, there was a surplus situation of availability from Solar and Deficit situation of availability of Non-solar sources during the FY 2023-24, for complying with RPO targets. Accordingly, the Petitioners have calculated the RPO requirement as shown in the following table:

Table 86: Renewable Purchase Obligation for FY 2023-24 (MUs)

Sr.	Particulars	FY 2023-24
A	**RPO Obligations (%)**	**20.00%**
1	Solar	10.00%
2	Other than Solar	10.00%
B	**Ex-Bus RPO Requirement based on MoD (MUs) excluding Hydro**	**16,140.99**
1	Solar	8,070.50
2	Other than Solar	8,070.50
C	**Energy Available from Existing Sources (MUs)**	**16,762.58**
1	Solar	10,297.82
2	Other than Solar	6,464.76
D	**Shortfall (MUs)**	**1,605.74**
1	Solar	-
2	Other than Solar	1,605.74
E	**Extra Power Available for Sale after meeting RPO obligations which needs to be sold (MUs)**	2,227.32
1	Solar	2,227.32
2	Other than Solar	-
G	**Renewable Energy Purchase Rate (Paisa/kWh)**	
1	Solar	317.50

Sr.	Particulars	FY 2023-24
2	Other than Solar	451.77
H	**Renewable Energy Purchase from Existing Source (Rs Crores)**	**6,190.14**
1	Solar	3,269.55
2	Other than Solar	2,920.60
I	**Renewable Energy Purchase for Shortage Power (Rs Crores)**	**725.43**
1	Solar	-
2	Other than Solar	725.43
J	**Total Renewable Energy Purchase to meet RPO (Rs Crores)**	**6,915.57**
1	Solar	3,269.55
2	Other than Solar	3,646.02
K	**Renewable Energy Sale Rate for Surplus Power (Paisa/kWh)**	
1	Solar	470.40
2	Other than Solar	470.40
L	**Revenue from sale of additional Renewable Energy (Rs Crores)**	**755.34**
1	Solar	-
2	Other than Solar	755.34
M	**Net additional cost to be borne due to shortage of RPO (Rs. Cr)**	**(29.91)**
1	Solar	-
2	Other than Solar	(29.91)

5.3.4 It may be observed from the above table that there is a surplus of the RPO from solar shortfall of the RPO from Non-Solar for FY 2023-24 and the Petitioners would meet its Renewable Purchase Obligation requirement from procuring of the additional Renewable Energy with an objective to promote renewable energy.

5.4 Backing down of Power

5.4.1 After fully meeting the requirement of the State and selling power on the power exchange, the Petitioners still have to partially back-down plants so as to save on the variable costs being incurred. The Petitioners have applied month-wise merit order dispatch principle on the basis of variable costs for FY 2023-24 and thereafter, after considering all generating stations allocated to MPPMCL. The Petitioners have considered the actual data for FY 2021-22 & FY 2022-23 (till September 22) for calculating normative availability including backing down of power for FY 2023-24.

5.4.2 The Petitioners have also considered partial backing down of units/stations which are higher up in the MoD, during those periods when their scheduling is not required to meet the demand in periods when there is less demand in open market also. This addresses demand fluctuations and ensures that power procured from cheaper sources is fully utilized and avoids procurement of power from costlier sources. The resultant benefit of reduced power procurement cost or sale at a higher rate, whichever the case maybe, is in turn being passed on to the consumers.

5.4.3 The following Table shows the stations which are considered for partial/full back down for FY 2023-24:

Table 87: Backing Down of Power (MUs) Plant Source Wise

Sl. No.	Source	FY 2023-24		
		Energy Availability	Energy Scheduled	Backdown
1	Amarkantak TPS Ph-III	1,511	1,511	0
2	Satpura TPS Ph-II & III	0	0	0
3	Satpura TPS Ph-IV	3,597	3,597	0
4	SGTPS Ph-I & II	4,566	4,566	0
5	SGTPS Ph-III	3,519	3,519	0
6	Shri Singaji STPS Phase-I	8,444	8,444	0
7	Shri Singaji STPS Phase-II	9,289	9,289	0
A	**Total (MP Genco Thermal-MP Share)**	**30,926**	**30,926**	**0**
8	Rani Awanti Bai Sagar, Bargi HPS	395	395	0
9	Bansagar Ph I HPS (Tons)	1,167	1,167	0
10	Bansagar Ph-II HPS (Silpara)	93	93	0
11	Bansagar Ph-III HPS (Deolond)	100	100	0
12	Bansagar Ph-IV HPS (Jhinna)	92	92	0
13	Birsinghpur HPS	44	44	0
14	Madikheda HPS	110	110	0
15	Rajghat HPS	43	43	0
16	Gandhisagar HPS	104	104	0
17	Ranapratap Sagar HPS	134	134	0
18	Jawahar Sagar HPS	124	124	0
19	Pench HPS	199	199	0
B	**Total (MP Genco Hydel)**	**2,606**	**2,606**	**0**
20	NHDC Indira Sagar HPS	1,966	1,966	0
21	NHDC Omkareshwar HPS	1,158	1,158	0
22	NVDA Sardar Sarovar HPS	1,607	1,607	0
23	Rihand HPS	94	94	0
24	Matatila HPS	29	29	0
25	SJVN Rampur HPS	2	2	0
26	SJVN Jhakri HPS	9	9	0
27	Tehri HPS	6	6	0
28	Koteshwar HPP	2	2	0
29	NHPC Parbati III	5	5	0
30	NHPC Chamera II	3	3	0
31	NHPC Chamera III	2	2	0
32	NHPC Dulhasti	4	4	0
33	NHPC Dhauliganga	3	3	0
34	NHPC Sewa II	1	1	0
35	NHPC Uri II	0	0	0
36	NHPC Kishanganga	3	3	0
37	NTPC Koldam HPP I	3	3	0

Sl. No.	Source	FY 2023-24		
		Energy Availability	Energy Scheduled	Backdown
38	NTPC Singrauli Small HPP	0	0	0
39	NHPC Lower Subansiri HEP Unit-1	148	148	0
C	**Total (JV Hydel & Other Hydel)**	**5,045**	**5,045**	**0**
40	NTPC Korba	3,295	3,295	0
41	NTPC Korba III	506	506	0
42	NTPC Vindyachal I	2,955	2,955	0
43	NTPC Vindyachal II	2,196	2,196	0
44	NTPC Vindyachal III	1,682	1,682	0
45	NTPC Vindyachal IV	1,937	1,937	0
46	NTPC Vindyachal V Unit 1	966	966	0
47	NTPC Sipat I	2,253	2,253	0
48	NTPC Sipat II	1,276	1,276	0
49	NTPC Mouda I	135	0	135
50	NTPC Mouda II Unit 1	172	0	172
51	NTPC Solapur STPS	2,257	0	2,257
52	NTPC Gadarwara STPS, Unit-1	5,841	0	5,841
53	NTPC Lara STPS, Raigarh, Unit I	1,248	1,248	0
54	NTPC Khargone STPS, Unit-I & II	4,819	455	4,364
55	NTPC Kawas GPP	0	0	0
56	NTPC Gandhar GPP	0	0	0
57	KAPP Kakrapar	730	730	0
58	TAPP Tarapur	1,518	1,518	0
59	NTPC Gadarwara STPS, Unit-2	0	0	0
60	NTPC Lara STPS, Raigarh, Unit II	0	0	0
61	NTPC Lara STPS, Raigarh, Unit III	0	0	0
62	NTPC Lara STPS, Raigarh, Unit IV	0	0	0
63	NTPC Lara STPS, Raigarh, Unit V	0	0	0
D	**Total WR Region**	**33,784**	**21,016**	**12,768**
64	NTPC Kahalgaon I	0	0	0
65	NTPC Kahalgaon II	521	521	0
66	NTPC Farakka	0	0	0
67	NTPC Talcher	0	0	0
68	NTPC Barh	0	0	0
69	DVC (MTPS & CTPS)	211	0	211
70	DVC (DTPS)	493	0	493
E	**Total ER Region**	**1,224**	**521**	**704**
71	NTPC Auraiya GPP	12	0	12
72	NTPC Dadri GPP	15	15	0
73	NTPC Anta GPP	7	7	0
74	NTPC Firoz Gandhi Unchahar I	2	0	2

Sl. No.	Source	FY 2023-24		
		Energy Availability	Energy Scheduled	Backdown
75	NTPC Firoz Gandhi Unchahar II	7	0	7
76	NTPC Firoz Gandhi Unchahar III	4	0	4
77	NTPC Firoz Gandhi Unchahar IV	9	0	9
78	NTPC Rihand TPS-I	15	15	0
79	NTPC Rihand TPS-II	16	16	0
80	NTPC Rihand TPS-III	17	17	0
81	NTPC NCTP Dadri II	16	0	16
82	NTPC Singrauli	28	28	0
83	NTPC IGPS I Jhajjar	14	0	14
84	MEJA Urja Nigam	6	6	0
85	NTPC Tanda	8	0	8
86	NTPC Badarpur	0	0	0
87	Rajasthan (NPCIL)	8	8	0
88	NARORA (NPCIL)	7	7	0
F	**Total NR Region**	**191**	**120**	**72**
89	Torrent Power	214	0	214
90	BLA Power, Unit-I & II	189	189	0
91	Jaypee Bina Power	2,378	2,378	0
92	Lanco Amarkantak TPS Unit 1	2,038	2,038	0
93	Reliance UMPP, Sasan	10,450	10,450	0
94	Essar Power STPS	422	0	422
95	Jaiprakash Power STPS, Nigri	3,483	3,483	0
96	MB Power STPS, Unit-I	1,478	1,478	0
97	MB Power STPS, Unit-II	1,478	1,478	0
98	Jhabua Power STPS, Unit-1	1,478	1,478	0
99	DB Power STPS Unit-1	0	0	0
100	Pench Thermal Energy, Unit-1	0	0	0
G	**Total (IPPs)**	**23,608**	**22,972**	**636**
101	Renewable Energy (Solar)	10,298	10,298	0
102	Renewable Energy (other than Solar)	6,465	6,465	0
H	**Total Renewable Energy**	**16,763**	**16,763**	**0**
	Total	**114,148**	**99,968**	**14,180**

5.5 Management of Surplus Energy

5.5.1 As regard to management of surplus energy, the Hon'ble commission admitted quantum of 14,608.19 MU as surplus Energy available for sale in Power Exchange for FY 2023-24 at rate of Rs.3.33 per unit resulting into saving of Rs. 398.93 Crore in power purchase cost. It has been observed that the quantum of sale of surplus power have always being approved on higher side in respective Tariff Orders as against the realistic sale of surplus energy sold by the Licensees. The consideration of higher quantum of

surplus results in reducing the power purchase cost and thereby ARR of Discoms.

5.5.2 However, the Petitioners have been projecting the realistic sale of surplus energy based on its past experience considering the actual energy traded at power exchange during the past years. It is submitted that the sale of power at power exchange depends on the factors such as Demand situation of MP-State in MW, availability of surplus energy with MPPMCL in MW in time blocks, Demand-Supply position in the power sector and Marginal Clearing Price (MCP) at the market. It is noteworthy to mention that Petitioners do not have control over the availability of power stations and MCP of Power exchange. The comparative analysis of the quantum of surplus sale of power admitted by the Hon'ble Commission as against actual sale of surplus power sold by the Petitioners over the past years is shown in Table below:

Table 88: Surplus energy considered by the Commission against actual sale of surplus energy (MU)

Sr. No.	FY	As per Tariff Order	Actually sold through Exchange
1	FY 2019-20	25,657	2897
2	FY 2020-21	15,252	1558
3	FY 2021-22	24,887	2,983
4	FY 2022-23	19,456	-
5	FY 2023-24	14,608.	-

5.5.3 The approval of higher quantum of surplus sale is mainly because the Hon'ble Commission approves the sales at normative losses and the difference of approved sales and availability are being considered as surplus power available for sale. However, on actual scenario considering the Demand-Supply position with actual losses the results are different. For FY 2023-24 also, as per the current power supply position, and after meeting the energy requirement at actual loss situation, the Petitioners envisage to have surplus energy in few of the time blocks and months in the ensuing year. Further, in case the Petitioner projects the surplus sale considering the past trend, the same would not get approved as the Hon'ble Commission adopts different methodology. Hence, in order to have minimum deviation in projection and approval of power purchase cost, MPPMCL has considered ambitious target to sell around 50% to 60% of surplus energy available, i.e., around 11,612 MUs. However, it is prayed to the Hon'ble Commission to consider lower quantum of surplus power to be sold through exchange considering the past actuals.

Table 89: Surplus energy sale for FY 2023-24 (MU)

Particulars	UNIT	Normative	Actual
Ex-Bus Availability	MU	114,147.74	114,147.74
Ex-Bus Energy Required by Discom's	MU	88,356	93,911
Backdown of Power including Surplus Sale of Power	MU	25,792	20,237
Expected energy	%	45%	57%
Surplus Units available for Sale	MU	11,612	11,612
Backdown	MU	14,180	8,625

5.5.4 Further, as far as rate for sale of surplus energy is concerned, the Petitioner has observed the IEX rate on the basis of weighted average of the past 24 months (From Oct-2020 to Oct-2022) which is Paisa 470.40 per unit. Hence for the purpose of computation of revenue from surplus energy, the IEX rate is taken at Paisa 470.40 per unit for FY 2023-24.

5.5.5 The energy surplus of the Discom's vis-à-vis overall energy availability and energy requirement as well as the details of revenue from sale of energy are shown in the Table below:

Table 90: Management of Surplus Power for FY 2023-24 (MUs)

Particulars	UNIT	FY 24
Ex-Bus Availability	MU	1,14,147
Ex-Bus Energy Required by Discom's	MU	88,356
Backdown of Power including Surplus Sale of Power	MU	25,792
Backdown	MU	14,179
Surplus Units available for Sale	MU	11,612
IEX Rate (Paisa/kWh)	Ps./Kwh	470.40
Revenue from Sale of Surplus Power	Rs. Cr	5,462
Purchase Cost of Surplus Power- Variable (Rs Crores)	Rs. Cr	3,827
Total saving in variable cost from sale of surplus energy	**Rs. Cr**	**1,635**

5.5.6 The above revenue has been subtracted from the variable power purchase costs of MPPMCL allocated stations, while computing the total power purchase costs of the Discoms.

5.5.7 **The Petitioner hereby prays to the Hon'ble Commission to approve Assessment of Availability including treatment of surplus energy as indicated in the para above.**

A6: POWER PURCHASE COST

6.1 Details of Cost for Power Stations

The basis of considering the Fixed cost (Rs. Crores) and the variable charge (Paise/kWh) of different power stations has been indicated in the below table:

Table 91: Basis for consideration of Fixed & Variable Charges for FY 2023-24

Sl No	Source	Fixed Charge (Rs. Cr)	Basis for Fixed Charges	Variable Charge (Rs. /kWh)	Basis for Energy Charges
1	Amarkantak TPS Ph-III	164	MPERC MYT Order dated 19.05.2021 in respect of MP Genco Plants for FY 2019-20 to FY 2023-24 in P.no. 53 of 2020	3.25	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
2	Satpura TPS Ph-II & III	0		0.00	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
3	Satpura TPS Ph-IV	604		2.45	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
4	SGTPS Ph-I & II	457		2.48	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
5	SGTPS Ph-III	309		2.10	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
6	Shri Singaji STPS Phase-I	1,247		3.41	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
7	Shri Singaji STPS Phase-II	1,314		3.06	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
A	**Total (MP Genco Thermal-MP Share)**	**4,095**			
8	Rani Awanti Bai Sagar, Bargi HPS	8	As Approved by the Hon'ble Commission in MYT order	1.00	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
9	Bansagar Ph I HPS (Tons)	45	MPERC MYT Order dated 19.05.2021 in respect of MP Genco Plants for FY 2019-20 to FY 2023-24 in P.no. 53 of 2020	0.39	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
10	Bansagar Ph-II HPS (Silpara)	26		0.73	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
11	Bansagar Ph-III HPS (Deolond)	22		1.11	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
12	Bansagar Ph-IV HPS (Jhinna)	3		0.76	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)

Sl No	Source	Fixed Charge (Rs. Cr)	Basis for Fixed Charges	Variable Charge (Rs. /kWh)	Basis for Energy Charges
13	Birsinghpur HPS	3	MPERC MYT Order dated 19.05.2021 in respect of MP Genco Plants for FY 2019-20 to FY 2023-24 in P.no. 53 of 2020	0.82	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
14	Madikheda HPS	3		1.48	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
15	Rajghat HPS	3		2.52	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
16	Gandhisagar HPS	2		1.00	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
17	Ranapratap Sagar HPS	0		1.54	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
18	Jawahar Sagar HPS	0		1.54	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
19	Pench HPS	9		0.51	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
B	**Total (MP Genco Hydel)**	**122**			
20	NHDC Indira Sagar HPS	279	As Approved by the Hon'ble Commission in MYT order	2.00	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
21	NHDC Omkareshwar HPS	189	As Approved by the Hon'ble Commission in MYT order	2.12	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
22	NVDA Sardar Sarovar HPS	101	As Approved by the Hon'ble Commission in MYT order	0.82	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
23	Rihand HPS	0	As Approved by the Hon'ble Commission in MYT order	0.41	As Approved by the Hon'ble Commission in MYT order
24	Matatila HPS	0	As Approved by the Hon'ble Commission in MYT order	0.41	As Approved by the Hon'ble Commission in MYT order
25	SJVN Rampur HPS	1	CERC Order dtd. 24-01-2022 in P.no. 28/GT/2020 for 01.04.2019 to 31.03.2024	1.85	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
26	SJVN Jhakri HPS	1	CERC Order dtd. 16-09-2021 in P.no. 30/GT/2020 for 01.04.2019 to 31.03.2024	1.18	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
27	Tehri HPS	1	CERC Order dtd. 13-05-2022 in P.no. 97/GT/2020 for 01.04.2019 to 31.03.2024	1.99	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
28	Koteshwar HPP	1	CERC Order dtd. 03.10.2022 in P.no. 244/GT/2020 for 01.04.2019 to 31.03.2024	0.39	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
29	NHPC Parbati III	1	CERC Order dtd. 23-04-2019 in P.no. 6/GT/2017 for 01.04.2014 to 31.03.2019	1.26	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)

Sl No	Source	Fixed Charge (Rs. Cr)	Basis for Fixed Charges	Variable Charge (Rs. /kWh)	Basis for Energy Charges
30	NHPC Chamera II	0	CERC Order dtd. 17-06-2016 in P.no. 233/GT/2014	1.25	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
31	NHPC Chamera III	1	CERC Order dtd. 29.01.2020 in P.no. 321/GT/2018 for 01.04.2014 to 31.03.2019	2.12	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
32	NHPC Dulhasti	1	CERC Order dtd. 09.05.2022 in P.no. 146/GT/2020 for 01.04.2019 to 31.03.2024	2.60	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
33	NHPC Dhauliganga	0	CERC Order dtd. 18-08-2022 in P.no. 284/GT/2020 for 01.04.2019 to 31.03.2024	1.24	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
34	NHPC Sewa II	0	CERC Order dtd. 05-02-2020 in P.no. 322/GT/2018 for FY 2014-15 to FY 2018-19.	3.34	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
35	NHPC Uri II	0	CERC Order dtd. 05-02-2020 in P.no. 308/GT/2018 for FY 2014-15 to FY 2018-19.	0.00	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
36	NHPC Kishanganga	1	CERC Order dtd. 28-10-2019 in P.no. 43/GT/2018	2.18	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
37	NTPC Koldam HPP I	1	CERC Order dtd. 05-04-2018 in P.no. 107/GT/2015 up to FY 2018-19	2.61	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
38	NHPC Lower Subansiri HEP Unit-1	0		5.09	As per levelised tariff.
C	**Total (JV Hydel & Other Hydel)**	**579**			
39	NTPC Korba	248	CERC Ord dtd. 21.04.2022 in P.no. 486/GT/2020 for 01-04-2019 to 31-03-2024	1.73	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
40	NTPC Korba III	57	CERC Ord dtd. 23.03.2022 in P.no. 419/GT/2020 for 01-04-2019 to 31-03-2024	1.61	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
41	NTPC Vindyachal I	270	CERC Order 31.01.2022 in P.no. 401/GT/2022 for 01-04-2019 to 31-03-2024	1.99	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
42	NTPC Vindyachal II	170	CERC Order 10-06-2022 in P.no. 485/GT/2014 for 01-04-2019 to 31-03-2024	1.93	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
43	NTPC Vindyachal III	176	CERC Order 24-02-2017 in P.no. 342/GT/2014 for 01-04-2014 to 31-03-2019	1.72	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
44	NTPC Vindyachal IV	304	CERC Order 10-03-2017 in P.no. 339/GT/2014 for 01-04-2014 to 31-03-2019	1.71	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
45	NTPC Vindyachal V Unit 1	160	CERC Order 31-08-2016 in P.no. 234/GT/2015 for 30-10-2015 to 31-03-2019	1.77	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
46	NTPC Sipat I	282	CERC Order 06-06-2022 in P.no. 425/GT/2020 for 01-04-2014 to 31-03-2019	2.24	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)

Sl No	Source	Fixed Charge (Rs. Cr)	Basis for Fixed Charges	Variable Charge (Rs. /kWh)	Basis for Energy Charges
47	NTPC Sipat II	125	CERC Order 06-06-2022 in P.no. 435/GT/2020 for 01-04-2014 to 31-03-2019	1.57	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
48	NTPC Mouda I	25	CERC TuP Ord dtd.19-09-2022 in P.no.393/GT/2020 for 01-04-2014 to 31-03-2019	5.67	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
49	NTPC Mouda II Unit 1	25	CERC Order 05-04-2019 in P.no. 142/GT/2016 for period CoD to 31-03-2019	4.43	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
50	NTPC Solapur STPS	311	CERC Order dtd. 06-01-2020 in P.no. 178/GT/2017 for 25-09-2017 to 31-03-2019	4.12	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
51	NTPC Gadarwara STPS, Unit-1	1,140	Prorated Fixed Charges based on actual bills for the Period Sept'21 to Aug'22	3.84	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
52	NTPC Lara STPS, Raigarh, Unit I	138	Prorated Fixed Charges based on actual bills for the Period Sept'21 to Aug'22	2.28	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
53	NTPC Khargone STPS, Unit-I & II	852	Prorated Fixed Charges based on actual bills for the Period Sept'21 to Aug'22	3.76	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
54	NTPC Kawas GPP	96	CERC Order 04-06-2022 in P.no. 488/GT/2020 for 01-04-2019 to 31-03-2024	3.25	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
55	NTPC Gandhar GPP	89	CERC Order 04.06.2022 in P.no. 420/GT/2020 for 01-04-2019 to 31-03-2024	2.80	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
56	KAPP Kakrapar	0		2.34	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
57	TAPP Tarapur	0	Tariff @ Rs 2.9058 as DAE Notification dtd 22.03.2018 for 01.04.2017 to 31.03.2022	3.45	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
58	NTPC Gadarwara STPS, Unit-2	0		3.73	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
59	NTPC Lara STPS, Raigarh, Unit II	138	Prorated Fixed Charges based on actual bills for the Period Sept'21 to Aug'22	2.28	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
D	**Total WR Region**	**4,607**			
60	NTPC Kahalgaon I	0		0.00	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
61	NTPC Kahalgaon II	57	CERC TuP Ord 21-04-2022 in P.no. 362/GT/2020 for 01-04-2014 to 31-03-2019	3.28	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
62	DVC (MTPS & CTPS)	37	CERC Order dtd. 17-0-2017 in P.no. 180/GT/2015 for 01.04.2014 to 31.03.2019	3.81	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
63	DVC (DTPS)	120	CERC Order dtd. 17-03-2017 in P.no.	3.81	Energy Charge as per Weighted Avg of past 12

Sl No	Source	Fixed Charge (Rs. Cr)	Basis for Fixed Charges	Variable Charge (Rs. /kWh)	Basis for Energy Charges
			205/GT/2015 for 01.04.2014 to 31.03.2019		months Bills (Sep-21 to Aug-22)
E	**Total ER Region**	**213**			
64	NTPC Auraiya GPP	1	CERC Order dtd. 18-04-2017 in P.no. 285/GT/2014 for 01-04-2014 to 31-03-2019	8.76	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
65	NTPC Dadri GPP	1	CERC Order dtd. 13-11-2021 in P.no. 400/GT/2020 for 01-04-2019 to 31-03-2024	2.65	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
66	NTPC Anta GPP	1	CERC Order dtd. 19-09-2017 in P.no. 287/GT/2014 for 01-04-2014 to 31-03-2019	3.09	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
67	NTPC Firoz Gandhi Unchahar I	0	CERC Order dtd. 07.10.2022 in P.no. 431/GT/2020 for 01.04.2019 to 31.03.2024	4.47	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
68	NTPC Firoz Gandhi Unchahar II	1	CERC Order dtd. 12-12-2021 in P.no. 438/GT/2020 for 01.04.2019 to 31.03.2024	4.39	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
69	NTPC Firoz Gandhi Unchahar III	0	CERC Order dtd. 07.10.2022 in P.no. 427/GT/2020 for 01.04.2019 to 31.03.2024	4.49	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
70	NTPC Firoz Gandhi Unchahar IV	1	CERC TuP Ord dtd. 16.03.2022 in P.no. 364/GT/2020 for FY 2017-18 & FY 2018-19	4.64	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
71	NTPC Rihand TPS-I	1	CERC Order dtd. 23-08-2016 in P.no. 291/GT/2014	1.88	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
72	NTPC Rihand TPS-II	1	CERC Order dtd. 08-04-2022 in P.no. 426/GT/2020 for 01-04-2019 to 31-03-2024	1.83	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
73	NTPC Rihand TPS-III	3	CERC Order dtd. 06-02-2017 in P.no. 372/GT/2014 for 01-04-2014 to 31-03-2019	1.92	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
74	NTPC NCTP Dadri II	2	CERC Ord 02-06-2022 in P.no. 2/GT/2021 for 01-04-2019 to 31-03-2024	4.67	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
75	NTPC Singrauli	2	CERC Order dtd. 28-07-2016 in P.no. 290/GT/2014 for 01-04-2014 to 31-03-2019	1.89	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
76	NTPC IGPS I Jhajjar	2	CERC Order dtd. 22.09.2022 in P.no. 489/GT/2020 for 01-04-2019 to 31-03-2024	4.57	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
77	MEJA Urja Nigam	2	CERC Ord dtd. 02-05-2019 in P.no. 341/GT/2018 for 31.10.2018 to 31.03.2019	2.65	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
78	NTPC Tanda	3	Fixed Charge as per past 12 months Bills (Sep-21 to Aug-22)	4.01	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
79	Rajasthan (NPCIL)	0	Tariff @ Rs 2.9914 as DAE Notification dtd 22.03.2018 for 01.04.2017 to 31.03.2022	4.05	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)

Sl No	Source	Fixed Charge (Rs. Cr)	Basis for Fixed Charges	Variable Charge (Rs. /kWh)	Basis for Energy Charges
80	NARORA (NPCIL)	0	Tariff @ Rs 3.3439 as DAE Notification dtd 22.03.2018 for 01.04.2017 to 31.03.2022	3.08	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
F	**Total NR Region**	**22**			
81	Torrent Power	34	CERC Ord dtd 10-03-2022 in P.no. 236/GT/2020 for 01.04.2019 to 31.03.2024	4.69	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
82	BLA Power, Unit-I & II	19	MPERC Ord dtd 25-10-2021 in P.no. 17/2018 for FY 2016-17 to FY 2018-19	3.15	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
83	Jaypee Bina Power	453	MPERC Ord dtd 30-04-2021 in P.no. 44/2020	3.39	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
84	Lanco Amarkantak TPS Unit 1	264	MPERC Ord dtd 24-08-2021 in P.no. 60/2020 for FY 2014-15 to FY 2018-19	2.58	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
85	Reliance UMPP, Sasan	193	Prorated Fixed Charges based on actual bills for the Period Sept'21 to Aug'22	1.34	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
86	Essar Power STPS	0		5.77	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
87	Jaiprakash Power STPS, Nigri	618	MPERC Ord dtd 03-05-2021 in P.no. 43/2020 for FY 2019 to FY 2024	0.92	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
88	MB Power STPS, Unit-I	264	MPERC Ord dtd 01-05-2021 in P.no. 46/2020 for FY 2019 to FY 2024	2.97	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
89	MB Power STPS, Unit-II	264	MPERC Ord dtd 01-05-2021 in P.no. 46/2020 for FY 2019 to FY 2024	2.97	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
90	Jhabua Power STPS, Unit-1	272	MPERC Ord dtd 08-05-2021 in P.no. 47/2020 for FY 2019 to FY 2024	2.86	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
G	**Total (IPPs)**	**2,380**			
91	Renewable Energy (Solar)	0		3.17	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
92	Renewable Energy (other than Solar)	0		4.52	Energy Charge as per Weighted Avg of past 12 months Bills (Sep-21 to Aug-22)
H	**Total Renewable Energy**				
	Total	**12,017**			

6.2 Merit Order Dispatch

6.2.1 As already explained above, all plants have been considered to be allocated to MPPMCL and a common MoD has been applied to all the plants after considering the backing down of selected stations as explained above. The MoD applied for FY 2023-24 is given in the following table:

Table 92: Merit Order Dispatch for FY 2023-24

	Merit Order Dispatch	FY 2023-24	
Sr.no	Particulars	Variable Charge (Paisa/kWh)	Availability (MUs)
1	KAPP Kakrapar	2.34	730
2	TAPP Tarapur	3.45	1,518
3	Rajasthan (NPCIL)	4.05	8
4	NARORA (NPCIL)	3.08	7
5	NTPC Singrauli Small HPP	0.00	0
6	NHPC Lower Subansiri HEP Unit-1	5.09	148
7	Renewable Energy (Solar)	3.17	10,298
8	Renewable Energy (other than Solar)	4.52	6,465
9	Bansagar Ph I HPS (Tons)	0.39	1,167
10	Koteshwar HPP	0.39	2
11	Rihand HPS	0.41	94
12	Matatila HPS	0.41	29
13	Pench HPS	0.51	199
14	Bansagar Ph-II HPS (Silpara)	0.73	93
15	Bansagar Ph-IV HPS (Jhinna)	0.76	92
16	NVDA Sardar Sarovar HPS	0.82	1,607
17	Birsinghpur HPS	0.82	44
18	Jaiprakash Power STPS, Nigri	0.92	3,483
19	Rani Awanti Bai Sagar, Bargi HPS	1.00	395
20	Gandhisagar HPS	1.00	104
21	Bansagar Ph-III HPS (Deolond)	1.11	100
22	SJVN Jhakri HPS	1.18	9
23	NHPC Dhauliganga	1.24	3
24	NHPC Chamera II	1.25	3
25	NHPC Parbati III	1.26	5
26	Reliance UMPP, Sasan	1.34	10,450
27	Madikheda HPS	1.48	110
28	Ranapratap Sagar HPS	1.54	134
29	Jawahar Sagar HPS	1.54	124
30	NTPC Sipat II	1.57	1,276
31	NTPC Korba III	1.61	506
32	NTPC Vindyachal IV	1.71	1,937
33	NTPC Vindyachal III	1.72	1,682
34	NTPC Korba	1.73	3,295
35	NTPC Vindyachal V Unit 1	1.77	966

	Merit Order Dispatch	FY 2023-24	
Sr.no	**Particulars**	**Variable Charge (Paisa/kWh)**	**Availability (MUs)**
36	NTPC Rihand TPS-II	1.83	16
37	SJVN Rampur HPS	1.85	2
38	NTPC Rihand TPS-I	1.88	15
39	NTPC Singrauli	1.89	28
40	NTPC Rihand TPS-III	1.92	17
41	NTPC Vindyachal II	1.93	2,196
42	Tehri HPS	1.99	6
43	NTPC Vindyachal I	1.99	2,955
44	NHDC Indira Sagar HPS	2.00	1,966
45	SGTPS Ph-III	2.10	3,519
46	NHPC Chamera III	2.12	2
47	NHDC Omkareshwar HPS	2.12	1,158
48	NHPC Kishanganga	2.18	3
49	NTPC Sipat I	2.24	2,253
50	NTPC Lara STPS, Raigarh, Unit I	2.28	1,248
51	NTPC Lara STPS, Raigarh, Unit II	2.28	0
52	Satpura TPS Ph-IV	2.45	3,597
53	SGTPS Ph-I & II	2.48	4,566
54	Rajghat HPS	2.52	43
55	Lanco Amarkantak TPS Unit 1	2.58	2,038
56	NHPC Dulhasti	2.60	4
57	NTPC Koldam HPP I	2.61	3
58	MEJA Urja Nigam	2.65	6
59	NTPC Dadri GPP	2.65	15
60	NTPC Gandhar GPP	2.80	0
61	Jhabua Power STPS, Unit-1	2.86	1,478
62	MB Power STPS, Unit-I	2.97	1,478
63	MB Power STPS, Unit-II	2.97	1,478
64	Shri Singaji STPS Phase-II	3.06	9,289
65	NTPC Anta GPP	3.09	7
66	BLA Power, Unit-I & II	3.15	189
67	Amarkantak TPS Ph-III	3.25	1,511
68	NTPC Kawas GPP	3.25	0
69	NTPC Kahalgaon II	3.28	521
70	NHPC Sewa II	3.34	1
71	Jaypee Bina Power	3.39	2,378
72	Shri Singaji STPS Phase-I	3.41	8,444
73	NTPC Gadarwara STPS, Unit-2	3.73	0
74	NTPC Khargone STPS, Unit-I & II	3.76	4,819
75	DVC (MTPS & CTPS)	3.81	211
76	DVC (DTPS)	3.81	493
77	NTPC Gadarwara STPS, Unit-1	3.84	5,841
78	NTPC Tanda	4.01	8

	Merit Order Dispatch	FY 2023-24	
Sr.no	**Particulars**	**Variable Charge (Paisa/kWh)**	**Availability (MUs)**
79	NTPC Solapur STPS	4.12	2,257
80	NTPC Firoz Gandhi Unchahar II	4.39	7
81	NTPC Mouda II Unit 1	4.43	172
82	NTPC Firoz Gandhi Unchahar I	4.47	2
83	NTPC Firoz Gandhi Unchahar III	4.49	4
84	NTPC IGPS I Jhajjar	4.57	14
85	NTPC Firoz Gandhi Unchahar IV	4.64	9
86	NTPC NCTP Dadri II	4.67	16
87	Torrent Power	4.69	214
88	NTPC Mouda I	5.67	135
89	Essar Power STPS	5.77	422
90	NTPC Auraiya GPP	8.76	12
91	**Total**		**114,148**

6.3 Power Purchase Cost for MP

6.3.1 The following tables indicates the Total costs (fixed costs and variable costs) of Stations allocated to MP State and the three Discoms before consideration of MPPMCL Cost and treatment of surplus energy:

Table 93: Revised claim of Station-wise Power Purchase Cost for FY 24 against approved in MYT Order

Sr. No	Particulars	Approved for FY 24 in MYT Order			Revised claim for FY 2023-24			Variation		
		Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total
1	Amarkantak TPS Ph-III	163.59	199.81	363.40	163.59	249.02	412.61	0.00	(49.21)	(49.21)
2	Satpura TPS Ph-II & III			0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Satpura TPS Ph-IV	603.99	802.19	1,406.18	603.99	881.94	1,485.93	0.00	(79.75)	(79.75)
4	SGTPS Ph-I & II	425.47	1,134.80	1,560.27	457.03	1,130.25	1,587.28	(31.56)	4.55	(27.01)
5	SGTPS Ph-III	309.32	682.88	992.20	309.32	740.37	1,049.69	0.00	(57.49)	(57.49)
6	Shri Singaji STPS Phase-I	1,246.84	556.42	1,803.26	1,246.84	925.21	2,172.05	0.00	(368.79)	(368.79)
7	Shri Singaji STPS Phase-II	1,314.19	7.57	1,321.76	1,314.19	1,857.63	3,171.82	0.00	(1,850.06)	(1,850.06)
A	**Total (MP Genco Thermal-MP Share)**	**4,063.40**	**3,383.67**	**7,447.07**	**4,094.96**	**5,784.43**	**9,879.39**	**(31.56)**	**(2,400.76)**	**(2,432.32)**
8	Rani Awanti Bai Sagar, Bargi HPS	8.12	7.71	15.83	8.12	39.53	47.65	0.00	(31.82)	(31.82)
9	Bansagar Ph I HPS (Tons)	18.29	73.51	91.80	44.91	45.31	90.22	(26.62)	28.20	1.58
10	Bansagar Ph-II HPS (Silpara)	25.92	7.34	33.26	25.88	6.81	32.69	0.04	0.53	0.57
11	Bansagar Ph-III HPS (Deolond)	25.92	7.24	33.16	21.58	11.01	32.59	4.34	(3.77)	0.57
12	Bansagar Ph-IV HPS (Jhinna)	4.82	5.61	10.43	2.67	6.96	9.63	2.15	(1.35)	0.80
13	Birsinghpur HPS	2.19	3.72	5.91	2.63	3.61	6.24	(0.44)	0.11	(0.33)
14	Madikheda HPS	9.47	19.31	28.78	2.56	16.38	18.94	6.91	2.93	9.84
15	Rajghat HPS	2.70	4.41	7.11	2.70	10.95	13.65	0.00	(6.54)	(6.54)
16	Gandhisagar HPS	1.69	2.75	4.44	1.69	10.47	12.16	0.00	(7.72)	(7.72)
17	Ranapratap Sagar HPS	0.00	36.34	36.34	0.00	20.67	20.67	0.00	15.67	15.67
18	Jawahar Sagar HPS			0.00	0.00	19.07	19.07	0.00	(19.07)	(19.07)
19	Pench HPS	9.50	9.01	18.51	8.82	10.17	18.99	0.68	(1.16)	(0.48)
B	**Total (MP Genco Hydel)**	**108.62**	**176.95**	**285.57**	**121.56**	**200.94**	**322.50**	**(12.94)**	**(23.99)**	**(36.93)**
20	NHDC Indira Sagar HPS	279.46	280.37	559.83	279.46	392.27	671.73	0.00	(111.90)	(111.90)
21	NHDC Omkareshwar HPS	189.25	204.96	394.21	189.25	245.91	435.16	0.00	(40.95)	(40.95)

