



Petition for

Final True-up of FY 2021-22, APR of FY 2022-23,
MYT petition for Third Control Period FY 2023-24
to FY 2027-28,

&

Tariff Determination for FY 2023-24

of

MANIPUR STATE POWER DISTRIBUTION
COMPANY LTD (MSPDCL)

for its Distribution and Retail Supply Business

Submitted to:

Joint Electricity Regulatory Commission for
Manipur and Mizoram

By

Manipur State Power Distribution Company Limited (MSPDCL), Imphal

January, 2023

**BEFORE THE HONOURABLE JOINT ELECTRICITY REGULATORY COMMISSION
FOR MANIPUR AND MIZORAM**

FILING NO _____

CASE NO _____

IN THE MATTER OF: Petition for Approval of Final True up of FY 2021-22, APR for FY 2022-23, MYT petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24 for Manipur State Power Distribution Company Limited (MSPDCL) under Sections 45, 46, 61, 62 and 64 of the Electricity Act 2003 and as per the JERC (Multi Year Tariff) Regulations 2014.

AND IN THE MATTER OF: Manipur State Power Distribution Company Limited (hereinafter referred to as "MSPDCL", which shall mean for the purpose of this Petition the "Licensee" or "Petitioner") having its registered office at Imphal, Manipur.

The Petitioner, under sections 45, 46, 61, 62 and 64 of the Electricity Act, 2003 files for initiation of proceedings by the Hon'ble Commission for deciding on the matters concerning the approval of Approval of Final True up of FY 2021-22, APR for FY 2022-23, MYT petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24 of Manipur State Power Distribution Company Limited (hereinafter referred to as "MSPDCL" or "Petitioner")

The Petitioner respectfully submits as under:

1. The Petitioner is the sole Distribution Licensee in the State of Manipur, which has been formed after the restructuring of the erstwhile Electricity Department of Manipur. With effect from 1st February, 2014, the Electricity Department of Manipur has been restructured into two Companies, viz., the Manipur State Power Distribution Company Limited (MSPDCL) responsible for distribution and retail supply in the State of Manipur, and the Manipur State Power Company Limited (MSPCL) responsible for generation and transmission functions in the State of Manipur.
2. As per JERC (Multi Year Tariff) Regulations, 2014, the ARR and tariff of transmission and distribution are to be determined separately. In the Tariff Order for FY 2014-15, the Hon'ble Commission has also issued a directive for filing separate Petitions for Transmission Business and Distribution and Retail Supply Business. The two restructured Companies had filed separate ARR Petitions for Distribution and Transmission for the first time at the time of tariff determination for FY 2015-16, and the Hon'ble Commission issued separate Orders for Transmission and Distribution.

3. Pursuant to the enactment of the Electricity Act, 2003 MSPDCL is required to submit its Annual Revenue Requirement (ARR) and Tariff Petition as per procedures outlined in Sections 61, 62 and 64 of the Electricity Act, 2003 and the governing regulations thereof.
4. MSPDCL hereby submits its Petition for approval of Final True up of FY 2021-22, APR for FY 2022-23, MYT petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24 in accordance with the principles specified in the JERC (Multi Year Tariff) Regulations, 2014, and its subsequent amendments, as notified by the Hon'ble Commission.
5. MSPDCL prays to the Hon'ble Commission to admit the enclosed Petition for Final True up of FY 2021-22, APR for FY 2022-23, MYT petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24.

Manipur State Power Distribution Company Limited
Petitioner

Place: Imphal

Dated: 31.01.2023

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Chapter 1: Introduction

1.1. Historical Background

- 1.1.1. The commissioning of the two micro hydel sets having capacities of 100 kW and 56 kW at Leimakhong in 1930 by the then Manipur State Electricity Board marked the beginning of the use of electricity in Manipur. The Royal palace and main areas of Imphal Town enjoyed electricity generated from this captive hydel station. During World War-II, two more DG sets of 62 kW and 46 kW capacities were installed at the old Imphal Power House by the Armed Forces for electrification of Imphal town and its suburbs. The above installed capacity remained the same till the end of the first Five Year plan (1951-56) of the post- independence period. The second Five Year Plan (1956-61) however saw a significant change in the demand of power in the State. The demand grew rapidly, which necessitated further addition in the generation capacity that was accomplished with the installation of a few more DG sets of various capacities in and around Imphal.
- 1.1.2. To evacuate the power generated from the captive micro hydel power station (100 + 56) kW at Leimakhong to specific load centres of Palace Compound and main bazar area of Imphal, the 20 km long, 11 kV line between Imphal and Leimakhong was constructed for the first time in Manipur in 1930. The State was then having 26 km of 11 kV lines and 45 km of domestic lines to serve very few consumers in 7 villages/Leikais. The line and generating stations were owned by the then Manipur State Electricity Board, constituted under the ex-officio Chairmanship of the Political Agent. Subsequently, electricity was kept under the administrative control of the Public Works Department, Government of Manipur. It was separated from the State PWD and started functioning as an independent Department since February 1970.
- 1.1.3. The peak load demand of Manipur in 1971 was 3.6 MW only, which was met from the State's own generating stations and power purchased from the neighboring States/Electricity Boards at low voltage. The per capita consumption of energy was 4.84 kWh. The scenario abruptly changed after the purchase of bulk power from Assam with the commissioning of 132 kV inter-State transmission line from Imphal to Dimapur and 6.3 MVA, 132/33 kV sub-station at Yurembam in December 1981. The situation improved further with the commissioning of Loktak Hydro Electric Project having a capacity of 3x35 MW on 4 August, 1984.
- 1.1.4. During the years from 1984 to 1996, a number of Central Sector Power Projects, mostly hydel projects, were commissioned in the North Eastern Region. Manipur State has a share of about 7-8% in every project. Because of the power availability from such projects, the peak demand of the State has increased gradually and in FY 2020-21, it has increased to 251 MW (as per Central Electricity Authority, Executive Summary on power sector: March-2021).
- 1.1.5. After the enactment of Electricity Act 2003, various reforms have been initiated in the power sector including restructuring of integrated State Electricity Boards into separate Companies. With effect from 1 February, 2014, the Electricity Department of Manipur (EDM) was restructured and separated into two different entities, viz., (1)

Manipur State Power Distribution Company Limited (MSPDCL), and (2) Manipur State Power Company Limited (MSPCL).

- 1.1.6. Accordingly, MSPDCL is submitting the present petition for Final True up of FY 2021-22, APR for FY 2022-23, MYT petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24 for its Retail Supply Business to the Hon'ble Commission.

1.2. Power Profile of MSPDCL

- 1.2.1. Manipur, like other States of the North-Eastern Region, has been gifted with a fairly high hydro power potential. However, the major portion still remains untapped due to financial and environmental bottlenecks. Therefore, the State is dependent upon outside sources for meeting majority of its energy requirement. It is currently getting power from NTPC, NHPC, NEEPCO, ONGC Tripura Power Corporation (OTPC) Unit I and Unit II, and Baramura Gas Turbine Power Project (BGTPP). The scheduled allocated firm share from the Central Sector generating stations to MSPDCL for current financial year from NTPC Bongaigaon, NEEPCO, NHPC, OTPC-I and II, and BGTPP of Tripura State Electricity Corporation Limited (TSECL) is currently around 391.14 MW. However, currently MSPDCL's share is around 214 MW from installed and operative central generating stations' projects.
- 1.2.2. For the purpose of evacuating power from different sources in the North- Eastern Region, the inter-state transmission network owned and maintained by PGCIL as well as the intra-state transmission network owned by the Manipur State Power Corporation Limited (MSPCL) is utilized. The existing intra-state transformation capacity of 132 kV Substations in Manipur is 822.15 MVA and the length of the 33 kV lines is 1753.201 Ckt kms of single circuit lines and 87.9 km of double circuit lines. Currently, MSPDCL has 192 Feeders of 11 kV and above (rural and urban) and 7904 numbers of DTs (rural and urban). Also, MSPDCL's MVA capacity of LT network and 8205 numbers of (rural and Urban) HT network are 599.06 MVA and 164.85 MVA, respectively.

1.3. Background of Regulatory Setup

- 1.3.1. The State Governments of Manipur and Mizoram authorized the Government of India to constitute a Joint Commission as per Memorandum of Agreement dated 23rd July, 2004 among the Government of India and the States of Manipur and Mizoram to regulate the power sector in the States of Manipur and Mizoram. Accordingly, under provisions of Section 83(5) of the Electricity Act, 2003, a quasi-judicial independent body, i.e., the Joint Electricity Regulatory Commission for the States of Manipur & Mizoram (JERC) was constituted by the Central Government vide Govt. of India F. No. 23/3/2002- R&R dated 18 January, 2005 notified in the Gazette of India, Extraordinary dated 18 January, 2005. The functioning of the Commission started on January 2008. The Hon'ble JERC issued its first Tariff Order for FY 2010-11 for the State of Manipur on 15 March, 2011.
- 1.3.2. JERC (Multi Year Tariff) Regulations, 2014 requires the Licensees to submit the True up Petition for the previous year and ARR Petition for the ensuing financial year before 30th November of the current year. Since, MSPDCL as a new corporate entity has now completed the preparation of audited account statements till FY 21-22. To fulfil this statutory requirement, MSPDCL is filing the present Petition for approval of Final True up of FY 2021-22, APR for FY 2022-23, MYT petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24 in accordance with the JERC (MYT) Regulations, 2014, and its subsequent amendments.

1.4. Contents of this Petition

- 1.4.1. This Petition covers the final audited figures for Final True up of FY 2021-22, APR for FY 2022-23, MYT petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24 along with the audited account statements of FY 2021-22 as Annexure.

2. Chapter 2: Overall Approach for Present Filing

MSPDCL is filing the petition for the Final True up of FY 2021-22, APR for FY 2022-23, MYT Petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff determination of FY 2023-24. MSPDCL has studied the previous trends and taken cognizance of other internal and external developments to estimate the likely performance for FY 2022-23 and FY 2023-24.

2.1. Approach for Filing

The present filing for the Final True up of FY 2021-22, APR for FY 2022-23, MYT Petition for Third Control Period FY 2023-24 to FY 2027-28 and Tariff Determination for FY 2023-24 is based on the principles enumerated by the Joint Electricity Regulatory Commission's (JERC) (Multi Year Tariff) Regulations, 2014 notified on 9 June, 2014. The subsequent sections provide projection for various expenses, the proposed investment plan for multiyear and the expected revenue projections with existing tariff for FY 2022-23, based on the tariff notifications in force in the area of supply of MSPDCL.

However, it is important to consider the actual data for past years because it forms the base for future projections. Hence, MSPDCL is submitting the actual sales and power purchase data for FY 2021-22, which forms the base for projections for the ensuing year FY 2023-24. Therefore, a final true up of FY 2021-22 has been prepared based on the actual sales and power purchase data. For data other than sales and power purchase, MSPDCL has considered the actual values for first six months of FY 2022-23 in such as for O&M, depreciation, interest and finance charges, interest on working capital and approved values for non-tariff income.

Projections of various cost components required for determination of Aggregate Revenue Requirement for FY 2023-24 along with the rationale for estimation of such cost and the philosophy have been covered in this section. For the purpose of projecting the financial & technical parameters for FY 2023-24, MSPDCL has considered its actual performance during FY 2021-22 and FY 2022-23 as base and has projected the figures for FY 2023-24 to FY 2027-28 with supporting rationales.

3. Chapter 3: True up of FY 2021-22

MSPDCL is, hereby, submitting petition for Final true up of FY 2021-22 as per Regulation 10.2 of JERC (Multi Year Tariff) Regulations, 2014 based on audited annual accounts. As per Regulation 10.6 of JERC (Multi Year Tariff) Regulations, 2014, the Commission has to undertake true up based on audited accounts and pass an order recording approved aggregate gain or loss on account of controllable factors and the amount of such gains or losses that may be shared in accordance with Regulation 13 of JERC (Multi Year Tariff) Regulations, 2014.

It may be noted that the present true-up Petition is based on the comparison of the actual expenses and revenue for FY 2021-22 with the expenses and revenue considered by the Hon'ble Commission in the Annual Revenue Requirement (ARR) of FY 2021-22 as decided in the JERC tariff Order dated 26 April, 2021.

3.1. Energy Sales

MSPDCL caters to a diverse consumer mix comprising of:

- Kutir Jyoti and LT Domestic
- LT & HT Commercial,
- LT & HT Industry
- Public Street Lighting
- Public Water Works
- Agriculture consumers.

LT Domestic category is the largest consumer category and comprises around 60% of the total sales of MSPDCL. The number of consumers in this category has increased rapidly in the recent years on account of the rural electrification schemes such as RGGVY, DDUGJY and Saubhagya scheme. The actual category-wise energy sales as compared to the energy sales approved by the Hon'ble Commission (in ARR order dated 26.04.2021) for FY 2021-22 is given in the Table below:

Table 1: Category-wise Energy Sales (MU) for FY 2021-22

S No	Category	Approved in ARR Order	Approved in APR Order	Actual
A	LT Supply			
1	Kutir Jyoti	4.10	4.13	4.37
2	Domestic	441.28	462.22	523.62
3	Commercial LT	59.00	63.57	65.95
4	Public Lighting	3.86	3.66	4.12
5	PWW	1.29	1.28	1.38
6	Irrigation and Agriculture	1.15	1.15	1.23
7	Cottage and Small Industries	19.47	22.28	20.77
	Total LT	530.15	558.29	621.44
B	HT Supply			
1	Commercial HT	19.98	21.54	21.31
2	PWW	23.99	23.49	25.59
3	Irrigation and Agriculture	0.75	0.75	0.80

S No	Category	Approved in ARR Order	Approved in APR Order	Actual
4	Medium Industries	3.92	4.49	4.18
5	Large Industries	8.15	10.15	8.69
6	Bulk Supply	90.19	90.14	96.25
	Total HT	146.98	150.56	156.82
	Grand Total (LT & HT)	677.13	708.85	778.26

The actual energy sales by MSPDCL in FY 2021-22 is 778.26 MU. The actual sales are higher than the ARR approved figures on account of rise in domestic category consumption due to rise in number of consumers because of various household electrifications schemes which started gaining pace from FY 19. The actual sales are in line with the provisionally approved APR figures.

The Hon'ble Commission is requested to approve the consumption parameters as submitted in the above table as same is uncontrollable on the part of MSPDCL.

3.2. Energy Balance and Transmission & Distribution Loss

The computation of actual Transmission & Distribution losses for FY 2021-22 is shown in the Table below:

Table 2: Actual Transmission and Distribution Losses for FY 2021-22

S No.	Particulars	Unit	Actual
1	Own Generation	MU	0
2	Power purchase from CGS	MU	1150.61
3	Add: UI Over drawl	MU	12.87
4	Add: IEX purchases	MU	63.37
5	Add: Returned Banking Energy	MU	86.37
6	Less: IEX sales	MU	117.65
7	Less: Banking mode sales	MU	125.82
8	Gross Energy handled at NER	MU	1069.75
9	Pool Losses	%	2.36%
10	Energy Losses at NER	MU	25.25
11	Net Energy available at NER after losses	MU	1044.50
12	Less: UI Under drawl	MU	12.59
13	Gross Energy handled at State Periphery	MU	1031.91
14	Total Sales (LT+HT)	MU	778.26
15	Transmission and Distribution loss	MU	253.65
16	Transmission and Distribution loss	%	24.58%

The actual T&D Losses of 24.58% achieved by MSPDCL in FY 2021-22 against the approved figure of 27.57% approved by Hon'ble Commission in its ARR order dated 26.04.2021.

Table 3: Transmission and Distribution Losses for FY 2021-22

Particulars	Approved in ARR order	Approved in APR order	Actual
Distribution Loss	27.57%	28.10%	24.58%

It is submitted that energy availability for FY 2021-22 has been computed based on the actual Power purchase. Further, the transmission licensee, MSPCL operates the 33 kV network which is the input point of the distribution network. It may be noted that MSPDCL network periphery included only 11KV system and below whereas 33 KV and above transmission network falls under the MSPCL network. Therefore, segregating the MSPDCL distribution losses and MSPCL network losses, in absence of proper metering arrangements is not possible. Further, the Hon'ble

Commission has stated that w.e.f. 01.02.2014, MSPDCL shall be responsible for distribution losses. In absence of an accurate figure of losses for 33 kV and above network, the Commission had calculated the losses without subtracting the intra state transmission losses (@ 8.895% in the ARR order) which led to distribution losses of 18.68% and overall T&D losses of 27.57%. Because of huge differences in the figures of intra state transmission losses of claimed and approved as well as year wise difference, we have shown the combined T&D losses here.

The quantum of distribution losses is primarily due to the higher LT line lengths and the hilly / complex terrain of Manipur State. The long LT distribution lines and distribution at 11 kV are leading to higher distribution losses in the state. In the recent past, due to various initiatives in rural electrification, significant progress was made by MSPDCL in addition to the rural consumers. However, it is pertinent to note that the new consumer addition happened in most remote areas by extending the distribution network of MSPDCL. Due to smaller load and low consumption level, technical line losses would be quite high in those areas. MSPDCL is trying its best to serve them continuously and maintain these systems with its workforce efficiently. With the present state of complex terrain, long LT distribution lines, scatter LT domestic consumers, the actual LT distribution losses in Manipur are higher than the Commission approved distribution losses as given in its ARR order. Further, MSPDCL is in the process of expanding the coverage of prepaid meters to reduce unauthorized usage of electricity and the T&D losses. As the coverage of prepaid meters increased in the state in the future years, the T&D losses gradually improved.

Hence, MSPDCL requests the Hon'ble Commission to approve the actual distribution loss, as shown in the Table above.