Sr. No	Particulars	Approved for FY 24 in MYT Order			Revised claim for FY 2023-24			Variation		
		Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total
22	NVDA Sardar Sarovar HPS	101.45	178.85	280.30	101.45	131.75	233.20	0.00	47.10	47.10
23	Rihand HPS	0.00	4.44	4.44	0.00	3.84	3.84	0.00	0.60	0.60
24	Matatila HPS	0.00	1.61	1.61	0.00	1.18	1.18	0.00	0.43	0.43
25	SJVN Rampur HPS	0.50	0.60	1.10	0.67	0.41	1.08	(0.17)	0.19	0.02
26	SJVN Jhakri HPS	1.08	1.31	2.39	1.46	1.02	2.48	(0.38)	0.29	(0.09)
27	Tehri HPS	1.03	1.02	2.05	0.63	1.22	1.85	0.40	(0.20)	0.20
28	Koteshwar HPP	0.37	0.40	0.77	0.90	0.10	0.99	(0.53)	0.30	(0.22)
29	NHPC Parbati III	0.62	0.49	1.11	0.81	0.59	1.40	(0.19)	(0.10)	(0.29)
30	NHPC Chamera II	0.38	0.44	0.82	0.43	0.41	0.84	(0.05)	0.03	(0.02)
31	NHPC Chamera III	0.45	0.48	0.93	0.57	0.44	1.01	(0.12)	0.04	(0.08)
32	NHPC Dulhasti	1.09	0.92	2.01	1.16	0.92	2.08	(0.07)	0.00	(0.07)
33	NHPC Dhauliganga	0.29	0.30	0.59	0.37	0.31	0.69	(0.08)	(0.01)	(0.10)
34	NHPC Sewa II	0.30	0.31	0.61	0.28	0.15	0.43	0.02	0.16	0.18
35	NHPC Uri II	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	NHPC Kishanganga	0.49	0.47	0.96	0.64	0.65	1.29	(0.15)	(0.18)	(0.33)
37	NTPC Koldam HPP I	0.79	0.86	1.65	0.67	0.91	1.57	0.12	(0.05)	0.08
38	NTPC Singrauli Small HPP	0.00	0.11	0.11	0.00	0.00	0.00	0.00	0.11	0.11
39	NHPC Lower Subansiri HEP Unit-1	0.00	0.00	0.00	0.00	75.15	75.15	0.00	(75.15)	(75.15)
C	**Total (JV Hydel & Other Hydel)**	**577.55**	**677.94**	**1,255.49**	**578.74**	**857.22**	**1,435.96**	**(1.19)**	**(179.28)**	**(180.47)**
40	NTPC Korba	225.38	594.99	820.37	247.85	568.95	816.80	(22.47)	26.04	3.57
41	NTPC Korba III	70.08	91.13	161.21	56.80	81.38	138.18	13.28	9.75	23.03
42	NTPC Vindyachal I	269.99	626.00	895.99	270.28	589.24	859.52	(0.29)	36.76	36.47
43	NTPC Vindyachal II	152.14	445.41	597.55	170.17	423.78	593.95	(18.03)	21.63	3.60
44	NTPC Vindyachal III	175.71	353.48	529.19	175.98	289.59	465.56	(0.27)	63.89	63.63
45	NTPC Vindyachal IV	303.52	359.03	662.55	304.07	330.90	634.96	(0.55)	28.13	27.59

Sr. No	Particulars	Approved for FY 24 in MYT Order			Revised claim for FY 2023-24			Variation		
		Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total
46	NTPC Vindyachal V Unit 1	159.85	203.45	363.30	160.14	171.28	331.42	(0.29)	32.17	31.88
47	NTPC Sipat I	294.02	394.81	688.83	282.14	504.46	786.60	11.88	(109.65)	(97.77)
48	NTPC Sipat II	158.27	221.17	379.44	125.24	200.10	325.34	33.03	21.07	54.10
49	NTPC Mouda I	24.39	48.61	73.00	24.90	0.00	24.90	(0.51)	48.61	48.10
50	NTPC Mouda II Unit 1	24.73	26.11	50.84	25.43	0.00	25.43	(0.70)	26.11	25.41
51	NTPC Solapur STPS	487.44	82.47	569.91	311.11	0.00	311.11	176.33	82.47	258.80
52	NTPC Gadarwara STPS, Unit-1	570.18	530.42	1,100.60	1,140.36	0.00	1,140.36	(570.18)	530.42	(39.76)
53	NTPC Lara STPS, Raigarh, Unit I	138.17	167.88	306.05	138.17	284.49	422.66	0.00	(116.61)	(116.61)
54	NTPC Khargone STPS, Unit-I & II	851.54	942.73	1,794.27	851.54	117.23	968.77	0.00	825.50	825.50
55	NTPC Kawas GPP	86.91	125.08	211.99	95.84	0.00	95.84	(8.93)	125.08	116.15
56	NTPC Gandhar GPP	92.06	197.74	289.80	88.76	0.00	88.76	3.30	197.74	201.04
57	KAPP Kakrapar	0.00	176.08	176.08	0.00	170.59	170.59	0.00	5.49	5.49
58	TAPP Tarapur	0.00	535.61	535.61	0.00	523.80	523.80	0.00	11.81	11.81
59	NTPC Gadarwara STPS, Unit-2	570.18	527.55	1,097.73	0.00	0.00	0.00	570.18	527.55	1,097.73
60	NTPC Lara STPS, Raigarh, Unit II	138.17	167.88	306.05	138.17	0.00	138.17	0.00	167.88	167.88
D	**Total WR Region**	**4,792.73**	**6,817.63**	**11,610.36**	**4,606.94**	**4,255.78**	**8,862.72**	**185.79**	**2,561.85**	**2,747.64**
61	NTPC Kahalgaon II	56.71	101.14	157.85	57.03	71.50	128.53	(0.32)	29.64	29.32
62	DVC (MTPS & CTPS)			0.00	36.51	0.00	36.51	(36.51)	0.00	(36.51)
63	DVC (DTPS)	0.00	0.00	0.00	119.62	0.00	119.62	(119.62)	0.00	(119.62)
E	**Total ER Region**	**56.71**	**101.14**	**157.85**	**213.16**	**71.50**	**284.66**	**(156.45)**	**29.64**	**(126.81)**
63	NTPC Auraiya GPP	0.74	2.70	3.44	0.80	0.00	0.80	(0.06)	2.70	2.64
64	NTPC Dadri GPP	0.76	3.44	4.20	0.86	3.88	4.74	(0.10)	(0.44)	(0.54)
65	NTPC Anta GPP	0.52	0.27	0.79	0.59	1.14	1.73	(0.07)	(0.87)	(0.94)
66	NTPC Firoz Gandhi Unchahar I	0.25	0.12	0.37	0.24	0.00	0.24	0.01	0.12	0.13
67	NTPC Firoz Gandhi Unchahar II	0.70	0.24	0.94	0.85	0.00	0.85	(0.15)	0.24	0.09

Sr. No	Particulars	Approved for FY 24 in MYT Order			Revised claim for FY 2023-24			Variation		
		Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total
68	NTPC Firoz Gandhi Unchahar III	0.43	0.12	0.55	0.45	0.00	0.45	(0.02)	0.12	0.10
69	NTPC Firoz Gandhi Unchahar IV	1.32	0.29	1.61	1.38	0.00	1.38	(0.06)	0.29	0.23
70	NTPC Rihand TPS-I	1.16	2.18	3.34	1.28	2.79	4.07	(0.12)	(0.61)	(0.73)
71	NTPC Rihand TPS-II	1.09	2.78	3.87	1.31	2.97	4.29	(0.22)	(0.19)	(0.42)
72	NTPC Rihand TPS-III	2.45	3.05	5.50	2.75	3.25	6.01	(0.30)	(0.20)	(0.51)
73	NTPC NCTP Dadri II	2.13	0.70	2.83	1.94	0.00	1.94	0.19	0.70	0.89
74	NTPC Singrauli	1.90	4.84	6.74	1.99	5.35	7.35	(0.09)	(0.51)	(0.61)
75	NTPC IGPS I Jhajjar	2.05	0.00	2.05	2.14	0.00	2.14	(0.09)	0.00	(0.09)
76	MEJA Urja Nigam	2.04	0.00	2.04	2.04	1.60	3.64	0.00	(1.60)	(1.60)
77	NTPC Tanda	1.71	3.37	5.08	3.25	0.00	3.25	(1.54)	3.37	1.83
78	NTPC Badarpur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	Rajasthan (NPCIL)	0.00	4.09	4.09	0.00	3.14	3.14	0.00	0.95	0.95
80	NARORA (NPCIL)	0.00	2.34	2.34	0.00	2.30	2.30	0.00	0.04	0.04
F	**Total NR Region**	**19.25**	**30.53**	**49.78**	**21.89**	**26.44**	**48.33**	**(2.64)**	**4.09**	**1.45**
81	Torrent Power	0.00	0.00	0.00	33.90	0.00	33.90	(33.90)	0.00	(33.90)
82	BLA Power, Unit-I & II	16.09	20.31	36.40	19.22	31.23	50.45	(3.13)	(10.92)	(14.05)
83	Jaypee Bina Power	413.65	81.00	494.65	452.90	362.45	815.35	(39.25)	(281.45)	(320.70)
84	Lanco Amarkantak TPS Unit 1	264.22	391.02	655.24	264.22	526.45	790.67	0.00	(135.43)	(135.43)
85	Reliance UMPP, Sasan	166.58	1,579.51	1,746.09	192.50	1,403.69	1,596.20	(25.92)	175.82	149.89
86	Essar Power STPS			0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	Jaiprakash Power STPS, Nigri	521.57	245.75	767.32	617.63	319.19	936.82	(96.06)	(73.44)	(169.50)
88	MB Power STPS, Unit-I	440.06	704.35	1,144.41	263.90	426.37	690.27	176.16	277.98	454.14
89	MB Power STPS, Unit-II			0.00	263.90	404.34	668.24	(263.90)	(404.34)	(668.24)
90	Jhabua Power STPS, Unit-1	225.45	335.43	560.88	271.60	412.56	684.16	(46.15)	(77.13)	(123.28)
G	**Total (IPPs)**	**2,047.62**	**3,357.37**	**5,404.99**	**2,379.77**	**3,886.30**	**6,266.07**	**(332.15)**	**(528.93)**	**(861.08)**
91	Renewable Energy (Solar)	0.00	3,144.16	3,144.16	0.00	3,269.55	3,269.55	0.00	(125.39)	(125.39)

Sr. No	Particulars	Approved for FY 24 in MYT Order			Revised claim for FY 2023-24			Variation		
		Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total
92	Renewable Energy (other than Solar)	0.00	4,112.90	4,112.90	0.00	2,920.60	2,920.60	0.00	1,192.30	1,192.30
H	**Total Renewable Energy**	**0.00**	**7,257.06**	**7,257.06**	**0.00**	**6,190.14**	**6,190.14**	**0.00**	**1,066.92**	**1,066.92**
	Total	**11,665.86**	**21,802.25**	**33,468.11**	**12,017.02**	**21,272.76**	**33,289.78**	**(351.16)**	**529.49**	**178.33**

Table 94: Total Power Purchase Cost for MP State

Sr. No	Particulars	Approved for FY 24 in MYT Order			Revised claim for FY 2023-24			Variation		
		Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total	Fixed Charge	Variable Charge	Total
1	Gross Power Purchase Cost	11,665.86	21,802.25	33,468	12,017.02	21,272.76	33,290	(351)	529	178
2	Less: Saving in variable cost of surplus energy from sale of surplus energy		399	399		1,636	1,636	0	(1,237)	(1,237)
3	Gross Power Purchase Cost after Saving in Variable Cost	11,666	21,403	33,069	12,017	19,637	31,654	(351)	1,766	1,415
4	Add: MPPMCL Cost		(454)	(454)		372	372	0	(826)	(826)
5	Add: Cost due to RPO			0		(30)	(30)	0	30	30
6	**Net Power Purchase Cost**	**11,666**	**20,950**	**32,616**	**12,017**	**19,979**	**31,996**	**(351)**	**970**	**619**
7	Inter-state Transmission Charges	2,732.45		2,732	3,025		3,025	(293)	0	(293)
8	MPPTCL Charges including SLDC Charges	4332		4,332	4,335		4,335	(3)	0	(3)
9	**Total Power Purchase Cost**	**18,730**	**20,950**	**39,680**	**19,378**	**19,979**	**39,357**	**(647)**	**970**	**323**

The Total Power Purchase cost excluding MPPTCL Charges is again distributed among the three Discoms according to the DBST Methodology for individual Discoms as summarized below:

6.4 Distribution Bulk Supply Tariff methodology for Allocation of Power Purchase Cost to Discoms

6.4.1 The Government of MP vide gazette notification dated 21st March 2016 had allocated all the stations to MPPMCL and in order to maintain equitable allocation of the power purchased cost among all the three Discoms, MPPMCL have allocated the costs to the three Discoms as per Distribution Bulk Supply Tariff (DBST) methodology.

6.4.2 With the Implementation of Distribution Bulk Supply Tariff (DBST) with effect from January 2020, the overall Power Purchase Cost of all the three Discoms is being distributed on the basis of Revenue available with Discoms for power purchase and in-proportion of their energy requirement.

6.4.3 The Power Purchase cost allocated to Discoms based on DBST methodology for FY 2023-24 as provided in the Table below:

Table 95: Allocation of total Power Purchase Cost for MP State as per DBST for FY 2023-24

			FY 2023-24			
S.no	**Particulars**	**Unit**	**MP**	**EZ**	**CZ**	**WZ**
A	**Revenue from Existing Tariff**	**Rs. Cr**	**47,992**	**13,395**	**15,870**	**18,727**
B	**Other costs of Discoms (Expenditure other than power purchase cost)**	**Rs. Cr**	**10,173**	**4,838**	**4,406**	**929**
1	R&M Expense	Rs. Cr	921	336	341	245
2	Employee Expenses	Rs. Cr	4,190	1,443	1,326	1,422
3	A&G Expense	Rs. Cr	409	129	134	145
4	Depreciation and Related debits	Rs. Cr	1,037	296	395	346
5	Interest & Finance Charges	Rs. Cr	1,090	413	446	231
6	Other Debits, Write-offs (Prior period and bad debts)	Rs. Cr	6	2	2	2
7	RoE	Rs. Cr	687	235	277	175
8	Less: Other income	Rs. Cr	572	186	183	203
9	Impact of True ups	Rs. Cr	2,404	2,171	1,667	(1,433)
C	**Intra- state transmission Charges including SLDC Charges**	**Rs. Cr**	**4,335**	**1,289**	**1,502**	**1,544**
D	**Aggregated Amount available with Discoms for Power purchase (A-B-C)**	**Rs. Cr**	**33,484**	**7,269**	**9,962**	**16,253**
E	**Total Power Purchase Cost**	**Rs. Cr**	**35,022**			
F	**Surplus/Gap (E-D)**	**Rs. Cr**	**1,537**			
G	Ex-Bus Energy Requirement	MU	88,356	24,439	29,332	34,585
H	Ex-Bus Energy Requirement	%	100%	28%	33%	39%
I	**Allocation of surplus/Gap as per the Energy Requirement**	**Rs. Cr**	**1,537**	**425**	**510**	**602**
J	**Power Purchase Cost for Discom (D+I)**	**Rs. Cr**	**35,022**	**7,694**	**10,472**	**16,855**
K	**Bulk Supply Tariff**	**Rs./kWh**	**3.96**	**3.15**	**3.57**	**4.87**

6.5 Estimation of Other Costs associated to Power Purchase.

6.5.1 Inter State Transmission Charges

6.5.1.1 The Inter-State transmission charges to be paid by MP consist of charges to be paid for Western, Eastern & Northern Regions transmission systems. The Petitioners have considered Inter-Transmission Charges for FY 2021-22 as per Actual figures from power purchase statement and 4% increment in each year considered for FY 2023-24 as shown below:

Table 96: Inter State Transmission Charges (Rs Crores)

Sr. no	Particulars	FY 22	FY 23	FY 24
1	East Discom	853.87	888.02	923.55
2	Central Discom	959.18	997.55	1,037.45
3	West Discom	984.17	1,023.54	1,064.48
4	**MP State**	**2,797.22**	**2,909.11**	**3,025.47**

6.5.1.2 These Inter-state transmission charges have been allocated to Discoms based on energy allocation from Central Generating Stations and as per Ex-bus Energy requirement.

6.5.2 Intra-State Transmission Charges including SLDC Charges and Cash Outflow for Terminal Benefits

6.5.2.1 These Inter-state transmission charges have been allocated to Discoms based on energy allocation from Central Generating Stations and as per Ex-bus Energy requirement.

6.5.3 Intra-State Transmission Charges including SLDC Charges and Cash Outflow for Terminal Benefits

6.5.3.1 The Petitioners have considered SLDC Charges for FY 2023-24 based on 4% increment in each year from actuals incurred for FY 2021-22.

6.5.3.2 The Petitioners have considered Intra-Transmission Charges for FY 2023-24 as per MPPTCL Transmission Tariff Order for control period from FY 2019-20 to FY 2023-24, dated 19th May 2021.

Table 97: Intra State Transmission Charges including SLDC (Rs Crores)

Sr.no	Transmission Charges	FY 22 (Actual)	FY 23	FY 24
1	East Discom	1,285.03	1,258.16	1,286.14
2	Central Discom	1,682.93	1,482.02	1,499.32
3	West Discom	1,739.92	1,502.08	1,538.56
4	**MP State**	**4,707.88**	**4,242.26**	**4,324.02**
Sr.no	**SLDC Charges**	**FY 22 (Actual)**	**FY 23**	**FY 24**

1	East Discom	2.35	2.44	2.54
2	Central Discom	2.80	2.91	3.03
3	West Discom	5.01	5.21	5.42
4	**MP State**	**10.16**	**10.57**	**10.99**
Sr.no	**Transmission Charges including SLDC Chgs**	**FY 22 (Actual)**	**FY 23**	**FY 24**
1	East Discom	1,287.38	1,260.60	1,288.68
2	Central Discom	1,685.73	1,484.93	1,502.35
3	West Discom	1,744.92	1,507.29	1,543.98
4	**MP State**	**4,718.04**	**4,252.83**	**4,335.01**

6.5.3.3 The Intra-State Transmission charges have been allocated to Discoms based on Ex-bus energy requirement.

6.6 MPPMCL Cost

6.6.1 The MPPMCL Cost for the FY 2023-24 is as follows:

Table 98: MPPMCL Cost Details for FY 2023-24

Sr.No.	Particulars	FY 24
I.	Revenue from operations (including Revenue Subsidy)	-
II.	Other income	117.92
III.	Income from other business allocated to Licensed business	
IV	Total Revenue (I + II+III)	117.92
V	Expenses:	
	Purchase of Power from MP Genco	
	Purchase of Power from Other Sources	99.87
	Inter-State Transmission charges	7.34
	Intra-State Transmission (MP Transco) Charges	
	SLDC Charges	
	Depreciation and amortzation expenses	8.49
	Interest & Finance Charges	266.91
	Repairs and Maintenance	3.37
	Employee costs	70.22
	Administration and General expenses	29.64
	Net prior period credit charges	-
	Other Debits, Write-offs	4.37
	Lease Rental	
	Total Expenses	**490.19**
VI	Profit before exceptional and extraordinary items and tax (IV-V)	(372.26)
VII	Exceptional items	-
VIII	**Profit before extraordinary items and tax (VI – VII)**	**(372.26)**

6.7 Total Power Purchase Cost

6.7.1 Based on the various cost components discussed above, the total power purchase cost for MP state and for each of the Discoms is indicated in the below Table:

Table 99: Total Power Purchase Cost for FY 2023-24

Power Purchase Cost FY 2023-24						
Sr. no.	**Particulars**	**UoM**	**MP State**	**East Discom**	**Central Discom**	**West Discom**
A	**Ex- Bus Net Power Purchase Cost excluding Transmission Charges (Inter, Intra & SLDC) etc.**					
i	Quantum	MUs	88,356	24,439	29,332	34,585
ii	Fixed Cost	Rs Crores	12,017	3,324	3,989	4,704
iii	Variable Cost	Rs Crores	19,607	5,423	6,509	7,675
iv	MPPMCL Cost	Rs Crores	372	103	124	146
v	Total Cost	Rs Crores	31,996	8,850	10,622	12,524
vi	Average Cost	Paisa/kWh	3.62	3.62	3.62	3.62
B	**Inter State Transmission**					
i	Losses	MUs	1,513	419	503	592
ii	Charges- Fixed	Rs Crores	3,025	837	1,004	1,184
C	**Power Purchase Cost at State Boundary**					
i	Quantum	MUs	86,843	24,020	28,830	33,993
ii	Fixed Cost	Rs Crores	15,042	4,161	4,994	5,888
iii	Variable Cost	Rs Crores	19,607	5,423	6,509	7,675
iv	MPPMCL Cost	Rs Crores	372	103	124	146
v	Total Cost	Rs Crores	35,022	9,687	11,627	13,708
vi	Average Cost	Paisa/kWh	4.03	4.03	4.03	4.03
D	**Intra State Transmission including SLDC**					
i	Losses	MUs	2,284	632	758	894
ii	Charges- Fixed	Rs Crores	4,335	1,289	1,502	1,544
E	**Power Purchase Cost at Discom Boundary**					
i	Quantum	MUs	84,559	23,388	28,071	33,099
ii	Fixed Cost including Transmission Charges	Rs Crores	19,378	5,449	6,496	7,432
iii	Variable Cost	Rs Crores	19,607	5,423	6,509	7,675
iv	MPPMCL Cost	Rs Crores	372	103	124	146
v	Total Cost	Rs Crores	39,357	10,976	13,129	15,252
vi	Average Cost	Paisa/kWh	4.65	4.69	4.68	4.61

6.7.2 **The Petitioners hereby prays to the Hon'ble Commission to approve power purchase cost as shown above.**

6.8 Reason for Increase in Power Purchase Cost

6.8.1 Power Purchase Costs contribute more than 80% of total ARR of the MP State. Any increase in power purchase cost directly gets reflected in the consumer tariff.

6.8.2 With new generating stations being added up in near future, power purchase costs are likely to be increase further. The Average Power Purchase Cost has increased by 56% over last eight years from Paisa 260 per kWh in FY 2011-12 to 405 paise per kWh in FY 2020-21. The year wise average power purchase cost is given as per the table below:

Table 100: Power Purchase Cost Trend in last few FYs

Power Purchase Cost Trend				
Sr. No.	**Particulars**	**Quantum (MUs)**	**Total Cost (Rs Crores)**	**Avg. Cost (Paisa/kWh)**
1	FY 2011-12	44,030	11,442	260
2	FY 2012-13	49,037	14,693	300
3	FY 2013-14	53,714	18,500	344
4	FY 2014-15	57,977	19,365	334
5	FY 2015-16	64,932	23,510	362
6	FY 2016-17	64,052	27,555	430
7	FY 2017-18	69,099	26,752	387
8	FY 2018-19	77,500	30,771	397
9	FY 2019-20	75,617	30,837	407
10	FY 2020-21	82,325	33,368	405
11	FY 2021-22	85,858	36,048	4.19

6.8.3 The reasons for the increase in average power purchase cost are given in brief below:

- Growth in demand as expected is not commensurate with energy generation added.
- Most of the PPAs are cost plus basis, the rise in cost of fuel/transportation, taxation etc. is pass through to the buyer;
- Due to high surplus, scheduling of costlier power plants for less no. of days, whereas their fixed cost had to be paid for the entire entitlement;
- Addition of renewable energy to meet RPO targets;

6.8.4 Some of the uncontrollable reasons which have been restricting MPPMCL from reduction of power purchase costs are as listed below:

- **Payment of Fixed Cost in case of Back down of Surplus Capacity:** It needs to be highlighted that the payment of fixed charges is required to be made for such generators in accordance with the PPAs even if the capacity is backed down. MPPMCL is also paying the Technical Minimum Charges for Central Generating Stations.

- Increment in per unit variable cost of generating stations due to increase in coal price owing to shortage of coal or due to blending of imported coal.

- Variation in Intra and Inter State Transmission Charges due to various factors beyond the control of Licensees.

- The scheduling of generators considered in the MOD is theoretical, whereas during actual operating conditions the demand incident is an uncontrollable parameter and varies abruptly during the peak of Rabi seasons. Under such circumstances most of the surplus capacity that has been considered to be back down is scheduled to meet the demand. Hence, there is a rational for having surplus capacities tied up.

A7: INCOME/EXPENSES OF MPPMCL

7.1 As per item No.8 (ii) of State Govt. Notification No.2260-F-3-24-2009-XIII dated 19/03/2013, to meet its own expenses, M.P. Power Management Company Limited has been supplying power to the Discoms at the tariff determined/approved by MPERC and its own expenses on actual basis in proportion to the energy drawl by respective Discoms.

7.2 MPPMCL has been operating on "No Profit and No Loss" basis. Therefore, till now at the end of each financial year, all the credits received by MPPMCL which formed the part of income of MPPMCL (shown as "other income" in Form S-1) were being passed on to the Discoms in proportion to the energy drawl by respective Discoms as a part of their Power Purchase Costs. The major components of Annual Revenue Requirement of MPPMCL are detailed in this section.

7.3 The details of these expenses are given in the Table below:

Table 101: Projections of MPPMCL Cost from FY 2023-24 (Rs Crores)

Sr.No.	Particulars	FY 24
I.	Revenue from operations (including Revenue Subsidy)	-
II.	Other income	117.92
III.	Income from other business allocated to Licensed business	
IV	Total Revenue (I + II+III)	117.92
V	Expenses:	
	Purchase of Power from MP Genco	
	Purchase of Power from Other Sources	99.87
	Inter-State Transmission charges	7.34
	Intra-State Transmission (MP Transco) Charges	
	SLDC Charges	
	Depreciation and amortization expenses	8.49
	Interest & Finance Charges	266.91
	Repairs and Maintenance	3.37
	Employee costs	70.22
	Administration and General expenses	29.64
	Net prior period credit charges	-
	Other Debits, Write-offs	4.37
	Lease Rental	
	Total Expenses	**490.19**
VI	Profit before exceptional and extraordinary items and tax (IV-V)	(372.26)
VII	Exceptional items	-
VIII	**Profit before extraordinary items and tax (VI – VII)**	**(372.26)**

7.4 Income of MPPMCL

Revenue from operations (including Revenue Subsidy)

7.4.1 The revenue from operation for M.P. Power Management Company Ltd. consists of sale bills credit, which could not be passed on to the Discoms in their monthly bills.

However, from FY 2022-23 it is assumed that the same would be passed to the Discoms in the regular monthly bills and thus revenue from operations has been considered as NIL for FY 2023-24.

Other Income

7.4.2 The other income of MPPMCL includes income from:

(a) rebate received on a/c of timely/prompt payments

(b) Generation based incentive

(c) Interest on Fixed deposits and commitment advances

(d) Rent receivable, sale of tender fees etc

(e) Income from Security Constrained Economic Dispatch

7.4.3 The Petitioner submits that during FY 2021-22, other income received was Rs 97.46 Crore. The details of which is as shown in the Table below:

Table 102: Other Income during FY 2021-22 (Rs Crores)

Particulars	Amount (in Crores)
i) Rebate received on a/c of timely/prompt payments	22.70
ii) Generation based incentive	6.97
ii) Interest received (Includes interest on commitment advances)	7.56
iv) Income from RRAS	19.99
v) Other Income	40.24
TOTAL	97.46

7.4.4 For the purpose of projections of other income for FY 2023-24, the Petitioner has taken an escalation rate of 10%. The said escalation rate is applied twice on the other income of FY 2021-22 to arrive the projected income for FY 2023-24.

7.5 Expenses of MPPMCL

7.5.1 In the ARR of DISCOMs, the station-wise power purchase cost and DISCOM's own O&M Expenses, Depreciation, Interest Charges etc. have been considered as per the provisions of MPERC Regulations. However, there are certain costs pertaining to power purchase (as detailed below) which could not be considered by the Discoms being not in their control/action. Such costs are therefore included additionally under power purchase costs of Discoms as MPPMCL specific costs and are taken into consideration in the ARR of MPPMCL, the details of which are given hereunder:-

Power Purchase from other sources

7.5.2 Beginning from the year 2007-08, MPPMCL has started the practice of exchange/banking of energy with third parties outside the State of Madhya Pradesh whereby during availability of surplus power in the state, energy is supplied to the parties facing shortage of power and in case of power deficit in the sate the banked

energy is taken by the Company. The Banking and Exchange transactions do not involve any payment or receipts in terms of money for the power transacted except the charges related to open access and trading margin payable to the party through which such transaction is facilitated. Energy banking is a barter system, wherein units of energy are exchanged without any financial transaction between the partners in banking arrangement, although some operational expenses like trading margin, open access charges, RLDC/SLDC permission charges etc. are incurred. The charges towards "banking of energy" reflect the notional cost of the net liability of energy to be returned in the subsequent year and it is based on average power purchase cost of the financial year concerned

7.5.3 During FY 2021-22, MPMPCL had returned 146 MU of banked power which was received in 2020-21. Further, during FY 2022-23, MPPMCL will return 528.25 MU of banked energy, banked during 2021-22, which translates into a financial liability of about Rs 217.37 Crore considering cost per unit of Rs. 4.11, i.e., the average power purchase rate for FY 2021-22 calculated on the basis of total power purchase cost except Banking for FY 2021-22. The detailed working of the same is as provided below:

Table 103: Details of Liability for Banking of Energy for FY 2023-24

Particulars	Rs Crores
Mus to be returned at the end of FY 2021-22	528.25
Mus to be returned at the end of FY 2022-23 (increasing the units of FY 2021-22 by 10%)	581.08
Average purchase cost for F.Y. 21-22	4.11
Average purchase cost for F.Y. 2022-23 (Increasing the rate of FY 2021-22 by 10%)	4.52
Total amount of Banking liability for FY 22-23	262.70
Debit for 528.25 Mus billed to Discoms in 2021-22 @ 4.11 Rs/unit	-217.37
Net liability to be passed to Discoms for FY 22-23	45.33
For FY 23-24 (Increasing cost for FY 22-23 by 10%)	49.87

7.5.4 From above, the net liability to be passed on to Discoms for FY 2022-23 works out to be Rs. 45.33 Crore. Similarly, the liability for FY 2023-24 is estimated by escalating the liability of FY 2022-23 by 10%.

Bills of Power Purchase:

7.5.5 Further, as mentioned earlier that from FY 2021-22 onwards, the bills of power purchase will be passed through the monthly bills to the Discoms, hence will be considered in ARR of Discoms. However, historically it has been observed that some bills are left to be passed in the monthly Discom bill. Therefore, an estimated amount of Rs 50 Crore is taken as power purchase bills which may not be passed through monthly bills to Discoms from FY 2022-23 onwards.

7.5.6 Accordingly, the total expenses towards Purchase of Power from Other Sources for FY

2023-24 are considered as Rs. 99.87 Crore (i.e., Rs. 49.87 Crore + Rs. 50 Crore).

Inter State Transmission Charges:

7.5.7 Apart from the direct bill of power purchase as per REA/SEA and other heads under energy purchase, some other expenses like open access charges etc. on banking and short-term power purchase & sale are being incurred by MPPMCL. During FY 2021-22, the Open Access charges incurred for banking of Power was Rs.6.06 Crore. Further, the transmission charges for FY 2023-24 is estimated by escalating the actual expenses of FY 2021-22 by 10% pa.

Depreciation:

7.5.8 Depreciation for FY 2023-24 is calculated as under:

Table 104: Details of Depreciation for MPPMCL

Fixed assets	FY21	FY22	FY23	FY24
(i) Tangible assets				
Gross Block	102.43	104.98	106.98	108.98
Depreciation*	2.59	1.87	2.07	2.27
(ii) Intangible assets				
Gross Block	30.58	40.55	40.55	40.55
Depreciation**	1.30	8.55	6.08	6.08
Total Depreciation (i + ii)	**3.89**	**10.21**	**8.15**	**8.35**
*In case of tangible assets, there is assumed to be an addition of Rs. 2 Crs. Depreciable @ 10% approx. from FY 2022-23 and onwards.				
**In case of intangible assets, no addition is assumed from FY 2022-23 and onwards.				

Interest and Finance charges for power procurement:

7.5.9 The Interest & Finance charges includes interest paid to suppliers on account of instalments facility, interest due to tariff revision, Bank charges, Guarantee Charges, commitment charges., Stamp duty, processing charges etc.

7.5.10 Further, as per the existing power purchase agreements, facility of Letter of Credit is to be provided to power suppliers. The cost towards extending this facility of LC and other bank charges is also covered under item "Interest & finance charges" in Form S-1.

7.5.11 The interest and finance charges for FY 2021-22 was Rs. 220.59 Crore. For FY 2022-23 onwards the interest and finance charges are taken by increasing the expenses of FY 2021-22 by 10% p.a.

7.5.12 **Repairs and Maintenance:**

These expenses for FY 2023-24 is taken by increasing the expenses of FY 2021-22 by 10% p.a.

7.5.13 **Employee expenses:**

The employee costs for FY 2021-22 are Rs. 66.19 Core. For FY 2023-24 the employee expense is estimated by increasing the expense of FY 21-22 by 3% p.a.

7.5.14 **Administration and General Expenses:**

FY 2021-22, Admin & general expenses consists of consultancy fees, legal charges, bank charges, Rates and Taxes, printing & stationary, etc.

The total Administration and General expenses for FY 2021-22 amounts to Rs 216.49 Crs. The administration and general expenses for FY 2023-24 is projecting by escalating the expenses of FY 2021-22 by 10% p.a.

7.5.15 **Exceptional Items**

In FY 2021-22, Exceptional items consists of credit balance of MP Power Generating Co. Ltd. Written off. This is a onetime settlement and thus not expected to occur again. Therefore, the exceptional items are taken as NIL for FY 2023-24 onwards.

7.5.16 **The Petitioner hereby prays to the Hon'ble Commission to approve MPPMCL cost as shown above.**

A8: O&M EXPENSES - DISCOMS

8.1.1 The O&M expenses comprises of Employee expenses, Administrative and General Expenses (A&G), and Repairs and Maintenance (R&M) expenses. Regulation 36 of the MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 provides stipulation for calculation of O&M expenses for the Control Period. The relevant extract of the said Regulations is as reproduced below:

> *36.2. The Employee expenses and Administrative and General expenses shall be derived on the basis of the average of the actual expenses for the period from FY 2018-19 to FY 2020-21, excluding abnormal expenses, if any, subject to prudence check by the Commission:*
>
> *Provided that the average of such expenses shall be considered as expenses for the Year ended 31 March, 2020, and shall be escalated at the respective escalation rate for FY 2020-21 and FY 2021-22, to arrive at the expenses for the base year ending 31 March, 2022:*
>
> *Provided further that the escalation rate for FY 2020-21 and FY 2021-22 shall be computed by considering 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years as per the Labour Bureau, Government of India.*
>
> *36.3. The Employee expenses and Administrative and General expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2021-22 by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years as per the Office of Economic Advisor of Government of India and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau, Government of India, to arrive at the permissible expenses for each year of the Control Period.*
>
> *36.4. The R&M Expenses shall be allowed on the opening GFA of the financial year @ 2.3% for East Discom, @ 2.3% for West Discom, @ 2.3% for Central Discom, and @ 5% for SEZ Pithampur.*

8.1.2 Based on the above provision, the Hon'ble Commission has approved O&M expenses for entire Control Period, i.e., from FY 2022-23 to FY 2026-27 in its MYT Order dated 31st March 2022. The summary of O&M expenses approved for FY 2023-24 is as provided in the Table below:

Table 105: O&M Expenses approved for FY 2023-24 in MYT Order

Particulars	***East Discom***	***Central Discom***	***West Discom***
Opening GFA	*14,849.78*	*15,440.66*	*10,805.79*
Repair and Maintenance Expenses @ 2.30%	***341.55***	***355.14***	***248.53***
Basic Salary	*896.52*	*789.01*	*866.64*
Dearness Allowance	*358.61*	*315.60*	*346.66*
Terminal Benefits	*56.65*	*68.26*	*60.38*
Employee Expenses	***1,311.78***	***1,172.87***	***1,273.68***
Administrative and General Expenses	***206.26***	***284.17***	***143.27***
Other Expenses (Rates & Taxes...etc.)	*2.07*	*1.34*	*10.20*
MPERC fees	*0.52*	*0.60*	*0.71*
Provision for Terminal Benefit Trust Fund	*70.00*	*70.00*	*70.00*
O&M Expenses Capitalized	*(49.45)*	*(39.30)*	*(41.20)*
Additional Operational Expenditure (RRDS)	*85.68*	*79.70*	*79.70*
Total O&M Expenses	***1,968.40***	***1,924.52***	***1,784.89***

8.1.3 As regard to above approved expenses, the Petitioners wish to submit that the same were based on the Audited expenses of past financial years, i.e., from FY 2018-19 to FY 2020-21. Further, as per Regulation 36.2 the base year considered was FY 2021-22 and the expenses of FY 2023-24 were approved by escalating the base year expenses with an escalation rate of 4.24%. Further, such an escalation rate of 4.24% was based on the average yearly inflation of past five financial years, i.e., from FY 2016-17 to FY 2020-21.

8.1.4 The Petitioners hereby wish to submit that now the Audited expenses of FY 2021-22 are available. Further, escalation rate of FY 2021-22 is also available. Hence, in order to have realistic projection capturing the true inflation, it is necessary that the actual expenses being incurred by the Licensees during FY 2021-22 are taken into account. Otherwise the actual expenses of FY 2023-24 at the time of True-up of FY 2023-24 would appear higher than the approved norms. Therefore, there is need to revise the base year and rework the expenditure for FY 2023-24.

8.1.5 Further, Regulation 7.2 of the Tariff Regulations, 2021 mandate the Discoms to file a revised ARR for FY 2023-24. However, Regulation 36 of the Tariff Regulations, 2021 do not stipulate any provision regarding revision in O&M expenses. Therefore, in absence of clarity the Petitioners have reworked the O&M expenses for FY 2023-24 by shifting the base year and other concerned years as specified in Regulation 36 of the Tariff Regulations, 2021 by one year. The other methodology as specified in aforesaid Regulations were kept the same. Accordingly, it is requested before the Hon'ble Commission to approve the revised O&M expenses as projected by the Licensees.

8.2. Revision in Base Year and other Concerned Years

As mentioned in paras above, the revised base year has been considered as the year ending 31st March 2023 instead of the year ending 31st March 2022 as specified in

Regulation 36.2 of Tariff Regulations, 2021. The normative Employee expenses and A&G expenses for the base year has been arrived based on the Audited Expenses of past three financial years, i.e., from FY 2019-20 to FY 2021-22 excluding abnormal expenses, if any. The average of past three years' audited expenses has been calculated which is considered as normative Employee expenses and A&G expenses for the year ended on 31st March, 2022, which in turn is escalated with revised escalation rate to arrive at the normative expenses for the base year ending 31st March, 2023. The base year expenses so calculated are then escalated to arrive at normative Employee expenses and A&G expenses for FY 2023-24.

8.3. Revision in Escalation Rate

8.3.1 Petitioners wish to submit that the escalation rate for projections has been considered in line with the methodology specified by the Hon'ble Commission in the Regulations. Petitioners have considered WPI series (Base Year: 2011-12) for the relevant period as released by the Office of the Economic Adviser of Government of India. The CPI for Industrial Workers (all-India) for the relevant period has been considered as per the Labour Bureau, Government of India. Petitioners further wishes to submit that Labour Bureau, Government of India has revised the CPI-IW series from base year 2001=100 to 2016=100. In the new CPI-IW series base 2016=100, the number of centres covered has been increased from 78 to 88. The number of markets has also been enhanced from 289 to 317. The coverage of workers has also been increased from 41040 to 48384. The new CPI-IW series data is available from September 2020 onwards and the old series has been discontinued, hence, no data is available for old series from September 2020 onwards. Due to aforesaid changes, the new CPI-IW index numbers are not comparable with previous CPI-IW series base 2001=100. Therefore, considering the new series data for part of the year, particularly for FY 2020-21 and for the complete FY 2021-22 shall not reflect the actual inflation during the year as compared to previous year.

8.3.2 Since, the Regulations stipulate to consider average yearly inflation of past 5 years, it is necessary to derive the old series CPI-IW data for the remaining period of FY 2020-21, i.e., from September 2020 to March 2021 and also for FY 2021-22. For doing so, the Petitioners have considered a multiplication factor of 2.88, which has been provided by the Labour Bureau, Government of India in its report on *"New Series of Consumer Price Index for Industrial Workers (CPI-IW) (Base 2016=100)"* dated 21 October, 2020. Hence, based on above in order to calculate the yearly inflation of FY 2020-21, the Petitioners have considered CPI-IW series base 2001=100 data up to August 2020, thereafter, Petitioners have derived the CPI-IW index data by multiplying the respective months' new series CPI-IW index numbers by 2.88. Similar, methodology adopted for calculating the yearly inflation of FY 2021-22.

8.3.3 Further, the escalation rate to be considered for calculating the normative expenses of FY 2021-22 has been derived as 4.24% which is based on the average yearly inflation of past five years, i.e, from FY 2016-17 to FY 2020-21 with 30% and 70% weightage to WPI and CPI, respectively. Similarly, the revised escalation rate for FY 2022-23 has been

worked out as 5.06% as shown in the flowing Table:

Table 106: Escalation Rate for FY 2021-22 & FY 2022-23 (%)

Year	Yearly WPI	WPI Inflation	Yearly CPI	CPI Inflation
FY 2016-17	111.62	1.73%	275.92	4.12%
FY 2017-18	114.88	2.92%	284.42	3.08%
FY 2018-19	119.79	4.28%	299.92	5.45%
FY 2019-20	121.80	1.68%	322.50	7.53%
FY 2020-21	123.38	1.29%	338.69	5.02%
FY 2021-22	139.41	13.00%	356.06	5.13%
Average from FY17 to FY21		2.38%		5.04%
Average from FY18 to FY22		4.63%		5.24%
Weightage		30%		70%
Escalation rate for FY 2021-22 (2.38%*30%+5.04%*70%)				**4.24%**
Escalation rate for FY 2022-23 (4.63%*30%+5.24%*70%)				**5.06%**

8.4. Employee Cost

8.4.1 Petitioners' wishes to submit that various head under Employee cost have been escalated based on the aforementioned escalation rate except for Dearness Allowances (D.A.). Further, it is to be noted that Petitioners have not considered any provisions made towards Terminal Benefit during the past three Audited years in their normative Employee expenses calculations for ensuing years. However, they have considered Rs. 70 Crore each as a provision towards Terminal Benefit Trust fund in line with the Hon'ble Commission's past Orders. As regard to D.A., which is linked to basic salary of Employees, Petitioners have considered latest available actual rate for FY 2022-23 in line with the order and circular issued by the Finance Department, Government of Madhya Pradesh. From FY 2022-23 onwards, Petitioners have considered marginal quarterly addition of 4% over previous quarters' D.A. rate as shown in the Table below:

Table 107: Dearness Allowance Considered (%)

Particulars (As per 7th Pay)	FY '24
DA as percentage of Basic for first quarter - Apr to June	38%
DA as percentage of Basic for 2nd and 3rd quarter - July to Dec	42%
DA as percentage of Basic for 4th quarter - Jan to March	46%

8.4.2 Petitioners further wishes to submit that during past three financial years, i.e., from FY 2019-20 to FY 2020-21, they have paid actual 7th pay arrears to their employees which is not reflected in the respective years' audited account since, the payment were made out of the provision accounted in FY 2017-18. Therefore, in order to reflect the impact of 7th pay revision in normative expenses of ensuing years, the Petitioners have considered the actual payment made against the 7th pay in its calculations.

8.4.3 Based on the above, the Employee and A&G expense for the ensuing year as shown in the Table below:

Table 108: Discom-wise Revised Employee Expenses claimed for FY 2023-24 (Rs. Crores)

Sr. No	Particular	East Discom		Central Discom		West Discom	
		Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim
1	**Employee Expenses**						
1	Basic Salaries	896.52	841.58	789.01	928.05	866.64	873.60
2	DA	358.61	353.46	315.60	274.43	346.66	366.91
3	Terminal Benefit	56.65	22.50	68.26	68.26	60.38	78.71
4	Other Allowance including outsourcing expenses and Pay	-	187.55	-	16.13	-	61.76
5	Less: Expenses Capitalized	49.45	32.49	39.30	30.66	41.20	29.41
6	Provision for Terminal Benefit Trust Fund	70.00	70.00	70.00	70.00	70.00	70.00
	Total Employee Expenses	**1,332.33**	**1,442.60**	**1,203.57**	**1,326.22**	**1,302.48**	**1,421.58**

Table 109: Revised Employee Expenses claimed for MP-State for FY 2023-24 (Rs. Crores)

Sr. No	Particular	Approved in MYT Order	Revised Claim
1	**Employee Expenses**		
1	Basic Salaries	2,552.17	2,643.23
2	DA	1,020.87	994.81
3	Leave Encashment	185.29	169.47
4	Other Allowance including outsourcing expenses and Pay	0.00	265.45
5	Expenses Capitalized	129.95	92.56
6	Provision for Terminal Benefit Trust Fund	210.00	210.00
	Total Employee Expenses	**3,838.38**	**4,190.40**

8.4.4 Petitioners hereby submit that the any variation against the normative Employee expenses as worked out above and actual expenses for the respective period shall be claimed at the time of final True-up.

8.5. Administrative & General Expenses

8.5.1 Petitioners wishes to submit that they have projected A&G expenses in line with the MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021. However, as mentioned in para 8.1.5 the base year and concerned year has been shifted by one year for the purpose of calculations. Further, for MPERC fees under A&G expenses, the Petitioners have projected the same considering Rs. 200 for each one Million Units of energy input into the distribution system in line with the "Madhya Pradesh Electricity Regulatory Commission (Fees, Fines and Charges) (Revision-I) (First Amendment) Regulations, 2010" dated 31 May, 2016. The Discom-wise summary of A&G expenses for next control period is as shown in the Table below:

Table 110: Discom-wise Revised A&G Expenses claimed for FY 2023-24 (Rs. Crores)

Sr. No	Particular	East Discom		Central Discom		West Discom	
		Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim
	A&G Expenses						
1	A&G Expenses	206.26	127.29	284.17	130.81	143.27	142.35
2	Rates & Taxes	2.07	1.33	1.34	2.89	10.20	2.39
3	MPERC Fee	0.52	0.49	0.60	0.59	0.71	0.69
4	**Total A&G Expenses**	**208.85**	**129.12**	286.11	134.29	154.18	145.43

Table 111: Revised A&G Expenses claimed for MP-State for FY 2023-24 (Rs. Crores)

Sr. No	Particular	Approved in MYT Order	Revised Claim
	A&G Expenses		
1	A&G Expenses	633.70	400.45
2	Rates & Taxes	13.61	6.62
3	MPERC Fee	1.83	1.77
4	**Total A&G Expenses**	**649.14**	**408.84**

8.6. Repair and Maintenance Expenses

8.6.1 As regards to estimation of R&M expenses, Petitioners submits that the same is linked to opening Gross Block Assets (GFA) of the year as per Regulation 36.4 of Tariff Regulations, 2021. Since there is a revision in capitalization and hence opening GFA for the concerned year, therefore, the Petitioner have projected the revised R&M expenses for FY 2023-24.

8.6.2 The revised claim of the Petitioners towards R&M expenses as shown in the Table below:

Table 112: Discom-wise Revised R&M Expenses for FY 2023-24 (Rs. Crores)

Sr. no	Particular	East Discom		Central Discom		West Discom	
		Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim
1	**R&M Expenses**						
1	Opening Gross Block	14,849	13,852	15,440	14,153	10,805	9,795
2	Applicable Rate	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
3	**Total R&M**	**341.54**	**318.61**	**355.14**	325.54	**248.53**	225.29

Table 113: Revised R&M Expenses claimed for MP-State for FY 2023-24 (Rs. Crores)

Sr. No	Particular	Approved in MYT Order	Revised Claim
	R&M Expenses		
1	Opening Gross Block	41,096.23	37,801.49
2	Applicable Rate	2.30%	2.30%
3	**Total R&M**	**945.21**	**869.43**

8.7. Additional Operational Expenditure (OPEX) Cost:

8.7.1 As already mentioned at paras above that the Petitioners have taken part in Central Government's Revamped Distribution Sector Scheme: A Reforms-Based and Results-Linked Scheme. Under part A of this scheme, Prepaid Smart metering for consumers, and System metering at Feeder and Distribution Transformer level with communicating feature along with associated Advanced Metering Infrastructure (AMI) will be done in TOTEX mode (CAPEX + OPEX) through PPP, to facilitate reduction of Distribution losses and enable automatic measurement of energy flows and energy accounting as well as auditing. For prepaid smart metering under the scheme, 15% of the total cost will be provided by the Government of India and an additional incentive of 7.5% will be provided for prepaid smart metering within the target time frame of the first phase, i.e., December 2023. The expenditure on billing module, data management, data analysis and other works will be funded 100% by the Government of India.

8.7.2 As per the guidelines issued by Ministry of Power, Government of India for Revamped Schemes, the funding shall be available to Discoms if the scheme is being implemented in TOTEX mode. Accordingly, Discoms have planned to implement the smart meterization through PPP in TOTEX mode. Under this, only partial capex will be paid upfront by Discoms, and balance shall be paid through annuity during next 10 years period of operations under OPEX.

8.7.3 At the time of previous Tariff filing proceedings (i.e., under MYT), Discoms have estimated the TOTEX requirement for meterization part of the scheme. Out of the total outlay as estimated by the Petitioners for the said scheme, the CAPEX portion was considered under Discom's CAPEX plan and the remaining portion, i.e., OPEX portion of the total outlay for meterization was claimed under O&M expenses on equated yearly instalment over the operation period of 10 years. Based on above submission, the Hon'ble Commission in its MYT Order has approved Additional OPEX for the Petitioners for each year of the Control Period which is over and above the normative O&M expenses.

8.7.4 However, as mentioned in paras above that due to uncontrollable situation, the smart metering plan has been deferred. Since, the Petitioners have projected downward revision in CAPEX particularly for Smart Metering during FY 2023-24, there is a downward revision in OPEX part too. Accordingly, the Petitioners have re-estimated the OPEX portion for FY 2023-24 as provided in the Table below:

Table 114: Addl. OPEX cost for Discoms for FY 2023-24 (Rs. Crores)

Sr.no.	Particular	East Discom	Central Discom	West Discom	MP-State
1	Additional OPEX Expenses	16.98	15.25	19.73	51.96

8.7.5 The Petitioners further submits that the estimation of the TOTEX and hence, OPEX cost claimed by Petitioner is based on the estimation and selection of vendor, award of contract and other factors. Such expense being specific in nature shall be subjected to True-up for respective years. Further, the aforesaid expenses shall be over and above normative O&M expense of respective year.

8.8. Gist of Total Revised O&M Expenses

8.8.1 Based on the above, Discom-wise and MP State level total O&M expenses for FY 2023-24 is as shown in the Table below:

Table 115: Discom-wise Revised O&M Expenses for FY 2023-24 (Rs. Crores)

Sr. No	Particular	East Discom		Central Discom		West Discom	
		Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim
1	**O&M Expenses**						
1	Employee Expenses	1,332.33	1,442.60	1,203.57	1,326.22	1,302.48	1,421.58
2	A&G Expenses	208.85	129.12	286.11	134.29	154.18	145.43
3	R&M Expenses	341.54	318.61	355.14	325.54	248.53	225.29
4	Additional OPEX Expenses	85.68	16.98	79.70	15.25	79.70	19.73
5	**Total O&M Expenses**	**1,968.40**	**1,907.31**	**1,924.52**	**1,801.31**	**1,784.89**	**1,812.03**

Table 116: Revised O&M Expenses at State Level for FY 2023-24 (Rs. Crores)

Sr. No	Particular	MP State	
		Approved in MYT Order	Revised Claim
1	**O&M Expenses**		
1	Employee Expenses	3,838.38	4,190.40
2	A&G Expenses	649.14	408.84
3	R&M Expenses	945.21	869.43
4	Additional OPEX Expenses	245.08	51.96
5	**Total O&M Expenses**	**5,677.81**	**5,520.64**

8.8.2 **The Petitioner hereby requests the Hon'ble Commission to approve the revised O&M expenses as shown above. Any variation shall be claimed at the time of final True-up of respective years.**

A9: INVESTMENT PLAN – DISCOMS

9.1 Capital Investment Plan

9.1.1 For strengthening of the system and reduction of Distribution losses, all the three Discom's of the State are undertaking various projects in the forthcoming years. The focus is on creation of new 33/11 kV S/s, bifurcation of overloaded 33 kV feeders, feeder bifurcation of agricultural feeder at 11 kV level, Addl. / Aug of PTRs, Installation of DTRs, conversion of bare LT line into AB Cables and replacement of service lines etc.

9.1.2 The overall distribution loss of the system is a mix of Technical and Commercial losses. Technical losses are mainly due comparatively inadequate infrastructure as per the system demand which needs strengthening, renovation and up-gradation of the capacity of lines, Sub-stations and associated infrastructures. Whereas the commercial losses are mainly due to commercial parameters like theft & pilferage of energy, presence of prominent nos. of stop & defective meters in the system, inadequate meter reading system etc. which can also be reduced to a large extent by re-engineering of the system which requires capital investment and directed efforts. Discoms are working on both the issues regularly, which have resulted in reduction in Distribution losses considerably over the past years, but these reductions are not up to the normative loss levels which are more stringent at this level.

9.1.3 Further, with the aim to provide 24x7 uninterrupted, quality, reliable and affordable power supply, Government of India has launched Revamped Distribution Sector Scheme (RDSS), on 20th July 2021 for supporting DISCOMs to undertake reforms and improve performance in a time bound manner. MP Discoms have participated in the RDSS Scheme. The Revamped Distribution Sector Scheme has the following parts:

Part A – Metering & Distribution Infrastructure Works:

- Facilitating in installing prepaid smart meters for all consumers along with associated AMI, communicable meters for DTs & Feeders, ICT including Artificial Intelligence (AI), Machine Learning (ML), etc. based solutions for power Sector and a unified billing and collection system;
- Distribution infrastructure works as required for strengthening and modernizing the system as well as measures for loss reduction. The infrastructure strengthening works will include separation of Agriculture feeders to enable implementation of the KUSUM scheme, Aerial Bunch cables and HVDS for loss reduction, replacement of HT/LT lines as required, construction of new/ upgradation of substations, SCADA and DMS system etc. Each DISCOM/ State will draw up the scheme according to its requirement with the end objective of reducing losses and ensuring 24 x 7 supply.

Part B - Training & Capacity Building and other Enabling & Supporting Activities:

- Supporting and enabling components, such as Nodal Agency fee, enabling components of MoP (communication plan, publicity, consumer awareness, consumer survey and other associated measures such as third-party evaluation etc.), up-gradation of Smart Grid Knowledge Centre, training and capacity building, awards and recognitions etc

9.1.4 The details of capital expenditure estimated to be incurred under ongoing Schemes or Capital Investment Plan for FY 2023-24 has already been submitted to the Hon'ble Commission separately.

9.1.5 Further, as regard to Smart Metering under RDSS, the Petitioners would like to submit that the implementation of the same has planned to be undertaken in a phased manner, i.e., in Phase I and II as per RDSS guidelines. The expected completion period for Phase-1 is December 2023 and that of Phase II is March 2025 as per RDSS guidelines. The Government of India as approved the MP Discoms plan under Smart Metering according to which total 34.72 Lakhs Smart meters will be installed by all three Discoms under Phase-1 of the scheme, covering Consumer meter, DTRs meters and feeder meters. Further, as per 5th Monitoring committee meeting of the RDSS held on 10th February 2022, it was instructed that all DTRs are to be metered by March 2023. Accordingly, a total of 3.20 Lakhs DTRs which earlier was planned to be covered under Phase-2 of the scheme, clubbed with phase-1 of the scheme. Considering both, Smart Meters of Phase-1 and DTRs of Phase-2, the Discoms have to install approximate 38 Lacs Smart Meters under Phase-1 of the scheme.

9.1.6 The Petitioner wishes to submit that they have already issued bids/awarded work for installation of 23.20 Lacs Smart Meters (Central Discom- 9.58 Lacs, West Discom-3.79 Lacs, East Discom-9.83 Lacs) with the financial support from KfW Development Bank. Further, the bids were issued by all three Discoms in December 2021. It is to be noted that as per bid conditions, bids would be opened sequentially starting from Central Discom, then West Discom then East Discom, as there is a condition that once a work awarded to any agency in one Discoms that agency will not participate in next bids of Discoms.

9.1.7 Further, as mentioned above that as per Bid condition, the Central Discom bid was to open first, however, due to low participation of bidders in Central Discom bid, the bid was cancelled, and fresh bid was issued. Due to this change, the next bid, which was in sequence, i.e., West Discom's bid was opened, and work was awarded to M/s BCISTs in July 2022. Further, next bid for East Discom was opened and work was awarded to M/s Monte Carlo in November 2022. The bid of Central Discom is opened in November 2022 and the same is under evaluation. It is submitted that due to above events, the Smart Metering plan mainly for Central Discom has been deferred.

9.1.8 Further, in order to meet the target of RDSS Phase-1, Discoms have to issue bids for approximately 15 Lakhs Smart meters. It is submitted that the bids will be issued using Standard Bidding Document issued by REC for RDSS scheme. MP Discoms have

requested to REC (vide letter number 95, dated 26th Aug'2022) to allow certain deviations in Smart Metering SBD, the response of REC on those deviations are still awaited. Once, approved by REC the bids will be issued by Discoms. The Petitioners wish to submit that the due to low participation and pending deviation of REC bids, the CAPEX as estimated to be incurred during FY 2022-23 as well as for FY 2023-24 has been deferred. Due to this reason, there is downward revision in CAPEX under Smart Metering.

9.1.9 Further, as already mentioned above that the bids of West and East Discoms have been opened and awarded, so the Rates for Meters have been disclosed (as quoted by the bidders in recent awarded work). The same Rates have been considered by the Petitioners while estimating the revised CAPEX for FY 2023-24. However, for Central Discom, since the no bid is awarded, the Rates are not yet disclosed. Therefore, the Rates as discovered under East Discom's bid are considered for Central Discom's CAPEX estimation for Smart Metering. This is mainly because the area and number of meters in East Discom's and Central Discom's bids are similar.

9.1.10 The scheme wise summary of capital expenditure of the three Discoms are as detailed below:

Table 117: Capital expenditure Plan for FY 2023-24 (Rs. Crores)

Name of Scheme	East Discom	Central Discom	West Discom
Government schemes (ST(N), TSP, SCSP)	70	184	219
Supervision	-	194	-
Capital store and spares	-	28	-
Smart Meterization	297	285	306
Loss Reduction	1,105	1,304	1,209
SSTD & Modernization	749	423	-
Total	**2,221**	**2,419**	**1,734**

9.1.11 The Petitioners request the Hon'ble Commission to approve the above CAPEX plan for MP Discoms. Further, any variation against the aforesaid proposal may be adjusted at the time of final True-up of FY 2023-24.

9.2 Scheme Wise Capitalization

9.2.1 Discoms have projected CAPEX during FY 2023-24 as outlined in the paras above. Out of the scheme wise yearly CAPEX proposed during the year, 100% of the CAPEX under Smart Metering have been estimated to be capitalized during the same year. For other ongoing Schemes, the capitalization has been estimated by each Discoms as per its best judgement. Based on the above, the summary of scheme wise Capitalization Plan of Discoms is as shown in the Table below:

Table 118: Scheme Wise Capitalization for FY 2023-24 (Rs. Crores)

Name of Scheme	East Discom	Central Discom	West Discom
Government schemes (ST(N), TSP, SCSP)	72.85	143.06	-

Name of Scheme	East Discom	Central Discom	West Discom
Others	93.55	222.58	-
Scheme for reduction in Distribution Transformer failure	-	-	24.00
DTR metering in predominant AG. DTR	-	-	5.71
Smart Meterization	148.27	285.46	300.07
Loss Reduction	791.99	554.20	716.27
SSTD & Modernisation	299.68	211.50	104.50
Total	**1,406.34**	**1,416.80**	**1,150.55**

9.3 Capital Work in Progress

9.3.1 Based on the proposed capital expenditure and capitalization, Petitioners have projected the opening and closing balance of CWIP of the three Discoms as shown in the Table below:

Table 119: Discom Wise Capital Work in Progress (Rs. Crores)

SL. No.	Particulars	East Discom	Central Discom	West Discom	Total
1	Opening Balance of CWIP	2,342	2,517	3,342	8,202
2	Fresh Investment during the year	2,221	2,419	1,734	6,374
3	**Total Capitalisation during the year**	1,406	1,417	1,151	3,974
4	**Closing Balance of CWIP**	**3,157**	**3,520**	**3,926**	**10,602**

9.4 Fixed Assets Addition

9.4.1 Based on the capitalization as proposed in the section above, Petitioners have projected the Gross Fixed Assets addition for the FY 24 as shown in the Table below:

Table 120: Fixed Assets Addition for FY 2023-24 (Rs. Crores)

Particular	East Discom	Central Discom	West Discom
Buildings	2	21	9
Other civil works	2	0	0
Plant & machinery	109	73	131
Lines, cables, networks	54	34	(30)
Vehicles	0	0	0
Furniture & fixtures	0	0	0
Office equipment's	0	10	9
RGGVY	0	0	0
Intangible Assets	0	4	15
Supervision assets	0	194	0
Capital Stores & Spares	0	28	0
RRRDS	1,240	1,051	1,016
Total	**1,406**	**1,417**	**1,151**

9.4.2 The Petitioner hereby requests the Hon'ble Commission to approve Capital Expenditure and Fixed Assets Addition as shown above

A10: OTHER COSTS / INCOME - DISCOMS

10.1 Depreciation

10.1.1 Regulation 33 of the MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021, provides stipulation for calculation of depreciation. As per the said Regulations, Depreciation needs to be calculated on value base of the capital cost as admitted by the Commission. The salvage value of the assets needs to be considered as 10% of Capital Cost and Depreciation shall be allowed up to maximum of 90% of the Capital Cost of the Asset.

10.1.2 The rate of depreciation has been considered in accordance with the rate specified by the Hon'ble Commission in its Regulations. In case of existing projects/schemes Petitioners have verified if the accumulated depreciation has reached 70%. For the existing projects/schemes where the accumulated depreciation has reached 70% of asset value, the remaining depreciable value has been spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

10.1.3 Petitioners have claimed depreciation on the Net Block of Assets excluding consumer contribution and grants, since the Petitioners have not considered deferred income booked towards the amortization of assets created through consumer contribution and grants under their Non-Tariff Income.

10.1.4 Accordingly, the Discom-wise depreciation for the ensuing years of the Control Period is as shown in the Table below:

Table 121: Discom-wise Depreciation for FY 2023-24 (Rs. Crores)

Particulars	East Discom	Central Discom	West Discom	MP-State
Building	0.88	4.76	4.36	10.00
Hydraulic Works	0.00	0.34	0.28	0.62
Other Civil Works	1.01	0.13	0.43	1.56
Plant & Machinery	104.45	94.10	143.86	342.42
Line Cable Networks etc.	155.37	147.94	185.90	489.22
Vehicles	0.11	0.00	0.21	0.32
Furniture & fixtures	0.00	0.09	0.12	0.21
Office Equipment	9.34	11.02	4.93	25.28
Asset not belonging to Company (RGGVY, IPDS, Soubhagya, DDUGJY, RRRDS)	24.14	119.16	0.00	143.30
Amortization of Intangible Assets	0.56	0.35	5.66	6.57
Supervision assets	0.00	0.00	0.00	0.00
Capital Stores & Spares	0.00	17.47	0.00	17.47
Total	**295.86**	**395.36**	**345.77**	**1036.98**

10.2 Interest and Finance Charges

10.2.1 Interest on Project Loans

Regulation 32 of the MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 provides stipulation for calculation of interest and finance charges on loan capital.

Petitioners have calculated interest and finance charges on loan capital in line with the methodology adopted by the Hon'ble Commission in its previous Tariff/True-up Orders. The opening debt of FY 2021-22 has been considered in line with the closing debt as approved by the Hon'ble Commission in its True-up Order of FY 2020-21. The assets addition to GFA, consumer deposit & grant and actual equity contribution has been considered as proposed in the True-up Petition of FY 2021-22. The repayment of loan has been considered equal to depreciation. Accordingly, the closing debt of FY 2021-22 has been arrived by adding the net GFA considered as funded through debt and subtracting debt repayment of the respective year. The Closing debt of FY 2021-22 is then considered as opening debt of FY 2022-23.

On a similar fashion, opening and closing debt of FY 2023-24 has been arrived. However, while doing so the GFA addition, consumer deposit & grant and equity has been considered as projected in this Petition. Further, 30% of the net asset addition to GFA during the year or actual equity infusion as admitted, whichever being less has been considered as funded through equity. Balance of net asset addition to GFA is considered as having been funded through debt and added to the total debt in GFA.

The interest on loan for FY 2023-24 has been calculated on the normative average loan of the year by applying the weighted average rate of interest. Further, the weighted average rate of interest for each Discom has been calculated based on the actual loan portfolio of Discoms in line with the Regulations.

Petitioners have also considered other finance charges such as Bank Charges, Commitment Charges, Guarantee/LC Charges etc. based on the actual expenditure incurred over the previous financial years as per audited accounts. The Discom-wise summary of interest and finance charges is as detailed in the Table below:

Table 122: Discom-Wise Interest on Project Loan for FY 2023-24 (Rs. Crores)

Sr. No	Particulars (In Rs Crores)	East Discom	Central Discom	West Discom	MP-State
1	Opening Debt associated with GFA (as per True-up Order)	3725.57	4674.25	1377.16	9776.99
2	GFA Addition during the year	1406.34	1416.80	1150.55	3973.69
3	Consumer Deposit and Grants utilized during the year	726.97	719.82	504.20	1950.98
4	Net GFA Addition during the year	679.37	696.98	646.36	2022.70
5	Addition of Equity	38.87	80.25	31.35	150.46

Sr. No	Particulars (In Rs Crores)	East Discom	Central Discom	West Discom	MP-State
6	Net GFA considered as funded through debt	640.50	616.73	615.01	1872.24
7	Debt repayment during the year	295.86	395.36	345.77	1036.98
8	Closing debt associated with GFA	4070.21	4895.62	1646.41	10612.24
9	Average debt associated with Loan	3897.89	4784.94	1511.79	10194.61
10	Weighted average rate of interest (%) on all loans	7.17%	7.13%	8.30%	7.32%
11	**Interest on Project Loans**	**279.58**	**341.35**	**125.41**	**746.33**
12	**Other Finance cost**	**2.37**	**7.04**	**20.04**	**29.45**
13	*Bank Charges*	0.08	7.04	9.44	16.56
14	*Commitment Charges*	0.36	0.00	10.60	10.96
15	*Guarantee/LC Charges*	1.93	0.00	0.00	1.93
16	**Interest Cost Claimed in Petition**	**281.95**	**348.39**	**145.45**	**775.78**

Petitioners request the Hon'ble Commission to approve the interest and finance charges on Project loan as summarized in the Table above. Any variation shall be claimed at the time of final True-up.

10.2.2 Interest on Working Capital

Regulation 23 of the MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 provides the method of calculation of interest on working capital, wherein the total Working Capital shall consist of expenses towards working capital for the supply activity and wheeling activity. The said Regulation also stipulates the parameters to be considered for computation of working capital for wheeling and supply activity.

As per the Regulation 38, the Rate of interest on working capital shall be equal to the Base Rate as on 01st April of the relevant year plus 350 basis points. Further, the base rate shall be one-year Marginal Cost of Funds-based Lending Rate (MCLR) as declared by State Bank of India from time to time. The SBI MCLR as on 1st April, 2022 is 7%. Accordingly, the Petitioners have considered the interest rate on working capital as 10.50% (SBI-MCLR 7% plus 350 bps).

The summary of Discom wise Interest on Working Capital is as detailed in the Table below:

Table 123: Discom-wise Interest on Working Capital for FY 2023- 24 (Rs. Crores)

Sr. no.	Particulars	East Discom	Central Discom	West Discom	MP-State
I	**Wheeling**				
A)	1/6th of annual requirement of inventory for 1% GFA of previous year	18.47	18.87	13.06	50.40
B)	O&M expenses				
	R&M expenses	318.61	325.54	225.29	869.43
	A&G expense	135.69	134.29	145.21	415.19

Sr. no.	Particulars	East Discom	Central Discom	West Discom	MP-State
	Employee expenses	1,445.01	1,326.22	1,421.58	4,192.81
B) i)	Total of O&M expenses	1,899.31	1,786.05	1,792.08	5,477.44
B) ii)	1/12th of total	158.28	148.84	149.34	456.45
C)	Receivables	-	-	-	-
C) i)	Annual Revenue from wheeling charges**	-	-	5.63	5.63
C) ii)	Receivables equivalent to 2 months average billing of wheeling charges	-	-	0.94	0.94
D)	Total Working capital [A) + B) ii) - C) ii)]	176.75	167.71	163.34	507.79
E)	Rate of Interest *	10.50%	10.50%	10.50%	10.50%
F)	**Interest on Working capital (Wheeling)**	**18.56**	**17.61**	**17.15**	**53.32**
II	**Retail Supply**				
A)	1/6th of annual requirement of inventory for previous year	4.62	4.72	3.27	12.60
B)	Receivables				
B) i)	Annual Revenue from Tariff and charges**	13,395	15,870	18,727	47,992
B) ii)	Receivables equivalent to 2 months average billing	2,233	2,645	3,121	7,999
C)	Power Purchase expenses	7,722	10,439	16,897	35,058
C) i)	1/12th of power purchase expenses	644	870	1,408	2,922
D	Consumer Security Deposit	1,027	1,568	2,059	4,655
E)	Total Working capital (A+B ii) - C i) - D)	566	**566**	**(343)**	790
F)	Rate of Interest *	10.50%	10.50%	10.50%	10.50%
G)	**Interest on Working capital (Retail Supply)**	**59.48**	**22.19**	**0.00**	**81.68**
	Total Interest on Working Capital (Wheeling + Retail Supply)	**78.04**	**39.80**	**17.15**	**134.99**

Petitioners request the Hon'ble Commission to approve the interest on working capital as projected in the Table above. Any variation shall be claimed at the time of final True-up of the respective years.

10.2.3 Interest on Consumer Security Deposit

Interest on Consumer Security Deposit has to be paid to the consumers in accordance with MPERC (Terms and Conditions for Determination of Tariff for Supply and Wheeling of Electricity and Methods and Principles for Fixation of Charges) Regulations, 2021 and MPERC Security Deposit Regulations, 2009 and its amendment thereof. The Petitioner have provisionally considered rate on Consumer Security Deposit rate in line with the actual rate arrived based on the audited accounts. The Discom-wise summary of interest on Consumer Security Deposit is as provided in the Table below:

Table 124: Discom-wise Interest on Consumer Security Deposit for FY 2023-24 (Rs. Crores)

Sr. no.	Particulars	East Discom	Central Discom	West Discom	MP-State
1	Interest on Consumer Security Deposit	53.19	58.26	68.29	179.73

10.2.4 Gist of Interest & Finance Charge

Gist of the Interest & Finance Charges for FY 2023-24 is summarized as below:

Table 125:Discom-wise Total Interest & Finance Charges for FY 2023-24 (Rs. Crores)

Sr. No	Particular	East Discom		Central Discom		West Discom	
		Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim	Approved in MYT Order	Revised Claim
1	Interest on Project Loans	436.74	281.95	476.04	348.39	236.35	145.45
2	Total Interest on working Capital	66.04	78.04	65.01	39.80	0.00	17.15
3	Interest on Consumer Security Deposit	45.77	53.19	51.93	58.26	80.58	68.29
4	**Total Interest & Finance Charges**	**548.55**	**413.18**	**592.98**	**446.45**	**316.93**	**230.88**

Table 126: Revised Interest & Finance Charges claimed for MP-State for FY 2023-24 (Rs. Crores)

Sr. No	Particular	MP -State	
		Approved in MYT Order	Revised Claim
1	Interest on Project Loans	1,149.13	775.78
2	Total Interest on working Capital	131.05	134.99
3	Interest on Consumer Security Deposit	178.28	179.73
4	**Total Interest & Finance Charges**	**1,458.46**	**1,090.51**

10.3 Return on Equity

10.3.1 The Commission in its Tariff Regulations, 2021 has proposed to allow Return on Equity in two parts, i.e., Base Return on Equity and Additional Return on Equity linked to actual performance. The rate for base Return on Equity has been kept at 14% and additional Return of 2% which is linked to performance has proposed to be allowed at the time of True-up.

10.3.2 Regulation 22 of the MYT Regulations, 2021 provides that the debt-equity ratio of the capital employed for determination of tariff shall be 70:30. However, in case the actual equity is less than 30%, actual equity infused is to be considered and wherever the actual equity infused exceeds 30%, equity in excess of 30% shall be treated as normative loan. Accordingly, based on the above, the Petitioners have worked out Return of Equity for the FY 2023-23 as follows:

(a) Opening Equity for FY 2021-22 has been considered as the closing equity admitted in true up of FY 2020-21. Thereafter addition in equity for FY 2021-22 has been considered as proposed in True-up Petition for FY 2021-22. The closing equity thus arrived for FY 2021-22 has been considered as opening equity for FY 2022-23.

(b) Net asset addition to GFA during FY 2022-23 and FY 2023-24 of the Control Period is arrived by subtracting the consumer contribution/Grants from total asset addition to GFA as projected in this Petition.

(c) 30% of the net asset addition to GFA during the year or actual equity infusion as proposed, whichever being less has been considered as funded through equity.

10.3.3 Accordingly, the Return on Equity has been calculated on the average equity balance of the respective year with the Rate of 14% as summarised in the Table below:

Table 127: Discom-wise return on Equity for FY 2023-24 (Rs. Crores)

Particulars	East Discom	Central Discom	West Discom
Gross Fixed Assets at the beginning of year (net of consumer contributions)	**8,228.98**	**9,752.17**	**8,640.48**
Opening balance of GFA identified as funded through equity	1,655.66	1,940.23	1,233.68
Proposed capitalization of assets as per the investment plan (net of consumer contribution and grant)	**679.37**	**696.98**	**646.36**
Proportion of capitalized assets funded out of equity, internal reserves	38.87	80.25	31.35
Balance Proportion of capitalized assets funded out of project loans (B - B1)	640.50	616.73	615.01
Normative additional equity (30% of B)	203.81	209.09	193.91
Normative additional debt (70% of B)	475.56	487.88	452.45
Excess / shortfall of additional equity over normative (B1-C1)	(164.94)	(128.85)	(162.56)
Excess / shortfall of additional debt over normative (B2-C2)	164.94	128.85	162.56
Equity eligible for Return (A1+(C1/2)) OR (A1+(B1/2)), whichever is lower	**1,675.09**	**1,980.36**	**1,249.36**
Rate of Return in Equity	**14.00%**	**14.00%**	**14.00%**
Return on Equity (14% on E)	**234.51**	**277.25**	**174.91**

10.3.4 Petitioners request the Hon'ble Commission to approve the RoE as proposed in the Table above. Any variation shall be claimed at the time of final True-up of the respective years.

10.4 Provision for Bad & Doubtful Debts

10.4.1 Regulation 37 of Tariff Regulations, 2021 provides the methodology for computation of Provision for Bad & Doubtful Debts, wherein it is stated that Bad & Doubtful Debts shall be allowed to the maximum of 1% of the yearly revenue. Accordingly, the Petitioners have claimed the expenses against bad and doubtful debts as shown in the Table below:

Table 128: Discom-wise Provision for Bad & Doubtful Debts for FY 24 (Rs. Crores)

Sr. no.	Particulars	East Discom	Central Discom	West Discom	MP-State
1	Interest on Consumer Security Deposit	2	2	2	6

10.5 Other Income & Non-Tariff Income

10.5.1 The main components of Non-Tariff Income are Wheeling Charges, Supervision Charges, Sale of Scrap, income from Trading and Miscellaneous Charges from consumers as per Tariff Regulations, 2021 and as per the "Schedule of Miscellaneous and General Charges" under MPERC (Details to be furnished and fee payable by licensee or generating company for determination of tariff and manner of making application) Regulations, 2004 and amendments issued thereof. The Petitioners have projected their Other Income & Non-Tariff Income for FY 2023-24 based on averaging method over various components of other income.

10.5.2 Petitioners further wish to submit that they have not considered deferred income i.e. income booked towards the amortization of assets created through consumer contribution and grants under their claim of Other Income since, the Petitioners have claimed depreciation on net block of assets. Further, in line with the methodology adopted by the Hon'ble Commission in its previous True-up Order of FY 2019-20, Petitioners have not considered the waived off amount by MPPTCL towards liability of wheeling charges on DISCOMs in other income.

10.5.3 Accordingly, the Other Income & Non-Tariff Income is shown below:

Table 129: Discom-wise Other Income & Non-Tariff Income for FY 2023-24 (Rs. Crores)

Particulars	East Discom	Central Discom	West Discom	MP-State
Income from Investment, Fixed & Call Deposits	8.99	26.70	33.62	69.31
Interest on loans and Advances to staff	-		0.09	0.09
Other Income from Trading/Sale of scrap	17.88	9.74	8.65	36.27
Interest on Advances to Suppliers / Contractors	-		0.29	0.29
Income/Fee/Collection against staff welfare activities	-		0.02	0.02
Miscellaneous receipts	76.52	41.90		118.42
Wheeling charges	0.92	0.25	5.63	6.80
Liability of wheeling charges towards MPPTCL written off	-			-
Supervision charges	17.44	22.90	24.78	65.12
Recovery from theft	7.33			7.33
Meter Rent	-			-
Other Charges from Consumers	56.92			56.92
Utility Charges	-	0.77		0.77
Net gain/(loss) on disposal of stores item	-			-
Income from renting	-		3.17	3.17
Other miscellaneous income	-	81.05	126.56	207.61
Total	**186.01**	**183.31**	**202.80**	**572.12**

A11: AGGREGATE REVENUE REQUIREMENT

11.1 Aggregate Revenue Requirement of MPPMCL

The Table below details the Aggregate Revenue Requirement of MPPMCL. The net expenses are included as a part of Power Purchase Costs of Discom's

Table 130: Summary of ARR for MPPMCL for FY 2023-24 (Rs. Crore)

Sr.No.	Particulars	FY 24
I.	Revenue from operations (including Revenue Subsidy)	-
II.	Other income	117.92
III.	Income from other business allocated to Licensed business	
IV	Total Revenue (I + II+III)	117.92
V	**Expenses:**	
	Purchase of Power from MP Genco	
	Purchase of Power from Other Sources	99.87
	Inter-State Transmission charges	7.34
	Intra-State Transmission (MP Transco) Charges	
	SLDC Charges	
	Depreciation and amortization expenses	8.49
	Interest & Finance Charges	266.91
	Repairs and Maintenance	3.37
	Employee costs	70.22
	Administration and General expenses	29.64
	Net prior period credit charges	-
	Other Debits, Write-offs	4.37
	Lease Rental	
	Total Expenses	**490.19**
VI	Profit before exceptional and extraordinary items and tax (IV-V)	(372.26)
VII	Exceptional items	-
VIII	**Profit before extraordinary items and tax (VI – VII)**	**(372.26)**

11.2 Impact of MPPTCL Ture-up, MPGECO True-up and DISCOM's True-up

(a) Impact of MPPTCL's True-up for FY 2020-21: The Hon'ble Commission has recently issued Order on True-up of Transmission Tariff of MPPTCL for FY 2020-21 in Petition No. 1/2022 dated 16th August, 2022. From the para 71 of the said True-up Order, an amount of Rs. 144.19 Crore has been allowed to be recoverable from Discoms. Accordingly, the said amount is considered by the Petitioners in their revised ARR for FY 2023-24.