Table 4: Energy balance (MU) for FY 2021-22

S No.	Particulars	Unit	Approved in ARR Order	Approved in APR Order	Actuals
A	Energy Requirement				
1	Energy Sales	MU	677.13	708.85	778.26
2	Transmission and Distribution loss	%	27.57%	28.10%	24.58%
3	Transmission and Distribution loss	MU	257.75	277.03	253.65
4	Energy Requirement	MU	934.88	985.88	1031.91
B	Energy Availability				
5	Own Generation (Net)	MU	0	0	0
6	Power Purchase	MU	1011.00	989.22	1150.61
7	Less: External Losses	%	2.57%	2.54%	2.36%
8	Less: External Energy Losses	MU	25.98	25.13	25.25
9	Energy available at state periphery(6-8)	MU	985.02	964.09	1125.36
10	Add: UI Purchases	MU	-50.13	-172.00	76.24
11	Net energy available at state periphery	MU	934.89	792.09	1201.60
12	Intra-State Transmission Loss	%		8.25%	
13	Intra-State Transmission Loss	MU		65.35	
14	Energy Available for Distribution	MU	934.89	726.75	1201.60
15	Surplus / (Deficit)	MU	0.00	-259.14	169.69
16	Surplus grossed up by Intra-state	MU	0.00	-282.44	169.73

	Transmission Loss for sale outside the state				
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The significant difference in actual energy surplus and approved energy surplus in FY 2021-22 is due to the difference in level of transmission and distribution loss and higher availability.

Hence, MSPDCL requests the Hon'ble Commission to approve the energy balance, as shown in the Table above.

3.3. Energy Purchase

The actual Power Purchase cost as against the power purchase cost approved in the ARR /Tariff Order for FY 2021-22 is shown in the Table below:

Table 5: Energy Purchase for FY 2021-22 (MU)

S No.	Sources of Power	Approved in ARR Order	Approved in APR order	Actual
A	CGS - NEEPCO			
1	Kopili - I HE	69.82		
2	Kopili - II HE	6.90	3.00	0.78
3	Khandong HE	12.50	15.00	17.51
4	Ranganandi HE Project	105.25	100.22	95.97
5	Doyang HE Project	11.35	10.00	7.48
6	Assam GBPP	100.97	100.00	141.61
7	Agartala GTPP	48.28	72.00	74.75
	Sub-total	355.07	300.22	338.10
B	CGS - NHPC			
1	Loktak HEP	188.00	160.00	118.89
2	Loktak Free power	55.90	58.00	46.70
	Sub-total	243.90	218.00	165.59
C	Other			
1	Baramura GBPP Unit IV and V	55.40	36.00	57.67
2	OTPC Pallatana Unit I	232.60	230.00	240.75
3	OTPC Pallatana Unit II			
	Sub-total	288.00	266.60	298.42
D	New Plants			
1	NTPC Bongaigaon Unit I			
2	NTPC Bongaigaon Unit II	96.80	160.00	313.13
3	NTPC Bongaigaon Unit III			
5	Pare HEP	25.45	45.00	35.67
6	Renewable – Solar	1.50	0.00	0.00
7	Renewable – Non Solar	1.00	0.00	0.00
	Sub-total	124.03	205.00	348.80
E	Short-term power purchase			
1	IEX Purchase	0.00	80.00	63.37
2	IEX Sales	0.00	-90.00	
	Sub-total	0.00	-10.00	63.37
F	UI Overdrawl	0.00	0.00	12.87
G	Banking energy returned	0.00	115.83	0.00
H	Banking sale to outsiders	0.00	-82.00	0.00
	TOTAL	1011.00	982.95	1227.15

As can be seen from the above Table, the actual power purchase quantum from CGS in FY 2021-22 was 1227.15 MU, which is higher than the approved quantum of 1011 MU.

The Hon'ble Commission is requested to approve the power purchase based on the actuals as shown in the table above.

3.4. Power Purchase Cost

The actual Power Purchase cost as against the power purchase cost approved in the ARR /Tariff Order for FY 2021-22 is shown in the Table below:

Table 6: Power Purchase Cost for FY 2021-22 (Rs. Crore)

S No.	Sources of Power	Approved in ARR Order		Approved in APR order		Actuals	
		Total Cost (Rs. Crore)	Average Rate (Rs / kWh)	Total Cost (Rs. Crore)	Average Rate (Rs / kWh)	Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
A	CGS - NEEPCO						
1	Kopili - I HE	7.60	1.09	0.04	0.00		
2	Kopili - II HE	1.02	1.48	1.34	4.47	0.17	2.18
3	Khandong HE	2.37	1.90	3.52	2.35	3.06	1.75
4	Ranganandi HE Project	25.87	2.46	26.54	2.65	24.89	2.59
5	Doyang HE Project	6.55	5.77	8.89	8.89	6.28	8.40
6	Assam GBPP	48.47	4.80	44.99	4.50	49.11	3.47
7	Agartala GTPP	24.38	5.05	30.06	4.18	27.10	3.63
	Sub-total	116.26	3.27	115.38	3.84	110.62	3.27
B	CGS - NHPC						
1	Loktak HEP	66.78	3.55	59.55	3.72	51.91	4.37
2	Loktak Free power						
	Sub-total	66.78	2.74	59.55	2.73	51.91	3.13
C	Other						
1	Baramura GBPP Unit IV and V	17.40	3.14	19.91	5.53	25.74	4.46
2	OTPC Pallatana Unit I	76.71	3.30	93.55	4.07	80.37	3.34
3	OTPC Pallatana Unit II						
	Sub-total	94.11	3.27	113.46	4.27	106.11	3.56
D	New Plants						
1	NTPC Bongaigaon Unit I	108.95	11.34	165.72	10.36	193.65	6.18
2	NTPC Bongaigaon Unit II						
3	NTPC Bongaigaon Unit III						
4	Pare HEP	12.85	5.05	22.53	5.01	17.69	4.96
5	Renewable – Solar	0.68	4.51	0.00	0.00	0.00	0.00
6	Renewable – Non Solar	0.55	5.46	0.00	0.00	0.00	0.00
	Sub-total	123.02	9.92	188.25	9.18	211.34	6.06
E	Short-term power purchase						
1	IEX Purchase	0.00	0.00	22.40	2.80	21.71	3.43
2	IEX Sales	0.00	0.00	-21.60	2.40		
	Sub-total	0.00	0.00	0.80	0.80	21.71	3.43
F	UI Overdrawl	0.00	0.00	0.00	0.00	3.96	3.08
G	Supplementary bills	30.00	0.00	20.00	0.00	29.32	0.00
H	Late Payment Surcharge	7.73		28.33			
I	REC	24.93					
	TOTAL POWER PURCHASE COST	462.82	4.58	525.77	5.35	534.97	4.36

As per the above table, the actual power purchase cost is Rs. 534.97 Crore for FY 2021-22. The actual cost is higher than the approved figure of Rs. 462.82 Crore in ARR of 2021-22.

The Petitioner has paid Rs. 29.32 Crore of supplementary bills to the generators. These bills were raised by the generators as a result of additional costs allowed by the Regulators. The payment of these supplementary bills are uncontrollable on part of the Petitioner. Therefore, the Petitioner requests the Hon'ble Commission to approve the supplementary bills of Rs. 29.32 Crore for FY 2021-22.

The Hon'ble Commission is requested to approve the power purchase cost as submitted in the above table as the same is uncontrollable on part of MSPDCL.

3.5. Transmission charges

The transmission charges include the charges paid to PGCIL, MSPCL and SLDC charges. The summary of transmission charges approved by the Commission in ARR order and the actual charges paid by MSPDCL for FY 2021-22 is as follows:

Table 7: Transmission Charges for FY 2021-22 (Rs. Crore)

S No.	Particulars	Approved in ARR Order	Approved in APR order	Actual
1	PGCIL Charges	83.06	75.04	81.22
2	MSPCL Charges	96.27	70.96	64.20
3	SLDC Charges	0.82	0.00	0.01
4	NERLDC Charges	0.71	0.67	0.80
	Total	180.85	146.67	146.24

The transmission charges are uncontrollable in nature as the same are levied based on approved cost and orders of CERC and JERC as applicable for inter-state and intra state transmission respectively.

As such, MSPDCL requests the Hon'ble Commission to approve the actual Transmission Charges of Rs. 146.24 Cr. for FY 2021-22, as shown in the Table above.

3.6. Operation and Maintenance Expenses

The Operation and Maintenance (O&M) expenses comprises of Employee Expenses, Repair and Maintenance (R&M) Expenses and Administrative and General (A&G) Expenses. In the FY 2021-22, MSPDCL has incurred the O&M expenses as follows:

3.6.1. Employee Expenses

Employee Expenses includes the Basic Pay, Dearness Pay, Dearness allowances, house rent allowances, and other allowances, new pension scheme paid to the MSPDCL cadre, staff etc. The liabilities for terminal benefits for the employees transferred from the erstwhile Electricity Department of Manipur are directly borne by the State Government and are not included in the employee cost claimed here. The actual employee expenses based on audited accounts for FY 2021-22 as compared with those approval in the Tariff Order are shown in the Table below:

Table 8: Employee Expenses for FY 2021-22 (Rs. Crore)

Particulars	Approved in ARR order	Approved in APR order	Actual
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Total Employee Expenses	116.43	65.49	59.36
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The actual employee expenses are much lower than the employee expenses approved by the Hon'ble Commission for FY 2021-22. The break-up of actual employee strength during FY 2021-22 is shown below:

Table 9: Actual Employee Strength of MSPDCL in FY 2021-22

S No	Particulars	Employee strength as on 1 st April 2021	Employee Strength as on 31 st March 2022
1	Regular	1239	1139
2	Work charge	144	121
3	Muster roll	22	22
4	Contract	17	15
	Total	1422	1297

Decline in employee strength than the ones considered in the ARR projections is the reason for the variation in employee expenses.

MSPDCL, thus, requests the Hon'ble Commission to approve the actual Employee Expenses of Rs.59.36 Crore for FY 2021-22.

3.6.2. R&M Expenses

Repair and Maintenance (R&M) Expenses includes all expenditure incurred on the maintenance and upkeep of distribution assets. It includes the expenses on repairs and maintenance of Plant and Machinery, Transformers, Lines, cable network, Vehicles, Office equipment, etc. The actual R&M expenses based on audited accounts for FY 2021-22 are given below as per the different accounting heads used for booking R&M expenses:

Table 10: Break-up of R&M Expenses for FY 2021-22 (Rs. Crore)

S No	Particulars	Actual
1	Repair & Maintenance Expenses (Plant and Machinery)	7.34
2	Repair & Maintenance Expenses (Others)	1.66
3	O&M Expenses	15.19
4	Stores and Consumables	1.21
	Total	25.40

The actual R&M expenses as compared as compared to the approved expenses are as follows:

Table 11: R&M Expenses for FY 2021-22 (Rs. Crore)

Particulars	Approved in ARR order	Approved in APR order	Actual
R&M Expenses	19.44	11.25	25.40

The actual R&M expenses are higher than the approved values by the Hon'ble Commission for FY 2021-22. The R&M expenses approved by Hon'ble Commission in the ARR order of FY 2021-22 has been around 1% of the approved GFA. The reason of this is that the R&M expenses are projected on low baseline. However, the actual R&M expenses are around 2% of the asset base. The Petitioner submits that, R&M expenses are uncontrollable in nature as the distribution utility

is required to spend on maintenance of network to comply with the Standards of Performance laid by the Commission.

Hence, in the above context, MSPDCL therefore, requests the Hon'ble Commission to approve the actual R&M expenses of Rs. 25.40 Crore for FY 2021-22.

3.6.3. A&G Expenses

Administrative and General (A&G) Expenses includes all expenditure incurred in operating a business such as:

- ✓ Travel and conveyance expenses
- ✓ Consultancy and regulatory fees
- ✓ IT services and outsourcing cost
- ✓ Office Expenses
- ✓ Publication Expenses
- ✓ Other administration Expenses
- ✓ Telephone
- ✓ Hiring of vehicle etc.

The A&G expenses incurred by MSPDCL in FY 2021-22 based on audited accounts are as follows:

Table 12: A&G Expenses for FY 2021-22 (Rs. Crore)

S No	Particulars	Actual
1	Auditors Remuneration	0.01
2	ROC Filing Fees	0.02
3	Advertisement Expenses	0.34
4	Bank Charges	0.05
5	BEE charges	0.58
6	Consultancy Charges	0.41
7	Ex-gratia payment	0.23
8	JERC Fees and Expenses	0.52
9	Office Expenses	0.56
10	Legal Fees and Charges	0.03
11	Printing & Stationary Expenses	0.03
12	Telephone Expenses	0.23
13	Travelling Exp	0.03
14	Vehicle hiring, Repairs and Maintenance	1.46
15	Interest and Penalty	0.00
	Total	4.52

The actual A&G expenses as compared to the approved figure in ARR of FY 2021-22 is as follows:

Table 13: A&G Expenses for FY 2021-22 (Rs. Crore)

Particulars	Approved in ARR order	Approved in APR order	Actual
A&G Expenses	10.10	8.45	4.52

MSPDCL requests the Hon'ble Commission to approve the actual A&G expenses of Rs. 4.52 Crore based on the audited accounts for FY 2021-22 and based on the detailed break-up of the actual cost as provided above.

The total O&M expenses incurred in FY 2021-22 as per audited accounts are shown in the Table below:

Table 14: Actual O&M Expenses for FY 2021-22 (Rs. Crore)

S No.	Particulars	Approved in ARR Order	Approved in APR order	Actual
1	Employee Expenses	116.43	65.49	59.36
2	R&M Expenses	19.44	11.25	25.40
3	A&G Expenses	10.10	8.45	4.52
	Total	145.97	85.19	89.28

The actual O&M expenses are thus, lower than the O&M expenses approved by the Hon'ble Commission in the Tariff Order for FY 2021-22. Variation in Employee expenses is the main reason for this deviation as explained earlier. MSPDCL requests the Hon'ble Commission to approve the actual O&M expenses of Rs. 89.28 Crore for FY 2021-22.

3.7. Interest on Working Capital

The interest on working capital is calculated as interest incurred on operation and maintenance expenses for one month, power purchase cost for one month, Receivables equivalent to one (1) month of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs as per clause 29.4 of the JERC (Multi Year Tariff) Regulations 2014.

The computation of normative Interest on Working Capital (IoWC) for MSPDCL for FY 2021-22, is shown in the Table below:

Table 15: Interest on Working Capital for FY 2021-22 (Rs. Crore)

S No.	Particulars	Approved in ARR order	Approved in APR order	Actual
1	O & M Expenses one month			7.44
2	Maintenance of spares @ 1% of GFA Escalated by 6%			8.02
3	Receivable equivalent to one month			38.31
4	Less: Consumer Security Deposit			
5	Net WC requirement			53.77
6	SBAR rate as on 01.04.2018			12.15%
7	Interest of Working Capital			6.53

MSPDCL requests the Hon'ble Commission to approve the IoWC of Rs.6.53 Crore for FY 2021-22.

3.8. Gross Fixed Assets and Depreciation

The depreciation for FY 2021-22 has been claimed as per the audited accounts.

Table 16: Actual Depreciation for FY 2021-22 (Rs. Crore)

Particulars	Approved in ARR order	Approved in APR order	Actual
Depreciation	1.84	1.83	21.79

It may be noted that the actual depreciation claimed above does not include depreciation on assets funded through grants and the same has been deducted from the total depreciation claimed. The difference in actual and approved depreciation is due to the difference in methodology adopted for calculation of depreciation on assets funded through grants. The Commission has assumed that 90% of the assets are funded through grants and as such approved only 10% of the depreciation on the total asset base. However, in actual, the assets transferred to MSPDCL at the time of restructuring of erstwhile EDM are not booked as grants but as capital reserve/ equity pending allotment. As such, the depreciation should be allowed on the entire assets transferred from the erstwhile EDM into the corporate entity of MSPDCL. the detailed break up of actual depreciation booked in accounts is shown below:

Table 17: Depreciation for FY 2021-22 (Rs. Crore)

Asset Category	Average value of asset	Depreciation charged during the year	Prior period Depreciation	Amortization of deferred income	Total
Distribution Assets					
Plant & Machinery	1482.86	13.58	6.34	97.60	117.53
Building	47.20	0.28		0.45	0.72
Furniture & fittings	1.29	0.03		0.08	0.11
Computer	5.89	0.01		2.51	2.52
Heavy Equipments	0.05	0.00		0.00	0.00
Heavy Vehicle	0.88	0.01		0.05	0.05
Office Equipments	0.04	0.00		0.00	0.00
Vehicle	5.74	0.00		0.59	0.59
Land	0.35	0.00		0.00	0.00
Software	8.38	0.07		14.07	14.14
Generation Assets					
Plant & Machinery	49.25	1.25		0.00	1.25
Building	13.48	0.22		0.00	0.22
Furniture & fittings	0.03	0.00		0.00	0.00
Computer	0.00	0.00		0.00	0.00
Office Equipments	0.05	0.00		0.00	0.00
Vehicle	0.03	0.00		0.00	0.00
Total	1615.53	15.44	6.34	115.36	137.14

In the above table, the depreciation charged on the assets booked as capital reserve / equity is Rs. 21.79 Crore (including prior period depreciation). The depreciation on the assets funded through grants is represented as amortization of deferred income. The Petitioner has subtracted

the depreciation on assets funded through grants from the depreciation charged on charged on assets booked as capital reserve.

MSPDCL requests the Hon'ble Commission to approve the depreciation of Rs.21.79 Crore for FY 2021-22.

3.9. Interest on Loan

The major part of capital expenditure undertaken by MSPDCL is funded by the State Government's grants and Central Government's grant. However, in addition to these sources of funds, MSPDCL has also taken some amount of loan from REC for RAPDRP-B Project and DDUGJY project for meeting counterpart funding as per Gol scheme guidelines. The repayment of loans during the year has been considered as per principal repayment made, and the repayment has been considered proportionately based on the opening loan balance.

The details of loans with the computation of Interest on loan are shown in the Table below:

Table 18: Break-up of Loan for FY 2021-22 (Rs. Crore)

S No.	Particulars	Loan 1 (PFC R- APDRP- A)	Loan 2 (PFC R- APDRP- B)	Loan 3 (REC R- APDRP- B)	DDUGJY	Prepaid Meter loan (Hill & Valley) (REC)	SLTTL (PFC)	SLTTL (REC)
1	Opening Loan	14.35	352.83	27.92	19.01	0.00	55.74	55.74
2	Addition during the Year		0.91			63.09		
3	Repayment during the year			3.98	2.05			
4	Closing Loan	14.35	353.74	23.93	16.96	63.09	55.74	55.74
5	Average Loan							
6	Rate of Interest	9.00%	9.00%	11.70%	11.00%	10.45%	9.50%	9.50%
7	Interest & Finance Charges			3.04	1.74	1.84	5.19	5.34

The interest on loan of Rs. 17.16 Crore has been paid out but not booked. Instead, this amount has been capitalized.