(b) Impact of MPGENCO's True-up for FY 2020-21: MPGENCO has recently filed a Petition No. 66 of 2022 for True-up of FY 2020-21; wherein as per Table No. 6.1.4.1 (para 6.1.4 of said Petition) MPGENCO has claimed True-up requirement of Rs. (1015.83) Crore. The said Petition is available on the MPERC website. Accordingly, the Petitioners have considered the True-up impact as filed by MPGENCO in the revised ARR for FY 2023-24.

(c) Impact of DISCOM's True-up for FY 2021-22: The Petitioners in line with Regulation 7.2 of Tariff Regulations, 2021 have filed a separate Petition for True-up of ARR for FY 2021-22. The Petitioners have claimed Rs. 3,275.88 Crore towards True-up of ARR for FY 2021-22. The same has been considered in the revised ARR for FY 2023-24.

11.3 Aggregate Revenue Requirement of Discoms

The summary of the Aggregate Revenue Requirement, Revenue from Sale of Power & Revenue (Gap)/Surplus of the DISCOM's calculated on the basis of provisions of the regulation is detailed in the Table below:

Table 131: Summary of ARR of Discoms for FY 2023-24 (Rs. Crore)

Sr. no.	Particular	Unit	Revised ARR for FY 2023-24			
			MP State	East	Central	West
A	**Revenue**					
1	Revenue from sale of power at current Tariffs	Rs Cr	47,992	13,395	15,870	18,727
B	**Expenditure**					
1	Purchase of Power including MPPMCL Cost and Inter-State Transmission Charges	Rs Cr	35,022	7,694	10,472	16,855
2	Intra-State Transmission (MP Transco) Charges and SLDC Charges	Rs Cr	4,335	1,289	1,502	1,544
3	R&M Expense	Rs Cr	921	336	341	245
4	Employee Expenses	Rs Cr	4,190	1,443	1,326	1,422
5	A&G Expense	Rs Cr	409	129	134	145
6	Depreciation and Related debits	Rs Cr	1,037	296	395	346
7	Interest & Finance Charges	Rs Cr	1,090	413	446	231
8	Other Debits, Write-offs (Prior period and bad debts)	Rs Cr	6	2	2	2
9	**Total Expenses**	**Rs Cr**	**47,011**	**11,602**	**14,619**	**20,790**
10	RoE	Rs Cr	687	235	277	175
11	**Total Expenses Including RoE**	**Rs Cr**	**47,698**	**11,836**	**14,897**	**20,965**
12	Other income	Rs Cr	572	186	183	203
C	**Total ARR**	**Rs Cr**	**47,126**	**11,650**	**14,713**	**20,762**
D	**Revenue Gap**	**Rs Cr**	**(867)**	**(1,745)**	**(1,157)**	**2,035**
13	Impact of True Up GENCO	Rs Cr	(1,016)	(339)	(339)	(339)
14	Impact of True Up Transco	Rs Cr	144	73	49	22
15	Impact of True Up Discoms	Rs Cr	3,276	2,436	1,957	(1,117)
E	**Total Revenue Gap (including true up if any)**	**Rs Cr**	**1,537**	**425**	**510**	**602**
F	**Total ARR including true up**	**Rs Cr**	**49,530**	**13,821**	**16,380**	**19,329**
G	Sales	MU	71,074	19,773	23,417	27,884
H	**Average Cost of Supply (incl. True-up)**	**Rs./Unit**	**6.97**	**6.99**	**7.00**	**6.93**

A12: TARIFF PROPOSAL FOR FY 2023-24

12.1 Revenue at Current & Proposed Tariffs

12.1.1 It is submitted that there has not been any substantial tariff hike for the years FY 2014-15 and FY 2015-16 in the state of Madhya Pradesh which has severely affected the financial health of the Discom's. For FY 2016-17 to FY 2018-19, the Hon'ble Commission had approved an average tariff hike of 8.40%, 9.48% and 0% respectively. In FY 2019-20 & FY 2020-21, there was 7% & 2% hike respectively, whereas in FY 2021-22 there was a marginal tariff hike of 0.63% only. The Discom's are finding it extremely difficult to sustain its operations at the present tariff levels because of intrinsic rise in expenditure due to inflationary pressures, and consistent rise in power and energy demands, an ambitious normative loss reduction trajectory and benchmarks set by the Hon'ble Commission, and obligations to be met under the policy objectives of the State and Central governments.

12.1.2 The state of MP has a total installed capacity of approx. 23,315 MW as on 31st March 2022. With a vision of 24x7 electricity supply for all the consumers in the state, and keeping in view the expected increase in demand, the state has planned capacity additions in advance. However, the demand has not kept pace due to various reasons like Open Access, Railways exercising it right under a deemed distribution licensee status, slow industrial growth due to reasons well known, etc. over the past few years, resulting in a situation where most of the states (particularly in Western Region) including M.P. are saddled with surplus capacity which is not getting utilized.

12.1.3 Due to this situation, it is essential to highlight that as per the current capacity available to state, the thermal plants from almost 80% of the scheduling. Further, MPPMCL follows the Merit Order Dispatch principle as prescribed by Hon'ble Commission. It is important to mention that Renewable, Nuclear and major part of Hydel have a must-run status and therefore all the backing down is to be considered from thermal power stations. The surplus situation has led to back down of the available capacity as the prices in the exchange also are not attractive and also due to capacity constraint for inter-regional power transfer. However, the payment of fixed charges is required to be made for such generators in accordance with the PPAs. In order to respect the power purchase agreements with such generators substantial quantum of power was backed down in previous years also and the Petitioners have to pay the fixed cost to the generators against power which was not availed. Further, the Petitioners are also paying the Technical Minimum Charges to Central Generating Stations according to the applicable Regulations.

12.1.4 Further, in order to increase its sales base and bring in new consumers under its ambit, several rounds of discussions have been held with Captive and Open Access consumers. The price of electricity, both in absolute and in relative terms, is an important factor in the competitiveness of industry. All Captive and Open Access Consumers have mentioned that to retain the competitiveness the power is sourced

from options other than Discom's. If the Discom can provide competitive power, they will be willing to shift their demand to Discom's. With the surplus availability of energy in the State as estimated for FY 2023-24, it is necessary to increase the sale also. The licensees in their previous years Petition have introduced several rebates to encourage Captive and Open Access Consumers to shift their demand to Discoms and the same have been admitted in the Tariff order of the Commission. With the existence of these rebates many Captive and OA consumers have inclined to shift their demand to Discoms. It is important to mention that increase in the consumer base would have a ripple effect on the entire consumer base of the Discom as the costs get spread over and the revenue of Discom's increases.

12.1.5 Furthermore, discussions have been held with Railways to bring them back to the Discom. Accordingly, rebates have been proposed for Railways in the previous Petition.

12.1.6 In order to bridge the revenue gap, it is necessary for the licensee to seek an appropriate hike in the tariff, up to the level as proposed and detailed in this petition. It is submitted to the Hon'ble Commission that the Petitioners have proposed sale of surplus energy at the prevailing IEX rates. The current rates are reflective of the ongoing demand-supply scenario in the country, however, in case these rates improve during the ensuing years, the Petitioners would leverage the opportunity to increase their revenue from sale of surplus power by better rates and increased sale. The Petitioners have always tried to reduce the costs incurred by them to serve the consumers in its license area. The costs as mentioned in this tariff proposal Petition for the year FY 2023-24 are already on the lower side and are based on the normative loss levels as specified by the Hon'ble Commission. The Petitioners submit that the actual costs run higher based on the actual loss levels experienced in its distribution network and the external network.

12.1.7 In view of the above submission, the Petitioners are proposing a hike of around 3.20% across all the categories. It would just not be possible for the Discom's to maintain its operational viability at the least, without an appropriate hike in the retail tariff sought through this Petition.

12.1.8 A summary of the proposed tariff hike and resultant additional revenue is given in the table below:

Table 132: Summary of proposed tariff for FY 2023-24 (Rs. Crores)

Particular	Unit	MP State	East	Central	West
Total ARR	Rs Crs.	49,529.81	13,820.73	16,380.40	19,328.69
Revenue at Current Tariffs	Rs Crs.	47,992.32	13,395.46	15,869.98	18,726.88
Total Revenue Gap (Including True-Up)	Rs Crs.	1,537.49	425.26	510.42	601.81
Sales	MUs	71,073.98	19,772.87	23,416.84	27,884.26
Average Cost of Supply (Including True-up)	Rs./Unit	6.97	6.99	7.00	6.93

12.1.9 In view of above the licensees pray to the Hon'ble Commission to consider and approve the said tariff proposal for FY 2023-24 to recover the costs for the ensuing year for the State as a whole.

12.1.10 The detailed category-wise tariff proposal is being submitted in the tariff schedules as part of the current petition. The impact on category-wise revenue due to the proposed tariff is given below:

Table 133: Category-wise proposed revenue for FY 2023-24 (Rs. Crores)

Tariff Category/ Sub-category		MP State		East Discom		Central Discom		West Discom	
		Rev. at Current Tariffs	Rev. at Proposed tariffs	Rev. at Current Tariffs	Rev. at Proposed tariffs	Rev. at Current Tariffs	Rev. at Proposed tariffs	Rev. at Current Tariffs	Rev. at Proposed tariffs
LV-1	Domestic	12188	12529	3839	3949	4266	4383	4083	4197
LV-2	Non-Domestic	3695	3834	1145	1186	1270	1322	1280	1327
LV-3	Public Waterworks & Street Light	989	1021	273	281	329	340	387	399
LV-4	LT Industry	1516	1564	503	520	319	329	694	716
LV-5	Agriculture	17236	17788	4282	4418	5984	6177	6970	7193
LV-6	EV Charging	0	0	0	0	0	0	0	0
	TOTAL – LT	**35623**	**36737**	**10042**	**10355**	**12168**	**12550**	**13413**	**13832**
HV-1	Railway Traction	80	83	41	43	39	40	0	0
HV-2	HV 2: Coal Mines	433	448	409	423	24	25	0	0
HV-3.1	Industrial Use	7582	7858	2129	2205	2466	2555	2987	3098
HV-3.2	Non-Industrial	1063	1100	263	272	368	381	431	447
HV-3.3	Shopping Mall	90	93	7	8	35	36	47	49
HV-3.4	Power Intensive Industries	1294	1347	70	72	407	424	817	850
HV-4	Seasonal & Non Seasonal	21	21	8	9	2	2	10	11
HV-5	PWW Works & Other Agri.	1437	1482	233	240	245	253	959	988
HV-6	Bulk Residential Users	324	317	190	186	111	108	23	23
HV-7	RECs/Synchro of power for Generator connected to Grid	30	31	2	2	3	3	26	26
HV-8	EV Charging	16	15	1	1	2	2	12	11
	TOTAL - HT	**12369**	**12793**	**3354**	**3461**	**3702**	**3830**	**5314**	**5502**
	TOTAL (LT+HT)	**47992**	**49530**	**13395**	**13816**	**15870**	**16380**	**18727**	**19334**

12.2 Separate tariff category for Metro Rail

12.2.1 In Bhopal and Indore cities new connections are expected during the FY 2023-24 for the purpose of traction load and non-traction loads of Metro Rail. Envisaging the above, details regarding the projected load, load factor, etc., were sought from the Madhya Pradesh Metro Rail Corporation Limited. However, till drafting of this Petition, the Petitioners could not get the details necessary for projecting the sales and revenue for upcoming connections of Metro Rail (Traction and Non-Traction activity).

12.2.2 The Petitioners endeavour for their readiness to cater the connection on the demand of MPMRCL. As regard to readiness, the Petitioners have analysed, the tariff applicable to Metro Rail in other states for proposing the Tariff. The Petitioners hereby propose a separate tariff and Tariff Category for metro rail as the nature of services, load factor and other parameters are different from all other categories including Railways. This is in line with Section 62 (3) of the Electricity Act 2003 which allows to differentiate consumers based on consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.

12.2.3 For creation of the separate tariff category and for the reference of the Hon'ble Commission, the Petitioners hereby submit the stand taken by the Telangana Electricity Regulatory Commission in its Tariff order for FY 2016-17. The same is as reproduced below:

"Commission's view

TSSPDCL in its filings had proposed the sub category of HT-V (B) Hyderabad Metro Rail (HMR). Through an addendum petition dated 21/03/2016, TSSPDCL had requested the Commission to consider Hyderabad Metro Rail as a distinct specific tariff category called HT-IX: HMR. During the public hearing, objection was raised against the proposal of creating a separate category since the nature of business of HMR is similar to that of Indian Railways.

The Commission has examined the proposal for creating a separate category or subcategory to an existing category and presents its reasoning as below:

- *HMR will be engaged in the activities of providing mass rapid transit system for Hyderabad and is a public utility and a social sector project having many social benefits which would be bestowed upon a section of traveling public.*
- *Section 61 and 62 of The Electricity Act allow for differentiation on the basis of geographical positioning and the purpose for which supply is required. The nature of service provided, geographical area and purpose of HMR are different from that of the Indian Railways and hence qualify for separation.*
- *With regard to load factor of the service, as the HMR becomes fully operational, the movement of trains will be more frequent in the given limited area of*

operations and thus the load factor will be higher than that of the Railways.

- *Further the HMR provides only passenger services unlike the Railways which carry goods and earn additional revenue from such services.*

Hence, the Commission opines that HMR is eligible to be classified under a separate category as has been done in Delhi. The commercial operation of the HMR is anticipated to be commenced during the year FY2016-17 covering only a limited area of operations and at present its load constitutes construction and commercial loads. The Commission observes that the category cost of service cannot be ascertained at this stage and hence a sub-category can be created with lower tariff than that of the Indian Railways to accommodate the unique requirement of this category prior to major commercial operations. ***Meanwhile the Commission directs TSSPDCL to study the consumption pattern for the portion of the commercial operation to commence during the year FY 2016-17 and propose the Category CoS for the subsequent year.***

Hence the sub-category HT-V (B) Hyderabad Metro Rail (HMR) under HT-V Railway traction is created as requested by the Discom in its original petition and after considering the facts explained. Categorization of Metro Rail as a separate category/ sub-category has also been allowed by DERC and KERC respectively.

{Emphasis added}

12.2.4 The Petitioners wish to submit that many States have also approved separate tariff in their Tariff Order. The summary of Tariff Orders issued by various SERC across the country and the Tariff applicable to Metro Rail in different States is shown in Table below:

Table 134: Metro Rail Tariff in Different States (Rs. Crores)

Sr. no.	State/UT	Category	Discom	FC	EC
1	Delhi	Public Utility	BRPL BYPL TPDDL	Rs. 250 /kVA/month	6.25 Rs./kVAh
2	Telangana	HT-V(B) HMR	Telangana Discom	Rs. 475/kVA/month	4.95 Rs./kVAh
3	Uttar Pradesh	HV – 3: B: METRO RAIL CORPORATION:	UPPCL	Rs. 300/kVA/month	7.30 Rs./ kVAh
4	Maharashtra	HT III - Railways/ Metro/Monorail	MSEDCL	Rs. 432/kVA/month Rs. 432/kVA/month	6.86 Rs./ kVAh 6.86 Rs./ kVAh
5	Karnataka	Bangalore Metropolitan Railway Corporation Ltd., (BMRCL)	BESCOM	Rs.245 /kVA/month	5.25 Rs. /kVAh

12.2.5 In view of the above, the Petitioners hereby propose a separate tariff category for Metro Rail in the state of Madhya Pradesh. The Petitioners submit that the tariff of the Sub-urban Rail Transport has been kept within the 20% of the "Average cost of supply". The Petitioners, therefore, proposing the tariff for Sub-urban Rail Transport (Metro) as shown in the Table below:

S.No.	Category	Monthly Fixed Charges (Rs. per kVA of billing demand per month)	Energy Charge (paisa/Unit)
1	Sub-urban Rail Transport (Metro Rail) at 132kV / 220kV	380	610

12.2.6 As no historical data in respect of Metro Rail activities like Diversity factor and the ratio of Traction & Non-Traction load is available with the Petitioners, hence, no sales & revenue projection have been made in the instant Petition.

12.2.7 **In view of above the Petitioners hereby pray to the Commission to introduce a separate Tariff category for Sub-urban Rail Transport like Metro Rail which will be covering the Traction as well as Non-Traction activities of Metro Rail Corporation.**

12.3 Salient Features of the Tariff Proposal

12.3.1 In order to meet out the Revenue gap, the licensees have proposed nominal hike in tariff rates along with certain changes in other terms and conditions of LT and HT tariff. The various proposals are being made taking cognizance of the consumer's demand to reduce complexity in Tariff. Further, MoP has recently issued *"Consumer Service Rating Report"* for FY 2020-21 wherein weightage has been given to number of tariff categories in such a fashion that the Discoms with least number of tariff categories including sub-categories and slab will get highest mark and vice-a-versa. Accordingly, simplification of tariff categories has been proposed in this Petition with the aim to score more marks in the ensuing Rating exercise. The proposed schedule of the Retail Tariff for FY 2023-24 is enclosed with this Petition.

12.3.2 The salient features of the proposed changes are as elaborated below:

1. **Simplification of Tariff slabs in LV-1.2 Domestic Tariff** :

   Reasons for proposed changes: For the purpose of Simplification of Domestic Tariff sub-categories, it is proposed to modify the tariff slab "**151 - 300 unit**" as "**Above 151 units**" and removal of **"Above 300 units slab".**

2. ***Rationalization of Tariff for "Temporary connections including Multi-point temporary connection for Mela" in LV 2.2 Tariff schedule:***

Reasons for proposed changes: For the purpose of rationalization & reduction in Tariff sub-categories it is proposed that the Tariff for "**Temporary connections including Multi-point temporary connection for Mela"** in LV 2.2 Tariff schedule may be billed @1.25 times as per the General Terms & Conditions of LT Tariff. The same is according to the provisions of the Tariff Policy.

3. **Merging of LV-5.1 and LV-5.4 Tariff categories:**

Reasons for proposed changes: For the purpose of reduction in complexity in Tariff, it is proposed to merge the LV-5.1 and LV-5.4 Tariff categories as both the categories have the same Tariff. By extending LV-5.1 tariff category to flat rate consumers also the LV-5.4 category will no longer be required.

4. ***Single part Tariff in LV-6 & HV-8 Tariff schedules meant for E-Vehicles/Rickshaw Public Charging stations:***

Reasons for proposed changes: In accordance with the "Charging infrastructure for Electric Vehicle (EV) – the revised consolidated Guidelines & Standards" issued by GoI vide notification No. 12/2/2018-EV (Comp No. 244247) dated 14th January 2022 it is proposed to have a single part Tariff for LV-6 & HV-8.

5. ***Amendment in applicability clause for HV-3.4 Tariff Sub-category for Power Intensive Industries.***

Reasons for proposed changes:

In view of ambiguity arisen in case of consumers under this category using coal furnaces for heating and metal of Iron and Steel, the applicability clause of Power intensive consumers has been proposed to be amended for "Melting and heating of Iron and Steel" using **Electric furnaces** only.

6. ***Merging of HV-6.1 & HV-6.2 sub-categories:***

Reasons for proposed changes: For the purpose of rationalization & simplification of Tariff sub-categories, it is proposed to merge the tariff sub-categories HV-6.1 & HV-6.2. The provisions of HV-6 category is detailed in the Tariff Schedule.

7. ***Simplification of Tariff for 132kV & 220kV voltage level in HV-3 & HV-6 tariff categories meant for Shopping Malls, Power Intensive and Bulk Residential Users:***

Reasons for proposed changes: As there are no consumers available in 132kV & 220kV voltage level for HV-3.3 Shopping Mall & HV-3.4 Power Intensive Category, respectively and in 132kV level for HV-6 Bulk Supply Category. Hence, the tariff of these consumers has been merged with that of immediate above respective voltage level without impacting the revenue of the Petitioners.

8. ***Introducing KVAH billing for HT category*** :

Reasons for proposed changes: In view of suggestions of Industrial stakeholders during the Tariff determination exercise of FY 2015-16 & FY 2016-17 Hon'ble Commission had directed the Discoms to submit the impact assessment on switching over from kWh billing to kVAh billing. After careful study of tariff neutrality at kVAh & kWh considering the applicable pf incentives/surcharges over a wide range of power factors of HV consumers it is proposed to implement the kVAh billing in HT category. In view of various advantages of switching over to kVAh billing to both licensee and consumers kVAh Tariff is being designed for HT consumers considering suitable conversion factor.

9. Continuation of Tariff for supply through DTR meters for cluster of Jhuggi/Jhopadi:

Reasons for proposed changes : The Hon'ble Commission vide its Order dated 21.09.2022 has restored the Tariff category for supply through DTR meters for cluster of Jhuggi/Jhopadi for FY 2022-23 only. Further, the Hon'ble Commission directed the Central Discom to provide individual meters to all such un-metered connections latest by 31st March, 2023. In this regard the Central Discom submits that for cluster of Jhuggi/Jhopadi consumers meters are installed at DTR locations. However, it will take time for proper electrification of these declared/undeclared illegal colony. Till such time individual meters are provided to these connections; it is proposed to continue the tariff category for supply through DTR meters for cluster of Jhuggi/Jhopadi.

10. Clarification on consideration of Fuel and Power Purchase Cost Adjustment Charges (FPPCA) for unmetered temporary agriculture connection:

Reasons for proposed changes : As per existing mechanism, agricultural consumers opting for temporary supply have to pay the charges in advance for three months including the prevailing FCA charges. However, in case where the FCA charges are revised for the next quarter/months, such charges are difficult to recover from the consumers. Hence, to address such constraints in recovery of charges on account of revision of FCA for unmetered temporary agriculture connection it is proposed to bill Fuel and Power Purchase Cost Adjustment Surcharge (FPPCA) at the rate prevailing as on the date of release of connection.

11. Separate Tariff for Metro Rail :

Reasons for proposed changes: Envisaging the new connections for the purpose of traction load and non-traction loads of Metro Rail, a new separate tariff category has been proposed considering the nature of supply and the purpose for which the supply is required.

A13: INTRODUCTION TO KVAH BASED BILLING TO HT CONSUMERS

13.1 The Petitioners wish to submit that electrical energy has two components, i.e., Active Energy (kWh) and Reactive Energy (kVARh). The active power also called as real power is consumed and converted into useful work for creating heat, light and motion. The Active power is measured in kilo Watt (kW) and is totalized by the energy meter in kilo watt hour (kWh). Whereas, Reactive power is used to provide the electromagnetic / electrostatic field in inductive and capacitive equipment like motors, air conditioners, fans and is measured in kVAR (lag/ lead). Further, the Reactive Power is totalised by the energy meter as kVARh. Vector sum of these two components is called as Apparent Energy & is measured in terms of kVAh.

13.2 Both Active (kWh) and Reactive (kVARh) energies are consumed simultaneously. Reactive Energy (kVARh) occupies the capacity of electricity network and reduces the useful capacity of system for generation and distribution & hence its consumption also needs to be billed. The source of most reactive currents is the poor power factor loads (equipment) connected at consumer premises. As these loads are not compensated by appropriate capacitor installation by consumers, utilities are burdened for installation of capacitors.

13.3 In the State of Madhya Pradesh, as per existing mechanism the billing of all consumers is done on the basis of active power which is measured in kWh. As far as Reactive power is concerned, the same is presently eligible for Power Factor Incentive and Penalty mainly for LT consumer (other than LV:1 Domestic consumers) and HT consumers.

13.4 The Hon'ble Commission vide its Order dated 29th June 2005 in Petition No. 03/2005 had introduced the mechanism to incentivize HT and LT consumers if they maintain average monthly power factor above specified percentage and penalize if the average monthly power factor fall below specified percentage. Subsequently, the Hon'ble Commission stringent the norms for power factor incentives and penalties in its subsequent Tariff Orders. Presently, the HT consumers are eligible for incentives if they maintain average monthly power factor above 95 percent and shall be penalize if their average monthly power factor fall below 90 percent. The relevant provision of power factor incentives and penalty from the Tariff Order of FY 2022-23 is as reproduced below:

"1.8 Power Factor Incentives:

Power factor incentives shall be payable as follows:

Power Factor	***Percentage incentive payable on billed energy charges on the basis of energy actually consumed***
Above 95% and up to 96%	*1.0 (one percent)*
Above 96% and up to 97%	*2.0 (two percent)*
Above 97% and up to 98%	*3.0 (three percent)*
Above 98 % up to 99%	*5.0 (five percent)*
Above 99 %	*7.0 (seven percent)*

1.14 Power Factor Penalty (For HT consumers other than Railway Traction HV-1)

(i) If the average monthly power factor of the consumer falls below 90 percent, the HT consumer shall be levied a penalty @ 1% (one percent), for each one percent fall in his average monthly power factor below 90 percent, on total amount of bill under the head of "Energy Charges":

(ii) If the average monthly power factor of the HT consumer falls below 85 percent, the HT consumer shall be levied a penalty of 5% (five percent) plus @ 2% (two percent) for each one percent fall in his average monthly power factor below 85 percent on the total amount of bill under the head of "Energy Charges". This penalty shall be subject to the condition that overall penalty on account of low power factor does not exceed 35%.

(iii) Should the average monthly power factor fall below 70%, the Distribution Licensee reserves the right to disconnect the consumer's installation till steps are taken to improve the same to the satisfaction of the Distribution Licensee. This is, however, without prejudice to the levy of penalty charges for low power factor in the event of supply not being disconnected.

(iv) ……."

13.5 The Petitioners wish to submit that considering long pending demand of the stakeholders and complying to the directives of the Hon'ble Commission, the kVAh billing may be introduced in the State for HT consumers. As the incentives and penalties are inbuilt in the kVAh billing it will reduce the complexities in billing and will encourage the consumers to maintain near unity Power factor to achieve loss reduction, improve system stability, power quality and improve voltage profile.

13.6 The relevant extract from the Tariff Order of FY 2016-17 wherein stakeholders have requested the Discoms to introduce kVAh billing is reproduced below:

"ISSUE NO. 16: Introduction of kVAh billing

Issue raised by objectors

One of the objectors suggested introducing kVAh billing for purpose of simplification of billing, dispensing away power factor incentive and for the purpose of system strengthening.

Response from Discoms

Discoms submitted that in the current scenario, the Discoms are technically equipped to make billing on kWh basis. Further, they are scrutinising the implications for the implementation of kVAh billing, practical problems and acceptance of such technology.

Commission's views

The Commission has directed the Petitioners to carry out impact assessment study on transition from KWh billing to KVAh billing."

13.7 In compliance of the above, the Petitioner had carried out the study which was submitted to the Hon'ble Commission along with Tariff Petition of FY 2017-18. Further, in Tariff Order of FY 2017-18, the Hon'ble Commission has noted the submission of MP-Discoms and further directed the MP-Discoms to submit the comprehensive study report referring to other States where KVAH billing is prevalent with the next Tariff Petition.

13.8 MPPMCL on behalf of MP-Discoms submitted the Consolidated Report on Impact assessment study for switching from kWh billing to kVAh billing is submitted to the Hon'ble Commission vide Letter No. CGM (RM)/ARR FY-19/1212 dated 17 February 2018 along with Tariff Petition for FY 2018-19. Subsequently, in compliance of directive given in Tariff Order FY 2018-19, comprehensive report duly linked with excel sheet, has been submitted by MPPMCL to the Hon'ble Commission vide letter no CGM (RM)/COD TO FY-19/1027, dated 2nd January 2019 along with Tariff Petition for FY 2019-20.

13.9 The Petitioners wish to submit that at various levels and platforms, the MP-Discoms shown their readiness for implementation of kVAh billing to HT Consumers, where meters can ready extract data suitable for kVAh billing is available. Further, many States have already adopted kVAh billing in India, the details of while are as below:

Name of State	Date of Order for kVAh billing
Himanchal Pradesh	18.09.2001
Delhi	2001
Jammu & Kashmir	28.03.2007
Andhra Pradesh	30.03.2011
Haryana	25.07.2012
Uttar Pradesh	31.05.2013
Punjab	22.08.2014
Chhattisgarh	23.05.2015
Bihar	21.03.2016
Maharashtra	30.03.2020

13.10 Further, the category wise status of applicability of kVAh billing for various States is tabulated as below:

Category	MH	AP	CG	Delhi	Gujarat	Haryana	UP	Bihar	J&K
HT Category									
Industrial	**Y**	**Y**	**Y**	**Y**	**X**	**Y**	**Y**	**Y**	**Y**
Commercial	**Y**	**Y**	**Y**	**Y**	**X**	**Y**	**Y**	**Y**	**Y**
Railways	**Y**	**Y**	**Y**	**Y**	**X**	**Y**	**Y**	**Y**	**Y**
Agriculture	**Y**	**Y**	**Y**	**X**	**X**	**X**	**X**	**Y**	**Y**
PWW/LIS	**Y**	**Y**	**Y**	**Y**	**X**	**X**	**Y**	**Y**	**Y**
Temporary	**Y**	**Y**	**Y**	**Y**	**X**	**X**	-	**Y**	**Y**
Bulk Supply	**Y**	**Y**	**Y**	**X**	**X**	**Y**	**Y**	**Y**	**Y**
Start Up	-	**X**	**Y**	**X**	**X**	**X**	**Y**	**Y**	**X**
LT Category									

Category	MH	AP	CG	Delhi	Gujarat	Haryana	UP	Bihar	J&K
Domestic	X	X	X	X	X	X	X	X	X
Non Domestic/ Commercial	Y	X	X	Y	X	Y	X	Y	X
PWW	Y	X	X	Y	X	X	X	X	X
Agriculture	X	X	X	X	X	X	X	X	X
Industrial	Y	X	X	Y	X	Y	X	Y	X
Street Light	X	X	X	X	X	X	X	X	X

13.11 Further, the Forum of Regulators (FoR) in its report on "Metering Issues" August,2009, has stated that kVAh billing is the new trend in electricity billing, which is adopted worldwide. In the report they have strongly advocated to adopt kVAh billing in India.

13.12 Based on the above, the Petitioners have proposed to implement kVAh billing, like other States, initially for HT consumers considering higher awareness about advantages of maintaining PF among HT consumer groups.

13.13 Further, while proposing the kVAh billing, i.e., in designing kVAh Tariff, the Petitioners have adopted the principle of revenue neutrality so that both the licensee as well as consumers are not burdened unnecessarily. Tariff determined in kVAh is less than kWh tariff by the average power factor. The methodology as adopted by the Petitioners are explained in subsequent paras:

Methodology for kVAh tariff determination

I. A conversion factor has been derived for converting energy charge in Rs./kWh to energy charge in Rs./kVAh for the corresponding power factor.

Following illustration is given for the purpose of understanding:

Let assume,

a = energy charge in Rs./kWh

b = Total no. of units billed in kWh

pf = average monthly power factor

i = percentage power factor incentive or penalty for the given month

{" i " is positive of penalty and negative for incentive}

*The total Energy Charge for total kWh units is therefore = a * b ……(1)*

After considering power factor incentive or penalty
*Total kWh energy charge payable Rs. = a * b * (1+i) …… (2)*

Now, the units equivalent to kVAh consumption will be = b/pf ……. (3)

The revenue neutralized energy charge in Rs./kVAh corresponding to given power factor shall be: c = (2) / (3)

*Where c = a * pf * (1+i)* *…….(4)*

Therefore,

Revenue neutralized conversion factor for energy charges in Rs./kWh to energy charges in Rs./ kVAh is say k as under:

$$k = \frac{c}{a}$$

$$k = pf * (1 + i) \qquad \text{……(5)}$$

Sample Calculation:

Energy charge (Rs./ kWh) = 6.5
Average monthly power factor = 98%

As per the MYT Tariff Order 2022-23, for 98% monthly average power factor an incentive of 3% is given on energy charge.

After substituting above values in eq. (5)

The revenue neutralized conversion factor for converting energy charges in Rs./kWh to energy charges in Rs./ kVAh corresponding to 98% power factor is
= 0.98(1-0.03)*
= 0.9506

*Accordingly, Energy charges in Rs./ kVAh = 0.9506*6.5*
= 6.1789

II. By using the above methodology, revenue neutral conversion factor for each power factor ranging from (1 , 0.99, 0.98……0.70) is calculated and then energy charges in Rs./kVAh is determined corresponding to each power factor for each sub-category.

III. Finally, for determining the category wise energy charge in Rs./kVAh, a weighted average of kWh units and energy charge in Rs./kVAh for the full range of power factor is determined.

IV. After determining the sub-category wise energy charged in Rs./kVAh, sub-category wise conversion factor is determined by taking the ratio of energy charges in Rs./kVAh and energy charges in Rs./kWh of that sub-category.

Following Table summarizes the sample calculation for weighted average energy charges for HV 2.1 B and HV 3.1 A based on actual data of East Discom.

Table 135: Calculation of sub-category wise energy charges in Rs./kVAh as per weighted average cum revenue neutralize method

Power Factor	% Incentive or Penalty	Revenue neutralize Conversion factor	HV 2.1. B			HV 3.1. A		
			Existing Energy Charges in Rs./KWh	Energy Charges in Rs./kVAh	Units Sales (kWh)	Existing Energy Charges in Rs./KWh	Revenue neutralize Energy Charges in Rs./kVAh	Units Sales (kWh)
pf	**i**	**k = pf* (1+i)**	**a**	**a*k**		**b**	**b*k**	
1	-7%	0.930	6.29	5.85	0	6.2	5.77	1086653
0.99	-5%	0.941	6.29	5.92	0	6.2	5.83	21547216
0.98	-3%	0.951	6.29	5.98	20328782	6.2	5.89	20477943
0.97	-2%	0.951	6.29	5.98	13261527	6.2	5.89	15710336
0.96	-1%	0.950	6.29	5.98	43712368	6.2	5.89	11741162
0.95	0	0.950	6.29	5.98	14443740	6.2	5.89	4006883
0.94	0	0.940	6.29	5.91	37108693	6.2	5.83	6477415
0.93	0	0.930	6.29	5.85	36977395	6.2	5.77	3132171
0.92	0	0.920	6.29	5.79	32400305	6.2	5.70	5688258
0.91	0	0.910	6.29	5.72	31636964	6.2	5.64	3862944
0.9	0	0.900	6.29	5.66	2771016	6.2	5.58	3224783
0.89	1%	0.899	6.29	5.65	0	6.2	5.57	3281570
0.88	2%	0.898	6.29	5.65	0	6.2	5.57	2498718
0.87	3%	0.896	6.29	5.64	1037673	6.2	5.56	3198403
0.86	4%	0.894	6.29	5.63	0	6.2	5.55	1793452
0.85	5%	0.893	6.29	5.61	0	6.2	5.53	2089683
0.84	7%	0.899	6.29	5.65	0	6.2	5.57	2468189
0.83	9%	0.905	6.29	5.69	0	6.2	5.61	265985
0.82	11%	0.910	6.29	5.73	126736	6.2	5.64	794897
0.81	13%	0.915	6.29	5.76	0	6.2	5.67	923481
0.8	15%	0.920	6.29	5.79	0	6.2	5.70	1380791
0.79	17%	0.924	6.29	5.81	0	6.2	5.73	767077
0.78	19%	0.928	6.29	5.84	2114074	6.2	5.75	1488279
0.77	21%	0.932	6.29	5.86	0	6.2	5.78	217693
0.76	23%	0.935	6.29	5.88	0	6.2	5.80	217889
0.75	25%	0.938	6.29	5.90	0	6.2	5.81	432834
0.74	27%	0.940	6.29	5.91	0	6.2	5.83	312084
0.73	29%	0.942	6.29	5.92	0	6.2	5.84	281895
0.72	31%	0.943	6.29	5.93	0	6.2	5.85	557294
0.71	33%	0.944	6.29	5.94	0	6.2	5.85	226863
0.7	35%	0.945	6.29	5.94	149481	6.2	5.86	4239179
Sub category wise energy charges in Rs./ kVAh					**5.88**			**5.80**

From the above the weighted average energy charges for HV 2.1:B is arrived as Rs. 5.88/kVAh. Accordingly, the conversion factor for HV 2.1 B works out as 0.9348 (i.e., Rs. 5.88 per kVAh/ Rs. 6.29 per kVAh)

Similarly, the conversion factor for HV 3.1:A works out as 0.9355

V. Similarly, Energy Charge in Rs./kVAh and conversion factor for each sub-categories for each Discom is determined. *Following Table summarizes the Discom wise conversion factor calculation*

Table 136 : Discom wise conversion factor for determination of energy charge in Rs./kVAh

Tariff sub-category	Existing energy charge in Rs./kWh	East Discom		West Discom		Central Discom	
		Energy Charge in Rs./kVAh	Conversion Factor	Energy Charge in Rs./kVAh	Conversion Factor	Energy Charge in Rs./kVAh	Conversion Factor
HV-2.1.A	6.50	6.07	0.934	-	-	0.00	-
HV-2.1.B	6.29	5.88	0.935	-	-	5.90	0.938
HV-2.1.C	6.08	5.78	0.950	-	-	0.00	-
HV-3.1.A	6.20	5.80	0.935	5.81	0.937	5.80	0.935
HV-3.1.B	6.11	5.72	0.937	5.72	0.936	5.71	0.935
HV-3.1.C	5.76	5.42	0.940	5.39	0.936	5.38	0.935
HV-3.1.D	5.30	4.95	0.935	4.96	0.937	0.00	-
HV-3.2.A	6.65	6.21	0.933	6.22	0.935	6.22	0.935
HV-3.2.B	6.40	5.98	0.935	5.99	0.936	6.00	0.938
HV-3.2.C	5.80	0.00	-	5.42	0.935	5.40	0.931
HV-3.3.A	6.60	6.20	0.940	6.21	0.941	6.24	0.945
HV-3.3.B	6.20	5.82	0.938	5.81	0.937	5.81	0.937
HV-3.4.B	5.26	4.93	0.937	4.93	0.937	4.93	0.938
HV-4.1.A	6.02	5.69	0.946	5.64	0.937	5.68	0.943
HV-4.1.B	5.83	5.44	0.933	5.47	0.938	5.48	0.940
HV-5.1.A	6.10	5.56	0.912	5.57	0.913	5.60	0.918
HV-5.1.B	5.96	5.49	0.922	5.59	0.938	5.55	0.932
HV-5.1.C	5.56	0.00	-	5.09	0.915	5.20	0.935
HV-5.2.A	6.10	5.66	0.928	5.73	0.940	5.71	0.937
HV-5.2.B	5.96	5.58	0.937	5.61	0.941	5.58	0.936
HV-6.1.A	5.72	5.34	0.933	5.38	0.941	5.39	0.943
HV-6.1.B	5.52	5.22	0.945	5.15	0.934	5.20	0.942
HV-6.2.A	5.72	5.38	0.940	5.34	0.933	5.34	0.933
HV-6.2.B	5.52	0.00	-	5.16	0.935	5.18	0.938
HV-7.1.B	9.78	9.09	0.930	9.20	0.941	9.19	0.939
HV-7.1.C	9.78	9.10	0.930	9.16	0.937	9.00	0.920
HV-7.1.D	9.78	0.00	-	9.14	0.935	0.00	-
HV-8.1 A	5.90	0.00	-	5.51	0.935	0.00	-
HV-8.1 B	5.90	0.00	-	5.60	0.950	0.00	-
Average of conversion factor			**0.933**	-	**0.936**	-	**0.934**
Overall Average of Conversion factor				**0.934**			

VI. The conversion factor so arrived as per Table above, i.e., 0.934 is then applied to proposed tariff for HT consumers in order to have a proposed kVAh tariff for FY 2023-24.

Note: For analysis of kVAh billing Petitioners have considered base data of FY 2021-22 billing file of HT consumers of all Discoms. Billing file of HT consumers have sold unit, category of consumers, PF, LF, PF incentive/penalty, Energy charges and other required data.

13.14 The Petitioners submit that the prime objective of the kVAh billing is to encourage the consumers to maintain near unity Power factor to achieve loss reduction, improve system stability, power quality and improve voltage profile. If in case, the Power Factor is less than unity, the consumption recorded in respect of kVAh would be high compared to kWh consumption. Thus, the kVAh based billing will drive the consumers to reach unity power factor.

13.15 As regard to existing PF incentive and penalty, Petitioners submit that the Hon'ble APTEL in its Appeal No.130 of 2005 has already ruled that ***"kVAh billing which provides inbuilt incentive for the Appellant's category, which will automatically take care of power factor incentive and disincentive for the high and low power factor respectively".*** Hence, it is proposed to withdraw the existing provision of PF incentives and penalties for HT consumers as ultimately, kVAh billing will provide inbuilt incentive which will automatically take care of power factor incentive and disincentive. Petitioners further submit that the consumers who have already spent money to maintain power factor will have an added advantage as they already have the resources to maintain higher power factor which will benefit them in terms of reduced consumption.

13.16 In view of the submissions in the foregoing paras, it is requested the Hon'ble Commission to approve kVAh based billing for the HT consumers from billing cycle of April 2023. In view of the proposed kVAh billing, the provision for Power Factor incentive and penalty shall not be applicable for HT consumers. However, the existing provisions for Power Factor incentive and penalty shall continue to be applicable for LT category consumers as per the relevant Orders of the Hon'ble Commission.

A14: VOLTAGE WISE COST OF SUPPLY

14.1 Commissions Directives

14.1.1 The Hon'ble MPERC has directed the Discom's of MP to determine the voltage wise cost of supply in its previous Tariff Order's. The Hon'ble Commission referred to the judgment passed by Appellate Tribunal for Electricity (APTEL) in Appeal No. 103 of 2010 & IA Nos. 137 & 138 of 2010 regarding determination of voltage level wise Cost of Supply.

14.1.2 Until 100% DTR Meterization is complete, the computation of losses for 11kV and LT system separately is a very cumbersome task. However, it is submitted that for determination of Voltage wise cost of supply, the judgment passed by Appellate Tribunal for Electricity (APTEL) in Appeal No. 103 of 2010 & IA Nos. 137 & 138 of 2010 may please be perused.

14.1.3 The extract of APTEL's order is elaborated as below.

Extract of APTEL's order

"*32. Ideally, the network costs can be split into the partial costs of the different voltage level and the cost of supply at a voltage level is the cost at that voltage level and upstream network. However, in the absence of segregated network costs, it would be prudent to work out the voltage-wise cost of supply taking into account the distribution losses at different voltage levels as a first major step in the right direction. As power purchase cost is a major component of the tariff, apportioning the power purchase cost at different voltage levels taking into account the distribution losses at the relevant voltage level and the upstream system will facilitate determination of voltage wise cost of supply, though not very accurate, but a simple and practical method to reflect the actual cost of supply.*

33. The technical distribution system losses in the distribution network can be assessed by carrying out system studies based on the available load data. Some difficulty might be faced in reflecting the entire distribution system at 11 KV and 0.4 KV due to vastness of data. This could be simplified by carrying out field studies with representative feeders of the various consumer mix prevailing in the distribution system. However, the actual distribution losses allowed in the ARR which include the commercial losses will be more than the technical losses determined by the system studies. Therefore, the difference between the losses allowed in the ARR and that determined by the system studies may have to be apportioned to different voltage levels in proportion to the annual gross energy consumption at the respective voltage level. The annual gross energy consumption at a voltage level will be the sum of energy consumption of all consumer categories connected at that voltage plus the technical distribution losses corresponding to that voltage level as worked out by system studies. In this manner, the total losses allowed in the ARR can be

apportioned to different voltage levels including the EHT consumers directly connected to the transmission system of GRIDCO.

The cost of supply of the appellant's category who are connected to the 220/132 KV voltage may have zero technical losses but will have a component of apportioned distribution losses due to difference between the loss level allowed in ARR (which includes commercial losses) and the technical losses determined by the system studies, which they have to bear as consumers of the distribution licensee.

34. Thus Power Purchase Cost which is the major component of tariff can be segregated for different voltage levels taking into account the transmission and distribution losses, both commercial and technical, for the relevant voltage level and upstream system. As segregated network costs are not available, all the other costs such as Return on Equity, Interest on Loan, depreciation, interest on working capital and O&M costs can be pooled and apportioned equitably, on pro-rata basis, to all the voltage levels including the appellant's category to determine the cost of supply. Segregating Power Purchase cost taking into account voltage-wise transmission and distribution losses will be a major step in the right direction for determining the actual cost of supply to various consumer categories. All consumer categories connected to the same voltage will have the same cost of supply. Further, refinements in formulation for cost of supply can be done gradually when more data is available."

14.1.4 It is humbly submitted, that the above mentioned order of APTEL has been challenged in the Hon'ble Supreme Court of India by the Respondents in the case and the matter is under consideration before the Apex Court. However, as per the directives of the Hon'ble Commission, the Discom's submit the details of calculation of the voltage wise cost of supply as per the methodology provided by the APTEL.

14.2 Voltage-wise Losses

14.2.1 It is submitted that the MPERC Tariff Regulations do not provide segregation of normative losses for the Distribution Licensees into voltage wise normative losses in respect of technical and commercial losses. Therefore, the Petitioners face difficulty in segregation of normative losses in voltage level wise technical and commercial losses.

14.2.2 Determination of voltage-wise losses would require detailed technical studies of the Distribution network of the three Discoms. For the purposes of illustrative computation of voltage-wise Cost of Supply, the petitioners have assumed voltage-wise losses; the data therein is not verified and so should not be relied upon.

14.3 Methodology

14.3.1 The Discoms have proposed the methodology for Voltage-wise Cost of Supply computation for three categories, namely:

- ✓ EHT System (400 kV, 220 kV and 132 kV)
- ✓ 33 KV System
- ✓ 11 KV + LT System

14.3.2 For determination of Voltage-wise Cost of Supply, the proposed methodology involved the following steps:

- ✓ Determination of voltage-wise Sales for three voltage levels.
- ✓ Projection of voltage-wise loss levels based on historical numbers. It is pertinent to mention here that the loss levels so determined are on assumption basis and it would require a detailed technical study of the Distribution Network for the technical verification of the same. The Inter-state PGCIL and Intra-state MPPTCL losses are allocated to the EHT System (400 kV, 220 kV and 132 kV).
- ✓ It may also be noted that the percentage of EHT losses allocated to the three Discom's are different due to the fact that different generating stations are assigned to the different Distribution company and each draws its power from different 132 kV substation.
- ✓ Determine the voltage-wise energy input based on sales and the losses. The sales numbers have been escalated by the T&D loss% of the current voltage level as well as the next higher voltage level.
- ✓ Since the breakup of technical and commercial losses at 11 kV +LT system is not available, 50% of the total loss at this voltage level has been assumed as purely technical loss and remaining 50% loss has been assumed as commercial loss which has been loaded to various voltage levels in the proportion of their sales.
- ✓ The total Power Purchase Costs of each Discom is allocated to the three voltage levels based on the voltage-wise input energy. All other costs of the Discoms are allocated based on the sales to each voltage-level.
- ✓ Non-tariff income has been assumed to be part of the revenue from 11 kV + LT, 33kV and EHT voltage levels.
- ✓ Sum of total costs (less non-tariff income) divided by net energy input gives the voltage wise cost of supply for the respective voltage level.

14.4 Computation of VCoS for MP State and Discom

The calculation for Voltage wise Cost of Supply for MP State and Discom's is as shown below:

Table 137: Cost of Supply Calculation for MP State for FY 2023-24

Sr. No	Particulars	UoM	Formulae	EHT System (400 kV, 220 kV & 132 kV)	33 KV System	11 KV + LT System	Total
A	**MP State**						
1	**Sales**	**MUs**		**6,053**	**9,427**	**55,594**	**71,074**
2	Loss %	%		3.41%	4.74%	4.30%	10.77%
3	**Energy Input**	**MUs**		**6,267**	**10,246**	**63,140**	**79,653**
4	Energy Lost (Technical up to 33 kV voltage & 11 kV +LT technical and Commercial)	MUs	4=3-1	214	819	7,547	
5	Commercial Loss assumed as 50% of 11 kV and LT overall losses	MUs				3,773	
6	Balance 50% Commercial loss for all voltage in proportion to Sales	MUs		321	500	2,951	
7	**Net Energy Input**	**MUs**	**7=1+4+6**	**6,588**	**10,747**	**62,318**	**79,653**
8	Power Purchase Costs - allocated based on voltage-wise losses	Rs Cr		3,258	5,315	30,820	39,393
9	Other costs - allocated based on voltage-wise sales	Rs Cr		912	1,420	8,376	10,708
10	Less: Other income - allocated based on voltage-wise sales	Rs Cr		49	76	447	571
11	**Total Costs (ARR requirement)**	**Rs Cr**	**11=8+9-10**	**4,122**	**6,659**	**38,749**	**49,530**
12	**Average Cost of Supply**	**Rs/kWh**	**12=11/1*10**	**6.81**	**7.06**	**6.97**	**6.97**

Table 138: Cost of Supply Calculation for East Discom for FY 2023-24

Sr. No	Particulars	UoM	Formulae	EHT System (400 kV, 220 kV & 132 kV)	33 KV System	11 KV + LT System	Total
A	**East Discom**						
1	**Sales**	**MUs**		**1,514**	**2,301**	**15,958**	**19,773**
2	Loss %	%		3.41%	3.45%	8.95%	18.48%
3	**Energy Input**	**MUs**		**1,568**	**2,467**	**20,222**	**24,257**
4	Energy Lost (Technical upto 33 kV voltage & 11 kV +LT technical and Commercial)	MUs	4=3-1	54	166	4,264	
5	Commercial Loss assumed as 50% of 11 kV and LT overall losses	MUs				2,132	
6	Balance 50% Commercial loss for all voltage in proportion to Sales	MUs		163	248	1,721	

Sr. No	Particulars	UoM	Formulae	EHT System (400 kV, 220 kV & 132 kV)	33 KV System	11 KV + LT System	Total
7	**Net Energy Input**	**MUs**	**7=1+4+6**	**1,731**	**2,715**	**19,811**	**24,257**
8	Power Purchase Costs - allocated based on voltage-wise losses	Rs Cr		643	1,009	7,359	9,011
9	Other costs including true up adjustment - allocated based on voltage-wise sales	Rs Cr		383	581	4,032	4,996
10	Less: Other income - allocated based on voltage-wise sales	Rs Cr		14	22	150	186
11	**Total Costs (ARR requirement)**	**Rs Cr**	**11=8+9-10**	**1,011**	**1,568**	**11,241**	**13,821**
12	**Average Cost of Supply**	**Rs/kWh**	**12=11/1*10**	**6.68**	**6.82**	**7.04**	**6.99**

Table 139: Cost of Supply Calculation for Central Discom for FY 2023-24

Sr. No	Particulars	UoM	Formulae	EHT System (400 kV, 220 kV & 132 kV)	33 KV System	11 KV + LT System	Total
A	**Central Discom**						
1	**Sales**	**MUs**		**2,224**	**2,541**	**18,652**	**23,417**
2	Loss %	%		3.41%	2.22%	29.74%	8.67%
3	**Energy Input**	**MUs**		**2,302**	**2,690**	**20,648**	**25,641**
4	Energy Lost (Technical upto 33 kV voltage & 11 kV +LT technical and Commercial)	MUs	4=3-1	79	149	1,996	
5	Commercial Loss assumed as 50% of 11 kV and LT overall losses	MUs				998	
6	Balance 50% Commercial loss for all voltage in proportion to Sales	MUs		95	108	795	
7	**Net Energy Input**	**MUs**	**7=1+4+6**	**2,397**	**2,798**	**20,445**	**25,641**
8	Power Purchase Costs - allocated based on voltage-wise losses	Rs Cr		1,116	1,303	9,522	11,941
9	Other costs - allocated based on voltage-wise sales	Rs Cr		439	501	3,681	4,622
10	Less: Other income - allocated based on voltage-wise sales	Rs Cr		17	20	146	183
11	**Total Costs (ARR requirement)**	**Rs Cr**	**11=8+9-10**	**1,538**	**1,785**	**13,058**	**16,380**

Sr. No	Particulars	UoM	Formulae	EHT System (400 kV, 220 kV & 132 kV)	33 KV System	11 KV + LT System	Total
12	**Average Cost of Supply**	**Rs/kWh**	**12=11/1*10**	**6.92**	**7.03**	**7.00**	**7.00**

Table 140: Cost of Supply Calculation for West Discom for FY 2023-24

Sr. No	Particulars	UoM	Formulae	EHT System (400 kV, 220 kV & 132 kV)	33 KV System	11 KV + LT System	Total
A	**West Discom**						
1	**Sales**	**MUs**		**2,315**	**4,586**	**20,983**	**27,884**
2	Loss %	%		3.41%	6.70%	12.00%	6.29%
3	**Energy Input**	**MUs**		**2,397**	**5,089**	**22,270**	**29,756**
4	Energy Lost (Technical up to 33 kV voltage & 11 kV +LT technical and Commercial)	MUs	4=3-1	82	503	1,287	
5	Commercial Loss assumed as 50% of 11 kV and LT overall losses	MUs				643	
6	Balance 50% Commercial loss for all voltage in proportion to Sales	MUs		53	106	484	
7	**Net Energy Input**	**MUs**	**7=1+4+6**	**2,450**	**5,195**	**22,111**	**29,756**
8	Power Purchase Costs - allocated based on voltage-wise losses	Rs Cr		1,519	3,219	13,703	18,441
9	Other costs - allocated based on voltage-wise sales	Rs Cr		91	179	821	1,090
10	Less: Other income - allocated based on voltage-wise sales	Rs Cr		17	33	152	203
11	**Total Costs (ARR requirement)**	**Rs Cr**	**11=8+9-10**	**1,592**	**3,365**	**14,371**	**19,329**
12	**Average Cost of Supply**	**Rs/kWh**	**12=11/1*10**	**6.88**	**7.34**	**6.85**	**6.93**

A15: CROSS SUBSIDY SURCHARGE AND ADDITIONAL SURCHARGE

15.1 Cross Subsidy Surcharge

15.1.1 The Tariff Policy provides for the determination of cross- subsidy surcharge for various categories of consumers. It is pertinent to mention here that Discoms have employed Merit-order dispatch while scheduling power from various stations so as to procure the cheapest power available. Also, the Petitioners have also considered backing down of units/stations where variable cost is more than Rs 4.70 per unit as decided by MPPMCL to ensure that power procured from cheaper sources is fully utilized and to avoid procurement of power from costlier sources. The resultant benefit of reduced power procurement cost is in turn being passed on to the consumers, along with back down of few stations.

15.1.2 Hence, in light of above, the petitioners submit that the basis for determination of the aforementioned cross-subsidy surcharge to be taken as per provisions of National Tariff Policy 2016.

15.1.3 The Hon'ble Commission has determined the average tariff based on the power purchase cost as per previous year's available data. Any variation on account of such change in fuel cost is also passed on to the consumer through FCA, which will result in an increase in average tariff by FCA amount. Therefore, it will be appropriate to increase the cross-subsidy surcharge to the extent of FCA charges payable for a particular period.

15.2 Additional Surcharge

15.2.1 The Licensees submit that the National Tariff Policy 2016 also provides for the determination of additional surcharge to be levied from consumers who are permitted open access.

15.2.2 The Petitioners would like to submit that financial position of the Discoms are getting constrained due to eligible consumers opting for open access. There has been an increase in quantum and number of consumers opting for open access over the last few years. With this shift of consumers to open access, the power remains stranded and the Discom's have to bear the additional burden of capacity charges of stranded power to comply with its Universal Supply Obligation.

15.2.3 The Petitioner would further like to submit that in other states also, separate orders for levy of additional surcharges have been passed by respective Commission after considering the impact of shift by open access consumers and based on other data with due prudence check.

15.2.4 In light of the provisions specified in the clause 5.8.3 of the National Electricity Policy, Section 42(4) of the Electricity Act 2003 besides relevant clause 13.1 of MPERC (Term & conditions for Open Access in MP) Regulations, 2005 and determined additional surcharge on a yearly basis for Open Access consumers of the

State in addition to levy of Cross subsidy surcharge specified in Tariff policy 2016 on the basis of latest data for previous 12 months commencing from September 2021 to August 2022.

15.2.5 The Petitioner has computed the additional surcharge by considering the weighted average monthly fixed rate of surrendered power, which is based on daily weighted fixed rate of the generating station in the surrendered power. The Petitioner worked-out additional surcharge is shown in the table below:

Table 141: Additional Surcharge for FY 2023-24

Sl no	Months	Energy entitlement (MU)	Energy Scheduled (MU)	Energy Surrendered (MU)	Effective Fixed Cost Applied (Rs/Unit)	OA Units (MU)	Cost of Back Energy Surrendered due to Open Access (Rs. Cr.)
1	2	3	4	5=3-4	6	7	8=(7*6)
1	Sep-21	5,821.08	5,419.66	401.42	1.63	186.47	30.30
2	Oct-21	6,160.09	5,405.75	754.33	1.23	109.80	13.51
3	Nov-21	6,490.20	5,660.75	829.45	1.23	153.65	18.92
4	Dec-21	7,186.38	6,258.70	927.67	1.15	162.49	18.67
5	Jan-22	6,977.32	5,781.90	1,195.43	0.98	134.32	13.18
6	Feb-22	6,744.78	6,165.06	579.71	1.32	141.02	18.66
7	Mar-22	6,976.92	6,791.40	185.53	1.55	84.67	13.16
8	Apr-22	6,539.67	6,478.58	61.09	1.21	53.65	6.48
9	May-22	7,084.46	6,645.12	439.34	1.41	119.41	16.85
10	Jun-22	6,931.75	6,302.04	629.71	2.86	101.91	29.17
11	Jul-22	6,788.46	5,955.12	833.33	1.57	145.13	22.72
12	Aug-22	6,222.26	5,291.62	930.64	1.38	146.05	20.23
Total		**79,923.37**	**72,155.71**	**7,767.66**		**1,538.58**	**221.85**
Additional Surcharge on OA Consumers (Rs./Unit) = (8/7)							**1.44**

15.2.6 The Petitioner has thus determined the additional surcharge of Rs 1.44 per unit on the power drawn by the Open Access consumers from the date of issuance or applicability of this Retail Supply Tariff Order by the Hon'ble Commission. The detailed calculation of additional surcharge along with the other details is being submitted in softcopy along with this Petition.

A16: MANNER OF BILLING OF DOMESTIC NET METERED CONSUMERS

16.1 As per MPERC (Grid Connected Net Metering) Regulations 2015 notified on 14th October 2015 and amendments issued therein, net metering facility has to be made available to Consumers. To incorporate the provisions of Net Metering Regulations for giving credit of energy through billing software, procedure for same is required to be incorporated in the Tariff Order, so that the same can be uniformly applied in all the three Discoms of MP.

The following process needs to be followed:

i. Manner of billing of fixed charges to the net metered domestic Consumer.

ii. Applicable slab / Tariff for billing of net import units to the net metered consumer.

iii. Applicability of subsidy.

The detailed explanations of some of the key points are explained below:

16.2 Manner of billing of fixed charges to the net metered domestic Consumer:

As per the Tariff Order for FY 2021-22, the authorized load of Domestic consumer is required to be calculated based on the units consumed i.e., 15 units treated as 0.1 kW of authorized load. Therefore, for levy of fixed charges, connected load should be calculated based on the total energy imported from grid by net metering consumer. An illustration clarifying above is given below: -

Table 142: Computation of Authorized load for a net metered domestic Consumer

Sr. no.	Month	Import	Export	Net Read (+Import / -Export)	Authorized Load (in kW)
A	B	C	D	E	F
1	April	95	100	-5	0.70
2	May	215	200	15	1.50
3	June	315	300	15	2.10
4	July	395	400	-5	2.70
5	August	530	100	430	3.60
6	September	650	200	450	4.40
7	October	725	300	425	4.90
8	November	400	400	0	2.70
9	December	100	500	-400	0.70
10	January	1045	1500	-455	7.00
11	February	1132	200	935	7.60
12	March	400	800	-400	2.70

In the above table, authorized load should only be calculated based on total drawl of power from the grid without any netting of injected units.

16.3 Applicable slab/Tariff for billing of net import:

In the tariff order, for the purpose of billing, different slabs are provided based on the consumption pattern of consumer. For example, in case LV-1.2 category following slabs are prescribed in the Tariff Order of FY 2022-23:

Table 143: Domestic Tariff as per Tariff order FY 2022-23

Monthly Consumption Slab(units)	Energy Charge with telescopic benefit (paisa per unit) Urban/ Rural areas	Monthly Fixed Charge (Rs)	
		Urban areas	Rural areas
Up to 50 units	413	64 per connection	50 per connection
51 to 150 units	505	109 per connection	90 per connection
151 to 300 units	645	24 for each 0.1 kW of authorized load	21 for each 0.1 kW of authorized load
Above300 units	665	25 for each 0.1 kW of authorized	24 for each 0.1kW of authorized

In the scenario of net metering, only net units (net of import & export units) are required to be billed to the consumer. Therefore, in view of different slabs with telescopic benefit, it is decided that netting of import & export units shall also be done slab wise and remaining units shall be billed in the respective higher slab. An illustration clarifying above is given below: -

Sr. no.	Month	Import	Export	Net Read (3-4)	Billed units	Up to 50 Units	51-150 Units	151-300 Units	Above 300 Units
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	April	95	100	-5	0	0	0	0	0
2	May	215	200	15	10			10	
3	June	315	300	15	15				15
4	July	395	400	-5	0	0	0	0	0
5	August	530	100	430	425			200	225
6	September	650	200	450	450			100	350
7	October	725	300	425	425				425
8	November	400	400	0	0	0	0	0	0
9	December	100	500	-400	0	0	0	0	0
10	January	1045	1500	-455	0	0	0	0	0
11	February	1132	200	932	77 (932-855)				77
12	March	400	800	-400	(-) 400*APPC	0	0	0	0

APPC → Average Power Purchase Cost

A17: FUEL & POWER PURCHASE COST ADJUSTMENT (FPPCA)

17.1 The Ministry of Power (MoP), Government of India (GoI) vide its notification dated 22nd October 2021 has issued Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021. The said Rules are applicable to Generating and Transmission companies and provide **automatic pass-through** of impact in tariff due to Change in Law automatically by a formula. The brief summary of the said Rules is as under:

a) On the occurrence of a change in law, the monthly tariff or charges shall be adjusted and be recovered to compensate the affected party so as to restore such affected party to the same economic position as if such change in law had not occurred.

b) For this, the generating company or transmission licensee which intends to adjust and recover the costs due to change in law, shall give a three-week prior notice to the other party about the proposed impact in the tariff or charges.

c) The affected party shall furnish to the other party, the computation of impact in tariff or charges to be adjusted and recovered, within thirty days of the occurrence of the change in law or on the expiry of three weeks from the date of the notice.

d) The recovery of the proposed impact in tariff or charges shall start from the next billing cycle of the tariff.

e) The impact of change in law to be adjusted and recovered may be computed as one time or monthly charges or per unit basis or a combination thereof and shall be recovered in the monthly bill as the part of tariff.

f) The generating company or transmission licensee shall, within thirty days of the coming into effect of the recovery of impact of change in law, furnish all relevant documents along with the details of calculation to the Appropriate Commission for adjustment of the amount of the impact in the monthly tariff or charges.

g) The Appropriate Commission shall verify the calculation and adjust the amount of the impact in the monthly tariff or charges within sixty days from the date of receipt of the relevant documents.

h) After the adjustment of the amount of the impact in the monthly tariff or charges, the generating company or transmission licensee, as the case may be, shall adjust the monthly tariff or charges annually based on actual amount recovered, to ensure that the payment to the affected party is not more than the yearly annuity amount.

17.2 **As per the notified rules, the condition of prior approval of appropriate Commission for compensation on account of change in law events has been removed and the same has been made an automatic pass through to the procurers**. As state earlier that the aforesaid rules are applicable for the Generating or Transmission Company, however, it does not provide any stipulation regarding the impact of the automatic claim of the Generating or Transmission Company on the DISCOMs. Acknowledging the fact that DISCOMs will also face revenue constrains on account of

such change in law claim as the pass through of costs is not done regularly and timely in the retail tariff, MOP has issued a recommendation letter No. 23/23/2021-R&R dated 9th November 2021 wherein; **MoP has requested the respective Commission to formulate a mechanism for automatic pass through of change in law burden to retail consumers**. The relevant extract from the letter is as reproduced below:

> *3. Learning from the recent experience and in order to ensure that the power sector does not face any constraints in maintaining assured power supply to meet the demand, all the stakeholders in the value chain of power sector must ensure that there is timely recovery of cost. This involves two steps:*
>
> *a) The cost pass through by the generating companies to the distribution companies.*
>
> *b) The cost pass through from distribution companies to the consumer.*
>
> *4. For the lack of a robust mechanism of timely automatic pass through of fuel cost and transportation cost, the generating companies face constraints in maintaining stock of fuel during such periods. This results in shortage of supply in the grid which may affect the power supply to the consumer.*
>
> *5. **Distribution companies face revenue constraints as the corresponding pass through of cost is not done regularly and timely in the retail tariff. Timely collection of revenue from consumer would ensure timely payment by the distribution company to the generating stations and coal companies. This will also help in ensuring availability of supply to meet the expected increase in demand.***
>
> *……*
>
> *7. Some of the states already have formula for fuel surcharge adjustment which is being*
> *used for this purpose. A state wise list of the status of fuel surcharge formula prescribed by the State Commission is enclosed. This is as per the information submitted by the SERCs to Forum of Regulators in compliance of the APTEL order. **However, this is not an automatic pass through and there remains need for approval of the State Commission. The present mechanism leads to delays. It may be changed to provide for automatic pass through in tariff change in costs on account of change in law/ power purchase costs in accordance with a formula laid down by the State Regulatory Commissions. The Discoms will pass through the change in costs according to the said formula whenever the change in costs due to change in law/power purchase costs occur.** Till a suitable formula is prescribed by the State Commissions the formula given in the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 may be adopted. After giving effect to the pass through the Discoms will send the relevant papers/ calculation sheets to the commissions which shall verify and confirm the Pass through within 60 days. This will result in less working capital requirements by the Discoms, leading to less costs of power for the consumers.*
>
> *……*
>
> *9. **The State Commissions are requested to place the above mechanism in operation with immediate effect. {Emphasis Added}***

17.3 As regard to above, the Petitioners submit that the very purpose of allowing fuel and

power purchase cost adjustment is to compensate the Distribution Licensee for the increase in power purchase costs during the year in order to keep its financial liquidity intact. Fuel prices are generally uncontrollable in nature which varies frequently due to various factor such as change in policy, taxes, cess, market demand and supply position etc. The generators who procure fuel need to be compensated for any increase in fuel prices else the generator would not be in a position to procure enough fuel to satisfy the demand of electricity. Therefore, the DISCOMs who procures power from the generators, are liable to pay the generators the increased costs. If DISCOMs are not compensated for such an increase cost during the period, their liquidity would be affected.

17.4 The Petitioners further wish to submit that Section 62(4) of the Electricity Act, 2003 provides for periodic tariff adjustment during a year to take care of the variations in fuel prices, as may be specified. The relevant extract is as reproduced below

> *"No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."*

17.5 Further, the APTEL in the judgement dated 11.11.2011 in Appeal No. 1 of 2011 issued, *inter alia*, the following direction to the State Electricity Regulatory Commissions regarding the Fuel and Power Purchase Cost Adjustment:

> *"**Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable**. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. **The Fuel and Power Purchase cost adjustment should preferably be on monthly basis** on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this order put in place such formula/mechanism."**{Emphasis Added}***

17.6 Furthermore, The National Tariff Policy, 2016 states that all power purchase costs need to be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates.

17.7 Thus, from the above, DISCOMs should be allowed to recover full legitimate power purchase cost including fixed and variable charges as quickly and as practically as possible. However, the existing **formula specified for computation of the FCA as governed under Regulation 9 of Tariff Regulations, 2021 does not capture the total power purchase cost. It covers only variable charge component of the total power purchase costs. The DISCOMs therefore deprived the opportunity to recover the variation in total power purchase cost through the levy of a FCA every quarter and they have been accumulating the variations on account of power purchase costs till the end of the respective year, till the accounts are finalized, audited and certified**

which is causing a financial burden to the DISCOMs. In addition, the prevailing FCA formula does not cover the recovery of incremental power purchase cost wherein power purchase has been made due to factors beyond their control. This includes shortage in supply from the identified power supply sources in the Tariff Order requiring them to purchase power at a higher price from the power market or other sources to meet the demand. DISCOMs in their Tariff Petition have been regularly requesting the Hon'ble Commission to address the aforesaid issues by providing suitable amendments to FCA formula.

17.8 In addition to the above, the existing FCA recovery mechanism is a **quarterly based** which require prior approval **of the Hon'ble Commission. As per existing mechanism, the FCA is** to be computed by MPPMCL and the details is required to be submitted before the Hon'ble Commission before commencement of the billing quarter. After approval of the Hon'ble Commission, FCA charge shall be leviable in the billing quarter. Therefore, **as per the existing mechanism the FCA charges of say 'n' month is allowed to get levied on 'n+4' month.**

17.9 Following illustration is given for the purpose of understanding:

Let 'February' be the 'n' month for which the power has been procured. The generator or transmission company will raise the bills on immediate next month, i.e., in 'March' and the Discoms are obligated to pay to generators within stipulated time. Further, as the present mechanism is quarterly based, therefore the FCA is calculated after completion of quarter. As per the existing provision the billing quarter shall be 'July to September' and the period of 'May and June' is allowed to collect the data/details and finalization of FCA charges. Thus, FCA of February month say 'n' is get levied in the billing month of 'July' which is 'n+4'.

17.10 The Petitioners wish to submit that the generating and transmission companies have been raising bills on monthly basis in line with the notified Regulations and Rules. Further, per the governing provision of respective PPAs with generators, DISCOMs are obligated to pay the generators or transmission companies within stipulated time. However, the recovery of the same from retail consumers of DISCOMs happened generally after 4 to 5 months as per existing mechanism. As against this DISCOMs were allowed only 2 months of normative working capital requirements in its Aggregate Revenue Requirement (ARR). This results in additional interest cost on account of additional working capital requirements due to delay in recovery of the same beyond the normative time period which is ultimately resulting in increased power purchase cost for end consumers.

17.11 **Further, as regard to existing prior approval mechanism, the Petitioners would further like to add that the Discoms have participated in** Government of India's Revamped Distribution Sector Scheme (RDSS) aimed at improving the financial condition and operational efficiencies of state-owned DISCOMs. It is submitted that the RDSS is a result linked evaluation scheme. Under the scheme **it is mandatory for**

DISCOMs to meet the specified pre-qualifying criteria every year before the funds can be released under the scheme. Further, to ensure strict compliance of the pre-qualification criteria, Standard Operating Procedures (SOPs) for States/DISCOMs are being issued which will help Ministry of Power, Nodal Agencies, State Governments and DISCOMs achieve and monitor the targets set for themselves under the scheme in time bound manner.

As per *"SOPs in respect to important conditionalities under RDSS, LIS, Additional borrowings etc. to be followed during implementation and evaluation"* dated 1st July 2022 it has been directed to State and Discoms to make changes in their policies and procedures to align with the SOPs prepared on the following areas:

PQ Criteria	***SOP***	***Relevant Clause***
State Government to ensure 100% payment of subsidy for the previous year and advance payment of subsidy up to current period in line with section 65 of EA2003 and wipe out the remaining subsidy amount by the end of the project period.	***100% timely payment of Subsidy on the basis of correct subsidy accounting mechanism***	***3.1***
No. of days Payables to Creditors including Gencos for the year under evaluation is equal to or less than the projected trajectory as per results evaluation framework.	***Linkage of no. of days Payables for power purchase with LPS Rules*** ***Automatic pass through of fuel adjustment cost to achieve financial sustainability through elimination of ACS-ARR gap***	***3.2*** ***3.3***
DISCOMs will have ensured that no new Regulatory Assets have been created in latest tariff determination cycle.	***No new creation of regulatory assets and treatment of outstanding regulatory assets***	***3.4***
All Government Departments/Attached Offices/ Local Bodies/Autonomous Bodies/ Boards/Corporations have made 100% payment of current electricity dues for the year under evaluation	***Mechanism to ensure 100% payment of Government department dues***	***3.5***

The clause 3.3 of SOPs as mentioned above further stipulate as under:

One of the main reasons for financial stress for DISCOMs is the widening ACS-ARR gap. There are multiple reasons which contribute to such a gap. However, States/Regulators/DISCOMs have to work in tandem to bridge this gap and bring it to zero. This is one of the most critical evaluation criteria of RDSS. Amongst other, measures to be adopted by States/DISCOMs for elimination of ACS-ARR gap, following steps need to be taken:

i. ***All States/DISCOMs to create a mechanism for automatic pass through of fuel cost adjustment on monthly/quarterly basis in retail tariffs without the need for any prior approval***

ii. *All such changes shall be reconciled at the true-up stage by the DISCOMs*

iii. DISCOMs to ensure that the ACS-ARR gap follows a downwards trajectory on quarter-to-quarter basis and it must not increase again after meeting the target set under REF of RDSS

17.12 Further, the Ministry of Power has issued the draft Electricity (Amendment) Rules, 2022 vide its notification no. 23/2/2022-R&R dated 12th August, 2022, to amend the Electricity Rules, 2005. The Rule 14 of the said draft proposes that the appropriate Commission shall within 90 days of publication of these Rules, specify a price adjustment formula for recovery of costs, arising on account of the variation in the price of fuel, or power purchase costs. **The impact in the cost due to such variation shall be automatically passed through in the consumer tariff, on a monthly basis, using the formula.** Such monthly automatic adjustment shall be trued up on an annual basis by the appropriate Commission.

17.13 Further, the MoP in the said draft Rules has also defined that variation in Fuel and Power Purchase costs shall mean the **increase in cost of power, supplied to consumers, due to change in Fuel cost, power purchase cost and transmission charge** with reference to cost of supply approved by the State Commission. As the existing FAC recovery mechanism is not in tandem with the above-mentioned Rules, the same need to be modified.

17.14 **In view of the above submission and taking cognizance of MoP letter dated 9th November 2021,** Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021, SOPs under RDSS and draft Electricity (Amendment) Rules, 2022 the Petitioners request the Hon'ble Commission to modify the existing FCA recovery mechanism. The Petitioners have proposed certain modification as detailed in subsequent paras of this Petition for the kind consideration of the Hon'ble Commission.

17.15 **Proposed FCA recovery mechanism**

17.15.1 Since, from now on the generating or transmission companies will be raising bills on monthly basis considering the automatic impact of change in law claims, hence, the Petitioner proposes that the FCA charges shall also be calculated on monthly basis for timely recovery of the legitimate costs.

17.15.2 The FCA charges associated with say 'n' month shall be calculated in the immediate next month after receiving all the power purchase bills. The calculated FCA shall then be automatically levied to retails consumers in 'n+2' month. After completion of say 'n quarter', the Licensee shall submit the details of FCA calculations incorporating the monthly FCA computation of 'n quarter' to the Hon'ble Commission for its post facto approval. Any adjustment subsequent to post facto approval of FCA by the Hon'ble Commission would be adjusted in the next corresponding billing month. This provision will help DISCOMs to pass on the variations power purchase costs \ to the consumers as quickly and as practically possible.

17.15.3 Further, as demarcated by the Hon'ble APTEL in the judgement dated 11.11.2011 in

Appeal No. 1 of 2011 and also in National Tariff Policy that the fuel and power purchase cost are uncontrollable in nature and all power purchase costs need to be considered legitimate. Further, taking cognizance of draft Electricity (Amendment) Rules, 2022, the formula for FCA should cover all power purchase costs including variable as well as fixed charge components.

17.15.4 The summary of modified provisions towards recovery of FCA is as follows:

9. Fuel and Power Purchase Cost Adjustment:-

9.1 The Fuel Power Purchase Cost Adjustment (FPPCA) formula has been specified as provided in Section 62(4) of the Act, for recovery/adjustment of increase or decrease in power purchase cost on monthly basis. The formula for deriving FCA for recovery/adjustment of uncontrollable costs due to increase or decrease in cost of power purchase from coal, oil, and gas based generating plants is as under:

$$FPPCA\ for\ billing\ month\ (\text{p/u}) = \frac{APPC\ (Rs.Crore) x 100}{Normative\ Sales\ (MUs)}$$

Where,

FPPCA = Fuel & Power Purchase Cost Adjustment in Rs/unit.

APPC (Average Power Purchase Cost) = sum of (a) difference in per unit weighted average cost actually billed by each power generator/sources and as allowed in the tariff order, multiplied by (b) units availed from each such generating station in the preceding month.

Preceding Month = the month excluding the period of one month immediately preceding to the billing month,

Billing Month = the month for which FPPCA is to be billed and levied and shall be as defined in the Supply Code, 2021 and its amendment thereof as notified by the Commission from time to time.

Normative Sale = the sale grossed down from the total actual ex-bus drawal from all sources (generators + other sources) during preceding month by the normative PGCIL, transmission and distribution losses for the respective month as provided in the Tariff Order.

Illustration: If the "billing month" is say 'February' then the "preceding month" shall mean the month of "December" and the month of "January" shall be treated for collection of data/details and finalization of the FPPCA charges.

9.2 The variations in power purchase costs (fixed plus variable costs including change in law claims) based only on the monthly actual bills received from the generators or transmission companies shall be automatically pass on through retail tariff to all the categories of consumers as per formula as provided in Regulation 9.1 on provisional basis subjected to post facto approval of the

Commission.

9.3 FPPCA shall have to be computed on the basis of the normative parameters as per Tariff Orders of respective generating stations, as issued by the appropriate Commissions.

9.4 FPPCA charge shall be in the form of paisa per unit (kWh) rounded off to the nearest integer. For this purpose, fraction up to 0.5 shall be ignored and fraction higher than 0.5 shall be rounded off to the next higher integer. This charge shall be added to, or deducted from, as the case may be, the energy charges as per the existing tariff for the energy billed to every consumer and shall be treated as part of energy charge.

9.5 The FPPCA charge shall be uniformly applicable to all categories of consumers of the DISCOMs. The FPPCA charge shall also be uniformly applicable to all categories of open access consumers for the quantum of such supply as is availed by them from the DISCOMs.

9.6 MPPMCL shall work out the rate of FPPCA every month based on the change in weighted average cost of power purchase during the preceding month based on the actual monthly bills received by them from the Generators including long term coal, oil and gas based generators. The information shall be prepared in the following manner for every month and summated thereafter for the quarter:

Month	Name of the Generating Station/ Other source	Power Drawn ex-bus	Fixed Cost			Variable Cost					Change in Law Claim	Total Variation in Power Purchase Cost
		(MUs)	As approved in TO (Rs. Cr)	Actual (Rs. Cr)	Variation (Rs. Cr)	Approved (Rs./Unit)	Actual Rs./Unit	Approved (Rs. Cr)	Actual (Rs. Cr)	Variation	(Rs. Cr)	(Rs. Cr)
(1)	(2)	(3)	(4)	(5)	(6)=(5-4)	(7)	(8)	(9)	(10)	(11)=(10-9)	(12)	(13)=(6+11+12)
Total												

9.7 MPPMCL shall workout "normative sale" based on normative PGCIL, transmission and distribution loss (percentage /quantum) for the preceding month, as provided in the Tariff Orders, and the total ex-bus power drawn during the respective preceding month.