Table 19: Interest on Loan for FY 2021-22 (Rs. Crore)

S No.	Particulars	Approved in ARR Order	Approved in APR order	Actual
1	Interest & Finance Charges	35.79	11.76	17.16

MSPDCL requests the Hon'ble Commission to kindly approve the interest on loan of Rs. 17.16 Crore for FY 2021-22.

3.10. Return on Equity

As per audited accounts, the RoE is computed on paid up capital of Rs. 10.05 Crore at the rate of 15.50% as stated in clause 26.1 of JERC (Multi Year Tariff) regulations 2014

Table 20: Return on Equity for FY 2021-22 (Rs. Crore)

S No.	Particulars	Approved in ARR Order	Approved in APR order	Actual
1	Average Equity	10.05	10.05	10.05

2	RoE %	15.50%	15.50%	15.50%
3	Return on Equity	1.56	1.56	1.56
4	MAT Rate applicable	0.00%	0.00%	0.00%
	Net RoE (Grossed up by MAT rate)	1.56	1.56	1.56

MSPDCL requests the Hon'ble Commission to approve the Return on Equity of Rs.1.56 Crore for FY 2021-22.

3.11. Write off of bad debts

As per the audited accounts for FY 2021-22, the receivables from consumers is Rs. 570.18 Crore. Some of these receivables are pending since the time of unbundling of EDM.

MSPDCL has booked Rs 17.58 Crore as provision for bad and doubtful debts in the accounts for FY 2021-22 Therefore, MSPDCL requests the Hon'ble Commission to allow write off of Rs 17.58 Crore of the receivables as bad debts as per provisions of clause 89.8 of the JERC (Multi Year Tariff) Regulations 2014.

3.12. Non-tariff Income

The Hon'ble Commission approved Non-Tariff Income of Rs. 0.39 Crore in the ARR for FY 2021-22. The actual Non-Tariff Income earned by MSPDCL in FY 2021-22 was Rs. 5.74 Crore, as shown in the Table below:

Table 21: Break-up of Non-tariff Income for FY 2021-22 (Rs. Crore)

S No.	Particulars	Actual
1	Interest Income	4.20
2	Agency Charges @ 3.75%	0.94
3	Sale of Scrap	0.04
4	Others	0.56
	Total	5.74

The actual Non-tariff income as compared to the approved figure in ARR of FY 2021-22 is as follows:

Table 22: Non-tariff Income for FY 2021-22 (Rs. Crore)

Particulars	Approved in ARR order	Approved in APR order	Actual
Non-tariff Income	6.80	8.55	5.74

MSPDCL requests the Hon'ble Commission to approve the actual Non-Tariff Income of Rs. 5.74 Crore for FY 2021-22.

3.13. Aggregate Revenue Requirement

Based on the above component-wise expenses, the Aggregate Revenue Requirement computed for FY 2021-22 by MSPDCL against the figures approved by the Commission in the Tariff Order for FY 2021-22, is given in the Table below:

Table 23: Aggregate Revenue Requirement for FY 2021-22 (Rs. Crore)

S No.	Particulars	Approved in ARR Order	Approved in APR order	Actual
1	Cost of power purchase	462.82	525.77	534.97
2	Transmission charges	180.85	146.67	146.24

3	O&M Expenses	145.97	85.19	89.28
	Employee Expenses	116.43	65.49	59.36
	A&G Expenses	10.10	8.45	4.52
	R&M Expenses	19.44	11.25	25.40
4	Depreciation	1.84	1.83	21.79
5	Interest on Loan	35.79	11.76	17.16
6	Interest on Working Capital	0.00	0.00	6.53
7	Bad Debt	0.00	0.00	17.58
	Total Cost	827.28	771.22	833.55
8	Add: RoE	1.56	1.56	1.56
9	Add: Income Tax	0.00	0.00	0.00
	Total	828.84	772.78	835.10
10	Less: Non-tariff Income	6.80	8.55	5.74
11	Less: Efficiency Gains	16.00	40.00	
	Aggregate Revenue Requirement (ARR)	806.04	724.23	829.37
	Less: Revenue from sale of surplus power	12.67		49.68
	Net ARR	793.37	724.23	779.69

The revenue from sale of power to consumers for FY 2021-22 was Rs. 507.99 Crore as approved by Hon'ble Commission in its ARR order for FY 2021-22. The actual revenue from sale of power to consumers in FY 2021-22 is Rs. 459.76 Crore as per audited accounts. The revenue from sale of surplus power is Rs. 49.68 Crore.

MSPDCL requests the Hon'ble Commission to approve the same.

3.14. Revenue Gap

The Revenue Gap of MSPDCL for FY 2021-22 as against the Revenue Gap approved by the Hon'ble Commission in the ARR Order for FY 2021-22 is shown in the Table below:

Table 24: Revenue Gap for FY 2021-22 (Rs. Crore)

S No.	Particulars	Approved in ARR Order	Approved in APR order*	Actual
1	Net ARR after considering outside sale income	793.37	724.23	779.69
2	Total Revenue from consumer tariff	507.99	423.46	459.76
3	Revenue Gap before Govt. Subsidy (1-2)	285.38	300.77	319.93
4	State Government Revenue Subsidy	285.38	216.00	272.19
5	Revenue Gap / (Surplus) (4-3)	0.00	84.77	47.74

As can be seen from the above Table, the Revenue Gap in ARR of FY 2021-22 was largely met by State Government subsidy of Rs 272.19 Crore.

Based on the audited ARR and revenue figures mentioned in the table above, MSPDCL requests the Hon'ble Commission to pass the **approve the revenue gap of INR 47.74 crores and pass through the same in future ARR calculations.**

Chapter 4: Annual Performance Review of FY 2022-23

The Petitioner humbly submits that the present APR is based on actual provisional expenses of FY 2022-23 from first six-month data available for FY 2022-23. The comparison of the projected expenses and revenue has been made with the expenses and revenue considered by Hon'ble Commission in the ARR of FY 2022-23 as approved in the JERC tariff Order in Petition (ARR & Tariff) (henceforth referred as 'Approved' order with reference to FY 2022-23). However, the Petitioner requests Hon'ble Commission to review the expenses and revenue for FY 2022-23 based on the trend observed as per actual data.

4.1. Energy Sales

MSPDCL caters to a diverse consumer mix comprising of:

- Kutir Jyoti and LT Domestic
- LT & HT Commercial,
- LT & HT Industry
- Public Street Lighting
- Public Water Works
- Agriculture consumers.

LT Domestic category is the largest consumer category and comprises around 60% of the total sales of MSPDCL. The number of consumers in this category has increased rapidly in the recent years on account of the rural electrification schemes such as RGGVY, DDUGJY and Saubhagya scheme. The sales as projected for the whole year; actual category-wise energy sales for six months as compared to the energy sales approved by the Hon'ble Commission for FY 2022-23 is given in the Table below:

Table 25: Category-wise Energy Sales (MU)

S No	Category	Approved in ARR Order	Six months actual	Revised projection
A	LT Supply			
1	Kutir Jyoti	4.23	1.98	3.96
2	Domestic	470.70	265.47	552.18
3	Commercial LT	65.16	32.47	64.94
4	Public Lighting	3.69	2.16	5.67
5	PWW	1.29	0.69	1.38
6	Irrigation and Agriculture	0.00	0.00	1.22
7	Cottage and Small Industries	22.95	0.61	20.76
	Total LT	568.03	313.76	650.11
B	HT Supply			
1	Commercial HT	21.97	10.86	21.72
2	PWW	24.66	13.17	26.34
3	Irrigation and Agriculture	0.75	0.40	0.80
4	Medium Industries	4.62	2.36	4.72
5	Large Industries	10.66	4.64	9.28

S No	Category	Approved in ARR Order	Six months actual	Revised projection
6	Bulk Supply	93.98	48.59	101.07
	Total HT	146.98	80.02	163.93
	Grand Total (LT & HT)	677.13	393.78	814.03

MSPDCL requests the Commission to approve the revised sales projections for FY 2022-23.

4.2. Energy Balance and Transmission & Distribution Loss

The computation of revised Transmission & Distribution losses for FY 2022-23 is shown in the Table below:

Table 26: Transmission and Distribution Losses

S No.	Particulars	Unit	Revised
1	Own Generation	MU	0.00
2	Power purchase from CGS	MU	1206.98
3	Add: UI Over drawl	MU	13.20
4	Add: IEX purchases	MU	74.56
5	Add: Returned Banking Energy	MU	137.41
6	Less: IEX sales	MU	110.43
7	Less: Banking mode sales	MU	136.37
8	Gross Energy handled at NER	MU	1185.35
9	Pool Losses	%	2.36%
10	Energy Losses at NER	MU	27.97
11	Net Energy available at NER after losses	MU	1157.37
12	Less: UI Under drawl	MU	11.76
13	Gross Energy handled at State Periphery	MU	1145.61
14	Total Sales (LT+HT)	MU	814.03
15	Transmission and Distribution loss	MU	331.57
16	Transmission and Distribution loss	%	28.9%

The projected T&D Losses of 28.9% is expected be achieved by MSPDCL in FY 2022-23 against the approved figure of 29.00% approved by Hon'ble Commission in its ARR order.

Table 27: Transmission and Distribution Losses for APR of FY 2022-23

Particulars	Approved in ARR order	Revised Projection
Distribution Loss	29.00%	28.90%

It is submitted that energy availability for FY 2022-23 has been computed based on the actual Power purchase. Further, the transmission licensee, MSPCL operates the 33 kV network which is the input point of the distribution network. It may to be noted that MSPDCL network periphery included only 11KV system and below whereas 33 KV and above transmission network falls under the MSPCL network. Therefore, segregating the MSPDCL distribution losses and MSPCL network losses, in absence of proper metering arrangements is not possible. Further, the Hon'ble Commission has stated that w.e.f. 01.02.2014, MSPDCL shall be responsible for distribution losses. In absence of an accurate figure of losses for 33 kV and above network, the Commission had calculated the losses without subtracting the intra state transmission losses (@ 8.5% in the ARR order) which led to distribution losses of 20.40% and overall T&D losses of 28.90%. Because of huge differences in the figures of intra state transmission losses of claimed and approved as well as year wise difference, we have shown the combined T&D losses here.

The quantum of distribution losses is primarily due to the higher LT line lengths and the hilly / complex terrain of Manipur State. The long LT distribution lines and distribution at 11 kV are leading to higher distribution losses in the state. In the recent past, due to various initiatives in rural electrification, significant progress was made by MSPDCL in addition to the rural consumers. However, it is pertinent to note that the new consumer addition happened in most remote areas by extending the distribution network of MSPDCL. Due to smaller load and low consumption level, technical line losses would be quite high in those areas. MSPDCL is trying its best to serve them continuously and maintain these systems with its workforce efficiently. With the present state of complex terrain, long LT distribution lines, scatter LT domestic consumers, the actual LT distribution losses in Manipur are higher than the Commission approved distribution losses as given in its ARR order. Further, MSPDCL is in the process of expanding the coverage of prepaid meters to reduce unauthorized usage of electricity and the T&D losses. As the coverage of prepaid meters increased in the state in the future years, the T&D losses gradually improved.

Table 28: Energy balance (MU) for APR FY 2022-23

S No.	Particulars	Unit	Approved in ARR order	Revised Projection
1	Energy Sales	MU	724.68	814.03
2	T&D Loss	%	20.50%	28.94%
3	Energy Requirement at T&D boundary	MU	988.81	1145.61
4	Inter-State Transmission losses	%	6.20%	
5	Energy Requirement at State periphery	MU	988.81	1145.61
6	Inter-State Transmission Losses	%	2.54%	2.36%
7	Total Energy Requirement	MU	1014.58	1173.30
8	Total Energy Available from Long Term Sources	MU	1022.01	1206.98
9	Net Surplus / (Deficit) at State Periphery	MU	7.41	34.49

Based on the projected sales to consumers, projected distribution loss, interstate (as per average loss data from NERLDC) and intra state losses (as approved), projected power purchase and the energy balance is calculated and the surplus power available for banking / surplus sale is estimated and MSPDCL request the Hon. Commission to approve the same.

4.3. Energy Purchase

MSPDCL receives allocated power from various Central Generating Stations in North Eastern Region, viz., NEEPCO, NHPC, Tripura-Baramura and OTPC- Palatana, and NTPC Bongaigaon for power purchase under long term PPAs. The proposed power purchase for FY 2022-23 has been projected in the MYT order based on the annual allocation of different power projects. MSPDCL is required to purchase the contracted quantum of power from different sources as projected in MYT order. Due to dam related problem in Kopili HEP, no power was available from the project.

However, the actual power purchase quantum is likely to vary based on the energy availability, hydrology, operational conditions of the plants etc. While estimating the power purchase for FY 2022-23, actual power purchase during the first six months is considered along with the availability of plants in next six months. Further, based on the actual power procurement for FY 2021-22, year on year growth has been considered based on the planned allocation for projecting the power purchase for current financial year. Accordingly, the revised energy purchase has been proposed. The revised energy purchase for FY 2022-23 is detailed in the Table below:

Table 28: Power Purchase Cost and Quantum for APR FY 2022-23

		Approved in ARR		Revised Projections	
		Energy Purchased / generated (ex-bus) (MU)	Total cost (Rs. Crore)	Energy Purchased / generated (ex-bus) (MU)	Total Cost (Rs. Crore)
A	CGS - NEEPCO				
1	Kopili - I HE	1.00	0.44	-	-
2	Kopili - II HE	3.00	1.46	-	-
3	Khandong HE	15.00	2.62	-	-
4	Ranganandi HE Project	110.00	24.64	107.14	22.33
5	Doyang HE Project	15.00	10.61	14.23	8.63
6	Assam GBPP	105.00	43.73	142.24	87.38
7	Agartala GTPP	70.00	31.71	68.72	40.09
	Sub-total	319.00	66.24	332.32	158.43
B	CGS - NHPC				
1	Loktak HEP	180.00	15.76	127.58	42.82
2	Loktak Free power	62.00		63.26	
	Sub-total	242.00	15.76	190.83	42.82
C	Other				
1	Baramura GBPP Unit IV and V	32.00	19.49	11.18	5.13
2	OTPC Pallatana Unit I	225.00	98.07	399.4	131.3
	Sub-total	257.00	190.14	410.58	136.43
D	New Plants				
1	NTPC Bongaigaon	158.00	168.11	232.83	149.91
2	Pare HEP	40.00	20.02	40.41	20.21
	Sub-total		489.16	273.24	170.12
E	Short-term power purchase				
1	IEX Purchase	30.45	8.53	74.56	26.10
2	IEX Sales	-35.00			
	Sub-total			74.56	26.10
F	UI Overdrawl			13.01	3.38
G	Banking purchase	80.00			
H	Supplementary Bills		40.00		
I	REC		32.10		
	TOTAL POWER PURCHASE COST	1017.46	569.79	1294.74	536.70

MSPDCL, therefore, requests the Hon'ble Commission to approve the revised power purchase costs for FY 2022-23.

4.4. Transmission charges

The transmission charges include the charges paid to PGCIL, MSPCL and SLDC charges. The summary of transmission charges approved by the Commission in ARR order and the revised projections for FY 2022-23 is as follows:

Table 29: Transmission charges for APR FY 2022-23

S No.	Particulars	Approved in ARR Order	Revised projections
1	PGCIL Charges	93.80	104.20
2	MSPCL Charges	93.86	84.83
3	SLDC Charges	0.00	0.87
4	NERLDC Charges	0.71	0.71
	Total	188.37	190.60

The transmission charges are uncontrollable in nature as the same are levied based on approved cost and orders of CERC and JERC as applicable for inter-state and intra state transmission respectively.

As such, MSPDCL requests the Hon'ble Commission to approve the Revised transmission cost.

4.5. Operation and Maintenance Expenses

The Operation and Maintenance (O&M) expenses comprises of Employee Expenses, Repair and Maintenance (R&M) Expenses and Administrative and General (A&G) Expenses. In the FY 2022-23 based on six months data, revised projection of the O&M expenses as follows:

Table 30: O&M Expenses for APR FY 2022-23

S No.	Particulars	Approved in ARR Order	Revised Projections
1	Employee Expenses	77.15	72.02
2	R&M Expenses	8.25	11.78
3	A&G Expenses	6.12	9.66
	Total	91.52	93.46

Accordingly, MSPDCL submits Hon'ble Commission to approve the proposed O&M costs of Rs. 93.46 Crore for FY 2022-23.

4.6. Interest on Working Capital

The interest on working capital is calculated as interest incurred on operation and maintenance expenses for one month, power purchase cost for one month, Receivables equivalent to one (1) month of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs as per clause 29.4 of the JERC (Multi Year Tariff) Regulations 2014.

The computation of normative Interest on Working Capital (IoWC) for MSPDCL for FY 2022-23, is shown in the Table below:

Table 31: IoWC for APR FY 2022-23

S No.	Particulars	Approved in ARR order	Revised Projections
1	O & M Expenses one month	Disallowed	7.79
2	Maintenance of spares @ 1% of GFA Escalated by 6%		27.89
3	Receivable equivalent to one month		42.96
4	Less: Consumer Security Deposit		
5	Net WC requirement		78.63
6	SBAR rate as on 01.04.2018		12.30%
7	Interest of Working Capital		9.67

MSPDCL requests the Hon'ble Commission to approve the IoWC of Rs.9.67 Crore for FY 2022-23.

4.7. Gross Fixed Assets and Depreciation

The depreciation on the GFA is calculated as per the JERC (MYT) Regulations 2014. As, the assets are funded by 90% grant from the Central Government the net depreciation booked shall be 10% of the calculated depreciation.

For calculating the GFA the figures of the base year have been used, the capital expenditure for a particular year has been capitalized in the next year. On the basis of the projected GFA, the additional depreciation has been calculated. The additional depreciation is on the new assets added to the GFA. The depreciation on the older assets has been calculated as per the accounts and the additional depreciation is added to the same for finding out the final value of the depreciation charged for the Financial year.

The depreciation for FY2022-23 is shown as below:

Table 32: GFA for APR FY 2022-23

S No	Particulars	Opening balance as on 31.03.2022	Additions	Closing balance as on 31.03.2023	Additional Depreciation for FY 2022-23 @ 10% of gross depreciation
1	Plant & Machinery	2,376.18	149.25	2,525.43	0.79
2	Building	64.70	4.06	68.76	0.01
3	Furniture & fittings	1.32	0.08	1.40	0.00
4	Computer	9.75	0.61	10.36	0.01
5	Heavy Equipments	0.88	0.06	0.94	0.00
6	Heavy Vehicle	0.88	0.06	0.94	0.00
7	Office Equipments	0.09	0.01	0.09	0.00
8	Vehicle	5.77	0.36	6.13	0.00
9	Land	0.35	0.02	0.38	-
10	Software	15.47	0.97	16.44	0.01
	TOTAL	2475.38	155.48	2,630.86	0.82

The additional depreciation on the addition for FY 2022-23 has been added to the booked depreciation for FY 2021-22 to arrive at the depreciation for FY 2022-23

Table 33: Depreciation for APR FY 2022-23

Particulars	Approved in ARR order	Revised Projections
Depreciation	1.84	17.08

4.8. Interest on Loan

The major part of capital expenditure undertaken by MSPDCL is funded by the Central / State Government's grants and consumer contribution. However, in addition to these sources of funds, MSPDCL has also taken a significant amount of loan from REC for RAPDRP-B Project and RGGVY project. The repayment of loans during the year has been considered as per actual repayment, and the repayment has been considered proportionately based on the opening loan balance.

Table 34: GFA for APR FY 2022-23

S No.	Particulars	Approved in ARR Order	Revised projections
1	Interest & Finance Charges	17.62	6.61

The details of loans with the computation of Interest on loan are shown in the Table below:

Table 35: Loan details for APR FY 2022-23

S No.	Particulars	Loan 1 (PFC R- APDRP- A)	Loan 2 (PFC R- APDRP- B)	Loan 3 (REC R- APDRP- B)	DDUJGY	Prepaid Meter loan (Hill & Valley) (REC)	SLTTL (PFC)	SLTTL (REC)
1	Opening Loan	14.35	353.74	23.93	16.96	63.09	55.74	55.74
2	Addition during the Year					27.30		
3	Repayment during the year							
4	Closing Loan	14.35	353.74	23.93	16.96	90.39	55.74	55.74
5	Average Loan							
6	Rate of Interest	9%	9%	12%	11%	10%	10%	10%
7	Interest & Finance Charges			1.35		4.74	2.70	2.66

4.9. Return on Equity

As per audited accounts, the RoE is computed on paid up capital of Rs. 10.05 Crore at the rate of 15.50% as stated in clause 26.1 of JERC (Multi Year Tariff) regulations 2014

Table 36: RoE for APR FY 2022-23

S No.	Particulars	Approved in ARR Order	Revised projections
1	Average Equity	10.05	10.05
2	RoE %	15.50%	15.50%
3	Return on Equity	1.56	1.56
4	MAT Rate applicable	0.00%	0.00%
	Net RoE (Grossed up by MAT rate)	1.56	1.56

MSPDCL requests the Hon'ble Commission to approve the Return on Equity of Rs.1.56 Crore for FY 2022-23

4.10. Non-tariff Income

The actual Non-tariff income as compared to the approved figure in ARR of FY 2022-23 is as follows:

Table 37: NTI for APR FY 2022-23

Particulars	Approved in ARR order	Revised projections
Non-tariff Income	8.00	6.08

MSPDCL requests the Hon'ble Commission to approve the actual Non-Tariff Income of Rs. 6.08 Crore for FY 2022-23.

4.11. Aggregate Revenue Requirement

Based on the above component-wise expenses, the Aggregate Revenue Requirement computed for FY 2022-23 by MSPDCL against the figures approved by the Commission in the Tariff Order for FY 2022-23, is given in the Table below:

Table 38: Aggregate Revenue Requirement for APR of FY2022-23 (Rs. Crore)

S No.	Particulars	Approved in ARR Order	Revised Projections
1	Cost of power purchase	569.79	536.70
2	Transmission charges	188.37	190.61
3	O&M Expenses	91.52	93.46
	Employee Expenses	77.15	72.02
	A&G Expenses	6.12	9.66
	R&M Expenses	8.25	11.78
4	Depreciation	1.84	16.26
5	Interest on Loan	17.62	6.61
6	Interest on Working Capital	0.00	9.67
	Total Cost	868.51	853.31
7	Add: RoE	1.56	1.56
8	Add: Income Tax	0.00	0.00
	Total	870.07	854.87
9	Less: Non-tariff Income	8.00	6.08
10	Less: Efficiency Gains	0.00	0.00
	Aggregate Revenue Requirement (ARR)	862.07	848.79
11	Less: Revenue from sale of surplus power	7.93	61.18
	Net ARR	854.14	787.61

4.12. Revenue Gap

The Revenue Gap of MSPDCL for FY 2022-23 as against the Revenue Gap approved by the Hon'ble Commission in the ARR Order for FY 2021-22 is shown in the Table below:

Table 39: Revenue Gap for APR of FY2022-23 (Rs. Crore)

S No.	Particulars	Revised projections
1	Net ARR after considering outside sale income	848.79
2	Total Revenue from consumer tariff at existing rates	515.51
3	Revenue Gap before Govt. Subsidy (1-2)	333.28
4	State Government Revenue Subsidy	290.38
5	Revenue Gap / (Surplus) (4-3)	42.90

As can be seen from the above Table, the Revenue Gap in APR of FY 2022-23 will be largely met by State Government subsidy of Rs 290.38 Crore.

Based on the revised projections mentioned in the table above, MSPDCL requests the Hon'ble Commission to pass the **approve the revenue gap of INR 42.90 crores.**

Chapter 5: Determination of Multi-Year ARR projections from FY 2023-24 to FY 2027-28

5.1. Preamble

- 5.1.1. The Hon'ble Commission came up with its Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 applicable from 1st April 2015.
- 5.1.2. This section outlines the MYT petition of MSPDCL as per the JERC (Manipur and Mizoram) MYT Regulations, 2014 for the Second Control Period from FY 2023-24 to 2027-28 covering the following projections:
- Sales, No. of Consumers and Connected load
 - Energy requirement and Energy balance
 - Power purchase cost
 - Multi-Year Aggregate Revenue Requirement from FY 2023-24 to 2027-28
- 5.1.3. MSPDCL is submitting its ARR and Tariff Petition for determination of Tariff and ARR for FY 2023-24 broadly on the basis of the principles outlined in MYT Tariff Regulations notified by JERC. MSPDCL has considered the past trends and taken cognizance of other internal and external developments to estimate the likely performance for FY 2023-24 to FY 2027-28.
- 5.1.4. The following sections explain in detail the basis and forecasts of the following elements for FY 2023-24:
1. Category wise Energy Sales & Revenues at existing tariffs
 2. T&D Losses and Energy Requirement
 3. Determination of Aggregate Revenue Requirement by forecasting the following costs, other income & returns:
 - Power Purchase Cost
 - Employee Cost
 - Repairs & Maintenance Cost
 - Admin & General Cost
 - Capital Investment Plan
 - Interest Cost
 - Depreciation
 - Return on Equity
 - Non-Tariff Income
 4. Determination of Gap between Revenue & Costs and the arrangements to cover the revenue gap for the First year of the Second Control Period i.e. FY 2023-24 to FY 2027-28.

5. Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap for FY 2023-24.

5.2. Energy Sales

As per section 88.1 of MYT regulations 2014; The Distribution Licensee shall submit a forecast of the expected sales of electricity to each tariff category/sub-category and to each tariff slab within such tariff category/sub-category to the Commission for approval along with the Business Plan, as specified in these Regulations.

Also, as per section 88.3 of MYT regulations 2014; The sales forecast shall be consistent with the load forecast prepared as part of the long-term power procurement plan submitted as a part of Business Plan and shall be based on past data and reasonable assumptions regarding the future.

5.2.1. Approach for Sales

It has been observed from past experience that the historical trend method has proved to be a reasonably accurate and well accepted method for estimating the load, number of consumers and energy consumption. In light of the above, MSPDCL has estimated the above for various customer categories primarily based on the CAGR trends during past years. Wherever the trend has seemed unreasonable or unsustainable, the growth factors have been corrected by the company, to arrive at more realistic projections.

5.2.2. Summary for growth and projections

The growth rates observed in the energy sold to each consumer category has been analysed for the purpose of sales projections for the Third Control Period FY 2023-24 to 2027-28. The analysis of the growth rate helps us understand the behavior of each category and hence forms the basis of forecasting the sales for each category.

5.2.3. Category-wise energy sold

The Break-up of the sales and the CAGR growth rates for different periods (3 year, 2 year and year on year) thereof are as follows. CAGR has been computed for each consumer category for the 3-year period FY 2018-19 to FY 2021-22, and the 2-year period FY 2019-20 to FY 2021-22, along with the y-o-y growth rate of FY 2020-21 over FY 2021-22, as summarized in the table below.

Table 40: Actual category-wise Energy Sales (MU)

S No	Category	2018-19	2019-20	2020-21	2021-22	2022-23 (till Sept)
A	LT Supply					
1	Kutir Jyoti	15.22	21.56	4.46	4.36	1.98
2	Domestic	392.04	397.62	478.93	523.6	265.47
3	Commercial LT	45.54	46.71	70.26	65.94	32.47
4	Public Lighting	5.41	5.22	4.55	4.12	2.16
5	PWW	2.14	2.26	1.57	1.37	0.69
6	Irrigation and Agriculture					
(i)	Agriculture	0.00	0.00	0.00	0.00	0.00
(ii)	Irrigation (Others)	1.22	1.31	1.43	1.23	0.61

S No	Category	2018-19	2019-20	2020-21	2021-22	2022-23 (till Sept)
7	Cottage and Small Industries	19.96	20.58	24.68	20.77	10.38
	Total LT	481.53	495.26	585.88	621.39	313.76
B	HT Supply					
1	Commercial HT	6.45	5.34	23.58	21.31	10.86
2	PWW	17.24	20.00	25.43	25.59	13.17
3	Irrigation and Agriculture					
(i)	Agriculture	0.00	0.00	0.00	0.00	0.00
(ii)	Irrigation (Others)	0.78	5.34	0.93	0.79	0.4
4	Medium Industries	4.05	2.01	5.00	4.18	2.36
5	Large Industries	5.65	13.31	9.32	8.69	4.64
6	Bulk Supply	111.48	133.04	98.05	96.25	48.59
	Total HT	145.65	179.04	162.31	156.81	80.02
	Grand Total	627.18	674.30	748.19	778.19	393.78

As can be seen, MSPDCL overall energy sales are significantly dependent on the domestic consumers to the extent of around 60%. MSPDCL is of the view that there are various factors contributing to the growth in the energy sales and beyond the control of the utility including factors such as Rural Electrification, Government Policy, economic climate, weather conditions and force majeure events like natural disasters, etc. MSPDCL therefore, for projecting the category-wise consumption for the FY 2023-24 to FY 2027-28 has considered the past growth trends of last 4 years in each of the consumer category sales and the availability of supply. It is also submitted that the sales in Domestic category have increased due to launch of Saubhagya Scheme. The growth rates, on CAGR basis, for projection have been calculated as below:

Table 41: Category-wise Energy Sales CAGR (%)

S No	Category	3-year	2-year	1-year	Growth rate assumed
A	LT Supply				
1	Kutir Jyoti	-34%	-55%	-2%	0%
2	Domestic	10%	15%	9%	10%
3	Commercial LT	13%	19%	-6%	10%
4	Public Lighting	-9%	-11%	-9%	1%
5	PWW	-14%	-22%	-13%	0%
6	Irrigation and Agriculture				
(i)	Agriculture	0%	0%	0%	0%
(ii)	Irrigation (Others)	0%	-3%	-14%	0%
7	Cottage and Small Industries	1%	0%	-16%	1%
B	HT Supply				
1	Commercial HT	49%	100%	-10%	10%
2	PWW	14%	13%	1%	10%
3	Irrigation and Agriculture				
(i)	Agriculture	0%	0%	0%	0%
(ii)	Irrigation (Others)	0%	-62%	-15%	0%

S No	Category	3-year	2-year	1-year	Growth rate assumed
4	Medium Industries	1%	44%	-16%	1%
5	Large Industries	15%	-19%	-7%	10%
6	Bulk Supply	-5%	-15%	-2%	1%

The category wise CAGR has been applied on sales volume of FY 2021-22. This is because of the fact that, in FY 2021-22, we have got actual total energy sales data for FY 2021-22. On this sales data of FY 2021-22, the historical growth trend percentage is applied to project sales for FY 2023-24 to FY 2027-28.

Table 42: Category-wise Projected Energy Sales (MU)

S No	Category	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
A	LT Supply						
1	Kutir Jyoti	3.96	3.96	3.96	3.96	3.96	3.96
2	Domestic	552.18	607.40	668.13	734.95	808.44	889.29
3	Commercial LT	64.94	71.43	78.58	86.44	95.08	104.59
4	Public Lighting	5.67	5.73	5.78	5.84	5.90	5.96
5	PWW	1.38	1.38	1.38	1.38	1.38	1.38
6	Irrigation and Agriculture						
(i)	Agriculture	0.00	0.00	0.00	0.00	0.00	0.00
(ii)	Irrigation (Others)	1.22	1.22	1.22	1.22	1.22	1.22
7	Cottage and Small Industries	20.76	20.97	21.18	21.39	21.60	21.82
	Total LT	650.11	712.08	780.23	855.17	937.59	1028.21
B	HT Supply						
1	Commercial HT	21.72	23.89	26.28	28.91	31.80	34.98
2	PWW	26.34	28.97	31.87	35.06	38.56	42.42
3	Irrigation and Agriculture						
(i)	Agriculture	0.00	0.00	0.00	0.00	0.00	0.00
(ii)	Irrigation (Others)	0.80	1.00	1.20	1.40	1.60	1.60
4	Medium Industries	4.72	4.77	4.81	4.86	4.91	4.96
5	Large Industries	9.28	10.21	11.23	12.35	13.59	14.95
6	Bulk Supply	101.07	103.08	105.11	107.16	109.23	111.32
	Total HT	163.93	171.92	180.50	189.74	199.69	210.23
	TOTAL (LT+HT)	814.03	884.00	960.74	1044.92	1137.28	1238.44

Growth projections for FY 2023-24 to FY 2027-28

This section discusses in detail the basis for taking the growth projections for various categories of consumers as enumerated above. For projecting the no. of consumers for FY 2023-24 to 2027-28, the base number of FY 2021-22 is considered.

Domestic/Residential

MSPDCL has witnessed a remarkable growth in the units sold in the last four years in this category. The average CAGR growth rate between FY 2018-19 to FY 2021-22 has been 10.00%. As this category contributes the most of the sales and increase in rural electrification, the company expects this trend to continue for the Third Control Period.

Commercial

Considering the past trend in increasing consumer numbers in this category, a growth rate of 10.00% over actual number of FY 2021-22 is considered for projecting the number of consumers for Third Control Period.

Irrigation and Agriculture

Considering the trend of declining sales for Irrigation and Agriculture (both HT and LT) category, it was prudent to adopt a 0% growth rate for this category.

Public Lighting

The past sales trend suggest that sales from this category were falling. However, in the current year, MSPDCL has installed 64 high mast lights and 1164 street lights. As such, this has been factored in while calculating the consumption for FY 2022-23. Despite, negative sales growth trend, it shall be prudent to adopt a 1% growth rate for Third Control Period for this category as it comes under the essential services category.

Large Industry

Large Industry category has shown robust sales growth w.r.t. the time period under consideration. The fall in sales in recent years is due to COVID-19 induced lockdown. However, considering, the State Government has undertaken several initiatives to promote industrial growth in Manipur, we have considered a 10% growth rate for this category.