9.8 FPPCA charge shall be worked out by MPPMCL based on the formula as proposed above. Upon completion of 'n quarter', MPPMCL shall simultaneously submit all relevant details of calculations along with supporting details to the Hon'ble Commission within 30 days of the completion of the exercise for its post facto approval.

9.9 Any adjustment after post facto approval of the Commission may be adjusted in subsequent billing cycle.

9.10 The DISCOMs shall commence billing of FPPCA charge from the first day of the 'n+2' month's billing cycle.

Illustration: ***Let 'February' be the 'n' month for which the power has been procured. The generator or transmission company will raise the bills on immediate next month, i.e., in 'March' or (n+1) month. The Licensee shall compute the FPPCA charge during 'n+1' month. The Licensee shall commence billing of calculated FPPCA charge automatically from the first day of the 'n+2' month's billing cycle, i.e., from 'April month's billing'.***

17.15.5 The Petitioners further wishes to submit that the Regulation 51 and 52 of the Tariff Regulations, 2021 provides power to the Hon'ble Commission to remove difficulties in giving effect to any of the provisions and also to amend or modify any provision of the said Regulations. The relevant extract is as reproduced below:

51. Power to remove difficulties

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by general or special order, direct the Licensees to do or undertake things, which in the opinion of the Commission is necessary or expedient for the purpose of removing the difficulties.

52. Power to Amend

The Commission may, at any time add, vary, alter, modify or amend any provisions of these Regulation

17.15.6 **The Petitioners hereby request the Hon'ble Commission to exercise the power conferred under above stated Regulations and provide necessary amendments in FCA recovery mechanism as proposed by the Petitioners in this Petition.**

A18: GREEN ENERGY TARIFF

18.1 There is a growing demand from consumers for a rapid transition to a zero-carbon economy. Over 175 of the world's most influential companies have already made this commitment through the global corporate leadership initiative, RE100. This is driving up demand for renewable electricity and creating a shift in demand patterns away from fossil fuels across the global power system. Google & Autodesk are just a few of the companies that have already achieved their goal and are now powered by 100% renewable energy. They are demonstrating to their stakeholders including investors, customers and policymakers — that they see a future in which businesses are powered by renewables.

18.2 Government of India is also promoting renewable energy in a big way and has kept an aggressive target of 175 GW of renewable energy by 2022. Indian corporates are also playing key role in achieving the aggressive target of the Government as corporate citizens and other resultant advantage of being zero carbon companies.

18.3 The corporate consumers have already initiated the process by opting to receive RE under Open Access mechanism as approved by the Commission. However, many corporates do not wish to go through this process of sourcing Renewable Energy because either they are not eligible to avail open access under the current Regulatory framework or they do not have the resources, expertise and the bandwidth required for carrying out this activity.

18.4 Considering the above practices available in other states, petitioners requested the Hon'ble Commission for determination of Green Energy Tariff in MYT Petition for Control Period for FY 23 to FY 27. The Commission considered the proposal of the petitioners and approved the Green Energy Tariff of Rs. 1.13 per unit for FY 2022-23 in the MYT Order dated 31st March 2022.

18.5 The Hon'ble Commission determined the Green Energy Tariff for FY 2022-23 as 50% of the difference in weighted average charge of RE and weighted average rate of Energy charge of non-RE sources.

18.6 In view of the variations in power purchase cost and expected capacity additions of renewable energy during the FY 2022-23 & FY 2023-24. The Petitioners have computed the Green Power Tariff to be paid by such consumers on the basis of projected power purchase cost for FY 2023-24 as indicated below:

RE Power Procurement for the Period FY 2023-24			Non-RE Power Procurement (Only Variable) for the Period FY 2023-24			Difference between RE & Non-RE Power	Claimed Green Energy Tariff
MU	Rs. Cr	Rs/Unit	MU	Rs. Cr	Rs/Unit	Rs/Unit	Rs/Unit
A	B	C	D	E	F	G = (C – F)	H=G*50%
16,763	6,190	3.69	71,593	15,083	2.11	1.58	0.79

18.7 The Green Power Tariff recovered from these consumers for supply of 100% renewable energy in addition to Tariff applicability of consumers, will increase the tariff income of the distribution business and thereby be fully accounted for reduction in ARR. Further, these initiatives will also promote the Government of India's pledge towards green energy, clean environment and sustainable development Goals.

18.8 In view of the above, the Hon'ble Commission is requested to approve the Green Energy Tariff as claimed in this Petition.

A19: COMPLIANCE OF DIRECTIVES

The response of MP Discoms on the directives issued by Hon'ble Commission in the Retail Supply Tariff Order for FY 2022-23 is given below:

19.1 Meterisation of Unmetered Connections

Commission's Directive:

The Commission has noted the submission of DISCOMs and has obtained the latest reports from them. The Commission has observed that the progress of the DISCOMs regarding DTR meterisation is not satisfactory. The Commission further directs the DISCOMs to expedite DTR meterisation. The Commission has observed that simply providing meters is not the total solution but the DISCOMs need to have a complete energy auditing solution in order to monitor the energy pilferage. The DISCOMs shall continue submitting the quarterly progress reports on DTR meterisation along with the energy Audit. With regards to submission of action plan Commission observed that Petitioners have not submitted the Action Plan. Therefore, Petitioners are directed to submit an action plan within 6 months of issuance of this Order.

Petitioners Compliance to Directive:

Response of East Discom:

The meterisation of DTRs is not covered in any ongoing/sanctioned scheme. Due to difficult financial condition of the company and in absence of financial assistance from any financial institution/Govt, the required progress could not be achieved on the matter. However, under recently launched RRRDS scheme, the meterisation of non-Agriculture DTRs have been covered, the action is being taken to implement the scheme as soon as possible. The Quarterly report (March'22) of Ag. predominant DTR is submitted to MPERC vide letter no. EZ/WS/949 dtd. 20.06.22. The quarterly report is being submitted to Hon'ble Commission regularly.

As on 31st March' 2022 only 311497 unmetered DLF connections are remaining. In view of the installation of smart meters, the plan of providing meters on unmetered DLF connections is as given below-

Balance unmetered DLF connections as March' 22	Qtr. wise meterisation plan for FY 2022-23			
	Q-1	Q-2	Q-3	Q-4
311497	10000	10000	10000	25000 no's to be taken up under RDSS scheme through installation of smart meters.

Response of Central Discom :

MPCZ Humbly submits that due to paucity of fund the meterisation of Rural Domestic unmetered consumers have not been completed. Under RDSS smart meter project approx. 9.57 Lacs meters shall be replaced. After replacement of the old meters with smart meters, these will be re-issued for installation on domestic Unmetered category in Rural areas. Provision for

meterisation of Agriculture DTR is made in RDSS which will be achieved as per timeline of the scheme.

Response of West Discom:

As on date following is the status of DTR Meterisation:

Discoms	Total No. of DTs	Metered DTs (Till 31.03.2022)	Unmetered DTs (Till 31.03.2022)	% of Metering
MPPKVVCL	2,95,166	57,956	2,37,210	20%
Urban	36,311	16,034		
Rural	2,58,855	41,922		

There is a total back log of unmetered DTR as follows:

MPPKVVCL	Total Non-Agriculture DTR		Total Agriculture DTR	
	No. of DTRs	Metered DTRs	No. of DTRs	Metered DTRs
	107863	37676	187303	13997

In accordance with the Gazette Notification no. 18/1/BEE/DISCOM/2021 dated 06.10.2022 the DISCOM has to complete the meterisation of DTRs as per the following routing map.

Targets for functional meters –

Meter	FY 22-23	FY 23-24	FY 24-25
DT Metering	90%	95%	98%

At present a scheme RDSS has got underway in the MPPKVVCL, Indore in the phased manner i.e., phase I (up to March 2023) and Phase II (up to December 2023). Accordingly, after commissioning of smart meters with AMI feature and their networking, the manual intervention free energy audit report at all voltage level will be generated and submitted to the BEE, New Delhi and SDA (MPUVN, Bhopal). Also as provisioned in the Gazette Notification no. 18/1/BEE/DISCOM/2021 dated 06.10.2022, annual energy audit report will be submitted in time to all recipients. The Petitioner submits that the meterisation of predominately agriculture DTRs has already been incorporated in the capex plan of the DISCOM for the FY 2020-21 to FY 2024-25. The said work for DTR meterisation shall be executed depending upon the availability of the funds.

19.2 Accounting of Rebates/Incentives/Surcharges:

Commission's Directive:

The Commission has noted the submissions of DISCOMs and directs DISCOMs to expedite the process of development of a report and submit the same on quarterly basis. Further, the Commission has extended applicability of various rebates in this Order. Accordingly, the Petitioner is directed to undertake study with analysis to ascertain the impact of various incentive/rebate/surcharge being allowed by the Commission in tariff order. Further, the analysis should cover scenarios for Rabi & Non-Rabi Seasons, separately and also scenario

where no incentive/rebate are provided in tariff. Petitioners are directed to submit the above study by next petition filling.

Petitioners Compliance to Directive:

Response of East Discom:

A detailed report in this regard for Q3 and Q4 of FY 22 is already submitted to MPERC vide letter no. MD/EZ/CGM(Comm.)/591 dtd 28.07.2022. The net impact of the incentive and surcharge are adding advantages to consumers thereby increasing Discoms business. From the detailed analysis it can be seen that the incentives not only help Discom in growth of energy sales but also in retaining/addition of High valued consumers from obtaining open access.

Response of Central Discom:

In line with the provisions of Tariff Order rebates/incentives are provided to HT consumers (Industrial/Non-Industrial) on monthly basis. The FY-Wise amount is tabulated as below:

Type of Rebate/ Incentives	**FY2021-22**	**FY 2022-23 (up to Sep-2022)**
	Amount (in crore)	**Amount (in crore)**
TOD-Rebate	143.02	39.57
Incremental unit Rebate	91.67	47.94
Captive Rebate	57.55	26.72
Greenfield Rebate	10.01	4.65
NSC Rebate	10.33	10.14
Online payment rebate	1.68	0.76
Prompt payment rebate	2.12	0.95
advance payment rebate	0.01	0.01
Subsidy	43.66	10.58

Response of West Discom:

The Summary of incentive/surcharge for consumers given during the FY 2021-22 andFY 2022-23 up to (July, 2022) is as under:

Particulars	Total	
	FY 2021-22	**FY 2022-23 (Up to July 22)**
Surcharge recovered from consumer (Rs. Crore)		
Power Factor Surcharge	594.39	146.37
Late Payment Surcharge	260.09	70.83
Total surcharge Recovered	**854.48**	**217.21**
Rebate/Incentive provided to consumer (Rs. Crore)		
Power Factor Incentive	224.10	89.89

Load Factor Incentive	5.04	2.06
Time of Day Incentive	203.52	45.90
Prompt Payment Incentive	3.09	1.45
Captive Incentive	49.83	16.42
Green Field/NSC Rebate	123.15	49.07
Advance Payment Incentive	3.07	2.38
Incremental Rebate	94.17	40.12
Online Payment Rebate	11.92	4.88
Total Rebate	**717.88**	**252.17**

Further a detailed consumer wise rebate/surcharge report for HT consumer and distribution center wise rebate surcharge report for LT consumer is being submitted to Hon'ble Commission, separately in soft copy.

19.3 Technical Studies of the distribution network to ascertain voltage wise cost of supply:

Commission's Directive:

The Commission has been continuously directing Petitioners to submit the study reports. However, in every year petition, Petitioners are submitting same response that it will be submitting shortly. This lackadaisical approach of the Petitioners is not acceptable and amounts to non-compliance of directives. Further, Regulation 26.7 of the MYT Regulations, 2021, specifies as follows:

"26.7. The Distribution Licensee shall also propose voltage wise losses for each year of the Control Period for the determination of Voltage-wise Cost of Supply. The Distribution Licensee shall be required to conduct the energy audit on representative sampling basis to segregate technical (i.e., Ohmic/Core losses in the lines, substations and equipment) and Commercial Loss (i.e., unaccounted energy due to metering inaccuracies/inadequacies, pilferage of electricity etc.). The Distribution Licensee(s) shall submit the first report on segregation of technical and commercial losses within one year from the date of notification of these Regulations. From FY 2023-24 onwards, the Distribution Licensee shall be required to submit detailed information for each year on Voltage-wise Distribution Losses segregating them into technical loss and Commercial Loss to the Commission."

In view of above, Commission directs the Petitioners to submit the comprehensive study as per above Regulations along with the next tariff petition. Non submission of report will tantamount to non-compliance of the Commission's direction and the Commission may take appropriate action against DISCOMs

Petitioners Compliance to Directive:

Response of East Discom*:*

Comprehensive study report on Technical and Commercial loss segregation at sub transmission and distribution level using GIS asset mapping is already submitted to Hon'ble Commission vide letter No. EZ/CGM/Comml/Trac/214 Jabalpur dtd. 20-05-2022.

Response of Central Discom:

The petitioner submits that the study shall be carried out through third party agency to ascertain voltage wise cost of supply, and after that company shall be providing the information to Hon'ble Commission.

Response of West Discom:

As per the Gazette Notification no. 18/1/BEE/DISCOM/2021 dated 06.10.2022 the MPPKVVCL, Indore would be able to get annual energy audit done with the services of accredited energy auditor, once the meterisation of consumer/ DTRs and feeders is complete under RDSS scheme. The periodic as well as annual energy audit report covers up voltage wise energy losses, account in respect of MPPKVVCL, Indore. As per the schedule of proposed RDSS works, it is expected that meterisation will be completed by December 2023. So, annual energy audit report would be available from FY 2023-24 onwards. The petitioner further submits that consulting agency PWC was directed to conduct a study on sample basis considering the directives of the Hon'ble Commission. Consultant has submitted its draft Report and the same is being submitted to the Hon'ble Commission in soft copy separately. Here, it is noteworthy to mention that results in the aforesaid study are based on sample feeder selected and these results may vary from the actual technical losses in the entire network of Discom on the account of following factors:

- Length of the feeder
- Overloading of the feeder
- Power factor
- Conductor type
- DTR type
- Loading during season and off season of agricultural feeders.

19.4 Transfer of Funds to Pension & Terminal Benefit Trust Fund

Commission's Directive:

The Commission has noted the submission of the Petitioners and directs the Petitioners to continue with deposit of the amount against the Terminal Benefit Trust Fund allocated in this Tariff Order on monthly basis as per Commission order dated 11th May, 2021. Further, the Petitioners are also directed to deposit the amount which has been allowed in the previous orders.

Petitioners Compliance to Directive:

Response of East Discom:

Hon'ble MPERC in its tariff order for FY 22-23 allowed Rs.70 Crore to be deposited against Terminal Benefit Trust fund. In this regard it is submitted that the details of amount deposited in TBT Fund for the month of April 2022 to June 2022 has already been submitted to Hon'ble Commission vide MD/EZ/CGM(Comml.)/591 dated. 28.07.22.

Response *of Central Discom:*

It is submitted that the desired information shall be submitted to Hon'ble Commission separately within short period of time.

Response of West Discom:

The Company is transferring the funds to Pension & Terminal Benefits trust Fund on regular basis. Whenever the company receives funds from MP Power Management Company to deposit the same in Pension & Terminal Benefit Trust Fund as per Cash Flow Management of Company, the same is transferred in the TBT Fund. The Company has deposited an amount of Rs. 273 Crore from 12.07.2019 to 23.08.2022 in Pension & Terminal Benefit Trust Fund. In future also whenever the Company will receive fund from MP Power Management Company to deposit in Pension & Terminal Benefit Trust Fund, the same shall be deposited in time in the TBT Fund.

19.5 Replacement of Stopped and Defective Meters

Commission's Directive:

The Commission has noted the submission of the Petitioner and directs the Petitioners to submit the quarterly progress report to the Commission.

Petitioners Compliance to Directive:

Response of East Discom :

Quarterly Report (June 21 to June 22) of stopped/defective meters is has already been submitted to Hon'ble Commission vide letter no. MD/EZ/CGM(Comml.)/1132 dated 03.11.22.

Response of Central Discom :

It is submitted that the desired information shall be submitted to Hon'ble Commission separately within short period of time.

Response of West Discom :

The petitioner submits that the progress report is being submitted regularly to the Hon'ble Commission through the quarterly MIS.

19.6 Alignment of R-15 strictly with the categories, subcategories and slabs of the Tariff Schedule as per the new Tariff Structure

Commission's Directive:

The Commission has taken note of the Petitioners submission. The Commission directs the Petitioners to keep submitting the R15 statement aligned with rate schedule on quarterly, half yearly and annual basis. Further, the Petitioners should also submit the reconciliation of sales, connected load and number of consumers as per the old and new R15 statement.

Petitioners Compliance to Directive:

Response of East Discom:

Month wise, Tariff Wise R15 (Jan 22 to Sep 22) MPERC, along with old and new R15 statement has been submitted to Hon'ble Commission vide letter no. MD/EZ/CGM (Comml) /1132 dated 03.11.22.

Response of Central Discom:

The Petitioner submits that the guidelines of MPERC shall be followed.

Response of West Discom:

The Petitioner submits that the compliance in this regard has been submitted before Hon'ble Commission vide letter No. 9967 Indore dated 13.07.2022. As directed by the Hon'ble Commission petitioner would submit the R-15 statement on quarterly, half yearly and annual basis regularly.

19.7 Capital Expenditure and Capitalisation details

Commission's Directive:

The Commission has observed that the Petitioners have submitted Fixed Assets Registers upto FY 2020-21. Although, the Petitioners have submitted the Fixed Asset Registers however, the same is not completely in accordance to the format specified by the Commission and observed that the Petitioners have not been able to link the individual assets details with its cost in years prior to FY 2020-21 in Fixed Asset Registers. The Petitioners have provided the quantity against the assets in cumulative manner, separately. Further, During Technical Validation Session, the Petitioners informed the Commission that from FY 2020-21 onwards, they are keeping record of the individual assets separately and accordingly, the Petitioner shall be submitting the Fixed Asset Register in the desired format during the next tariff and true up petitions. The Commission has taken note of the Petitioner submission. The Commission directs the Petitioners to submit the Fixed Asset Register as per format specified by the Commission in next tariff petition.

Petitioners Compliance to Directive:

Response of East Discom:

Scheme wise payment information for FY 2021-22 and capitalization details has already been submitted to Hon'ble Commission vide letter no. MD/EZ/CGM(Comml)/1207 dated 16/11/2022.

Response of Central Discom:

It is submitted that the desired information shall be submitted to Hon'ble Commission separately within short period of time.

Response of West Discom:

The Petitioner submits that company has already provided the Fixed Asset Register upto FY 2020-21 in a format prescribed by the Hon'ble MPERC. Also, the company has submitted the details of quantity of Assets upto FY 2020-21 separately. Further, the company is in process of maintaining all details of assets separately from the FY 2021-22. As directed by the Commission the Fixed Asset Register in the prescribed format shall be submitted at time of True up of FY 21-22.

19.8 Submission of report to ascertain the Consumption of irrigation pumps

Commission's Directive:

It is observed that the Petitioners have submitted details of consumption of sample agricultural feeder. However, the Petitioners have not submitted the detailed report detailing the methodology adopted for selection of sample feeders, energy audit report of the selected feeders etc. as per the direction of the Commission. Therefore, the Commission once again directs the Petitioners to submit report to ascertain the consumption of irrigation pumps based on detailed report for the representative sample agriculture feeders along with sample energy audit on predominantly agricultural DTRs in all the three DISCOMs justifying their claim in the next tariff filing/ true-up to the satisfaction of the Commission.

Petitioners Compliance to Directive:

Response of East Discom:

As regards the ascertainment of the consumption of irrigation pumps, the East Discom already submitted a detailed report of Study Conducted for Narsingpur Circle to the Hon'ble Commission vide letter dated 12.11.2021.

However, the Hon'ble Commission has given a direction in Tariff Order for FY 23 that to submit report to ascertain the consumption of irrigation pumps based on detailed report for the representative sample agriculture feeders along with sample energy audit on predominantly agricultural DTRs in all the three DISCOMs justifying the claim in the next tariff filing/ true-up i.e., Tariff Petition for FY 24 to the satisfaction of the Commission.

East Discom submits that Hon'ble Commission convened a meeting with MP-East Discom on 6th September 2022 for the status of the compliance to the directives issued in the Tariff Order for FY 2022-23.

As agreed in the meeting, Hon'ble Commission suggested for conducting the detailed study for ascertain the consumption of irrigation pumps with reference to Study conducted in Maharashtra State. It was directed to form a committee comprising Nodal Officer each from MPERC, Discoms and MPPMCL for this purpose. In this regard, MP-East Discom appointed Mr. Kuldeep Kumar Dubey, DGM (Energy audit) O/o CGM (Commercial) as Nodal officer for assistance during the study as instructed by the Hon'ble Commission 19/09/2022. Copy of the letter no. 1183 dated 10.11.2022 vide which nodal officer has been appointed has also been forwarded to MPERC.

Response of Central Discom:

The petitioner submits that the study as per the MPERC shall be carried out through third party agency for which a joined committee shall be formed with members from all the three DISCOMs, MPPMCL, and GOMP Energy Department. A nodal officer has been appointed by Central Discom as per commissions directive.

Response of West Discom:

The Petitioner submits that a study considering the data of 1632 Nos. agriculture feeders of 15 districts under West Discom jurisdiction for FY 2020-21 has been submitted to Hon'ble Commission vide letter No. 2763 Indore dated 23.02.2022.

19.9 Action Plan for Line Loss reduction

Commission's Directive:

The Commission appreciates the efforts made by the West DISCOM, however, it has been observed that the distribution losses submitted by other two DISCOMs are above loss level specified by the Commission. East and Central DISCOMs progress is far from satisfactory. There is a huge gap between the targeted losses and actual losses. These DISCOMs are losing huge amounts against these losses as the Commission has been allowing only the normative losses to be passed on to the consumers. The Commission opines that it is very necessary and expedient to go into the details of suboptimal performance of the DISCOMs. Further, Commission observed that Petitioners have not submitted the detailed action plan detailing the methodology that Petitioners will be adopting for reduction in losses. Therefore, Commission directs DISCOMs to submit a detailed action plan to reduce the losses. The Commission also directs the DISCOMs to submit quarterly progress reports in this matter. Further, the DISCOMs should note that as per MPERC MYT Regulations, 2021, DISCOMs are eligible for additional R&M expenses of 0.50%, on achievement of targets specified in the Regulations or reduction of actual losses by 3%. Therefore, the DISCOMs are encouraged to take benefit of additional R&M expenses as per Regulations.

Petitioners Compliance to Directive:

Response of East Discom:

In the company area in last five years i.e since FY'18 to FY'22, following main infrastructure has been created as per the capex plan to provide uninterrupted and quality power supply to all categories of consumers:

S.N.	Particulars	Unit	FY'18	FY'19	FY'20	FY'21	FY'22
1	33/11KVS/S	Nos	15	95	8	12	15
2	Addl/Aug PTR	Nos	39	242	89	40	35
3	33 KV Line	Km	507	698	477	212	224
4	11 KV Line	Km	10303	21857	3399	891	649
5	LT AB Cable	Km	4091	18153	865	345	185
6	DTR	Nos	17531	41387	9332	2411	3214

Regarding increase of Distribution losses, it is to mention that by carrying out system strengthening works technical losses has been definitely reduced. However, due to increase in LT line for supply of rural households under various schemes, the technical losses have increased. Further line loss reduction plan can be referred from RDSS scheme guidelines dated 17.03.2022.

Response of Central Discom:

The Central Discom has participated in RDSS Scheme of GoI. The Discom has to take up the following works:-

1. Replacement of Electronic Meter to Smart Meters in Urban areas having loss more than 40%
2. DT meterization of urban areas having loss more than 40%.
3. Augmentation of DTR and PTRs.
4. Augmentation of Conductor of 33 & 11 KV lines.
5. Construction of New Substations.
6. Installation of New Capacitor Bank on 11 KV feeders.
7. LT underground cabling etc.

The above works shall be executed under RDSS Scheme in phased manner for reduction of line losses.

Response of West Discom:

It is submitted that the West DISCOM has achieved the distribution loss level of 12.71% in the FY 2020-21 and 11.61% in FY 2021-22 against the normative distribution loss of 15.00% and 14.00% respectively, as allowed in the Tariff Regulations. DISCOM is making continuous efforts to reduce losses.

19.10 Meterisation of unmetered agricultural and domestic consumers

Commission's Directive:

The Commission has taken note of the submission of the DISCOMs. It has been observed that all three DISCOMs have achieved meterisation of Domestic urban consumers but not for rural domestic consumers and agriculture DTR meterisation. The DISCOMs are directed to complete

these works within 6 months of issuance of this order and report the status of compliance to the Commission after 1 month of deadline.

Petitioners Compliance to Directive:

Response of East Discom:

Regarding meterization of unmetered domestic connection of rural area continuous efforts are being made to provide the meters on unmetered connection. At the end of Dec 2021 only 322268 unmetered domestic connections were remaining which has further reduced to 311497 at the end of March' 2022. The figures given above are of R-15 of the corresponding month. The meterization of agricultural DTRs is not covered in any ongoing/sanctioned scheme. Plan for 100% predominant Agricultured DTR will be provided after sanction of loan assistance from Financial institutions of any Govt. Scheme. The Quarterly report of agriculture predominant DTR for March'2022 has already been submitted to MPERC vide letter no. EZ/WS/949 dated 20.06.2022.

Response of Central Discom:

MPCZ Humbly submits that due to paucity of fund the meterisation of Rural Domestic unmetered consumers has not been completed. Under RDSS smart meter project approx 9.57 Lacs meters shall be replaced. After replacement of the old meters these will be re-issued for installation on domestic Unmetered category in Rural areas. Provision for meterisation of Agriculture DTR is made in RDSS which will be achieved as per time line of the scheme.

Response of West Discom:

It is submitted that West DISCOM has achieved 100% meterisation in Domestic Urban Consumers. However, due to Covid 19 pandemic the set target for meterisation of Rural Domestic Consumers could not be achieved. It has now been targeted to achieve 100% meterisation by end of March-23. The action plan for 100% meterisation is as below:

Total-Rural Domestic Unmetered Connections (As per R-15 July, 22)	Plan for Meterization						
	Sept.22	Oct.22	Nov.22	Dec.22	Jan23	Feb23	March23
25763	3683	3680	3680	3680	3680	3680	3680

With regard to agriculture consumers, necessary instructions regarding identification and meterisation of urban flat rate agriculture consumers has already been issued to the field offices. The Commission is requested to extend the timeline to next tariff period.

The Petitioner submits that the meterisation of predominately agriculture DTRs has already been incorporated in the Capex plan. The said work for DTR meterisation shall be executed depending upon the availability of the funds.

19.11 Consumer category wise study of hourly consumption pattern

Commission's Directive:

The Commission observed that the Petitioners have not submitted any study report to modify / upgrade the ToD Tariff as per Commission's direction. Therefore, Commission reiterates its directions given to the Petitioners to undertake a detailed study of hourly consumption patterns of various consumer categories, based on ABT metering data, to identify which category is contributing how much to the peak consumption, which category can shift its consumption to off-peak hours, seasonal variation in the peak and off-peak consumption levels. Based on this study, the Petitioners should submit a comprehensive proposal to modify/upgrade the ToD tariff dispensation, along with its next Tariff Petition. Further, the Petitioners have also not submitted the data in accordance with format specified by the Commission. Therefore, Commission once again directs petitioners to submit the requisite data as per the format specified by the Commission in next tariff petition.

Ppetitioner's Compliance to Directive:

Response of East Discom:

Information of Average hourly consumption details of HV category consumers for FY 2021-22 has been submitted to Hon'ble Commission vide letter no. MD/EZ/CGM(Comml.)/1132 dtd. 03.11.22.

Response of Central Discom:

Consumer category wise study of hourly consumption pattern

Name of feeder	Name	No. of Consumers
DL Feeder	KAMPOO GORKIII	2385
NDL Feeder	DAULATGANJ	3375

Period	Per Consumer Consumption Per Month	
	DL	NDL
6AM to 10AM	36.93	14
11 AM to 5PM	40.72	38.02
6PM to 10PM	29.04	29.39
11PM to 5AM	36.9	22.78

Name of feeder	Name	No. of Consumers
DL Feeder	Bhopal (Town)	4306
NDL Feeder	Jyoti Complex	901

Period	Per Consumer Consumption Per Month	
	DL	NDL
6AM to 10AM	35.71	31.57

11 AM to 5PM	57.76	152.58
6PM to 10PM	36.65	100.29
11PM to 5AM	47.72	45.33

Response of West Discom:

It is submitted that the desired information in prescribed format is being submitted separately in the soft copy to the Hon'ble commission.

19.12 Policy and procedure for identification of bad debts and writing off the same

Commission's Directive:

Bad and doubtful debts

The Licensee shall submit the Draft policy and procedure for identification of bad debts and writing off the same for the approval of the Commission within three months from the date of notification of these Regulations." Accordingly, the Petitioners are directed to submit draft policy and procedure for identification of bad debts and writing off the same for the approval of the Commission within three months from the date of issuance of this tariff order.

Petitioners Compliance to Directive:

Response of East Discom:

As submitted by East Discom, the draft policy is under discussion and will be submitted to the Hon'ble commission after finalization.

Response of Central Discom:

The Central Discom has prepared the draft policy for adjustment mechanism of Bad and doubtful debts. The legal and financial evaluation of draft policy is under vetting. The Discom requests the Hon'ble Commission to provide time extension of one month for submission of policy.

Response of West Discom:

The Petitioner submits that the status of compliance in this regard has been submitted before Hon'ble Commission vide letter No. 9967 Indore dated 13.07.2022.

19.13 Format for Electricity Bill

Commission's Directive:

The Commission has observed that many stakeholders have raised issue of having very complex bill format and having difficulty in understanding their electricity bills. The Commission is of the view that the Electricity Bill issued by the DISCOMs for Domestic Consumers should be easy to understand. Therefore, the Commission directs the DISCOMs to prepare a simplified format of Electricity Bill and submit to the Commission within 3 months from the issuance of this tariff order.

Petitioners Compliance to Directive:

Response of East Discom:
As directed by Hon'ble Commission Simplified Electricity Bill format has already been shared with Hon'ble Commission vide East Discoms letter no. MD/EZ/CGM(Comml.)/730 dtd. 30.08.22.

Response of Central Discom:
In this regard the Central Discom opines that the present format of Electricity Bill is satisfactory. However, for clear understanding of Electricity Charges, a table of tariff calculation may be enclosed on back side of bill.

Response of West Discom:
The Petitioner submits that the status of compliance in this regard has been submitted before Hon'ble Commission vide letter No. 9967 Indore dated 13.07.2022.

19.14 Minimum Charges

Commission's Directives:

In the present tariff structure, recovery of fixed cost incurred by Distribution Licensees is partially recovered through fixed charges and remaining is recovered through energy charges. For the consumers in the event of zero or minimal consumption by a consumer,it is likely that such a consumer would only be required to pay fixed charges which would meet only about 20% of fixed cost in the system. This is certainly not a desirable situation and in order to avoid such a scenario, the concept to minimum charges was brought in, which was in the nature of meeting a part of the fixed cost. Notwithstanding the current scenario, the Commission is of the view that tariff structure needs further simplification and therefore, minimum charges which are in the nature of fixed charges, could be subsumed at a later stage in the category of fixed charges. However, in order to achieve this objective, it is necessary to understand implications of such a measure so that there is no tariff shock for any particular category of Consumer. Therefore, Distribution Licensees/Petitioners are directed to provide following information in details along with implications for taking considered view in this regard.

i. *Category / Sub-category wise applicable Minimum charges, recovery against the Minimum Charges and number of consumers who have been billed Minimum Charges during last five years.*
ii. *Category / Sub-category wise actual consumption for which billing has been done asper Minimum Charges for last five years.*
iii. *Category / Sub-category wise billed revenue from Fixed and Energy Charges during last five years*

Response of East Discom:

Hon'ble Commission vide email dated 01.07.2022, circulated the format for collection of category-wise minimum charges, billed recovery against the Minimum charges and number of consumers who have been billed minimum charges during the FY 2020-21 & FY 2021-22 and category-wise actual consumption for which billing has been done as per minimum charges.

The analysis carried out for all the consumer categories for FY 2020-21 & FY 2021-22. As regard to FY 2017-18, FY 2018-19, and FY 2019-20, the TMM analysis is prepared only for HT Categories, due to limitations of availability of data of LT categories because of migration to new billing system in the Discom.

In accordance with data availability and format provided by the Hon'ble Commission, category-wise minimum charges, billed recovery against the Minimum charges and number of consumers who have been billed minimum charges during the last five years has already been shared with Hon'ble Commission vide letter no.MD/EZ/CGM (Comml.)/1132 dated 03.11.2022.

Response of Central Discom:

It is submitted that the desired information shall be submitted to Hon'ble Commission separately within short period of time.

Response of West Discom:

As directed, desired information is being submitted separately to Hon'ble Commission in the soft copy.

TARIFF SCHEDULES

A20: TARIFF SCHEDULES FOR LOW TENSION CONSUMERS

Tariff Schedule - LV-1

DOMESTIC:

Applicability:

This tariff is applicable for light, fan and power for residential use. Dharamshalas, Gaushalas, old age homes, day care centres for senior citizens, rescue houses, orphanages, Affordable Rental Housing Complex established under Pradhan Mantri Awas Yojana, Registered home stays under following Schemes of the State Government: (a) MP Homestay Establishment (Registration and Regulation) Scheme, 2010, Amended 2018, (b) MP Bed and Breakfast Establishment (Registration and Regulation) Scheme, 2019, (c) MP Farm Stay Establishment (Registration and Regulation) Scheme, 2019, (d) MP Gram Stay Establishment (Registration and Regulation) Scheme, 2019, places of worship and religious institutions will also be covered under this category.

Tariff:

LV 1.1 (Consumers having sanctioned load not more than 100 watts (0.1 kW) and consumption not more than 30 units per month)

(a) Energy Charge and Fixed Charge – For metered connection

Monthly Consumption (units)	Existing		Proposed	
	Energy Charge (paise per unit) Urban and Rural	Monthly Fixed Charge	Energy Charge (paisa per unit)	Monthly Fixed Charge
Up to 30 units	334	NIL	345	NIL

(b) Minimum Charges: Rs. 45 per connection per month as minimum charges is applicable to this category of consumers.

LV 1.2

(i) Energy Charge and Fixed Charge – For metered connection

Monthly Consumption Slab Urban / Rural areas (units)	Existing			Proposed		
	Energy Charge with telescopic benefit (paisa per unit) Urban / Rural areas	Monthly Fixed Charge (Rs)		Energy Charge with telescopic benefit (paise per unit) Urban / Rural areas	Monthly Fixed Charge (Rs)	
		Urban areas	Rural areas		Urban areas	Rural areas
Up to 50 units	421	69 per connection	55 per connection	434	71 per connection	57 per connection
51 to 150 units	517	121 per connection	98 per connection	533	125 per connection	101 per connection
151 to 300 units[#]/ Above 150 units*	655	26 for each 0.1 kW of authorized load	23 for each 0.1 kW of authorized load	674	27 for each 0.1 KW of authorized load	24 for each 0.1 KW of authorized load

#Existing slab
**Proposed*

Minimum Charges: Rs. 70 per connection per month as minimum charges towards energy charges are applicable for above categories.

Notes:

1. The fixed charges shall be levied considering every 15 units of consumption per month or part thereof equal to 0.1 kW of load. **Example:** If consumption during the month is 155 units, then the fixed charges shall be levied for 1.1 kW. In case the consumption is 350 units then the fixed charges shall be levied for 2.4 kW.

2. In cases where the readings are recorded for the duration other than the respective days of the month, the consumption shall be prorated for the month so as to arrive at the proportionate units eligible for different slabs in a particular billing month. Accordingly, the Fixed and Energy Charges shall be computed.

   Illustration
   Previous Meter Reading: 4th April 2021
   Next Meter Reading: 10th May 2021
   Consumption period: 36 days
   Consumption: 450 units

   Slab-wise consumption to be considered for billing:

Slab	Computation of Consumption on Pro-rata basis	Units to be considered for billing (kWh)
0-50	50 units/30 days*36 days	60
51-150	100 units/30 days *36 days	120
Above 300	Balance Units	270
Total		**450**

   # Billing of fixed charges shall be done after pro-rating the consumption for 30 days (i.e. billing period) in the above manner.

(ii) Energy Charge and Fixed Charge – For temporary connection and DTR meter

Monthly Consumption Slab Urban / Rural areas (units)	Existing			Proposed		
	Energy Charge with telescopic benefit (paisa per unit) Urban / Rural areas	Monthly Fixed Charge (Rs)		Energy Charge with telescopic benefit (paisa per unit) Urban / Rural areas	Monthly Fixed Charge (Rs)	
		Urban areas	Rural areas		Urban areas	Rural areas
Temporary connection for construction of own house (max. up to three years) (max. up to Three year)	1.25 times the tariff applicable as per schedule LV 1.2 (i)			1.25 times the tariff applicable as per schedule LV 1.2 (i)		
Temporary connection for	845	75 for each one kW of	60 for each one kW of	872	77 for each one kW of	62 for each one kW of

Monthly Consumption Slab Urban / Rural areas (units)	Existing			Proposed		
	Energy Charge with telescopic benefit (paisa per unit) Urban / Rural areas	Monthly Fixed Charge (Rs)		Energy Charge with telescopic benefit (paisa per unit) Urban / Rural areas	Monthly Fixed Charge (Rs)	
		Urban areas	Rural areas		Urban areas	Rural areas
social/ marriage purposes and religious functions.		sanctioned or connected or recorded load, whichever is highest, for each 24 hours duration or part thereof.	sanctioned or connected or recorded load, whichever is highest, for each 24 hours duration or part thereof.		sanctioned or connected or recorded load, whichever is highest, for each 24 hours duration or part thereof.	sanctioned or connected or recorded load, whichever is highest, for each 24 hours duration or part thereof.
Supply through DTR meter for clusters of Jhuggi/Jhopadi till individual meters are provided	355	Nil	Nil	445	Nil	Nil

Minimum Charges: Rs. 1000/- per connection per month is applicable towards energy charges for temporary connection.

* Note: For the consumers in this category, the Distribution Licensee shall provide trivector/ bivector Meter capable of recording demand in kVA/kW, kWh, kVAh

(iii) Energy Charge and Fixed Charge for un-metered rural domestic connections having connected load up to 500 watts:

Particulars	Existing		Proposed	
	Units and Energy Charge to be billed per month for unmetered connections (Paise per Unit)	Monthly Fixed Charge (Rs)	Units and Energy Charge to be billed per month for unmetered connections (Paise per Unit)	Monthly Fixed Charge (Rs)
Un-metered connection in rural areas having connected load up to 500 watts	75 units @ 524 per unit	109 per connection	75 units @ 541 per unit	112 per connection

Note:

Minimum charges: No minimum charges are applicable to this category of consumers.