5.3. Consumer Profile

Manipur State Power Distribution Company Limited caters to a diverse consumer mix constituting of domestic, commercial, HT Industry, LT Industry and agriculture consumers. The number of consumers in various categories is summarized in table below:

Table 43: Category-wise Projected Number of Consumers

S No	Category	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
		Actual	(Est.)	Projected				
A	LT Supply							
1	Kutir Jyoti	15,907	14,406	13942	13494	13060	12639	12233
2	Domestic							
(i)	First - 100 kWh/Month	411,237	416,205	418856	421524	424209	426911	429631
(ii)	Next - 100 kWh/Month	35,434	37,960	38997	40063	41158	42283	43438
(iii)	Above 200 kWh/Month	12,019	15,270	16835	18561	20463	22561	24873
3	Commercial LT							
(i)	First - 100 kWh/Month	17,216	17,414	17748	18088	18434	18787	19147

S No	Category	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
(ii)	Next - 100 kWh/Month	4,091	5,194	5641	6127	6655	7229	7851
(iii)	Above 200 kWh/Month	5,486	5,524	6198	6954	7802	8753	9821
4	Public Lighting	471	494	505	516	528	540	552
5	PWW	42	42	43	43	44	44	45
6	Irrigation and Agriculture							
(i)	Agriculture	0	0	0	0	0	0	0
(ii)	Irrigation (Others)	48	48	48	49	49	49	50
7	Cottage and Small Industries	2,385	2,385	2402	2420	2437	2455	2473
	Total LT	504,336	514,942	521,216	527,838	534,839	542,251	550,113
B	HT Supply							
1	Commercial HT	1,088	1,109	1172	1239	1309	1383	1462
2	PWW	202	208	221	234	248	263	279
3	Irrigation and Agriculture							
(i)	Agriculture	0	0	0	0	0	0	0
(ii)	Irrigation (Others)	21	21	21	21	21	21	21
4	Medium Industries	99	112	125	140	156	175	195
5	Large Industries	44	47	50	54	58	62	67
6	Bulk Supply	412	416	426	436	446	456	467
	Total HT	1,866	1,913	2,015	2,123	2,238	2,360	2,491
	Grand Total	506,202	516,855	523,231	529,961	537,077	544,612	552,604

The Break-up of the category-wise number of consumers and the CAGR growth rates for different periods (4 year, 3 year, 2 year and year on year) are as follows:

Table 44: Category wise Number of consumers CAGR (%)

S No	Category	4-year	3-year	2-year	1-year	Growth rate assumed
A	LT Supply					
1	Kutir Jyoti	-2%	-3%	-4.8%	-9%	-3%
2	Domestic					
(i)	First - 100 kWh/Month	0%	0%	0.6%	1%	1%
(ii)	Next - 100 kWh/Month	3%	3%	4.1%	7%	3%
(iii)	Above 200 kWh/Month	9%	10%	15.8%	27%	10%
3	Commercial LT					
(i)	First - 100 kWh/Month	1%	2%	2.6%	1%	2%
(ii)	Next - 100 kWh/Month	9%	10%	16.9%	27%	9%
(iii)	Above 200 kWh/Month	12%	16%	26.4%	1%	12%

S No	Category	4-year	3-year	2-year	1-year	Growth rate assumed
4	Public Lighting	3%	2%	2.4%	5%	2%
5	PWW	13%	6%	1.2%	0%	1.2%
6	Irrigation and Agriculture					
(i)	Agriculture	0%	0%	0.0%	0%	0%
(ii)	Irrigation (Others)	5%	1%	0.0%	0%	1%
7	Cottage and Small Industries	1%	0%	0.0%	0%	1%
B	HT Supply					
1	Commercial HT	23%	17%	5.7%	2%	5.7%
2	PWW	4%	6%	4.9%	3%	6%
3	Irrigation and Agriculture					
(i)	Agriculture	0%	0%	0.0%	0%	0%
(ii)	Irrigation (Others)	-6%	-8%	-10.1%	0%	0%
4	Medium Industries	26%	12%	12.8%	13%	12%
5	Large Industries	15%	7%	9.8%	7%	7%
6	Bulk Supply	-1%	2%	0.5%	1%	2%

5.4. Connected Load

The growth rate for projecting connected load has been assumed to be 40% of the growth rate assumed for projecting the sales. The table below mentions the growth rate assumed for the projection of connected load from FY 2023-24 to FY 2027-28.

Table 45: Category wise connected load CAGR (%)

S No	Category	Growth rate assumed
A	LT Supply	
1	Kutir Jyoti	0.0%
2	Domestic	
(i)	First - 100 kWh/Month	4.0%
(ii)	Next - 100 kWh/Month	4.0%
(iii)	Above 200 kWh/Month	4.0%
3	Commercial LT	
(i)	First - 100 kWh/Month	4.0%
(ii)	Next - 100 kWh/Month	4.0%
(iii)	Above 200 kWh/Month	4.0%
4	Public Lighting	0.4%
5	PWW	0.0%
6	Irrigation and Agriculture	
(i)	Agriculture	0.0%
(ii)	Irrigation (Others)	0.0%
7	Cottage and Small Industries	0.4%
B	HT Supply	
1	Commercial HT	4.0%
2	PWW	4.0%

S No	Category	Growth rate assumed
3	Irrigation and Agriculture	
(i)	Agriculture	0.0%
(ii)	Irrigation (Others)	0.0%
4	Medium Industries	0.4%
5	Large Industries	4.0%
6	Bulk Supply	0.4%

The connected load in various categories is summarized in table below:

Table 46: Category wise Projected Connected load CAGR (MW)

S No	Category	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
		Actual	(Est.)	Projected				
A	LT Supply							
1	Kutir Jyoti	7.37	6.97	6.97	6.97	6.97	6.97	6.97
2	Domestic							
(i)	First - 100 kWh/Month	586.24	587.64	611.14	635.59	661.01	687.45	714.95
(ii)	Next - 100 kWh/Month	84.36	84.83	88.22	91.75	95.42	99.24	103.21
(iii)	Above 200 kWh/Month	41.30	41.45	43.11	44.83	46.63	48.49	50.43
3	Commercial LT							
(i)	First - 100 kWh/Month	43.41	44.79	46.58	48.45	50.38	52.40	54.50
(ii)	Next - 100 kWh/Month	9.42	9.64	10.02	10.42	10.84	11.27	11.72
(iii)	Above 200 kWh/Month	36.44	36.96	38.44	39.98	41.57	43.24	44.97
4	Public Lighting	1.21	1.22	1.23	1.23	1.24	1.24	1.25
5	PWW	0.48	0.45	0.45	0.45	0.45	0.45	0.45
6	Irrigation and Agriculture							
(i)	Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(ii)	Irrigation (Others)	0.37	0.37	0.37	0.37	0.37	0.37	0.37
7	Cottage and Small Industries	19.27	20.30	20.38	20.46	20.54	20.63	20.71
	Total LT	829.85	834.61	866.91	900.50	935.42	971.75	1009.52
B	HT Supply							
1	Commercial HT	21.84	26.20	27.25	28.34	29.47	30.65	31.88
2	PWW	17.06	17.61	18.31	19.04	19.81	20.60	21.42
3	Irrigation and Agriculture							
(i)	Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(ii)	Irrigation (Others)	0.74	0.76	0.76	0.76	0.76	0.76	0.76
4	Medium Industries	4.54	4.61	4.62	4.64	4.66	4.68	4.70
5	Large Industries	12.07	12.49	12.99	13.51	14.05	14.61	15.19
6	Bulk Supply	51.53	49.19	49.39	49.58	49.78	49.98	50.18

S No	Category	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
	Total HT	107.76	110.86	113.32	115.88	118.53	121.28	124.14
	Grand Total	937.61	945.47	980.23	1016.38	1053.96	1093.03	1133.65

5.5. T&D Loss

Being a hilly terrain and characterized by population spread out throughout the State, the system network of the State consist of long length of distribution and LT lines, with aging components which are being upgraded through various schemes. The MSPDCL (erstwhile EDM) has achieved a significant reduction in transmission & distribution losses in the past.

It is submitted that T&D has been computed based on the actual Power purchase. Further, the transmission licensee, MSPCL operates the 33 kV network which is the input point of the distribution network. It may to be noted that MSPDCL network periphery included only 11KV system and below whereas 33 KV and above transmission network falls under the MSPCL network. Therefore, segregating the MSPDCL distribution losses and MSPCL network losses, in absence of proper metering arrangements is not possible. Further, the Hon'ble Commission has stated that w.e.f. 01.02.2014, MSPDCL shall be responsible for distribution losses. In absence of an accurate figure of losses for 33 kV and above network, the Commission had calculated the losses without subtracting the intra state transmission losses (@ 8.50% in the ARR order). Because of huge differences in the figures of intra state transmission losses of claimed and approved as well as year wise difference, we have shown the combined T&D losses here.

Continuous efforts made towards implementation of prepaid metering in the distribution area of MSPDCL has started to show its effect in the form of higher revenue collection and decline in losses, the actual LT distribution losses in Manipur are higher than the Commission approved distribution losses as given in its ARR order.

The T&D loss trajectory for Third Control Period is aimed at reducing the T&D losses to around 15% for FY 2027-28. Despite increase in number of LT connections due to various electrification schemes, MSPDCL has been able to reduce the T&D losses and has made continuous efforts for reducing the losses including installation of pre-paid metering and upgrading its distribution infrastructure. MSPDCL shall be installing smart prepaid meters under the Revamped Distribution Sector Scheme (RDSS). This would aid in reducing the T&D loss.

The T&D loss trajectory for Third Control Period is given in the table below:

Table 47: T&D loss trajectory (%)

Particulars	2021-22 (Actual)	2022-23 (Estimated)	2023-24	2024-25	2025-26	2026-27	2027-28
T&D Loss	24.58%	28.94%	25.00%	22.50%	20.00%	17.50%	15.00%

The MSPDCL submits to the Commission to approve the distribution losses submitted herein.

5.6. Energy Balance

To arrive at the total energy requirement, the total sales in MUs as projected above has been grossed up by factoring in transmission and distribution losses. The inter-state transmission losses viz. PGCIL pooled losses are assumed at same level as in FY 2021-22 for the entire control period.

Further, the distribution losses are taken as per the projections above. Based on the projected sales for FY 2023-24 to FY 2027-28 and the T&D loss target as shown above, the overall energy requirement at the state periphery of Manipur is projected respectively. The projections for energy requirement for the MYT Third Control Period is shown in the table below:

Table 48: Energy Balance for Third Control Period

S No.	Particulars	Unit	2023-24	2024-25	2025-26	2026-27	2027-28
1	Energy Sales	MU	884.00	960.74	1044.92	1137.28	1238.44
2	T&D Loss	%	25.00%	22.50%	20.00%	17.50%	15.00%
3	Energy Requirement at T&D boundary	MU	1178.67	1239.66	1306.15	1378.52	1456.99
4	Energy Requirement at State periphery	MU	1178.67	1239.66	1306.15	1378.52	1456.99
5	Inter-State Transmission Losses	%	2.36%	2.36%	2.36%	2.36%	2.36%
6	Total Energy Requirement	MU	1207.16	1269.63	1337.72	1411.84	1492.21
7	Total Energy Available from Long Term Sources	MU	1259.17	1259.17	1259.17	1259.17	1259.17
8	Net Surplus / (Deficit) at State Periphery	MU	52.01	-10.46	-78.55	-152.67	-233.04
9	Net Surplus Energy Surplus/Deficit for Short Term Sale/Purchase	MU	53.26	-10.71	-80.45	-156.36	-238.68

5.7. Power Purchase Quantum and Cost

The energy requirement for the MSPDCL is met by supply of power from Central Generating Stations and a small quantum is purchased through short term market. MSPDCL mainly relies on the allocations of power from Central Generating Stations like NHPC, NEEPCO, OTPC Pallatana Unit I and Unit II. MSPDCL has surrendered the allocation from Baramura GBPP Unit IV and V from June 2022. Further, it has reduced the allocation from NTPC Bongaigaon Unit 1-3 from 52 MW earlier to 25.83 MW. MSPDCL is expected to receive power from Lower Subansiri Stage I of total installed capacity 500 MW from April 2023.

The allocation of tied up CGS for FY 2023-24 is shown in the table below:

Table 49: MSPDCL Allocation from CGS for FY 2023-24

S No.	Sources of Power	Installed Capacity (MW)	Allocation (MW)
A	CGS - NEEPCO		
1	Kopili - I HE	200.00	15.03
2	Kopili - II HE	25.00	1.77
3	Khandong HE	50.00	3.35
4	Ranganandi HE Project	405.00	34.40
5	Doyang HE Project	75.00	5.99
6	Assam GBPP	291.00	23.96
7	Agartala GTPP	130.00	10.85
B	CGS - NHPC		

S No.	Sources of Power	Installed Capacity (MW)	Allocation (MW)
1	Loktak HEP	105.00	31.74
2	Loktak Free power		12.60
3	Lower Subansiri Stage I	500.00	22.00
C	Other		
1	OTPC Pallatana	726.00	52.00
D	New Plants		
1	NTPC Bongaigaon	750	25.83
2	Pare HEP	110	9.30
	TOTAL		248.82

The MSPDCL for the purpose of estimation of the power availability during FY 2022-23 has considered the following sources of power:

- NHPC (Loktak HEP) Central Public Sector Generating Stations, (NE Region);
- NTPC Bongaigaon Unit I-III
- NEEPCO (Hydro) Central Public Sector Eastern Region Generating Stations, (NE Region);
- NEEPCO (Gas) Central Public Sector Eastern Region Generating Stations, (NE Region);
- Baramura (Gas turbine), Unit IV & V; Tripura State Electricity Corporation Ltd.
- OTPC, Pallatana-Unit I and Unit II
- Power purchase from short-term sources (IEX).
- Over-drawl under unscheduled interchange during peak hours at lean period.

The power purchase quantum has been computed considering power purchase cost per unit for all MYT Third control period same as FY 2023-24 at average PLF for last 3 years. Also, a hike of 3% in the Average tariff is considered for projecting the power purchase cost.

5.7.1. Power Purchase Quantum

The projected power purchase quantum for Third Control Period is given in the table below:

Table 50: Projected Power Purchase quantum for Third Control Period

S No.	Sources of Power	2021-22 (Actual)	2022-23 (est.)	2023-24	2024-25	2025-26	2026-27	2027-28
A	CGS - NEEPCO							
1	Kopili - I HE	-	-	63.52	63.52	63.52	63.52	63.52
2	Kopili - II HE	0.78	-	4.75	4.75	4.75	4.75	4.75
3	Khandong HE	17.51	-	10.87	10.87	10.87	10.87	10.87
4	Ranganandi HE Project	95.97	107.14	106.40	106.40	106.40	106.40	106.40
5	Doyang HE Project	7.48	14.23	12.41	12.41	12.41	12.41	12.41
6	Assam GBPP	141.61	142.24	129.85	129.85	129.85	129.85	129.85
7	Agartala GTPP	74.75	68.72	71.43	71.43	71.43	71.43	71.43
	Sub-total	338.10	332.32	399.24	399.24	399.24	399.24	399.24
B	CGS - NHPC							
1	Loktak HEP	118.89	127.58	143.85	143.85	143.85	143.85	143.85
2	Loktak Free power	46.70	63.26	60.91	60.91	60.91	60.91	60.91
	Sub-total	165.59	190.83	204.76	204.76	204.76	204.76	204.76
C	Other							
1	Baramura GBPP Unit IV and V	57.67	11.18					
2	OTPC Palatana	240.75	399.4	306.42	306.42	306.42	306.42	306.42
	Sub-total	298.42	410.58	306.42	306.42	306.42	306.42	306.42

S No.	Sources of Power	2021-22 (Actual)	2022-23 (est.)	2023-24	2024-25	2025-26	2026-27	2027-28
D	New Plants							
1	NTPC Bongaigaon	313.12	232.83	231.87	231.87	231.87	231.87	231.87
2	Pare HEP	35.67	40.41	39.79	39.79	39.79	39.79	39.79
3	Lower Subansiri Stage I			77.09	77.09	77.09	77.09	77.09
	Sub-total	348.80	273.24	348.75	348.75	348.75	348.75	348.75
E	Short-term power purchase							
1	IEX Purchase	63.37	74.56	50.35	109.47	175.64	249.20	328.25
	Sub-total	63.37	74.56	50.35	109.47	175.64	249.20	328.25
G	UI Overdrawl	12.87	13.20	13.01	13.01	13.01	13.01	13.01
	TOTAL	1227.15	1294.74	1322.52	1381.64	1447.82	1521.38	1600.43

5.7.2. Power Purchase Cost

The cost of purchase from the central generating stations for FY Third Control Period is estimated based on the following method:

- The per unit power purchase rate for various stations was calculated for FY 2022-23.
- Per unit power purchase rate for FY 2022-23 till the month of September has been taken as per actuals. For the remaining months, same rate has been considered.
- The power purchase cost has been calculated by multiplying the per unit average power purchase rate as estimated above and projected units from each of the stations for FY 2020-21, FY 2021-22 and FY 2022-23.
- The method of estimating average power purchase rate for each of the stations and the per unit rates for MYT Third Control Period from is summarized in the table below:

Table 51: Projected Power Purchase cost for FY 2022-23

S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2022-23	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
A	CGS - NEEPCO			
1	Kopili - I HE	-	-	-
2	Kopili - II HE	-	-	-
3	Khandong HE	-	-	-
4	Ranganandi HE Project	107.14	22.33	2.08
5	Doyang HE Project	14.23	8.63	6.06
6	Assam GBPP	142.24	87.38	6.14
7	Agartala GTPP	68.72	40.09	5.83
	Sub-total	332.32	158.43	4.77
B	CGS - NHPC			
1	Loktak HEP	127.58	42.82	3.36
2	Loktak Free power	63.26		
	Sub-total	190.83	42.82	2.24
C	Other			
1	Baramura GBPP Unit IV and V	11.18	5.13	4.59
2	OTPC Pallatana Unit I	399.4	131.3	3.29
	Sub-total	410.58	136.43	3.32
D	New Plants			
1	NTPC Bongaigaon	232.83	149.91	6.44
2	Pare HEP	40.41	20.21	5.00
	Sub-total	273.24	170.12	6.23
E	Short-term power purchase			
1	IEX Purchase	74.56	26.10	3.50

S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2022-23	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
	Sub-total	74.56	26.10	3.50
F	UI Overdrawl	13.01	3.38	2.60
	TOTAL POWER PURCHASE COST	1294.74	536.70	4.15

Table 52: Projected Power Purchase cost for FY 2023-24

S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2023-24	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
A	CGS - NEEPCO			
1	Kopili - I HE	63.52	8.17	1.29
2	Kopili - II HE	4.75	0.83	1.75
3	Khandong HE	10.87	2.47	2.27
4	Ranganandi HE Project	106.40	25.11	2.36
5	Doyang HE Project	12.41	8.44	6.80
6	Assam GBPP	129.85	64.28	4.95
7	Agartala GTPP	71.43	34.80	4.87
	Sub-total	399.24	144.10	3.61
B	CGS - NHPC			
1	Loktak HEP	143.85	53.87	3.75
2	Loktak Free power	60.91		
	Sub-total	204.76	53.87	2.63
C	Other			
1	Baramura GBPP Unit IV and V			
2	OTPC Pallatana Unit I	306.42	107.68	3.51
	Sub-total	306.42	107.68	3.51
D	New Plants			
1	NTPC Bongaigaon Unit I	231.87	153.78	6.63
2	Pare HEP	39.79	20.44	5.14
3	Lower Subansiri Stage I	77.09	38.54	5.00
	Sub-total	348.75	212.76	6.10
E	Short-term power purchase			
1	IEX Purchase	50.35	27.89	5.54
	Sub-total	50.35	27.89	5.54
F	UI Overdrawl	13.01	3.38	2.60
G	Renewable Energy Certificates			
1	Solar		19.24	
2	Non-solar			
	TOTAL POWER PURCHASE COST	1322.52	568.93	4.30

Table 53: Projected Power Purchase cost for FY 2024-25

5S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2024-25	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
A	CGS - NEEPCO			
1	Kopili - I HE	63.52	8.42	1.33
2	Kopili - II HE	4.75	0.86	1.80
3	Khandong HE	10.87	2.54	2.34

5S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2024-25	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
4	Ranganandi HE Project	106.40	25.86	2.43
5	Doyang HE Project	12.41	8.70	7.01
6	Assam GBPP	129.85	66.21	5.10
7	Agartala GTPP	71.43	35.84	5.02
	Sub-total	399.24	148.43	3.72
B	CGS - NHPC			
1	Loktak HEP	143.85	55.49	3.86
2	Loktak Free power	60.91		
	Sub-total	204.76	55.49	2.71
C	Other			
1	Baramura GBPP Unit IV and V			
2	OTPC Pallatana Unit I	306.42	110.91	3.62
	Sub-total	306.42	110.91	3.62
D	New Plants			
1	NTPC Bongaigaon Unit I	231.87	158.39	6.83
2	Pare HEP	39.79	21.05	5.29
3	Lower Subansiri Stage I	77.09	39.70	5.15
	Sub-total	348.75	219.14	6.28
E	Short-term power purchase			
1	IEX Purchase	109.47	60.65	5.54
	Sub-total	109.47	60.65	5.54
F	UI Overdrawl	13.01	3.38	2.60
G	Renewable Energy Certificates			
1	Solar		17.74	
2	Non-solar			
	TOTAL POWER PURCHASE COST	1381.64	615.74	4.45

Table 54: Projected Power Purchase cost for FY 2025-26

5S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2025-26	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
A	CGS - NEEPCO			
1	Kopili - I HE	63.52	8.67	1.37
2	Kopili - II HE	4.75	0.88	1.86
3	Khandong HE	10.87	2.62	2.41
4	Ranganandi HE Project	106.40	26.64	2.50
5	Doyang HE Project	12.41	8.96	7.22
6	Assam GBPP	129.85	68.19	5.25
7	Agartala GTPP	71.43	36.92	5.17
	Sub-total	399.24	152.88	3.83
B	CGS - NHPC			
1	Loktak HEP	143.85	57.15	3.97
2	Loktak Free power	60.91		
	Sub-total	204.76	57.15	2.79
C	Other			
1	Baramura GBPP Unit IV and V			
2	OTPC Pallatana Unit I	306.42	114.24	3.73
	Sub-total	306.42	114.24	3.73
D	New Plants			
1	NTPC Bongaigaon Unit I	231.87	163.14	7.04
2	Pare HEP	39.79	21.68	5.45
3	Lower Subansiri Stage I	77.09	40.89	5.30

5S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2025-26	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
	Sub-total	348.75	225.72	6.47
E	Short-term power purchase			
1	IEX Purchase	175.64	97.31	5.54
	Sub-total	175.64	97.31	5.54
F	UI Overdrawl	13.01	3.38	2.60
G	Renewable Energy Certificates			
1	Solar		16.58	
2	Non-solar			
	TOTAL POWER PURCHASE COST	1447.82	650.68	4.60

Table 55: Projected Power Purchase cost for FY 2026-27

5S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2026-27	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
A	CGS - NEEPCO			
1	Kopili - I HE	63.52	8.93	1.41
2	Kopili - II HE	4.75	0.91	1.91
3	Khandong HE	10.87	2.70	2.48
4	Ranganandi HE Project	106.40	27.44	2.58
5	Doyang HE Project	12.41	9.23	7.43
6	Assam GBPP	129.85	70.24	5.41
7	Agartala GTPP	71.43	38.03	5.32
	Sub-total	399.24	157.46	3.94
B	CGS - NHPC			
1	Loktak HEP	143.85	61.19	4.25
2	Loktak Free power	60.91		
	Sub-total	204.76	61.19	2.99
C	Other			
1	Baramura GBPP Unit IV and V			
2	OTPC Pallatana Unit I	306.42	117.67	3.84
	Sub-total	306.42	117.67	3.84
D	New Plants			
1	NTPC Bongaigaon Unit I	231.87	168.04	7.25
2	Pare HEP	39.79	22.33	5.61
3	Lower Subansiri Stage I	77.09	42.12	5.46
	Sub-total	348.75	232.49	6.67
E	Short-term power purchase			
1	IEX Purchase	249.20	138.06	5.54
	Sub-total	249.20	138.06	5.54
F	UI Overdrawl	13.01	3.38	2.60
G	Renewable Energy Certificates			
1	Solar		15.57	
2	Non-solar			
	TOTAL POWER PURCHASE COST	1521.38	725.82	4.77

Table 56: Projected Power Purchase cost for FY 2027-28

5S No.	Sources of Power	Energy Purchased / generated (ex-bus)	FY 2027-28	
			Total Cost (Rs. Crore)	Average Rate (Rs / kWh)
A	CGS - NEEPCO			
1	Kopili - I HE	63.52	9.20	1.45
2	Kopili - II HE	4.75	0.94	1.97
3	Khandong HE	10.87	2.78	2.55
4	Ranganandi HE Project	106.40	28.26	2.66
5	Doyang HE Project	12.41	9.50	7.66
6	Assam GBPP	129.85	72.34	5.57
7	Agartala GTPP	71.43	39.17	5.48
	Sub-total	399.24	162.19	4.06
B	CGS - NHPC			
1	Loktak HEP	143.85	60.63	4.22
2	Loktak Free power	60.91		
	Sub-total	204.76	60.63	2.96
C	Other			
1	Baramura GBPP Unit IV and V			
2	OTPC Pallatana Unit I	306.42	121.20	3.96
	Sub-total	306.42	121.20	3.96
D	New Plants			
1	NTPC Bongaigaon Unit I	231.87	173.08	7.46
2	Pare HEP	39.79	23.00	5.78
3	Lower Subansiri Stage I	77.09	43.38	5.63
	Sub-total	348.75	239.46	6.87
E	Short-term power purchase			
1	IEX Purchase	328.25	181.85	5.54
	Sub-total	328.25	181.85	5.54
F	UI Overdrawl	13.01	3.38	2.60
G	Renewable Energy Certificates			
1	Solar		12.27	
2	Non-solar		1.43	
	TOTAL POWER PURCHASE COST	1600.43	782.42	4.88

The Hon'ble Commission is requested to approve the power purchase cost as submitted in the above table.

Automatic Pass through of Fuel and Power Purchase Cost Adjustment

Due to global scenario, the power purchase cost of the thermal power plants have increased sharply this FY. As per the latest MoP rules, the discoms are liable to pay the bills raised by gencos within 45 days else leading to consequences not limiting to regulation of power.

MSPDCL sources power from several gas based TPS from NEEPCO where the APPC has increased by almost 100% since May 2022. In such scenario, MSPDCL is facing working capital issues to pay the bills of the gencos within due date leading to accumulation of power purchase dues.

The MoP vide its letter dated November 21, 2021 has proposed the mechanism for automatic pass through of fuel and power procurement cost citing licensees facing revenue constraints as the corresponding pass through of Fuel and Power Purchase Cost is not done regularly and timely. Timely collection of revenue from consumer would ensure timely payment.

On the same lines, JERC, vide its tariff order for ARR of 2022-23, had explained the mechanism for pass through of Fuel and Power Purchase Cost Adjustment (FPPCA). However, this is not an Automatic pass through and requires the approval of the Commission. This method may lead to delay. It may be changed to provide Automatic pass through in tariff change in costs on account of change in power purchase costs in accordance with the formula laid down by the JERC. MSPDCL may pass through the change in costs due to change in power purchase costs occur. After giving effect to the pass through, it shall send the relevant papers / calculation sheets to the Commission which shall verify the same and confirm the pass through in 60 days. This shall result in less working capital requirements by the MSPDCL.

Therefore, in the above context, MSPDCL requests the Commission to frame regulations for Automatic Pass through of Fuel and Power Purchase Cost Adjustment.

5.7.3. Renewable Purchase Obligations (RPO)

JERC has issued RPO targets vide its regulation Joint Electricity Regulatory Commission for Manipur & Mizoram (Renewable Purchase Obligation and its Compliance) (First Amendment) Regulations, 2022. The RPO targets for Third MYT Control Period FY 2023-24 to FY 2027-28 are shown in the table below:

Table 57: RPO targets for Third MYT control period

Financial Year	Wind RPO	Hydro Power Obligation (HPO)	Other RPO	Total RPO
2023-24	1.60%	0.66%	24.81%	27.08%
2024-25	2.46%	1.08%	26.37%	29.91%
2025-26	3.36%	1.48%	28.17%	33.01%
2026-27	4.29%	1.80%	29.86%	35.95%
2027-28	5.23%	2.15%	31.43%	38.81%

MSPDCL plans to meet the RPO targets through:

- Procuring Green energy from IEX GTAM market
- Renewable Energy Certificates from IEX at prevailing rates
 - Solar RECs at Rs 1.68/unit
 - Non-Solar REC at Rs 1.00/unit

The table below shows the RPO to be met by MSPDCL through power purchase of RE from IEX GTAM market.

Table 58: RPO Compliance for Third MYT control period

S No	Particulars	Formula	Unit	2023-24	2024-25	2025-26	2026-27	2027-28
1	Energy Sale excl. Inter-State Sale		MU	884.00	960.74	1044.92	1137.28	1238.44
2	Total RPO Target		%	27%	30%	33%	36%	39%

S No	Particulars	Formula	Unit	2023-24	2024-25	2025-26	2026-27	2027-28
3	Total RE purchase requirement	1*2	MU	239.39	287.36	344.93	408.85	480.64
4	HPO Target		%	1%	1%	1%	2%	2%
5	Hydrp power purchase requirement	1*4	MU	5.83	10.38	15.46	20.47	26.63
6	WPO Target		%	2%	2%	3%	4%	5%
7	Wind power purchase requirement	1*6	MU	14.14	23.63	35.11	48.79	64.77
8	Other RPO Target		%	25%	26%	28%	30%	31%
9	Other RE Purchase Requirement	1*8	MU	219.32	253.35	294.35	339.59	389.24
10	Energy Storage purchase obligation target		%	1%	2%	2%	3%	3%
11	Energy Storage purchase requirement	1*10	MU	8.84	14.41	20.90	28.43	37.15
12	Actual hydro power purchase		MU	77.09	77.09	77.09	77.09	77.09
13	Surplus / Deficit in Hydro power purchase	12-5	MU	71.25	66.71	61.62	56.62	50.46
14	HPO achievement	12/1	%	9%	8%	7%	7%	6%
15	Wind power purchase		MU	0.00	0.00	0.00	0.00	0.00
16	Surplus / Deficit in wind power purchase	15-7	MU	-14.14	-23.63	-35.11	-48.79	-64.77

S No	Particulars	Formula	Unit	2023-24	2024-25	2025-26	2026-27	2027-28
17	WPO achievement	15/1	%	0%	0%	0%	0%	0%
18	Other RE purchase	a+b+c+d+e	MU	47.69	104.69	169.15	239.09	316.18
a	Co-generation		MU	0.00	0.00	0.00	0.00	0.00
b	Small Hydro		MU	0.00	0.00	0.00	0.00	0.00
c	Biomass		MU	0.00	0.00	0.00	0.00	0.00
d	Solar		MU	47.69	104.69	169.15	239.09	316.18
e	Others		MU	0.00	0.00	0.00	0.00	0.00
19	Surplus / Deficit in other RE purchase	18-9	MU	-171.63	-148.66	-125.20	-100.50	-73.06
20	Other RPO achievement	18/1	%	5%	11%	16%	21%	26%
21	Energy Storage Purchase		MU	0.00	0.00	0.00	0.00	0.00
22	Surplus / Deficit in other RE purchase	21-11	MU	-8.84	-14.41	-20.90	-28.43	-37.15
23	Energy Storage Purchase achievement	21/1	%	0%	0%	0%	0%	0%
24	Total RE purchase achievement	12+15+18+21	MU	124.78	181.78	246.24	316.18	393.27
25	Total RPO achievement	24/1	%	14%	19%	24%	28%	32%

5.8. Transmission charges

Transmission charges payable to PGCIL are based on the point of connection charges per MW per month as notified by CERC and the scheduled generation and drawl by the applicable entity. MSPDCL has allocations from various Central Generating Stations and other generating stations located outside state which determines the transmission charges payable by MSPDCL. The

estimated transmission charges for FY 2022-23 have been projected by escalating the same by 5% and so on.

The Intra-State transmission charges have been adopted from the MYT petition of the MSPCL.

The SLDC and NERLDC charges have been projected same as that of ARR of FY 2022-23.

Table 59: Transmission Charges for Third Control Period (Rs. Crore)

S No.	Particulars	2021-22 (Actual)	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
1	Inter-State Transmission Charges	81.22	104.20	109.41	114.88	120.62	126.66	132.99
2	Intra-State Charges	64.20	84.83	107.39	116.93	128.18	138.79	151.56
3	SLDC Charges	0.01	0.87	0.87	0.87	0.87	0.87	0.87
4	NERLDC Charges	0.80	0.71	0.71	0.71	0.71	0.71	0.71
	Total	146.24	190.6	218.4	233.4	250.4	267.0	286.1

STOA Charges

For procurement and sale of energy through Short-term Open Access, MSPCL vide its letter no. 4/4/(SLDC)/MSPCL/NOAR/2022 dated 21.06.2022 has informed that it shall be levying STU charges @ Rs. 835/Mwh for all STOA transactions. In this regard, MSPDCL, humbly submits that the revised STOA charges have increased multi-fold times. Earlier, MSPCL levied STU charges in accordance with the CERC regulations 2008 @ Rs. 80/Mwh. This multi-fold increase in STOA charges has increased the financial burden on the stressed resources of MSPDCL. In this regard, our further submission is that:

- The STU charges are determined by the Commission based on long term transmission infrastructure planning taking into consideration all the expenses required in developing the infrastructure and market principles. They are basically determined on the capacity to be made available for facilitating the long-term open access.
- STU charges are based on the transmission capacity and the Aggregate Revenue Requirement for a particular Financial Year. On the other hand, the STOA charges are only a nominal value as the short-term transmission capacity available cannot be determined beforehand.
- In some states, the STOA charges are determined at rates which nominal fraction of the LTOA rates.

In this regard, considering the above, MSPDCL requests the commission to determine separate charges for LTOA and STOA for MSPCL ARR of 2023-24 as basis for determining both is different.

5.9. Operation and Maintenance Expenses

The Operation and Maintenance (O&M) expenses comprises of Employee Expenses, Repair and Maintenance (R&M) Expenses and Administrative and General (A&G) Expenses.

5.9.1. Employee Expenses

The Projection for MYT Third Control Period is done by taking 5.72% year on year growth on employee expenses of estimated FY 2022-23 figure. Further, it is submitted that MSPDCL has planned to recruit 600 employees in Group C and Group D in FY 2023-24. The recruitment

notification for the same has been issued. Estimated additional cost to be incurred by MSPDCL for disbursing salaries and benefits to the new employees is Rs. 22.35 Cr. The Commission is requested to consider an additional provision of Rs 22.35 Cr. for FY 2023-24.

Table 60: Employee expenses for Third Control Period (Rs. Crore)

Particulars	FY 2022-23 (till Sept)	FY 2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
Total Employee Expenses	36.01	72.02	98.50	104.13	110.09	116.38	123.04

5.9.2. R&M Expenses

Repair and Maintenance (R&M) Expenses includes all expenditure incurred on the maintenance and upkeep of distribution assets. It includes the expenses on repairs and maintenance of Plant and Machinery, Transformers, Lines, cable network, Vehicles, Office equipment, etc. As per regulations the R&M are projected for Third Control Period by taking an escalation of 5.72% over the estimated figure of FY 2022-23. MSPDCL submits to the Commission that it is important for MSPDCL to incur the R&M expenses as mentioned above in order to maintain and strengthen the system and quality of supply.

Table 61: R&M expenses for Third Control Period (Rs. Crore)

Particulars	FY 2022-23 (till Sept)	FY 2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
Total R&M Expenses	5.89	11.78	12.45	13.17	13.92	14.72	15.56

MSPDCL requests the Commission to approve the R&M expense without any disallowances as the same is necessary for proper maintenance and strengthening of the system and quality of supply in the region in order to ensure consumer satisfaction.

5.9.3. A&G Expenses

Administrative and General (A&G) Expenses includes all expenditure incurred in operating a business such as:

- ✓ Travel and conveyance expenses
- ✓ Consultancy and regulatory fees
- ✓ IT services and outsourcing cost
- ✓ Office Expenses
- ✓ Publication Expenses
- ✓ Other administration Expenses
- ✓ Telephone
- ✓ Hiring of vehicle etc.

As per regulations the R&M are projected for Third Control Period by taking an escalation of 5.72% over the estimated figure of FY 2022-23.

Table 62: A&G expenses for Third Control Period (Rs. Crore)

Particulars	FY 2022-23 (till Sept)	FY 2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
Total A&G Expenses	4.83	9.66	10.21	10.80	11.41	12.07	12.76

The total O&M expenses projected for Third Control Period are shown in the Table below:

Table 63: O&M expenses for Third Control Period (Rs. Crore)

Particulars	FY 2022-23 (till Sept)	FY 2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
Total O&M Expenses	46.73	93.46	121.16	128.09	135.42	143.17	151.36

5.10. Capital Expenditure Plan

Considering the increase in demand from HT & LT consumers, MSPDCL would be required to undertake significant capital expenditure for system augmentation and strengthening. System augmentation would not only help MSPDCL in handling increased load but would also ensure better quality of supply and network reliability to the consumers. Since, the current T&D loss levels are high, the capital expenditure would help in reduction in the T&D loss level.

MSPDCL under the RDSS scheme has got approval for undertaking capital expenditure of Rs 395 Cr in the following works:

Table 64: Capital Expenditure for Third Control Period (Rs. Crore)

S No	Particulars	2022-23	2023-24	2024-25	2025-26
1	11kV feeder bifurcation	4.92	9.83	14.75	19.67
2	Re-conductoring of 11kV line	5.41	10.83	16.24	21.65
3	LTAB Reconductoring	23.26	46.52	69.78	93.04
4	Medium voltage covered conductor	2.04	4.08	6.12	8.16
5	IT/OT works	4.30	8.60	12.90	13.20
	TOTAL	39.93	79.86	119.79	155.72

For Third Control Period, MSPDCL plan to undertake capital expenditure for loss reduction and network modernization works.