Specific Terms and Conditions for LV-1 category:

a) In case Energy Charges for actual consumption are less than minimum charges, minimum charges shall be billed towards energy charges. All other charges, as applicable, shall also be billed.

b) In case of prepaid consumers, a rebate of 25 paise per unit is applicable on the basic energy charges. All other charges should be calculated on the Tariff applicable after rebate. A consumer opting for prepaid meter shall not be required to make any security deposit.

c) Additional charge for Excess connected load or Excess demand: No extra charges are applicable on the energy/fixed charges due to the excess demand or excess connected load.

d) In case of temporary requirement for renovation / up gradation of premises, additional load is allowed to be used from existing metered connection on the same tariff applicable for permanent connection. Provided that the total load being used in the premises at a time should not exceed 130% of its sanctioned load.

e) Other terms and conditions shall be as specified under General Terms and Conditions for Low Tension Tariff.

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Tariff Schedule – LV-2

NON-DOMESTIC:

LV 2.1

Applicability:

This tariff is applicable for light, fan and power to Schools / Educational Institutions including workshops and laboratories of Engineering Colleges / Polytechnics/ITIs (which are registered with /affiliated/ recognized by the relevant Govt. body or university), Hostels for students or working women or sports persons.

Tariff:

Tariff shall be as given in the following table:

Sub category	Existing			Proposed		
	Energy Charge (paise/unit) Urban/ Rural areas	Monthly Fixed Charge (Rs.)		Energy Charge (paise/unit) Urban/ Rural areas	Monthly Fixed Charge (Rs.)	
		Urban areas	Rural areas		Urban areas	Rural areas
Sanctioned load based tariff (only for connected load up to 10 kW)	650	156 per kW	125 per kW	671	161 per kW	129 per kW
Demand based tariff Mandatory for Connected load above 10 kW	650	275 per kW or 220 per kVA of billing demand	235 per kW or 188 per kVA of billing demand	671	284 per kW or 227 per kVA of billing demand	243 per kW or 194 per kVA of billing demand

LV 2.2

Applicability:

This tariff is applicable for light, fan and power to Railways (for purposes other than traction and supply to Railway Colonies/water supply), Shops/showrooms, Parlors, All Offices, Hospitals and medical care facilities including Primary Health Centers, clinics, nursing homes belonging to either Govt. or public or private organisations, public buildings, guest houses, Circuit Houses, Government Rest Houses, X-ray plant, recognized Small Scale Service Institutions, clubs, restaurants, eating establishments, meeting halls, places of public entertainment, circus shows, hotels, cinemas, professional's chambers (like Advocates, Chartered Accountants, Consultants, Doctors etc.), bottling plants, marriage gardens, marriage houses, advertisement services, advertisement boards/ hoardings, training or coaching institutes, petrol pumps and service stations, tailoring shops, laundries, gymnasiums, health clubs, telecom towers for mobile communication and any other establishment which is not covered in other LV categories.

Tariff:

Tariff shall be as given in the following table:

Sub category	Existing			Proposed		
	Energy Charge (paise/unit) Urban/ Rural areas	Monthly Fixed Charge (Rs.)		Energy Charge (paise/unit) Urban/ Rural areas	Monthly Fixed Charge (Rs.)	
		Urban areas	Rural areas		Urban areas	Rural areas
Sanctioned load based tariff (only for connected load up to 10kW) On all units if monthly consumption is **up to 50 units**	630	82 per kW	67 per kW	650	85 per kW	69 per kW
Sanctioned load based tariff (only for connected load up to 10kW) On all units in case monthly consumption **exceeds 50 units**	780	138 per kW	117 per kW	805	142 per kW	121 per kW
Demand based tariff (**Mandatory** for Connected load above 10 kW)	690	296 per kW or 237 per kVA of billing demand	214 per kW or 171 per kVA of billing demand	712	305 per kW or 244 per kVA of billing demand	221 per kW or 177 per kVA of billing demand
Temporary connection including Multi point temporary connections at LT for Mela*	870	224 per kW or part thereof of sanctioned or connected or recorded load, whichever is the highest	195 per kW or part thereof of sanctioned or connected or recorded load whichever is the highest	-		
Temporary connection for marriage purposes at marriage gardens or marriage halls or any other premises covered under LV 2.1 and 2.2 categories	870 (Minimum consumption charges shall be billed @ 6 Units per kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part there of subject to a minimum of Rs.500/-)	87 for each kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part thereof.	67 for each kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part thereof.	898 (Minimum consumption charges shall be billed @ 6 Units per kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part there of subject to a minimum of Rs.500/-)	90 for each kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part thereof.	69 for each kW or part thereof of sanctioned or connected or recorded load, whichever is the highest for each 24 hours duration or part thereof.

*In case permission for organizing Mela is granted by Competent Authorities of the Government of Madhya Pradesh.

Specific Terms and Conditions for LV-2 category:

a) **Minimum charges:** The consumer shall pay minimum annual charges based on consumption of 240 units per kW or part thereof in urban areas and 180 units per kW or part thereof in rural areas of sanctioned load or contract demand (in case of demand based charges) irrespective of whether any energy is consumed or not during the year. However, the load of X-Ray unit shall be excluded while considering the load of the consumer for calculation of minimum charges. The method of billing of minimum charges shall be as given in General Terms and Conditions of Low Tension tariff.

b) **Additional Charge for Excess demand:** Shall be billed as given in General Terms and Conditions of Low Tension tariff.

c) For LV-2.1 and LV-2.2: For the consumers having connected load in excess of 10 kW, demand based tariff is mandatory. The consumers having connected load upto and including 10 kW may also opt for Demand based tariff.

d) In case of prepaid consumers, a rebate of 25 paise per unit is applicable on the basic energy charges, all other charges should be calculated on the Tariff applicable after rebate. A consumer opting for prepaid meter shall not be required to make any security deposit.

e) Tariff for temporary connection including Multi point temporary connections at LT for Mela (in case permission for organizing Mela is granted by Competent Authorities of the Government of Madhya Pradesh) shall be 1.25 times the tariff applicable for demand based Tariff of respective rural and urban areas under LV-2.2 category.

f) Other terms and conditions shall be as specified under *General Terms and Conditions of Low Tension Tariff.*

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Tariff Schedule – LV-3

PUBLIC WATER WORKS AND STREET LIGHTS

Applicability:

The tariff **LV-3** is applicable for Public Utility Water Supply Schemes, Sewage Treatment Plants, Sewage Pumping Installations run by P.H.E. Department or Local Bodies or Gram Panchayats or any other organization authorised by the Government to supply/ maintain public water works / sewerage installations, traffic signals and lighting of public streets or public places including parks, town halls, monuments and its institutions, museums, public toilets, public libraries, reading rooms run by the Government or Local Bodies, and Sulabh Shochalaya and shall also be applicable to electric crematorium maintained by local bodies/trusts.

Note: Private water supply scheme, water supply schemes run by institutions for their own use/employees/ townships etc. shall not fall in this category. These shall be billed under the appropriate tariff category to which such institution belongs. In case water supply is being used for two or more different purposes then entire consumption shall be billed for purpose forwhich the tariff is higher.

Tariff:

Category of consumers/area of applicability	Existing			Proposed		
	Energy Charge (Paise per unit)	Monthly Fixed Charge (Rs per KW)	Minimum charges (Rs)	Energy Charge (Paise per unit)	Monthly Fixed Charge (Rs per KW)	Minimum charges (Rs)
Municipal Corporation/ Cantonment board /Municipality / Nagar Panchayat	568	352	No Minimum Charges	586	363	No Minimum Charges
Gram Panchayat	540	164		557	169	
Temporary supply	1.25 times the applicable tariff			-		

Specific Terms and Conditions for LV-3 category:

a) Incentives for adopting Demand Side Management:

An incentive equal to 5 % of Energy Charges shall be given on installation and use of energy saving devices (such as ISI energy efficient motors for pump sets and programmable on-off/ dimmer switch with automation for street lights). Incentive will be admissible only if full bill is paid within due dates failing which all consumed units will be charged at normal rates. Such incentive will be admissible from the month following the month in which energy saving devices are put to use and are verified by a person authorized by the Distribution Licensee. This incentive will continue to be

allowed till such time these energy saving devices remain in service. The Distribution Licensee is required to arrange wide publicity of above incentive.

b) Tariff for temporary connection shall be 1.25 times the applicable tariff.

c) Other terms and conditions shall be as specified under *General Terms and Condition of Low Tension Tariff.*

*****

Tariff Schedule – LV-4

LT INDUSTRIAL

Applicability:

Tariff **LV-4** is applicable to light, fan and power for operating equipment used by printing press and any other industrial establishments and workshops (where any processing or manufacturing takes place including tyre re-treading). These tariffs are also applicable to cold storage, gur (jaggery) making machines, flour mills, Masala Chakkies, hullers, khandsari units, ginning and pressing units, sugar cane crushers (including sugar cane juicing machine), power looms, dal mills, besan mills, and ice factories and any other manufacturing or processing units (excluding bottling plant) producing/processing food items or processing agriculture produce for preservation/increasing its shelf life and Dairy units (where milk is processed to produce other end products of milk other than chilling, pasteurization etc.)

Tariff:

Sr. no.	Category of consumers/area of applicability	Existing			Proposed		
		Monthly Fixed Charge (Rs per KW)		Energy Charge (Paise per unit)	Monthly Fixed Charge (Rs per KW)		Energy Charge (Paise per unit)
		Urban Areas	Rural Areas		Urban Areas	Rural Areas	
4.1	**Non seasonal consumers**						
4.1 a	Demand based tariff* (Contract demand up to 150 HP/112kW)	320 per kW or 256 per kVA of billing demand	205 per kW or 164 per kVA of billing demand	660	330 per kW or 264 per kVA of billing demand	212 per kW or 170per kVA of billing demand	681

*** In case of consumers having contract demand up to 20 HP/15 kW, the energy charges and fixed charges shall be billed at a rate 30% less than the charges shown in above table for tariff category 4.1a.**

Provided that consumers whose recorded maximum demand during a month is more than 20 HP/15 kW, rebate of 30% shall not be applicable for that particular month.

4.2	**Seasonal Consumers** (period of season shall not exceed 6 Months continuously). If the declared season or off-season spreads over two tariff periods, then the tariff for the respective period shall be applicable.						
4.2 a	**During Season**	Normal tariff as for Non seasonal consumers	Normal tariff as for Non seasonal consumers	Normal tariff as for Non seasonal consumers	Normal tariff as for Non seasonal consumers	Normal tariff as for Non seasonal consumers	Normal tariff as for Non seasonal consumers
4.2 b	**During Off season**	Normal tariff as for Non-seasonal consumers on 10 % of contract demand or actual recorded demand, whichever is more	Normal tariff as for Non-seasonal consumers on 10 % of contract demand or actual recorded demand, whichever is more	120 % of normal tariff as for Non-seasonal consumers	Normal tariff as for Non-seasonal consumers on 10 % of contract demand or actual recorded demand, whichever is more	Normal tariff as for Non-seasonal consumers on 10 % of contract demand or actual recorded demand, whichever is more	120 % of normal tariff as for Non-seasonal consumers

Specific Terms and Conditions for LV-4 category:

(a) The maximum demand of the consumer in each month shall be reckoned as four times the largest amount of kilovolt ampere hours delivered at the point of supply of the consumer during any continuous fifteen minutes in that month.

(b) Demand based tariff is mandatory for all the LT industrial consumers.

(c) Minimum Charges : Shall be as per following:

1 For LT Industries in rural areas: The consumer shall pay minimum annual charges based on consumption (kWh) of 120 units per HP or part thereof of contract demand irrespective of whether any energy is consumed or not during the year.

2 For LT Industries in urban areas: The consumer shall pay minimum annual charges based on consumption (kWh) of 240 units per HP or part thereof of contract demand irrespective of whether any energy is consumed or not during the year.

3 The consumer shall be billed monthly minimum 10 units per HP per month in rural area and 20 units per HP per month in urban area in case the actual consumption is less than above specified units.

4 Method of billing of minimum charges shall be as given in the General Terms and Conditions of Low Tension tariff.

(d) Additional Charge for Excess Demand: Shall be billed as given in the *General Terms and Conditions of Low Tension Tariff*.

(e) Other Terms and conditions for seasonal consumers:

i. Season shall mean continuous period up to 6 months with a ceiling of 185 days.

ii. Period other than the declared season shall be considered as the off season period.

iii. The consumer has to declare months of season and off season for a year within 60 days of issuance of this tariff order and inform the same to the Distribution Licensee. The Year in this case shall be a period of 12 months commencing from start of season / off season, as applicable. If the consumer has already declared the period of season and off-season prior to issuance of this order, same shall be taken into cognizance for the purpose and accepted by the Distribution Licensee.

iv. The seasonal period once declared by the consumer cannot be changed during the year.

v. If the declared season or off-season spreads over two tariff periods, then the tariff for the respective period shall be applicable.

vi. This tariff is not applicable to composite units having seasonal and other category of loads.

vii. The consumer will be required to restrict his monthly off season consumption to

15% of the highest of average monthly consumption during the preceding three seasons. In case this limit is exceeded in any off season month, the consumer will be billed under Non seasonal tariff for the whole year (as opted) as per the tariff in force.

viii. The consumer will be required to restrict his maximum demand during off season up to 30 % of the contract demand. In case the maximum demand recorded in any month of the declared off season exceeds 36% of CD (120% of 30% of CD), the consumer will be billed under Non seasonal tariff for the whole year (as opted) as per the tariff in force.

(f) Other terms and conditions shall be as specified under *General Terms and Condition of Low Tension Tariff.*

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Tariff Schedule – LV–5

AGRICULTURE AND ALLIED ACTIVITIES

Applicability:

The tariff LV-5.1 shall apply to metered connections for agricultural pump, chaff cutters, threshers, winnowing machines, seeding machines, irrigation pumps of lift irrigation schemes including water drawn by agriculture pumps for use by cattle and pump connections for the purpose of fodder farming associated to Gaushalas. ***This tariff shall also be applicable to the Flat rate agricultural consumers.***

The tariff LV-5.2 shall apply to connections for nurseries, farms growing flowers/ plants/ saplings/ fruits, mushroom and grasslands.

The tariff LV-5.3 shall apply to connections for fisheries ponds, aquaculture, sericulture, hatcheries, poultry farms, cattle breeding farms and those dairy units only where extraction of milk and its processing such as chilling, pasteurization etc. is done.

Tariff:

Sr. no.	Sub-Category	Existing		Proposed	
		Monthly Fixed charges (Rs.)	Energy charges (Paise per unit)	Monthly Fixed charges (Rs.)	Energy charges (Paise per unit)
LV-5.1					
a)(i)	First 300 units per month	58	479	60	494
(ii)	Above 300 units up to 750 units in the month	74	582	76	601
(iii)	Rest of the units in the month/***Temporary connections****	81	610	84	629
b)	Temporary connections	81	610	-	
c)	DTR metered group consumers	Nil	459	Nil	474
LV-5.2					
a)(i)	First 300 units per month	58	479	60	494
(ii)	Above 300 units up to 750 units in the month	74	582	76	601
(iii)	Rest of the units in the month/ ***Temporary connections****	81	610	84	629
b)	Temporary connections	81	610	-	
LV-5.3					
a)	Up to 25 HP in **Urban areas**	118 per HP	535	122 per HP	552
b)	Up to 25 HP in **Rural areas**	88 per HP	518	91 per HP	535
c)	Demand based tariff (Contract demand up to 150 HP) (Mandatory above 25 HP) in **Urban areas**	272 per kW or 217 per kVA of billing demand	610	281 per kW or 225 per kVA of billing demand	629
d)	Demand based tariff (Contract demand up to 150 HP) (Mandatory above 25 HP) in	145 per kW or 116 per kVA of billing demand	610	150 per kW or 120 per kVA of billing demand	629

Sr. no.	Sub-Category	Existing		Proposed	
		Monthly Fixed charges (Rs.)	Energy charges (Paise per unit)	Monthly Fixed charges (Rs.)	Energy charges (Paise per unit)
	Rural areas				

Proposed for Tariff for FY 2023-24

Note:

1. The agriculture consumers in urban area connected to a feeder other than separated agriculture feeder will be billed as per consumption recorded in the meter. Existing unmetered consumers may be billed as per flat rate till meters are installed. DISCOMs must ensure that meters on all such connections are installed by the end of the current financial year**.**

2. Tariff for Temporary connections under LV-5.1 and 5.2 tariff categories shall be as per Tariff categories LV-5.1 (iii) and LV-5.2 (iii), respectively.

Specific Terms and Conditions for LV-5 category:

1.1 Billing of consumers under tariff schedule LV 5.1: Billing to the consumers covered under tariff schedule LV 5.1 shall be done on a monthly basis based on the consumption recorded in the meter. Unmetered temporary connection under this schedule shall be billed on the basis of assessment of consumption provided under condition 1.3 (iii) of this schedule.

1.2 Billing of un-metered flat rate agricultural consumers: The bill for the un-metered flat rate agricultural consumer shall be calculated at the rates specified under the tariff schedule LV 5.1 based on norms for assessment of units per HP specified under condition 1.3 of this schedule. In event of tariff subsidy for consumers, action as mandated under Section 65 of the Electricity Act, 2003 shall be ensured by all concerned and such consumers shall be billed accordingly by the Distribution Licensees.

1.3 Basis of energy audit and accounting for categories LV 5.1:

i) For energy audit and accounting purposes, actual billed consumption of flat rate and metered consumers covered under tariff schedule LV 5.1 shall be considered.

ii) For unmetered flat rate agriculture consumers under LV-5.1 category, assessed consumption shall be as per following norms:

Particulars	No. of units per HP of sanctioned load per month	
	Urban/Rural Area	
Type of Pump/Motor	**April to Sept**	**Oct to March**
Three Phase	**95**	**170**
Single Phase	**95**	**180**

iii) For unmetered temporary agriculture consumers under LV-5.1 category, assessed consumption shall be as per following norms:

Particulars	**No. of units per HP of sanctioned load per month**	
Type of Pump Motor	**Urban Area**	**Rural Area**
Three Phase	**220**	**195**
Single Phase	**230**	**205**

1.4 Agricultural consumers opting for temporary supply shall have to pay the charges in advance for three months including those who request to avail connection for one month only subject to replenishment from time to time for extended period and adjustment as per final bill after disconnection. Regarding temporary connection for the purpose of threshing the crops, temporary connection for a period of one month can be served at the end of Rabi and Kharif seasons only with payment of one month's charges in advance.

1.5 Following **incentive*** shall be given to the metered agricultural consumers on installation of energy saving devices –

Sr.no.	**Particulars of Energy Saving Devices**	**Rate of rebate**
1.	ISI / BEE star labelled motors for pump sets	15 paise per unit
2.	ISI / BEE star labelled motors for pump sets and use of frictionless PVC pipes and foot valve	30 paise per unit
3.	ISI / BEE star labeled motors for pump sets and use of frictionless PVC pipes and foot valves along with installation of shunt capacitor of appropriate rating	45 paise per unit

* Incentive shall be allowed on the consumer's contribution part of the normal tariff (full tariff minus amount of Govt. subsidy per unit, if any) for installation of energy saving devices under demand side management. This incentive will be admissible only if full bill is paid within due dates failing which all consumed units will be charged at normal rates. Incentive will be admissible from the month following the month in which Energy Saving Devices are put to use and its verification by a person authorized by the Distribution Licensee. The Distribution Licensee is required to arrange wide publicity to above incentive in rural areas. The licensee is required to place quarterly information regarding incentives provided on its website.

1.6 Minimum Charges

(i) **For Metered agricultural consumers (LV-5.1 and LV-5.2):** The consumer shall pay a minimum charge based on consumption of 30 units per HP or part thereof of connected load per month for the months from April to September and 90 units per HP or part thereof of connected load per month for the months from October to March irrespective of whether any energy is consumed or not during the month.

(ii) **For other than agricultural use (LV-5.3) :**

a) The consumer shall pay a minimum annual charge based on consumption

(kWh) of 180 units/HP or part thereof of contract demand in **notified rural areas** and 360 units/HP or part thereof of contract demand in **urban areas** irrespective of whether any energy is consumed or not during the year.

b) The consumer shall be billed monthly minimum 15 units per HP per month in **rural area** and 30 units per HP per month in **urban area** in case the actual consumption is less than monthly minimum consumption (kWh).

c) **Method of billing of minimum consumption** shall be as given in the *General Terms and Conditions of Low Tension Tariff.*

1.7 Additional Charge for Excess Demand: Shall be billed as given in the *General Terms and Conditions of Low Tension Tariff.*

1.8 Delayed payment surcharge in case of flat rate agriculture consumers DPS shall be levied @ of Rs 1 every month for each block or part thereof of arrears of Rs.100/-. For other sub categories of this Tariff Schedule, the delayed payment surcharge shall be billed as specified under General Terms and Conditions of Low Tension Tariff.

1.9 Specific conditions for DTR metered consumers:

a) All the consumers connected to the DTR shall pay the energy charges for the units worked out based on their actual connected load.

b) The Distribution Licensee will obtain consent of such connected consumers for billing as per procedure specified in (a) above.

1.10 One CFL/ LED lamp up to 20W is permitted at or near the pump in the power circuit.

1.11 The use of three phase agriculture pump by installing external device during the period when the supply is available on single phase, shall be treated as illegal extraction of energy and action as per prevailing rules and Regulations shall be taken against the defaulting consumer.

1.12 For unmetered temporary agriculture connection Fuel and Power Purchase Cost Adjustment Surcharge (FPPCA) shall be billed at the rate prevailing as on the date of release of connection.

1.13 Other terms and conditions shall be as specified under *General Terms and Conditions of Low Tension Tariff.*

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Tariff Schedule - LV-6

E- VEHICLE / E-RICKSHAWS CHARGING STATIONS

Applicability:

The tariff is applicable exclusively for Electric Vehicle / Electric Rickshaws charging and battery swapping stations. However, tariff for other consumers who use electricity for charging their own Vehicle / Rickshaws shall be the same as applicable for the relevant category of metered connection from which the Vehicle / Rickshaws are being charged.

Tariff:

Category	Existing		Proposed	
	Monthly Fixed Charges	**Energy Charge (Paise/unit)**	**Monthly Fixed Charges**	**Energy Charge (Paise/unit)**
Electric Vehicle/ Rickshaw charging installations	Rs 100 per kVA or 125 per kW of Billing Demand	600	-	697

Specific Terms and Conditions for LV-6 category:

(a) **Additional Charge for Excess demand:** Shall be billed as given in *General Terms and Conditions of Low Tension tariff.*

(b) Other terms and conditions shall be as specified under *General Terms and Conditions of Low Tension Tariff.*

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GENERAL TERMS AND CONDITIONS OF LOW TENSION TARIFF

1. **Rural Areas** mean those areas notified by the GoMP vide notification no. 2010/F13 /05/13/2006 dated 25th March 2006 as may be amended from time to time. Urban areas mean all areas other than those notified by the GoMP as Rural Areas.

2. **Rounding off:** All bills will be rounded off to the nearest rupee i.e. up to 49 paisa shall be ignored and 50 paisa upwards shall be rounded off to next Rupee.

3. **Billing Demand:** In case of demand based tariff, the billing demand for the month shall be the actual maximum kVA demand of the consumer during the month or 90% of the contract demand, whichever is higher. The billing demand shall be rounded off to the nearest integer number i.e. fraction of 0.5 or above will be rounded to next higher integer and the fraction of less than 0.5 shall be ignored.

4. **Fixed charges billing:** Unless specified otherwise, fractional load for the purposes of billing of fixed charges shall be rounded off to nearest integer i.e. fraction of 0.5 or above will be rounded to next higher integer and the fraction of less than 0.5 shall be ignored. However, for loads less than one kW/HP, it shall be treated as one kW/HP.

5. **Method of billing of minimum consumption:**

   A. **For metered agricultural consumers and other than agricultural consumers horticulture activity - LV 5.1 and LV 5.2**: The consumer shall be billed minimum monthly consumption (kWh) specified for his category for the month in which his actual consumption is less than prescribed minimum consumption.

   B. **For other consumers where applicable**:

      a. The consumer shall be billed one twelfth of annual minimum consumption (kWh) specified for his category each month in case the actual consumption is less than above mentioned minimum consumption.

      b. During the month in which actual cumulative consumption equals or is greater than the annual minimum consumption, no further billing of monthly minimum consumption shall be done in subsequent months of the financial year and only actual recorded consumption shall be billed.

      c. Minimum consumption shall be adjusted in the month in which cumulative actual or billed monthly consumption exceeds cumulative monthly prorated minimum annual consumption. If actual cumulative consumption does not get fully adjusted in that month, adjustment shall continue to be provided in subsequent months of the financial year. The following example illustrates the procedure for monthly billing of consumption where prorated monthly minimum consumption is 100 kWh based on annual consumption of 1200 kWh.

Month	Actual cumulative consumption (kWh)	Cumulative minimum consumption (kWh)	Higher of 2 and 3 (kWh)	Already billed in the year (kWh)	To be billed in the month = (4-5) (kWh)
1	2	3	4	5	6
April	95	100	100	0	100
May	215	200	215	100	115
June	315	300	315	215	100
July	395	400	400	315	85
Aug	530	500	530	400	130
Sept	650	600	650	530	120
Oct	725	700	725	650	75
Nov	805	800	805	725	80
Dec	945	900	945	805	140
Jan	1045	1000	1045	945	100
Feb	1135	1100	1135	1045	90
March	1195	1200	1200	1135	65

6. Additional Charge for Excess connected load or Excess Demand: Shall be billed as per the following procedure**:**

a) For demand based tariff: The consumers availing supply at demand based tariff shall restrict their actual maximum demand within the contract demand. However, in case the actual maximum demand recorded in any month exceeds 120% of the contract demand, the tariff in this schedule shall apply to the extent of 120 % of the contract demand only. The consumer shall be charged for demand recorded in excess of 120% of contract demand (termed as Excess Demand) at the following rates: -

i. **Energy charges for Excess Load**: No extra charges are applicable on energy charges due to excess demand or excess connected load.

ii. **Fixed Charges for Excess Demand:** These charges shall be billed as per following:

a. **Fixed Charges for Excess Demand when the recorded maximum demand is up to 130% of the contract demand:** Fixed Charges for Excess Demand over and above the 120 % of contract demand shall be charged at 1.3 times the normal rate of Fixed Charges.

b. **Fixed Charges for Excess Demand when the recorded maximum demand exceeds 130% of contract demand:** In addition to Fixed Charges in 1 above, recorded demand over and above 130 % of the contract demand shall be charged at 2 times the normal rate of Fixed Charges.

b) For connected load based tariff: The consumers availing supply at connected load based tariff shall restrict their actual connected load within the sanctioned load. However, in case the actual connected load in any month exceeds 120% of

the sanctioned load, the tariff in this schedule shall apply to the extent of 120 % of the sanctioned load only. The consumer shall be charged for the connected load found in excess of 120% of the sanctioned load (termed as Excess Load) at the following rates:-

i. **Energy charges for Excess Load**: No extra charges are applicable on energy charges due to excess demand or excess connected load.

ii. **Fixed Charges for Excess load:** These charges shall be billed as per following, for the period for which the use of excess load is determined in condition i) above:

a. **Fixed Charges for Excess load when the connected load is found up to 130% of the sanctioned load**: Fixed Charges for Excess load over and above the 120 % of sanctioned load shall be charged at 1.3 times the normal rate of Fixed Charges.

b. **Fixed Charges for Excess load when the connected load exceeds 130% of sanctioned load**: In addition to Fixed Charges in 1 above, connected load found over and above 130 % of the sanctioned load shall be charged at 2 times the normal rate of Fixed Charges.

c) The above billing for Excess Connected Load or Excess Demand, applicable to consumers is without prejudice to the Distribution Licensee's right to ask for revision of agreement and other such rights that are provided under the Regulations notified by the Commission or under any other law.

d) The maximum demand of the consumer in each month shall be reckoned as four times the largest amount of kilovolt-ampere hours delivered at the point of supply of the consumer during any continuous fifteen minutes in that month.

7. Incentives/Rebates:

(a) Rebate on advance payment: For advance payment made before commencement of consumption period for which bill is prepared, a rebate equivalent to the prevailing monthly SBI Bank rate on the amount (excluding security deposit) which remains with the Distribution Licensee at the end of billing month shall be credited to the account of the consumer after adjusting any amount payable to the Distribution Licensee.

(b) Incentive for prompt payment: An incentive for prompt payment @ 0.50% of the bill amount (excluding arrears, security deposit, meter rent, any subsidy given by Government and Government levies viz. Electricity Duty and Cess etc.) shall be given in case the payment is made at least 7 days in advance of the due date of payment where the current month billing amount is equal to or greater than Rs. Ten Thousand. The consumers in arrears shall not be entitled for this incentive.

(c) Rebate for online bill payment: Rebate of 0.50% on the total bill amount maximum up to Rs 20 and minimum of Rs 5 will be applicable for making online payment of bill.

(d) Load Factor incentive: Following slabs of incentive shall be allowed for consumers billed under demand based tariff:

Load factor	Concession in energy charges
Above 25% and up to 30 % load factor on contract demand	12 paise per unit concession on the normal energy charges for all energy consumption over and above 25% load factor during the billing month
Above 30% and up to 40 % load factor on contract demand	In addition to load factor concession available up to 30% load factor, concession at the rate of 24 paise per unit on the normal energy charges for all energy consumption over and above 30 % load factor during the billing month
Above 40% load factor on contract demand	In addition to load factor concession available up to 40% load factor, concession at the rate of 36 paise per unit on the normal energy charges for all energy consumption over and above 40% load factor during the billing month

The **load factor** shall be calculated as per the following formula:

$$\text{Load factor (\%)} = \frac{\text{Monthly consumption X 100}}{\text{No. of hours in the billing month X Demand (KW)}}$$

i. Monthly consumption shall be units (kWh) consumed in the month excluding those received from sources other than Licensee.

ii. No. of Hours in billing month shall exclude period of scheduled outages in hours.

iii. Demand shall be maximum demand recorded or contract demand whichever is higher.

Note: The Load Factor (%) shall be rounded off to the nearest lower integer. The billing month shall be the period in number of days between the two consecutive dates of meter readings taken for the purpose of billing to the consumer for the period under consideration as a month.

(e) Power Factor Incentive: If the average monthly power factor of the LT three-phase consumer (other than domestic consumers), ***whose connected load includes induction motors(s) of capacity 3 BHP and above***, is equal to or more than 85%, incentive shall be payable as follows:

Power Factor	Percentage incentive payable on billed energy charges
Above 85% up to 86%	**0.5**
Above 86% up to 87%	**1.0**
Above 87% up to 88%	**1.5**
Above 88% up to 89%	**2.0**
Above 89% up to 90%	**2.5**
Above 90% up to 91%	**3.0**
Above 91% up to 92%	**3.5**
Above 92% up to 93%	**4.0**
Above 93% up to 94%	**4.5**
Above 94% up to 95%	**5.0**
Above 95% up to 96%	**6.0**
Above 96% up to 97%	**7.0**
Above 97% up to 98%	**8.0**
Above 98% up to 99%	**9.0**
Above 99%	**10.0**

Note:

For this purpose, the "average monthly power factor" is defined as the ratio expressed in percentage of total kilo-watt-hours to the total kilo-volt-ampere-hours recorded during the billing month. This ratio (%) shall be rounded off to the nearest integer figure and the fraction of 0.5 or above will be rounded off to next higher figure and the fraction of less than 0.5 shall be ignored.

Provided that this Incentive shall be billed on the basis of energy actually consumed during the month.

All the rebates/incentives shall be calculated on amount excluding Government Subsidy, if any.

8. Other Terms and Conditions:

(a) **The Sanctioned Load / Connected Load (for sanctioned load based tariff) or Contract Demand (for demand based tariff), as the case may be,** should not exceed 112kW / 150 HP except where a higher limit is specified or the category is exempted from the ceiling on connected load. If the consumer exceeds his connected load or contract demand **as the case may be,** beyond this ceiling **in two consecutive billing months** during the tariff period, the Distribution Licensee may insist on the consumer to avail HT supply.

(b) No metering charges shall be levied.

(c) In case the cheque presented by the consumer is dishonoured, without prejudice to Distribution Licensee's rights to take recourse to such other action as may be available under the relevant law, a service charge of Rs. 200 plus applicable GST per cheque shall be levied in addition to delayed payment surcharge.

(d) Other charges as stated in Schedule of Miscellaneous Charges as specified in Madhya Pradesh Electricity Regulatory Commission (Recovery of Expenses and other Charges

for providing Electric Line or Plant used for the purpose of giving Supply) Regulations (Revision-I), 2009 and its amendments thereof shall also be applicable.

(e) **Existing LT power consumer (other than LV-1: Domestic Consumer)** shall ensure that LT capacitor of proper rating is provided. In this regard, the Madhya Pradesh Electricity Supply Code, 2021, as amended from time to time may be referred for guidance. It shall be the responsibility of the consumer to ensure that overall average power factor during any month is not less than 0.8 (80%) failing which the consumer shall be liable to pay low power factor surcharge on the entire billed amount against energy charges during the month. Provided that such surcharge shall be billed on the basis of energy actually consumed during the month. Power factor surcharge shall be billed at the rates given below in e(1) and e(2):

1. **For the consumer whose meter is capable of recording average power factor:**

Power Factor	Percentage Surcharge payable on billed energy charges
Below 80% up to 79%	1%
Below 79% up to 78%	2%
Below 78% up to 77%	3%
Below 77% up to 76%	4%
Below 76% up to 75%	5%
Below 75% up to 74%	6.25%
Below 74% up to 73%	7.50%
Below 73% up to 72%	8.75%
Below 72% up to 71%	10.00%
Below 71%	10.00%

In case of billing or credit of minimum consumption such surcharge shall be billed with respect to energy actually consumed during the month."

2. **For the consumer whose meter is not capable of recording average power factor:** The consumer (other than LV-1: Domestic Consumer) shall ensure that LT capacitors of proper rating are provided and are in good working condition. In this regard, the Madhya Pradesh Electricity Supply Code, 2021, as amended from time to time may be referred for guidance. In case of failure to meet the above criteria, the consumer would be levied a low power factor surcharge of 10% on the entire billed amount against energy charges during the month and would be continued to be billed till such time the consumer meets the above criteria.

   In case of billing or credit of minimum consumption such surcharge shall be billed with respect to energy actually consumed during the month."

(f) Levy of power factor surcharge as indicated hereinabove shall be without prejudice to the rights of the Licensee to disconnect the consumer's installation, if steps are not taken to improve the power factor by installing suitable shunt capacitors.

(g) In case of any dispute on applicability of tariff on a particular LT category, the decision of the Commission shall be final.

(h) The tariff does not include any tax, cess or duty, etc. on electrical energy that may be payable at any time in accordance with any law then in force. Such charges, if any, shall also be payable by the consumer in addition to the tariff charges and applicable miscellaneous charges.

(i) **Delayed payment Surcharge for all categories:** Surcharge at the rate of 1.25 % per month or part thereof on the amount outstanding (including arrears) will be payable if the bills are not paid up to due date subject to a minimum of Rs.5/- per month for total outstanding bill amount up to Rs. 500/- and Rs 10/ per month for amount of bill more than Rs.500/. The part of a month will be reckoned as full month for the purpose of calculation of delayed payment surcharge. The delayed payment surcharge will not be levied for the period after supply to the consumer is permanently disconnected. This provision shall not be applicable to that category where the levy of delayed payment surcharge has been prescribed separately.

(j) In case of conversion of LT connection into HT connection, it is mandatory on the part of both the consumer and the licensee to get the HT agreement executed before availing supply at HT.

(k) **Use of mix loads in one connection:** Unless otherwise permitted specifically in the tariff category, the consumer using mix loads for different purposes shall be billed for the purpose for which the tariff is higher.

(l) Consumers in the notified Industrial Growth Centres/Industrial areas/Industrial parks receiving supply under urban discipline shall be billed urban tariff.

(m) No change in the tariff or the tariff structure including minimum charges for any category of consumer is permitted except with prior written permission from the Commission. Any action taken without such written permission of the Commission shall be treated as null and void and shall also be liable for action under relevant provisions of the Electricity Act, 2003.

(n) All conditions prescribed herein shall be applicable to the consumer notwithstanding if any contrary provisions exist in the agreement entered into by the consumer with the licensee.

(o) If any difficulty arises in giving effect to any of the provisions of this order, the Commission may, by general or special order, direct the Licensees to do or undertake things, which in the opinion of the Commission is necessary or expedient for the purpose of removing the difficulties.

9. Additional conditions for Temporary Supply at LT:

Temporary supply cannot be demanded by a prospective/ existing consumer as a matter of right but will normally be arranged by the Distribution Licensee when a requisition giving due notice is made. The temporary additional supply to an existing consumer also shall be

treated as a separate service and charged subject to following conditions. However, service under Tatkal Scheme shall be made available within 24 hours according to the charges specified in the order of the Commission regarding Schedule of Miscellaneous Charges.

(a) Fixed Charge and Energy Charge for temporary supply shall be billed at 1.25 times the normal charges as applicable to relevant category if not specified otherwise specifically.

(b) Estimated bill amount is payable in advance before serving the temporary connection subject to replenishment from time to time and adjustment as per final bill after disconnection. No interest shall be given to consumers for this advance payment.

(c) The Sanctioned load / connected load (for sanctioned load based tariff) or contract demand (for demand based tariff), as the case may be, shall not exceed 112kW / 150 HP.

(d) The month for the purpose of billing of charges for temporary supply shall mean 30 days from the date of connection. Any period less than 30 days shall be treated as full month for the purpose of billing.

(e) Connection and disconnection charges and other miscellaneous charges shall be paid separately as may be specified in the Schedule of Miscellaneous Charges.

(f) Load factor concession shall not be allowed on the consumption for temporary connection.

(g) Power factor incentive/penalty shall be applicable at the same rate as applicable for permanent connection.

10. **Green Energy Tariff of Rs. 0.79/ kWh**, which is over and above the normal tariff of the respective category as per this Tariff Order, be levied to consumers opting for meeting their demand by 100% Renewable Energy from Distribution Licensee.

11. Wherever, there is contradiction in general terms & conditions and specific terms & conditions given for any particular category, the specific terms and conditions shall prevail for that category.

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A21: TARIFF SCHEDULES FOR HIGH TENSION CONSUMERS

Tariff Schedule - HV-1

RAILWAY TRACTION:

Applicability:

This Tariff shall apply to the Railways for Traction loads only.

Tariff:

Category of consumer	Existing		Proposed	
	Monthly Fixed Charge (Rs. per kVA of billing demand per month)	Energy Charge (paise / unit)	Monthly Fixed Charge (Rs. per kVA of billing demand per month)	Energy Charge (paise / kVAh)
Railway Traction on 132 kV / 220 kV	310	590	320	569

Note: A rebate of Rs. 2 per Unit in energy charges is applicable. This rebate shall be applicable up to FY 2023-24.

Specific Terms and Conditions for HV-1 category:

(a) In order to give impetus to electrification of Railway network in the State, a rebate of 15% in energy charges for new Railway traction projects shall be allowed for a period up to FY 2023-24 for new projects. The rebate provided in earlier orders shall remain in force at the rate and for the duration as mentioned in those tariff orders.

(b) The dedicated feeder maintenance charges shall not be applicable.

(c) Annual Minimum charges shall be based on minimum consumption of 1600 units (kVAh) per kVA of Contract Demand. The method of billing of minimum charges shall be as given in General Terms and Conditions of High Tension Tariff.

(d) The consumer shall at all times restrict their actual maximum demand within the contract demand. In case the actual maximum demand in any month exceeds 120% of the contract demand, the tariffs given in various schedules shall apply to the extent of the 120% of the contract demand only. The consumer shall be charged for excess demand computed as difference of recorded maximum demand and 120% of contract demand on fixed charges and while doing so, the other terms and conditions of tariff, if any, shall also be applicable on the said excess demand.