It may be noted that funding RDSS, the Central Government is providing 90% grant and 10% is covered through either loan or State Government grant.

5.11. Gross Fixed Assets and Depreciation

The depreciation on the GFA is calculated as per the JERC (MYT) Regulations 2014. As, the assets are funded by 90% grant from the Central Government the net depreciation booked shall be 10% of the calculated depreciation.

For calculating the GFA the figures of the base year have been used, the capital expenditure for a particular year has been capitalized in the next year. On the basis of the projected GFA, the additional depreciation has been calculated. The additional depreciation is on the new assets added to the GFA. The depreciation on the older assets has been calculated as per the accounts and the additional depreciation is added to the same for finding out the final value of the depreciation charged for the financial year.

Table 65: GFA for FY 2023-24 (Rs. Crore)

S No	Particulars	Opening balance as on 31.03.2023	Additions	Closing balance as on 31.03.2024	Additional Depreciation for FY 2023-24 @ 10% of gross depreciation
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1	Plant & Machinery	2,525.43	39.93	2,564.57	0.21
2	Building	68.76		68.75	
3	Furniture & fittings	1.40		1.40	
4	Computer	10.36		10.35	
5	Heavy Equipments	0.94		0.93	
6	Heavy Vehicle	0.94		0.93	
7	Office Equipments	0.09		0.09	
8	Vehicle	6.13		6.13	
9	Land	0.38		0.38	
10	Software	16.44		16.43	
	TOTAL	2,630.86	39.93	2,669.97	0.21

Table 66: GFA for FY 2024-25 (Rs. Crore)

S No	Particulars	Opening balance as on 31.03.2024	Additions	Closing balance as on 31.03.2025	Additional Depreciation for FY 2024-25 @ 10% of gross depreciation
1	Plant & Machinery	2,564.57	79.86	2,564.57	0.21
2	Building	68.75		68.75	
3	Furniture & fittings	1.40		1.40	
4	Computer	10.35		10.35	
5	Heavy Equipments	0.93		0.93	
6	Heavy Vehicle	0.93		0.93	
7	Office Equipments	0.09		0.09	
8	Vehicle	6.13		6.13	
9	Land	0.38		0.38	
10	Software	16.43		16.43	
	TOTAL	2,669.97	79.86	2,669.97	0.21

Table 67: GFA for FY 2025-26 (Rs. Crore)

S No	Particulars	Opening balance as on 31.03.2025	Additions	Closing balance as on 31.03.2026	Additional Depreciation for FY 2025-26 @ 10% of gross depreciation
1	Plant & Machinery	2,644.22	119.79	2,763.59	0.63
2	Building	68.75		68.75	-
3	Furniture & fittings	1.40		1.40	-
4	Computer	10.35		10.35	-
5	Heavy Equipments	0.93		0.93	-
6	Heavy Vehicle	0.93		0.93	-
7	Office Equipments	0.09		0.09	-
8	Vehicle	6.13		6.13	-
9	Land	0.38		0.38	-
10	Software	16.43		16.43	-
	TOTAL	2,749.62	119.79	2,868.99	0.63

Table 68: GFA for FY 2026-27 (Rs. Crore)

S No	Particulars	Opening balance as on 31.03.2026	Additions	Closing balance as on 31.03.2027	Additional Depreciation for FY 2026-27 @ 10% of gross depreciation
1	Plant & Machinery	2,763.59	155.72	2,918.68	0.82
2	Building	68.75		68.75	-
3	Furniture & fittings	1.40		1.40	-

4	Computer	10.35		10.35	-
5	Heavy Equipments	0.93		0.93	-
6	Heavy Vehicle	0.93		0.93	-
7	Office Equipments	0.09		0.09	-
8	Vehicle	6.13		6.13	-
9	Land	0.38		0.38	-
10	Software	16.43		16.43	-
	TOTAL	2,868.99	155.72	3,024.08	0.82

Table 69: GFA for FY 2027-28 (Rs. Crore)

S No	Particulars	Opening balance as on 31.03.2027	Additions	Closing balance as on 31.03.2028	Additional Depreciation for FY 2027-28 @ 10% of gross depreciation
1	Plant & Machinery	2,918.68	118.45	3,036.31	0.63
2	Building	68.75		68.75	-
3	Furniture & fittings	1.40		1.40	-
4	Computer	10.35		10.35	-
5	Heavy Equipments	0.93		0.93	-
6	Heavy Vehicle	0.93		0.93	-
7	Office Equipments	0.09		0.09	-
8	Vehicle	6.13		6.13	-
9	Land	0.38		0.38	-
10	Software	16.43		16.43	-
	TOTAL	3,024.08	118.46	3,141.71	0.63

Table 70: GFA for FY 2027-28 (Rs. Crore)

S No.	Particulars	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
1	Additional Depreciation to be charged	0.82	0.21	0.63	0.82	0.82	0.63
2	Actual Depreciation to be booked	16.26	16.47	17.11	17.93	18.75	19.37
	Total	17.08	16.68	17.74	18.75	19.57	20.00

5.12. Interest and Finance charges

The major part of capital expenditure undertaken by MSPDCL is funded by the Central / State Government's grants and consumer contribution. However, in addition to these sources of funds, MSPDCL has also taken a significant amount of loan from REC for RAPDRP-B Project and RGGVY project. The repayment of loans during the year has been considered as per actual repayment, and the repayment has been considered proportionately based on the opening loan balance. The details of loans with the computation of Interest on loan are shown in the Table below:

Table 71: Loan Details for FY 2022-23 (Rs. Crore)

S No.	Particulars	Loan 1 (PFC R-APDRP-A)	Loan 2 (PFC R-APDRP-B)	Loan 3 (REC R-APDRP-B)	DDUJGY	Prepaid Meter loan (Hill &	SLTTL (PFC)	SLTTL (REC)
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						Valley) (REC)		
1	Opening Loan	14.35	353.74	23.93	16.96	63.09	55.74	55.74
2	Addition during the Year					27.30		
3	Repayment during the year							
4	Closing Loan	14.35	353.74	23.93	16.96	90.39	55.74	55.74
5	Average Loan							
6	Rate of Interest	9%	9%	12%	11%	10%	10%	10%
7	Interest & Finance Charges			1.35		4.74	2.70	2.66

Table 72: Interest and Finance Charges for Third MYT Control Period (Rs. Crore)

S No.	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
1	Interest & Finance Charges	6.61	12.72	10.90	9.00	7.00	4.93
2	Outstanding loan at the start		125.33	108.86	91.75	73.83	55.08
3	Loan Repayment		16.47	17.11	17.93	18.75	19.37
4	Closing Loan at the end		108.86	91.75	73.83	55.08	35.70
5	Average Interest Rate		10.87%	10.87%	10.87%	10.87%	10.87%

5.13. Interest on Working Capital

The interest on working capital is calculated as interest incurred on operation and maintenance expenses for one month, Maintenance & spares @ 1% of the GFA, Receivables equivalent to one (1) month of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs as per clause 29.4 of the JERC (Multi Year Tariff) Regulations 2014.

The computation of normative Interest on Working Capital (IoWC) for MSPDCL for Third Control Period, is shown in the Table below:

Table 73: IoWC for Third Control Period (Rs. Crore)

S No.	Particulars	Unit	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
1	O & M Expenses one month	Rs. Cr.	7.79	10.10	10.67	11.29	11.93	12.61
2	Maintenance of spares @ 1% of GFA Escalated by 6%	Rs. Cr.	27.89	28.30	29.15	30.41	32.06	33.30
3	Receivable one month	Rs. Cr.	42.96	46.44	50.23	54.39	58.95	63.93
4	Less: Total Security Deposit							
5	Net WC requirement	Rs. Cr.	78.63	84.84	90.05	96.09	102.93	109.84
6	Interest Rate	%	12.30%	13.45%	13.45%	13.45%	13.45%	13.45%

S No.	Particulars	Unit	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
	Interest of Working Capital	Rs. Cr.	9.67	11.41	12.11	12.92	13.84	14.77

5.14. Return on Equity

As per audited accounts, the RoE is computed on paid up capital of Rs. 10.05 Crore at the rate of 15.50% as stated in clause 26.1 of JERC (Multi Year Tariff) regulations 2014

Table 74: Return on Equity for Third Control Period

S No.	Particulars	Unit	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
1	Average Equity	Rs Cr.	10.05	10.05	10.05	10.05	10.05	10.05
2	RoE %	%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
3	Return on Equity	Rs Cr.	1.56	1.56	1.56	1.56	1.56	1.56
4	MAT Rate applicable	%	0%	0%	0%	0%	0%	0%
	Net RoE (Grossed up by MAT rate)	Rs Cr.	1.56	1.56	1.56	1.56	1.56	1.56

5.15. Non-tariff Income

MSPDCL submits here that the details of Non-tariff income for FY 2022-23 is not available. The Non-tariff income for Third Control Period is projected using escalation factor of 6% on the FY 2022-23 figure and so on.

Table 75: Non-tariff income for Third Control Period (Rs Crore)

S No.	Particulars	2021-22 (Actual)	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
1	Non-tariff Income	5.74	6.08	6.45	6.84	7.25	7.68	8.14

5.16. Aggregate Revenue Requirement

Based on the above component-wise expenses, the Aggregate Revenue Requirement computed for FY 2020-21 by MSPDCL against the figures approved by the Commission in the Tariff Order for FY 2020-21, is given in the Table below:

Table 76: Aggregate Revenue Requirement for Third Control Period (Rs. Crore)

S No.	Particulars	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
1	Cost of power purchase	536.70	568.93	615.74	667.26	725.82	782.42
2	Transmission charges	190.61	218.38	233.39	250.38	267.03	286.13
	Inter-State Transmission Charges	104.2	109.41	114.88	120.62	126.66	132.99
	Intra-State Charges	84.83	107.39	116.93	128.18	138.79	151.56
	SLDC Charges	0.87	0.87	0.87	0.87	0.87	0.87
	NERLDC Charges	0.71	0.71	0.71	0.71	0.71	0.71

S No.	Particulars	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
3	O&M Expenses	93.46	121.16	128.09	135.42	143.17	151.36
	<i>Employee Expenses</i>	<i>72.02</i>	<i>98.50</i>	<i>104.13</i>	<i>110.09</i>	<i>116.38</i>	<i>123.04</i>
	<i>A&G Expenses</i>	<i>9.66</i>	<i>10.21</i>	<i>10.80</i>	<i>11.41</i>	<i>12.07</i>	<i>12.76</i>
	<i>R&M Expenses</i>	<i>11.78</i>	<i>12.45</i>	<i>13.17</i>	<i>13.92</i>	<i>14.72</i>	<i>15.56</i>
4	Depreciation	16.26	16.47	17.11	17.93	18.75	19.37
5	Interest on Loan	6.61	12.72	10.90	9.00	7.00	4.93
6	Interest on Working Capital	9.67	11.41	12.11	12.92	13.84	14.77
	Total Cost	853.31	949.08	1017.34	1092.91	1175.61	1259.08
9	Add: RoE	1.56	1.56	1.56	1.56	1.56	1.56
10	Add: Income Tax	0	0	0	0	0	0
11	Add: Truing up gap for past 7 years		61.47	61.47	61.47		
	Total cost	854.87	1012.11	1080.37	1155.94	1177.16	1260.64
12	Less: Non-tariff Income	6.08	6.45	6.84	7.25	7.68	8.14
	Aggregate Revenue Requirement (ARR)	848.79	1005.66	1073.53	1148.69	1169.48	1252.50
13	Less: Revenue from sale of surplus power	61.18	63.89	63.41	62.83	63.38	63.20
	Net ARR	787.61	941.77	1010.12	1085.87	1106.11	1189.29

5.17. Revenue at existing tariff

Revenue from sale of power for FY 2023-24 to FY 2027-28 is determined based on the energy sales estimated and category wise tariff prevalent in the State of Manipur, based on the average per unit revenue billed during FY 2022-23. It may be noted that the existing tariff was prevalent in FY 2022-23 from the starting and as such, per unit revenue billed in current year is the most appropriate reference for the existing tariff. The per unit category wise rates in FY 2022-23 has been used for projecting revenue from existing tariff.

The table below summarizes the revenue from sale of power at existing tariff for FY 2022-23 and Third Control Period

Table 77: Revenue at Existing Tariff (Rs. Crore)

Particulars	2022-23 (Est.)	2023-24	2024-25	2025-26	2026-27	2027-28
Revenue at existing tariff	515.51	557.26	602.76	652.68	707.38	767.12

Chapter 5: Tariff determination for FY 2023-24

5.1. ARR for FY 2023-24

The aggregate revenue requirement for FY 2023-24 and MYT Third Control Period is summarized below:

Table 78: Aggregate Revenue Requirement (Rs. Crore)

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28
Aggregate Revenue Requirement	1005.66	1073.53	1148.69	1169.48	1252.50

5.2. Revenue for FY 2023-24

The Revenue at existing tariff for FY 2023-24 and MYT Third Control Period is summarized below:

Table 79: Revenue at Existing Tariff (Rs. Crore)

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28
Revenue at existing tariff	557.26	602.76	652.68	707.38	767.12

5.3. Revenue gap for FY 2023-24

It can be observed that the revenue gap at existing tariff which works out to be Rs. 384.52 Crores for FY 2023-24. This revenue gap may be covered through tariff hike of 20% on an average across all consumer categories and budgetary support from the State Government.

Table 80: Revenue gap and Proposed Revenue (Rs. Crore)

S No.	Particulars	FY 2023-24
1	Annual Revenue Requirement	1005.66
2	Revenue @ Existing Tariff	557.26
3	Revenue from sale of surplus power	63.89
4	Total revenue from sale of power	621.14
5	Revenue Gap / (Surplus)	384.52
6	Additional Revenue from 15% tariff hike	83.59
7	Budgetary support required from the State Government	300.93

5.4. Tariff Proposal for FY 2023-24

- The total revenue gap for the FY 2023-24 to be covered is Rs. **384.52** Crores. The above ARR gap can be sought to be filled by:
 - Tariff Increase
 - Budgetary support from the Govt. of Manipur
- In case the entire gap was to be met from Tariff Increase, the average increase in tariff would work out to nearly 100%. It is presumed that this is an unacceptable level of tariff hike, and the realistic tariff in the region needs to form the basis for the proposed maximum increase in tariff, with the balance gap being addressed by one of the other means.

- The MSPDCL has been receiving budgetary support from the Government of Manipur for Plan and Non –Plan Funds. The same support is expected to be provided during ensuing year. Accordingly, out of the gap of Rs. 384.52 Crore, Rs. 300.93 Crores is proposed to be covered by budgetary support from Government of Manipur. Therefore, the balance revenue gap for the FY 2023-24 will have to be met from tariff increase and other recovery mechanism.
- The provisions of the Section 61 (g) of the Electricity Act, 2003 state that the Appropriate Commission should be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity. In line with the above provision, the National Tariff Policy also states that the tariffs should be within $\pm 20\%$ of the average cost of supply. However, in the present scenario it shall neither be feasible nor in the larger interest of the population of the State of Manipur to burden those with tariff anyway near to average cost of supply. Considering these limitations, the Tariff proposal has been formulated by MSPDCL with an endeavor to progressively approach to reduce the burden (budgetary support) on the Government of Manipur, without giving any tariff shock to the consumers. Furthermore, attempt has been made to evenly distribute the impact of increase in tariff required to fill the revenue gap left after the subsidy committed by the Government of Manipur within the given constraint of consumer mix in the State.
- MSPDCL has considerably increased quality and duration of power supply throughout the state. This has resulted in increased quantum of power purchase to be done by MSPDCL which has in turn increased average cost of supply. As such MSPDCL proposes to increase Tariff of all the consumers by 15.00% for FY 2023-24 to partially meet the increased cost of supply.