(e) **Energy charges for excess demand:** No extra charges are applicable on the energy charges due to the excess demand or excess connected load.

(f) The excess demand so computed as per above, if any, in any month shall be charged at the following rates:

(a) When the recorded maximum demand is up to 130% of contract demand- Excess Demand over and above 115 % of the contract demand—at the rate of Rs. 352 per kVA

(b) When the recorded maximum demand exceeds 130% of contract demand: - In addition to fixed charges in (a) above, recorded demand over and above 30 % of the contract demand shall be charged—at the rate of Rs. 480 per kVA

While doing so, other provisions of electricity tariff (such as tariff minimum charge etc.) will also be applicable on aforesaid excess demand.

(g) Emergency feed extension: Provided that if as a result of the emergency in the traction substation or in the transmission line supplying load or part thereof is transferred to an adjacent traction substation, the M.D. for the month for that adjacent traction substation shall be as the average of M.D. for previous three months during which no emergency had occurred.

(h) Other terms and conditions shall be as mentioned in the *General Terms and Conditions of High Tension Tariff.*

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Tariff Schedule - HV-2

COAL MINES:

Applicability:

This Tariff shall apply to the Coal Mines for power, ventilation, lights, fans, coolers, etc. which shall mean and include all energy consumed for coal mines and lighting in the offices, stores, canteen, compound lighting etc. and the consumption for residential use therein.

Tariff:

Sub category	Monthly Fixed Charge (Rs./kVA of billing demand per month)		Energy Charge for consumption up to 50% load factor		Energy Charge for consumption in excess of 50% load factor	
Coal Mines	**Existing**	**Proposed**	**Existing (Paise/ kWh)**	**Proposed (Paise/ kVAh)**	**Existing (Paise/ kWh)**	**Proposed (Paise/ kVAh)**
11 kV supply	690	712	736	709	650	626
33 kV supply			728	702	629	606
132 kV supply			708	682	608	586
220 kV supply			686	661	586	565

Specific Terms and Conditions for HV-2 category:

a. Minimum charges based on consumption shall be on the following basis :

Supply Voltage	Proposed Guaranteed annual minimum consumption in units (kVAh) per kVA of contract demand
For supply at 220 / 132 kV	1735
For supply at 33 / 11 kV	1285

Note: The method of billing of minimum consumption shall be as given in *General Terms and Conditions of High Tension Tariff.*

b. Time of Day Surcharge / Rebate: This surcharge/ rebate shall be as specified in *General Terms and Conditions of High Tension Tariff.*

c. Other terms and conditions shall be as specified under *General Terms and Conditions of High Tension Tariff.*

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Tariff Schedule - HV-3

INDUSTRIAL, NON-INDUSTRIAL AND SHOPPING MALLS

Applicability:

The tariff **HV-3.1(Industrial)** shall apply to all HT industrial consumers including mines (other than coal mines) for power, light and fan etc. which shall mean and include all energy consumed for factory and lighting in the offices, main factory building, stores, canteen, residential colonies of industries, compound lighting, common and ancillary facilities such as Telecom tower, Banks, General purpose shops, Water supply, Sewage pumps, Police Stations, etc. located within the premises of the industrial units and Dairy units where milk is processed (other than chilling, pasteurization etc.) to produce other end products of milk. This tariff shall also apply to cold storages.

The tariff **HV-3.2 (Non Industrial)** shall apply to establishments like Railway Stations, Offices, Hotels, Hospitals, Institutions etc. (excluding group of consumers) having mixed load for power, light and fan etc. which shall mean and include all energy consumed for lighting in the offices, stores, canteen, compound lighting etc. This shall also cover all other categories of consumers, defined in LT non-domestic category subject to the condition that the HT consumer shall not redistribute/sub-let the energy in any way to other person.

The tariff **HV-3.3 (Shopping malls)** shall apply to establishments of shopping malls having group of non-industrial consumers subject to the specific terms and conditions specified in (i) of this schedule.

Shopping Mall shall be a multi-storeyed shopping centre in an urban area having a system of enclosed walkways with collection of independent retail stores, services and parking areas constructed and maintained by a management firm/ developer as a unit.

The tariff **HV-3.4 (Power intensive industries)** shall apply to Mini Steel Plants (MSP), MSP with rolling mills/ sponge iron plants in the same premises, electro chemical/ electro thermal industry, Ferro alloy industry which shall mean and include all energy consumed for factory and lighting in the offices, main factory building, stores, canteen, residential colonies of industries, compound lighting etc.

Note: This tariff shall apply to only those Mini Steel Plants (MSP), MSP with re-rolling mills / sponge iron plants in the same premises and Ferro Alloy plants where smelting / heating of iron & steel is done using Electric Furnaces only.

Tariff:

S. no.	Sub-Category of consumer	Existing			Proposed		
		Monthly Fixed Charge (Rs/kVA) of billing demand per month	Energy Charge for consumption on up to 50% load factor	Energy Charge for consumption in excess 50% load factor	Monthly Fixed Charge (Rs/kVA) of billing demand per month	Energy Charge for consumption on up to 50% load factor	Energy Charge for consumption in excess 50% load factor
3.1	**Industrial**		**(paise/unit)**			**In Paise/kVAh**	
	11 kV supply	372	720	620	384	694	598
	33 kV supply	597	716	611	616	690	589
	132 kV supply	682	675	576	704	651	555
	220/400 kV supply	682	630	530	704	607	511
3.2	**Non-Industrial**						
	11 kV supply	337	755	665	348	728	641
	33 kV supply	485	738	640	501	711	617
	132 kV supply & above	575	690	580	593	665	559
3.3	**Shopping Malls**						
	11 kV supply	345	735	660	356	708	636
	33 kV supply & above*	400	725	620	413	699	598
	132 kV supply & above	530	675	600	-		
3.4	**Power Intensive Industries***						
	33 kV supply	608	550	550	627	530	530
	132 kV supply & above*	742	526	526	766	507	507
	220 kV supply	742	520	520	-		

**Proposed*

Specific Terms and Conditions for HV-3 category:

(a) Minimum Charges based on Consumption for all the above categories shall be on following basis :

Supply Voltage	Sub- category	Proposed Guaranteed annual minimum consumption in units (kVAh) per kVA of contract demand
For supply at 220/132 kV	Rolling Mills	1285
	Educational institutions	770
	Others	1925
For supply at 33 / 11 kV	Educational institutions	640
	Contract demand up to 100 kVA	640
	Others	1285

Note: The method of billing of minimum charges shall be as given in General Terms and Conditions of High Tension Tariff.

(b) Time of Day Surcharge / Rebate: This surcharge/ rebate shall be as specified in General Terms and Conditions of High Tension Tariff.

(c) Rebate for supply through feeders feeding supply to predominantly rural areas: HT consumers of this category receiving supply through rural feeders shall be entitled to 5 % rebate on Fixed Charges and 20 % reduction in Minimum Consumption (kVAh) as specified above for respective voltage levels.

(d) Rebate for existing HT connections: A rebate of Rs. 1 per Unit in energy charges is applicable for incremental monthly consumption w.r.t corresponding month of FY 2015-16. For any new consumer served during and after FY 2015-16, the base months for calculation of incremental monthly consumption shall be the first 12 months subsequent to the month of availing the connection. The incremental consumption for any month shall be worked out considering the consumption of the corresponding base month.

The consumer availing this rebate shall not be entitled to the rebate of new HT connection/ Green field connection under clause (d) below.

(e) Rebate for new HT connections: A rebate of Rs 1 per Unit or 20% whichever would be less is applicable in energy charges for new connection for the consumption recorded. The rebate shall be allowed up to FY 2023-24 from the date of connection for such new projects for which agreements for availing supply from licensee are finalized during and after FY 2016-17.

Provided that no rebate shall be applicable for connections obtained by virtue of change in ownership in existing connection or by reconnection.

Provided also that new connection on the permanently disconnected premises shall only be eligible for such rebate, if, the application for new service connection on such premises is received not before the expiry of six months from the date of its permanent disconnection.

The consumer availing this rebate shall not be entitled for the rebate of incremental consumption under clause (d) above.

(f) Rebate for Captive power plant consumers:

Applicability: The rebate shall be applicable to consumers-

i. Who have been meeting their demand either fully or partially during FY 2016-17 and/or FY 2017-18 and/or FY 2018-19 and/or FY 2019-20 and/or FY 2020-21 and/or FY 2021-22 and/or FY 2022-23 through their captive power plants located in Madhya Pradesh.

ii. The rebate shall be applicable up to FY 2023-24 from the date of request submitted by the consumer to the Licensee during and after FY 2017-18. The consumer shall be required to apply to the Licensee for the rebate indicating that he would be willing to avail supply from Licensee by switching consumption from his existing captive power plant.

iii. The **base year** shall be the financial year preceding the year during which the consumer has applied for switching consumption from his captive power plant to the licensee.

e.g., If a consumer applies for switching his consumption from captive power plant to Licensee in August, 2018, then his base year for calculation of incremental consumption would be FY 2017-18.

iv. Who have recorded an incremental consumption i.e., an increase in the units consumed from the Licensee in any month of the current year (FY 2023-24) compared to the same month in **base year**.

v. A rebate of Rs 2 per unit shall be applicable on incremental units of the consumer subject to reduction in captive generation as per the methodology given below:-

Scenario	**Base Year**		**Current Financial Year**		**Incremental Consumption from Discom**	**Reduction in Captive Generation**	**Units eligible for 60 paise rebate in energy charges as per Clause (c) of specific terms & conditions**	**Units eligible for Rs 2/ Unit rebate on incremental units**
	Consumption from Discom (Units)	Captive Generation Units	Consumption from Discom (Units)	Captive Generation (Units)	**Units**	**Units**	**Units**	**Units**
	(A_1)	(B_1)	(A_2)	(B_2)	$X= A_2-A_1$	$Y = B_1-B_2$		
Scenario 1	100	90	110	90	10	0	10	0
Scenario 2	100	90	110	80	10	10	0	10
Scenario 3	100	90	110	70	10	20	0	10
Scenario 4	100	90	100	80	0	10	0	0
Scenario 5	100	90	120	80	20	10	10	10

Note: 1) Captive power plant referred above shall be the "Captive Generating Plant" as defined in Rule 3 of the Electricity Rules, 2005.

2) For new consumers added during this tariff period who were fully meeting their demand from their captive power Plants during the previous financial year then their consumption from Discom may be treated as zero for the base year.

X = the incremental consumption recorded by the captive consumer in any month of the current financial year compared to the same month of base year.

And

Y = the quantum of reduction in units consumed from captive plant (self-consumption) achieved by the captive consumer in any month of the current financial year compared to the same month in the base year.

For all other cases of incremental consumption i.e when X>Y, the existing rebate of Rs 1/unit in energy charges will be applicable on X-Y units (as per the rebate for incremental consumption given in clause d in the Specific Terms & Conditions for HV-3).

Scenario 1: There is no reduction in Captive Generation but only incremental consumption from DISCOM, hence a rebate of Rs 1/unit in energy charges is applicable on incremental consumption from DISCOM (as per the rebate for incremental consumption given in clause d in the Specific Terms & Conditions for HV-3).

Scenario 2: The incremental consumption from DISCOM is due to the reduction of captive consumption by same quantum of units hence it will attract a rebate of Rs 2 per unit on incremental units.

Scenario 3: There is higher reduction in Captive Generation as compared to incremental Consumption from DISCOM hence incremental units consumed from the DISCOM as shown in the table, shall qualify for a Rebate of Rs 2 per unit.

Scenario 4: There shall not be any rebate due to absence of incremental Consumption from DISCOM irrespective of reduction in Captive Generation.

Scenario 5: This scenario depicts higher incremental consumption from DISCOM (X) than reduction in Captive Generation (Y) hence units corresponding to (X-Y) shall qualify for rebate of Rs 1/unit in energy charges (as per the rebate for incremental consumption given in clause d in the Specific Terms & Conditions for HV-3) while units Y shall qualify for Rebate of Rs 2 per unit.

(g) Rebate for Open Access Consumers

Applicability: The rebate shall be applicable to consumers

i. Who have been availing open access during the last financial year (FY 2022-23).

ii. Who have recorded an incremental consumption, i.e., an increase in the units consumed from the Licensees in any month of the current year (FY 2023-24) compared to the same month in last year (FY 2022-23).

iii. The rebate shall be applicable from the date of request submitted by the consumer to the Licensee during FY 2023-24.

iv. The consumer shall be required to apply with the Licensee for the rebate indicating that he would be willing to avail supply from Licensee by switching consumption from open access.

v. A rebate of Rs 1 per unit shall be applicable on incremental units of the consumer subject to reduction in open access consumption as per the methodology given below:

Scenarios	**FY 2022-23**		**FY 2023-24**		**Incremental Consumption from Discom X= A_2-A_1**	**Reduction in OA units Y = B_1-B_2**	**60 paisa rebate applicable units as per clause (c) of specific terms & conditions**	**Rs 1/unit rebate on incremental units of Open Access**
	Consumption from Discom (A_1)	**Wheeled Units (B_1)**	**Consumption from Discom (A_2)**	**Wheeled Units (B_2)**				
Scenario 1	100	90	110	90	10	0	10	0
Scenario 2	100	90	110	80	10	10	0	10
Scenario 3	100	90	110	70	10	20	0	10
Scenario 4	100	90	100	80	0	10	0	0
Scenario 5	100	90	120	80	20	10	10	10

X = the incremental consumption recorded by the open access consumer in any month of the current financial year as compared to the same month of base year.

And

Y = the quantum of reduction in units consumed from open access by the consumer in any month of the current financial year as compared to the same month in the base year.

For all other cases of incremental consumption i.e when X>Y, the existing rebate of Rs 1/unit in energy charges will be applicable on X-Y units (as per the rebate for incremental consumption given in clause (d) in the Specific Terms & Conditions for HV-3).

Scenario 1: There is no reduction in open access consumption but only incremental consumption from DISCOM, hence a rebate of Rs 1/unit in energy charges is applicable on incremental consumption from DISCOM (as per the rebate for incremental consumption given in clause d in the Specific Terms & Conditions for HV-3).

Scenario 2: The incremental consumption from DISCOM is due to the reduction of open access consumption by same quantum of units hence it will attract a rebate of Rs 1 per unit on incremental units.

Scenario 3: There is higher reduction in open access consumption as compared to incremental Consumption from DISCOM hence incremental units consumed from the DISCOM as shown in the table, shall qualify for a Rebate of Rs 1 per unit.

Scenario 4: There shall not be any rebate due to absence of incremental Consumption from DISCOM irrespective of reduction in open access consumption.

Scenario 5: This scenario depicts incremental consumption from DISCOM (X) and reduction in open access consumption (Y) hence units corresponding to (X-Y) shall qualify for rebate of Rs 1/unit in energy charges (as per the rebate for incremental consumption given in clause d in the Specific Terms & Conditions for HV-3) while units Y shall qualify for Rebate of Rs 1 per unit.

(h) Conversion of Existing LT Industrial/Non domestic connection to corresponding HT connection

A rebate of Rs. 1 per unit in the energy charges on the HT tariff shall be provided to those existing LT consumers who convert to HV 3 category during FY 2023-24. The rebate is applicable for FY 2023-24 for the units billed only after the commencement of HT Agreement during FY 2023-24.

(i) Additional specific terms and conditions for shopping mall

Individual end user shall not be levied a rate which is exceeding non-domestic-commercial tariff (LV 2.2) in case of LT connection and HT non-industrial tariff (HV 3.2) in case of HT connection, as determined by the Commission.

Note: For calculating applicable rebates or incentives e.g. incremental rebate for HT consumers, units of energy, i.e., kVAh shall be kept same for both consumption period and applicable base years/months.

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Tariff Schedule - HV-4

SEASONAL:-

Applicability:

This tariff shall be applicable to such seasonal industries / consumers requiring energy for the production purposes for season defined under this schedule.

The licensee shall allow this tariff to any industry having seasonal use only.

Tariff:

Category of consumers	Monthly Fixed Charge (Rs./kVA of billing demand per month)		Energy Charge for consumption up to 50% load factor (paise per unit)		Energy Charge for consumption in excess of 50% load factor (paise per unit)	
		During Season				
	Existing	Proposed	Existing	Proposed	Existing	Proposed
			(paise / unit)	(Paise/ kVAh)	(paise / unit)	(Paise/ kVAh)
11 kV supply	392	405	708	682	602	580
33 kV supply	434	448	688	663	583	562
		During Off-Season				
11 kV supply	Rs. 392 on 10% of contract demand or actual recorded demand whichever is higher	Rs. 405 on 10% of contract demand or actual recorded demand whichever is higher	850 i.e. 120% of seasonal energy charge	819 i.e. 120% of seasonal energy charge	Not applicable	Not applicable
33 kV supply	Rs. 434 on 10% of contract demand or actual recorded demand whichever is higher	Rs. 448 on 10% of contract demand or actual recorded demand whichever is higher	826 i.e. 120% of seasonal energy charge	796 i.e. 120% of seasonal energy charge	Not applicable	Not applicable

Specific Terms and Conditions for HV-4 category:

a) **Season shall mean continuous period upto 6 months with a ceiling of 185 days and minimum period of 3 months.**

b) Period other than the declared season shall be considered as the off season period.

c) The consumer has to declare months of season and off season for a year within 60 days of issue of this tariff order and inform the same to the Distribution Licensee. The Year in this case shall be a period of 12 months commencing from start of season / off season, as applicable. If the consumer has already declared the period of season and off-season prior to issuance of this order, same shall be taken into cognizance for the purpose and accepted by the Distribution Licensee.

d) The seasonal period once declared by the consumer during Year cannot be changed.

e) If the declared season or off-season spreads over two tariff periods, then the tariff for the respective period shall be applicable.

f) This tariff is not applicable to composite units having seasonal and other category of loads.

g) Annual Minimum Charges shall be based on minimum consumption of 965 (kVAh) per kVA of contract demand. The method of billing of minimum charges shall be as given in General Terms and Conditions of High Tension Tariff.

h) Time of Day Surcharge / Rebate: This surcharge/ rebate shall be as specified in General Terms and Conditions of High Tension Tariff.

i) The consumer will be required to restrict his monthly off season consumption to 15% of highest of the average monthly consumption of the preceding three seasons. In case this limit is exceeded in any off season month, the consumer will be billed under HV-3.1 Industrial Schedule for the whole year (as opted).

j) The consumer will be required to restrict his maximum demand during off season up to 30 % of the contract demand. In case the maximum demand recorded in any month of the declared off season exceeds 36% of CD (120% of 30% of CD), the consumer will be billed under HV 3.1 Industrial tariff for the whole year (as opted) as per the tariff in force.

k) Other terms and conditions shall be as per the General Terms and Conditions of High Tension Tariff.

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Tariff Schedule - HV-5

IRRIGATION, PUBLIC WATER WORKS AND OTHER THAN AGRICULTURAL

Applicability:

This Tariff Category shall apply to supply of power to lift irrigation schemes, group irrigation, Public Utility Water Supply schemes, sewage treatment plants /sewage pumping plants and for energy used in lighting pump house.

This Tariff category shall also applicable to River link projects implemented by government or its agency provided that the supply of power is utilized for purposes covered under this category only.

Note: Private water supply scheme, water supply schemes run by institutions for their own use/employees/townships etc. will not fall in this category but billed under the appropriate tariff category to which such institution belongs. In case water supply is being used for two or more different purposes then the highest tariff shall be applicable.

This tariff category shall also apply to supply of power to other than agriculture pump connections i.e. the connection for hatcheries, fisheries ponds, poultry farms, cattle breeding farms, grasslands, vegetables/ fruits/ floriculture/ mushroom growing units etc. and dairy (for those dairy units where only extraction of milk and its processing such as chilling, pasteurization etc. is done). However, in units where milk is processed to produce other end products of milk, billing shall be done under HV-3.1 (Industrial) category.

Tariff:

Sub-Category	Monthly Fixed Charge (Rs. /KVA of billing demand per month)		Energy Charge (Paise/Unit)	
	Existing	Proposed	Existing	Proposed
			(Paise per unit)	(Paise/ kVAh)
11 kV supply	372	384	610	588
33 kV supply			596	574
132 kV & above supply			556	536

Specific Terms and Conditions for HV-5 category:

(a) Annual Minimum Charge shall be based on Consumption of 770 (kVAh) per kVA of contract demand. The method of billing of minimum charges shall be as given in General Terms and Conditions of High Tension Tariff.

(b) Time of Day Surcharge / Rebate: This surcharge/ rebate shall be as specified in General Terms and Conditions of High Tension Tariff.

(c) Incentive for adopting Demand Side Management

An **incentive** equal to 5 % energy charges shall be given on installation and use of energy saving devices (such as ISI energy efficient motors for pump sets). **Incentive** will only be admissible if full bill is paid within due dates failing which all consumed units will be charged at normal rates as the case may be. Such incentive will be admissible from the month following the month in which energy saving devices are put to use and its verification by a person authorized by the licensee. The incentive will continue to be allowed till such time these energy saving devices remain in service. The Distribution Licensee is required to arrange wide publicity for above incentive. The Distribution Licensee is required to place quarterly information regarding incentives provided on its web site.

(d) Other terms and conditions shall be as per the *General Terms and Conditions of High Tension Tariff.*

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Tariff Schedule - HV-6

BULK RESIDENTIAL USERS

Applicability:

The tariff category HV-6 is applicable for supply to industrial or any other township (e.g. that of University or academic institutions, hospitals, MES and Border villages, etc.) for domestic purpose only such as lighting, fans, heating etc.

Provided that, in any of the above case, the connected load for essential common facilities such as Non-domestic supply in residential area, street lighting shall be within the limits specified hereunder: -

(i) Water supply and Sewage pumping, Hospital - **No limit**

(ii) Non-domestic/Commercial and other General purpose put together - **20 % of total connected load.**

This tariff shall also be applicable for supply to Registered Cooperative Group Housing Societies as per the Ministry of Power's notification no. S.O.798 (E) dated 9th June, 2005 and also to other Registered Group Housing Societies and individual domestic user, old age homes, day care centres for senior citizens, rescue houses and orphanages run by Govt./charitable trust. The Terms and Conditions to these consumers shall be applicable as per relevant provisions of the Madhya Pradesh Electricity Supply Code, 2021 as amended from time to time.

Tariff:

Sr no.	Sub-Category	Monthly Fixed Charge (Rs. /KVA of billing demand per month)		Energy Charge for consumption up to 50% load factor(Paise/Unit)		Energy Charge for consumption in excess of 50% load factor (Paise/Unit)	
		Existing	Proposed	Existing	Proposed	Existing	Proposed
				paise / unit	Paise/ kVAh	paise / unit	Paise/ kVAh
1	**For Tariff Sub-Category 6.1**						
	11 kV supply	352	Merged Below	637	Merged Below	572	Merged Below
	33 kV supply			622		552	
	132 kV supply			600		530	
2	**For Tariff Sub-Category 6.2**						
	11 kV supply	230	237	637	614	572	551
	33 kV supply & above*			622	599	552	532
	132 kV supply			555	-	515	-

**Proposed*

Specific Terms and Conditions for HV-6 category:

(a) Annual Minimum Charges shall be based on Consumption of 835 (kVAh) per

kVA of contract demand. The method of billing of minimum consumption shall be as given in General Terms and Conditions of High Tension Tariff.

(b) The individual end user shall not be levied a rate exceeding the tariff applicable to the corresponding LT category.

(c) Other terms and conditions shall be as specified under General Terms and Conditions of High Tension Tariff.

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Tariff Schedule - HV-7

SYNCHRONIZATION OF POWER FOR GENERATORS CONNECTED TO THE GRID

Applicability:

This Tariff shall apply to those generators who are already connected to the grid and seek to avail power for synchronization with the grid. This Tariff category shall also be applicable to the Generator/Co-generation plant from Renewable Sources entitled to draw power exclusively for its own use from the State Distribution Licensee for synchronization of plant with the grid or during shutdown period of its plant or during other emergencies (but not for construction) or for auxiliaries or forced outage.

Tariff for all voltages:

Category of consumers	Energy	Energy
	Existing	Proposed
	(paisa/unit)	(paisa/ KVAh)
Generators connected to the Grid	978	943

Specific Terms and Conditions for HV-7 category:

(a) The supply for above purpose with the grid shall not exceed 15% of the capacity of the Power Plant. In case of drawl of power above 15% of the capacity of the power plant on any occasion, the excess energy drawn during the billing month shall be billed at the rate of 2 times of the normal energy charges.

(b) The condition for minimum consumption shall not be applicable to the generators including CPP. Billing shall be done for energy recorded on each occasion of availing supply during the billing month.

(c) The supply shall not be allowed to the CPP for production purpose for which they may avail stand-by support under the relevant Regulations.

(d) The synchronization with the grid shall only be made available after commissioning of the plant.

(e) The generator including CPP shall execute an agreement with the Licensee for meeting the requirement of synchronization/power with the grid incorporating the above terms and conditions.

Tariff Schedule - HV-8

E- VEHICLE / E- RICKSHAWS CHARGING STATIONS

Applicability:

The tariff is applicable exclusively for Electric Vehicle / Electric Rickshaws charging and Battery Swapping stations. However, tariff for other consumers who use electricity for charging their own Vehicles/Rickshaws shall be the same as applicable for the relevant category of connection from which the Vehicles/Rickshaws is being charged at such premises.

Tariff:

Category of consumer	Existing		Proposed	
	Monthly Fixed Charge (Rs. per kVA of billing demand per month)	Energy Charge (paise / unit)	Monthly Fixed Charge (Rs. per kVA of billing demand per month	Energy Charge (paise / kVAh)
Electric Vehicle/ Rickshaw charging installations	100	590	NiL	623

Specific Terms and Conditions for HV-8 category:

(a) **Additional Charge for Excess demand:** Shall be billed as given in *General Terms and Conditions for High Tension tariff.*

(b) Other terms and conditions shall be as specified under *General Terms and Conditions for High Tension Tariff.*

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GENERAL TERMS AND CONDITIONS OF HIGH TENSION TARIFF

The following terms and conditions shall be applicable to all HT consumer categories subject to Specific Terms and Conditions for that category as mentioned in the Tariff Schedule of respective category:

1.1 The contract demand shall be expressed in whole number only.

1.2 Character of Service: The character of service shall be as per the Madhya Pradesh Electricity Supply Code, 2021 as amended from time to time.

1.3 Point of Supply:

(a) The power will be supplied to the consumer ordinarily at a single point for the entire premises.

(b) In case of Railway Traction, the supply at each sub-station shall be separately metered and charged.

(c) In case of coal mines, the power will be supplied ordinarily at a single point for the entire premises. The power may, however, be supplied, on the request of the consumer, at more than one point subject to technical feasibility. In such cases, metering and billing will be done for each point of supply separately.

1.4 **Determination of Demand:** The **maximum demand** of the supply in each month shall be four times the largest number of kilovolt ampere hours delivered at the point of supply during any continuous 15 minutes during the month as per sliding window principle of measurement of demand.

1.5 **Billing demand:** The billing demand for the month shall be the actual maximum kVA demand of the consumer during the month or 90% of the contract demand, whichever is higher. In case power is availed through open access, the billing demand for the month shall be the actual maximum kVA demand during the month excluding the demand availed through open access for the period for which open access is availed or 90% of the contract demand, whichever is higher, subject to clause 3.4 of the M.P. Electricity Supply Code, 2021.

The provisions regarding additional charges for excess demand shall be applicable as per clause 1.13 of these conditions.

Note: The billing demand shall be rounded off to the nearest integer number i.e. the fraction of 0.5 or above will be rounded off to next integer figure and the fraction of less than 0.5 shall be ignored

1.6 **Minimum charges shall be billed as follows:**

1) The consumer shall be billed for annual minimum charges based on consumption (kVAh) number of units per kVA of contract demand specified for his category, irrespective of whether any energy is consumed or not during the year.

2) The consumer shall be billed one twelfth of annual minimum consumption (kVAh) specified for his category each month in case the actual consumption is less than above mentioned minimum consumption.

3) During the month in which actual cumulative consumption equals or greater than the annual minimum consumption, no further billing of monthly minimum consumption shall be done in subsequent months of the financial year.

4) Tariff minimum consumption shall be adjusted in the month in which cumulative actual or billed monthly consumption exceeds cumulative monthly prorated minimum annual consumption. If actual cumulative consumption does not get fully adjusted in that month, adjustment shall continue to be provided in subsequent months of the financial year. The following example illustrates the procedure for monthly billing of consumption where prorated monthly minimum consumption is 100 kVAh based on annual consumption of 1200 kVAh.

Month	Actual cumulative consumption (kVAh)	Cumulative minimum consumption * (kVAh)	Higher of 2 and 3 (kVAh)	Already billed in the year (kVAh)	To be billed in the month = (4-5) (kVAh)
1	2	3	4	5	6
April	95	100	100	0	100
May	215	200	215	100	115
June	315	300	315	215	100
July	395	400	400	315	85
Aug	530	500	530	400	130
Sept	650	600	650	530	120
Oct	725	700	725	650	75
Nov	805	800	805	725	80
Dec	945	900	945	805	140
Jan	1045	1000	1045	945	100
Feb	1135	1100	1135	1045	90
March	1195	1200	1200	1135	65

1.7 **Rounding off:** All bills will be rounded off to the nearest rupee, i.e., up to 49 paisa shall be ignored and 50 paisa upwards shall be rounded off to next Rupee.

Incentive/ Rebate / Penalties

1.8 **Load factor calculation**

1) The **Load Factor** shall be calculated as per the following formula:

$$\text{Load Factor \%} = \frac{\text{Monthly Consumption (kVAh) x 100}}{\text{No. of Hours in the billing month X Demand (kVA)}}$$

i. Monthly consumption shall be units (kVAh) consumed in the month excluding those received from sources other than Licensee.

ii. No. of Hours in billing month shall exclude period of scheduled outages in hours.

iii. Demand shall be maximum demand recorded or contract demand whichever is higher.

Note: The load factor (%) shall be rounded off to the nearest lower integer. In case the consumer is getting power through open access, units set off from other sources, the net energy (after deducting units set off from other sources, from the consumed units) billed to consumer shall only be taken for the purpose of working out load factor. The billing month shall be the period in number of days between the two consecutive dates of meter readings taken for the purpose of billing to the consumer.

1.9 **Incentive for advance payment:** For advance payment made before commencement of consumption period for which bill is prepared, an incentive equivalent to monthly SBI Bank rate on the amount which remains with the licensee at the end of *billing month* (excluding security deposit) shall be credited to the account of the consumer after adjusting any amount payable to the licensee.

1.10 **Rebate for online bill payment:** Rebate of 0.5% on the total bill amount maximum up to Rs. 1000 will be applicable for making online payment of bill.

1.11 **Prompt payment incentive:** An incentive for prompt payment @0.25% of bill amount (excluding arrears, security deposit, meter rent and Government levies viz. Electricity Duty and Cess) shall be given in case the payment is made at least 7 days in advance of the due date of payment where the current month billing amount is equal to or greater than Rs. One Lakh. The consumers in arrears shall not be entitled for this incentive.

Surcharge amounts are levied in the bills where there are arrears and if consumer is eligible for prompt payment incentive then surcharge amount is proposed to be subtracted before calculating prompt payment incentive.

1.12 **Time of Day (ToD) Surcharge / Rebate:** This scheme is applicable to categories of consumers for which applicability of ToD/ Rebate is expressly mentioned in the tariff order. This is applicable for different periods of the day, i.e., normal period, peak load and off-peak load period. The surcharge / rebate on energy charges according to the period of consumption shall be as per following table:

Sr. No	Peak / Off-peak Period	Surcharge / Rebate on energy charges on energy consumed during the corresponding period
Months	**April to October**	
1.	Normal hours (i.e. Hours excluding Off peak hours)	Normal rate of Energy Charge
2.	Off peak load period (10 PM to 6 AM next day)	10 % of Normal rate of Energy Charge as Rebate
Months	**November to March**	
1.	Normal hours (i.e. Hours excluding Off peak hours)	Normal rate of Energy Charge
2.	Off peak load period (10 PM to 6 AM next day)	20 % of Normal rate of Energy Charge as Rebate

Note: Fixed charges shall always be billed at normal rates, i.e., ToD Surcharge / Rebate shall not be applied on Fixed Charges

1.13 Additional Charges for Excess Demand

i. The consumer shall at all times restrict their actual maximum demand within the contract demand. In case the actual maximum demand in any month exceeds 120% of the contract demand, the tariffs given in various schedules shall apply to the extent of the 120% of the contract demand only. The consumer shall be charged for excess demand computed as difference of recorded maximum demand and 120% of contract demand on fixed charges and while doing so, the other terms and conditions of tariff, if any, shall also be applicable on the said excess demand. The excess demand so computed, if any, in any month shall be charged at the following rates from all consumers except Railway Traction.

ii. **Energy charges for excess demand**: No extra charges are applicable on the energy charges due to the excess demand or excess connected load.

iii. **Fixed charges for Excess Demand: -** These charges shall be billed as per following:

1. **Fixed charges for Excess Demand when the recorded maximum demand is up to 130% of the contract demand:** Fixed charges for Excess Demand over and above the 120 % of contract demand shall be charged at 1.3 times the normal fixed charges.
2. **Fixed charges for Excess Demand when the recorded maximum demand exceeds 130% of contract demand**: In addition to fixed charges in 1 above, recorded demand over and above 130 % of the contract demand shall be charged at 2 times the normal fixed charges.

Example for fixed charges billing for excess demand: If the contract demand of a consumer is 100 kVA and the maximum demand recorded

in the billing month is 140 kVA, the consumer shall be billed towards fixed charges as under:-

a) Up to 120 kVA at normal tariff.

b) Above 120 kVA up to 130 kVA, i.e., for 10 kVA at 1.3 times the normal tariff.

c) Above 130 kVA up to 140 kVA, i.e., for 10 kVA at 2 times the normal tariff.

iv. The excess demand computed in any month will be charged along with the monthly bill and shall be payable by the consumer.

v. The billing of excess demand at higher tariff is without prejudice to the Licensee's right to discontinue the supply in accordance with the provisions contained in the Madhya Pradesh Electricity Supply Code, 2021 as amended from time to time.

1.14 **Delayed Payment Surcharge:** Surcharge at the rate of 1.25 % per month or part thereof on the amount outstanding (including arrears) will be payable if the bills are not paid up to due date. The part of a month will be reckoned as full month for the purpose of calculation of delayed payment surcharge. The delayed payment surcharge will not be applicable after supply to the consumer is permanently disconnected.

1.15 All the rebates/incentives shall be calculated on amount excluding Government Subsidy.

1.16 **Service Charge for Dishonoured Cheques:** In case the cheque(s) presented by the consumer are dishonoured, a service charge at the rate of Rs. 1000/- plus applicable GST per cheque shall be levied in addition to delayed payment surcharge as per rules. This is without prejudice to the Distribution Licensee's rights to take action in accordance with any other applicable law.

1.17 **Temporary supply at HT:** The character of temporary supply shall be as defined in the M.P. Electricity Supply Code, 2021 as amended from time to time. If any consumer requires temporary supply then it shall be treated as separate service and charged subject to the following conditions.

(a) Fixed Charges and Energy Charges shall be charged at 1.25 times the normal tariff. The fixed charges shall be recovered for the number of days for which the connection is availed during the month by prorating the monthly fixed charges. Month shall be considered as the number of total days in that calendar month.

(b) The consumer shall ensure minimum consumption (kVAh) as applicable to the permanent consumers on pro-rata based on number of days as detailed below:

$$\text{Minimum consumption for additional supply for temporary period} = \frac{\text{Annual minimum consumption as applicable to permanent supply} \times \text{No. of days of temporary connection}}{\text{No. of days in the year}}$$

(c) The billing demand shall be the demand requisitioned by the consumer or the highest monthly maximum demand during the period of supply commencing from the month of connection ending with the billing month, whichever is higher. For example:

Month	Recorded Maximum Demand (kVA)	Billing Demand (kVA)
April	100	100
May	90	100
June	80	100
July	110	110
August	100	110
September	80	110
October	90	110
November	92	110
December	95	110
January	120	120
February	90	120
March	80	120

(d) The consumer shall pay the estimated charges in advance, before serving the Temporary Connection subject to replenishment from time to time and adjustment as per final bill after disconnection. No interest shall be given on such advance payment.

(e) Connection and Disconnection Charges shall also be paid.

(f) In case existing HT consumer requires temporary supply for the purpose of addition and/or alteration within the premises of existing HT connection, then the consumer is allowed to avail the same through its existing permanent connection to the extent of its Contract Demand and such consumer shall be billed at applicable tariff for permanent connection. Excess demand, if any, shall be treated as per the provisions in clause 1.13 above.

(g) The condition for Time of Day Surcharge / rebate shall be applicable at the same rate as for permanent connection.

Other Terms and Conditions for permanent connections:

1.18 The existing 11 kV consumer with contract demand exceeding 300 kVA who want to continue to avail supply at 11 kV at his request, shall be required to pay additional charge at 3%. This additional charge of 3% shall be applicable for

enhanced maximum demand recorded for fixed charges and incremental units proportionate to enhanced maximum demand recorded for energy charges.

1.19 The existing 33 kV consumer with contract demand exceeding 10,000 kVA who want to continue to avail supply at 33 kV at his request, shall be required to pay additional charge at 2%. This additional charge of 2% shall be applicable for enhanced maximum demand recorded for fixed charges and incremental units proportionate to enhanced maximum demand recorded for energy charges.

1.20 The existing 132 kV consumer with contract demand exceeding 50,000 kVA who want to continue to avail supply at 132 kV at his request, shall be required to pay additional charge at 1%. This additional charge of 1% shall be applicable for enhanced maximum demand recorded for fixed charges and incremental units proportionate to enhanced maximum demand recorded for energy charges.

1.21 No Metering Charges shall be levied.

1.22 Green Energy Tariff of Rs. 0.79/kVAh, which is over and above the normal tariff of the respective category as per this Tariff Order, be levied to consumers opting for meeting their demand by 100% Renewable Energy from Distribution Licensee.

1.23 The tariff does not include any tax or duty, etc. on electrical energy that may be payable at any time in accordance with any law then in force. Such charges, if any, shall be payable by the consumer in addition to the tariff charges.

1.24 No changes in the tariff or the tariff structure including minimum charges for any category of consumer are permitted except with prior written permission of the Commission. Any order without such written permission of the Commission will be treated as null and void and also shall be liable for action under relevant provisions of the Electricity Act, 2003.

1.25 In case a consumer, at his request, avails supply at a voltage higher than the standard supply voltage as specified under relevant category, he shall be billed at the rates applicable for actually availed supply voltage and no extra charges shall be levied on account of higher voltage.

1.26 All consumers to whom fixed charges are applicable are required to pay fixed charges in each month irrespective of whether any energy is consumed or not.

1.27 If any difficulty arises in giving effect to any of the provisions of this order, the Commission may, by general or special order, direct the Licensees to do or undertake things, which in the opinion of the Commission is necessary or expedient for the purpose of removing the difficulties.

1.28 All conditions prescribed herein shall be applicable notwithstanding if any contrary provisions, exist in the agreement entered into by the consumer with the licensee.

1.29 Wherever, there is contradiction in general terms & conditions and specific terms & conditions given for any particular category, the specific terms and conditions shall prevail for that category.

1.30 In case any dispute arises regarding interpretation of this tariff order and/or applicability of this tariff, the decision of the Commission shall be final and binding.

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