Table 81: Existing Tariff Structure FY 2022-23

S No.	Category and Consumption Slab	Fixed Charges per month	Energy Charges per month
	LT Supply		
1	Kutir Jyoti	Rs/Connection	Rs/kWh
	All units (upto 45 kWh/3 months)	25	2.10
2	Domestic	Rs/kW	Rs/kWh
(i)	First - 100 kWh/Month	65	5.10
(ii)	Next - 100 kWh/Month	65	5.95
(iii)	Above 200 kWh/Month	65	6.75
3	Non-Domestic / Commercial	Rs/kW	Rs/kWh
(i)	First - 100 kWh/Month	85	6.55
(ii)	Next - 100 kWh/Month	85	7.25
(iii)	Above 200 kWh/Month	85	7.65
4	Public Lighting	70	9.60
5	Public Water Works	105	9.80
6	Irrigation and Agriculture	Rs/kW	Rs/kWh
(i)	Agriculture	65	4.55
(ii)	Irrigation (Others)	65	4.55
7	Small Industry	70	5.60
	HT Supply		
		Rs./kVA	Rs./kVAh
1	Commercial	105	8.90
2	Public Water Works	105	9.60
3	Irrigation and Agriculture		
(i)	Agriculture	105	5.15
(ii)	Irrigation (Others)	105	5.15
4	Medium Industry	105	8.00
5	Large Industry	105	9.10

S No.	Category and Consumption Slab	Fixed Charges per month	Energy Charges per month
6	Bulk Supply	105	9.25

Table 82: Proposed Tariff Structure FY 2023-24

S No.	Category and Consumption Slab	Fixed Charges per month	Energy Charges per month
	LT Supply		
1	Kutir Jyoti	Rs/Connection	Rs/kWh
	All units (upto 45 kWh/3 months)	25	2.10
2	Domestic	Rs/kW	Rs/kWh
(i)	First - 100 kWh/Month	80	6.00
(ii)	Next - 100 kWh/Month	80	7.00
(iii)	Above 200 kWh/Month	80	7.80
3	Non-Domestic / Commercial	Rs/kW	Rs/kWh
(i)	First - 100 kWh/Month	100	7.00
(ii)	Next - 100 kWh/Month	100	8.00
(iii)	Above 200 kWh/Month	100	9.00
4	Public Lighting	100	11.00
5	Public Water Works	120	11.50
6	Irrigation and Agriculture	Rs/kW	Rs/kWh
(i)	Agriculture	65	5.25
(ii)	Irrigation (Others)	65	5.25
7	Small Industry	80	6.50
	HT Supply		
		Rs./kVA	Rs./kVAh
1	Commercial	120	10.00
2	Public Water Works	120	11.50
3	Irrigation and Agriculture		
(i)	Agriculture	120	5.25
(ii)	Irrigation (Others)	120	5.25
4	Medium Industry	150	8.50
5	Large Industry	150	9.50
6	Bulk Supply	150	10.00

Chapter 6: Tariff schedule FY 2023-24

6.1. General Conditions of Supply (For all Categories of Consumers)

- 6.1.1. Rebate for advance payment: For payment of energy bill in advance, a rebate of 1% shall be allowed on the rate of charge of the applicable Tariff. This will be applicable only for all consumers provided with prepaid energy meters.
- 6.1.2. Rebate/surcharge for availing supply at voltage higher/lower than base voltage: Those who avail supply at higher voltage than the classified supply voltage for corresponding load as per Clause 3.2 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013, shall be allowed rebate and those availing supply at lower voltage than the specified voltage shall be levied surcharge as detailed below:
 - a. For consumers having contracted load up to 50 kW – If the supply is given at HV/EHV, a rebate of 5 % would be admissible on the rate of Energy Charge and Fixed Charge of the applicable tariff.
 - b. For consumers having contracted load above 50 kW – If supply is given at voltage lower than the base voltage for corresponding load as per the Clause mentioned above, the consumer shall be required to pay an extra charge of 10% on the bill amount (Energy Charge + Fixed Charge) calculated at the applicable tariff.
 - c. All voltages mentioned above are nominal rate voltages as per Clause 3.2 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.
- 6.1.3. Payment: All payments shall be made by way of Cash (up to the amount as acceptable to the Licensee), Banker's Cheque, Demand Draft or Money Order or e-transfer on-line. Cheques and Demand Drafts shall be payable at any branch of a scheduled commercial bank that is a member of the clearing house for the area where the concerned Sub Divisional Office is located. However, part payment is subjected to acceptance by the competent authority. Bank commission/charges, if any, should be borne by the consumers. The transaction charges of Rs. 5 per transaction shall be borne by the consumer.
- 6.1.4. Validity of Existing Recharge Voucher: For a consumer with prepaid meter who has purchased voucher prior to the effective date of new tariff, the existing voucher shall continue till such voucher is exhausted. The licensee shall cautiously issue voucher so that the existing voucher is valid for a minimum number of days beyond the effective date of new tariff.
- 6.1.5. Due date: Due date for payment of monthly bill through cheques shall be three (3) days in advance from the normal due date for that bill payment. While, in the case of payment through online bank transfer/credit card, it shall be one (1) day in advance from the normal due date specified for that bill. The licensee shall ensure that the bill is delivered to the consumer by hand/post/courier at least ten (10) days prior to the payment due date of the bill. (Clause 6.1 & 6.5 of the JERC for Manipur & Mizoram (Electricity Supply Code Regulations, 2013 with latest amendments).
- 6.1.6. Surcharge for late Payment of Bills: If payment is not received within due date, late payment surcharge @ 2% at simple interest on the outstanding principal amount for each 30 days successive period or part thereof will be charged, until the amount is paid in full.
- 6.1.7. Single Point Delivery: This tariff is based on the supply being given through a single point of delivery and metering at one voltage. Supply at other points at other voltage shall be separately metered and billed for and shall be considered as separate connection.

6.1.8. Voltage and Frequency: All voltages and frequency shall be as per Clauses 3.1 and 3.2 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013, with up to date amendment.

6.1.9. Power Factor Incentive/Surcharge:

- a. If the average monthly power factor of the consumers increases above 95%, he shall be paid an incentive at the following rate:

Criteria condition	Eligible Incentive
For each one percent increase by which his average monthly power factor is above 95%, up to unity power factor	One percent (1%) of the total amount of the bill under the head 'Energy Charge'.

- b. If the average monthly power factor of the consumers falls below 90%:

Criteria condition	Surcharge payable
For each one percent by which his average monthly power factor falls below 90% up to 85%	One percent (1%) of the total amount of the bill under the head 'Energy Charge'.

- c. If the average monthly power factor of the consumers falls below 85%, he shall pay a surcharge in addition to his normal tariff at the following rate:

Criteria condition	Surcharge payable
For each one percent by which his average monthly power factor falls below 85%	Two percent (2%) of the total amount of the bill under the head 'Energy Charge'.

- d. If the average monthly power factor of the consumer falls below 70%, then the utility shall have the right to disconnect supply to consumer's installation after serving a notice of 15 days. Supply may be restored only after steps are taken to improve the power factor to the satisfaction of the Utility. This is, however, without prejudice to the levy of surcharge for low power factor in the event of supply not being disconnected.
- e. For this purpose, the "average monthly power factor" is defined as the ratio of total 'kiloWatt-hours' to the total 'kiloVoltAmpere-hours' recorded during the month. This ratio will be rounded off to two figures after decimal. Figure 5 or above, in the third place after decimal, shall be rounded off to the next higher figure in the second place after decimal.
- f. Notwithstanding the above, if the average monthly power factor of a new consumers is found to be less than 90% at any time during the first 6 (six) months from the date of connection, and if he maintains the average monthly power factor in subsequent three months at not less than 90%, then the surcharge billed on account of low power factor during the said period, shall be withdrawn and credited in next month's bill.

6.1.10. Transformation loss: The consumers getting their supply at HT and metered on the LT side shall be charged transformation loss in kWh as per Clause 5.7 of JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 (together with latest amendment to date). However, the same is reproduced for convenience sake:

- a. The average losses in the transformer shall be calculated as follows and added to the energy consumption indicated by the meter:

$$730 \times 1.0 \times C$$

Average transformer loss = ----- = kVAh per month

where C = kVA rating of the transformer. For conversion of kVAh to kWh or vice-versa, latest power factor as per JERC (M&M) (Electricity Supply Code) Regulations, 2013 with latest amendment is to be used.

- b. The transformer loss arrived at by the above formula shall be added to the energy consumption, even when the recorded energy* consumption is nil.
- c. 1% of the transformer capacity for transformer above 63 kVA will be added to the recorded maximum demand on the Low-Tension side to arrive at the equivalent High-Tension demand.

6.1.11. Rounding of Contracted Load/billing demand: For the purpose of calculation of fixed/demand charge in the monthly billing, the contracted load/billing demand shall be taken on actual basis (not to be rounded), except for load less than 500 W. Load less than 500 W shall be taken as 0.5 kW for calculation of fixed/demand charge in the monthly billing. Fixed/Demand charge in the monthly billing shall be calculated as follows:- Fixed/Demand charge per month = Contracted load (in kW) or Billing demand (in kVA) x Rate of fixed charge per month per kW/kVA (as the case may be).

6.1.12. Rounding-off Rupees: Each components of bill, such as energy charge, fixed/demand charge, meter rent, surcharge, rebate of any kind, etc, including interest, involving fraction of a rupee should be individually rounded-off to nearest rupee (fraction of 50 paise and above to be rounded-off to the nearest higher rupee and fraction less than 50 paise to be ignored). In case of non-availability/scarcity of small change of rupees less the Rs.10, consumer may be allowed to tender next higher amount divisible by 10. Such excess amount so tendered shall be carried forward to the next bill as a credit and shall not entitle any interest of whatsoever.

6.1.13. Mixed load: Any part of the connection given for one specified category should not be utilized for any other purpose, involving higher rate of charge in the tariff. A separate connection shall have to be taken for such loads or purposes falling under appropriate category, failing which the entire consumption (i.e., existing category consumption and additional consumption for different purpose) shall be billed in that corresponding category with higher applicable tariff for which any part of that connection is utilized.

6.2. LT Supply

6.2.1. System of supply

6.2.1.1. LT Supply:-

- a. Alternating current, 50 Hz, single phase 230 Volts up to 8kW

- b. Alternating current, three phase, 400 Volts for loads above 8 kW upto 50 kW. Wherever 3-phase connection is required for load less than or equal to 8 kW, necessary justification shall be provided along with such request for consideration of licensee for extending such supply.
- 6.2.1.2. HT Supply:-
Supply of Electricity to the Consumers at voltage above 400V as per Clause 3.2 of JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.
- 6.2.2. The maximum demand means the highest load measured in average kVA or kW at the point of supply of a consumer during any consecutive period of 30 (thirty) minutes during the month or the maximum demand recorded by the MDI during the month.
- 6.2.3. Billing Demand: The billing demand "Billing Demand means highest of the following:
- (i) The Contract demand, or (ii) the maximum demand indicated by the meter during the billing cycle, or (iii) the sanctioned load wherever contract demand has not been provided in the supply agreement."
- 6.2.4. Tax or Duty: 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 / State Government Rules in force. Such charges, if any, shall be payable by the consumer in addition to tariff charges.
- 6.2.5. Contingency: - In case of any inconsistency between this Tariff Schedule and the prevailing JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013, the provision, meaning and contents of the said Code shall prevail.
- 6.2.6. Unmetered Supply: For all categories of consumers, the energy (kWh) so computed as per clause 7.5 of this tariff schedule shall be charged at the same rate for metered tariff of the respective category to arrive at the cost of energy consumed.

Tariff Schedule

6.3. LT Supply: -

6.3.1. LT Category-1: -KutirJyoti/BPL (Below Poverty Line) Connection

Applicability: Applicable to all households who have been given connection under KutirJyoti Scheme or similar connection under any scheme of the State Govt. or Central Govt. for the benefit of poorer section. As per existing norms unless superseded by other new norms of KJS, if the total consumption in the last three months exceed 45 kWh, the connection should be converted to LT Category-2 (Domestic).

Permitted load:-Initially single light point connection which can be extended by one or two light points or as per the norms specified by competent Authority from time to time

Tariff Rates:

A) Fixed Charge: Rs 25.00 per month per connection.

B) Energy charge per month:

All Units @ Rs 2.10 per kWh

Note: 1- if the total consumption of any consecutive three months is more than 45 kWh, then such consumer shall be re-categorised/converted into normal domestic category permanently from the very 1st/2nd/3rd month of that consecutive three months, if the total unit consumed exceed the specified limit of 45 kWh from that instance and the bill be served as domestic category. (Clause 4.90 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments may be referred to.)

Note 2: In case a KutirJyoti /BPL consumer on getting converted into a domestic consumer, the re-categorised/converted consumer shall be required to pay towards load security/meter security deposit as applicable for domestic consumers. But, it shall not contradict clause 5.9 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments.

6.3.2. LT Category-2: Domestic

Applicability: Applicable for supply of energy exclusively for domestic purposes only in domestic premises. The Domestic consumer is qualified to be in this category if it is with attached kitchen/kitchen facility. The Tariff is applicable to supplies for general domestic purposes such as Light, Fans, Heating devices, Television, VCR/VCP, Radio, Refrigerator, Air- conditioner, lift motors and all others appliances only for bona-fide residential use. This will

not be applicable to institutions conducting commercial activities of any nature.

Tariff Rates:

A) Fixed Charge: Rs. 80.00 per month per kW of Contracted load

B) Energy charge per month:

Consumption Range	Energy Charge (Rs. /kWh)
First 100 kWh/month	6.40
101-200 kWh/month	7.50
Above 200 kWh/month	8.50

Note: If any part of the domestic connection is utilized for any use other than dwelling purpose like commercial, industrial, etc., a separate connection should be taken for such loads under appropriate category, failing which the entire consumption shall be treated as the case may be, in the corresponding category with applicable tariff.

6.3.3. LT Category-3: Non-Domestic/Commercial

Applicability: This tariff is applicable to all lights, all types of fans, heating devices, Television, VCR/VCP, Radio, Refrigerator, Air Conditioner, lift motors, pump and all other appliances for the purpose of private gain including other small power. This tariff includes power loads for non-domestic purposes like Government/semi government/non-government offices, shops, hospitals, nursing homes, clinics, dispensaries, health centres, restaurants, bars, hotels, clubs, guest houses, circuit houses/rest houses, tourist lodges, picnic spots, resorts, farm/garden houses, clubs, markets, optical houses, public buildings, community halls, stadiums, meeting/conference halls, religious premises like churches, temples, mosques, gurudwaras, religious offices, all types of studios, tea stalls, professional chambers (like Advocates, chartered Accountants, consultants, Doctors etc.), private trusts, marriage halls, public halls, show rooms, centrally air-conditioning units, commercial establishments, X- ray plants, diagnostic centers, pathological labs, carpenters and furniture makers, repair workshops, laundries, typing institutes, internet cafes, STD/ISD PCO's, FAX/photocopy shops, tailoring shops, Government/Non-Government Institutions, schools, colleges, libraries, research institutes, boarding/lodging houses, railway stations, fuel/oil stations/pumps, bottling or filling stations /plants, service stations, Railway/Bus stations/terminals, All India radio/T.V. installations, printing presses, commercial trusts, societies, banks, financial institutions, theatres, cinema halls, circus, coaching institutes, common facilities in multi- storied commercial offices/ buildings, public museums, crematoriums, graveyards, orphanages/recognized charitable institutions where rental or fees of any kind are charged, non-recognized charitable institutions, power supply to tele- communication system/towers and others applications not covered under any other categories.

Tariff:

A) Fixed Charge: Rs. 100.00 per month per kW of Contracted load

B) Energy charge per month:

Consumption Range	Energy Charge (Rs. /kWh)
1-100 kWh/month	7.00
101-200 kWh/month	8.00
Above 200 kWh/month	9.00

6.3.4. LT Category-4: Public Lighting

Applicability: Applicable to Public Street Lighting System in Municipality, Town/Committee, Sub-Town/Village, etc., including Signal system and Road and Park lighting in areas of Municipality, Town/Committee, Sub - Town/Village, etc.

Tariff:

A) Fixed Charge: Rs. 100.00 per month per kW of contracted load.

B) Energy Charge per month:

1. Metered Supply

Consumption Range	Energy Charge (Rs. /kWh)
All Units	11.50

6.3.5. LT Category-5: Public Water Works (PWW)

Applicability: Applicable to all public water supply system and sewerage system.

Tariff Rates:

A) Fixed Charge:Rs. 120 per month per kW of Contracted load

B) Energy charge per month:

1. Metered Supply:

Consumption Range	Energy Charge (Rs. /kWh)
All Units	11.50

6.3.6. 7.3.6 LT Category-6: 6a - Agriculture and 6b - Irrigation

LT category 6a–Agriculture

Applicability: This tariff is applicable to pumping for Agricultural purpose by individual farmer.

LT category 6b– Irrigation

Applicability: This tariff is applicable to irrigation /pumping for Agricultural purpose by others.

Tariff Rates:

A) Fixed Charge: Rs. 65.00 per month per kW of Contracted load.

B) Energy charge per month:

1. Metered Supply:

Consumption Range	Energy Charge (Rs. /kWh)
All Units	5.50

6.3.7. LT Category-6: Small Industry

Applicability: Applicable to all Industrial power consumers with demand of power up to 50 kW, which are not covered by LT Category-3 (Supply for Non- Domestic/Commercial Purposes), such as steel fabrications, motor body builders, power handloom industry, poultry farming, pisciculture, prawn culture, floriculture in green houses, mushroom production, cold storage units, agriculture based industries, horticulture and any other type of industry where raw material is converted into finished products with the help of electrical motive power, printing press, etc. This will include domestic or commercial purpose within the industrial complex.

Tariff Rate:

A) Fixed Charge: Rs. 80.00 per month per kW of Contracted load.

B) Energy Charge per month:

1. Metered Supply

Consumption Range	Energy Charge (Rs. /kWh)
All Units	6.50

6.4. HT Supply Tariffs:

The tariffs are applicable for Consumer availing supply at voltage above 400 V irrespective of connected load/contracted demand. It is mandatory to supply with voltage above 400 V, to consumer having a Contracted Load of above 50 kW or Contract Demand of above 59 kVA, as per Clause 3.2 of JERC for M&M (Electricity Supply Code) Regulations, 2013 with up to date amendment.

6.4.1. HT Category-1: Commercial

Applicability: This Tariff is applicable to similar purposes defined in LT Category-3 Supply for Commercial Purposes.

Tariff Rates:

A) Demand Charge: Rs. 120.00 per month per kVA of Billing Demand

B) Energy charge per month

Metered Supply:

Consumption Range	Energy Charge (Rs. /kVah)
All Units	10.00

6.4.2. HT Category-2: Public Water Works (HT-PWW)

Applicability: This tariff is applicable to similar purposes defined in LT Category-5 Supply for Public Water Works (PWW) and sewerage system.

Tariff Rates:

A) Demand Charge: Rs. 120.00 per month per kVA of Billing Demand.

B) Energy charge per month:

Metered Supply:

Consumption Range	Energy Charge (Rs. /kWh)
All Units	11.50

6.4.3. HT Category-3: 3a - Agriculture & 3b - Irrigation

HT category 3a–Agriculture

Applicability: This tariff is applicable to pumping for Agricultural purpose by individual farmer.

HT category 3b– Irrigation

Applicability: This tariff is applicable to irrigation /pumping for Agricultural purpose by others.

Tariff Rates:

A) Demand Charge: Rs. 120.00 per month per kVA of billing demand

B) Energy charge per month:

Consumption Range	Energy Charge (Rs. /kWh)
All Units	6.20

6.4.4. HT Category-4: Medium Industry

Applicability: This Tariff is applicable to similar purpose defined in LT Category-7 for Small industry with Contract Demand up to 125 kVA or Contracted Load up to 100 kW.

Tariff Rates:

A) Demand Charge: Rs. 150.00 per month per kVA of Billing Demand.

B) Energy Charge per month:

Metered Supply:

Consumption Range	Energy Charge (Rs. /kWh)
All Units	8.50

6.4.5. HT Category-5: Large Industry

Applicability:

This Tariff is applicable for supply of power to industrial consumers having licence from designated authority of appropriate Government and not covered under any other category, at a single point for industrial purposes with Contract Demand above 125 kVA or Contracted Load above 100 kW.

Tariff Rates:

A) Demand Charge: Rs. 150.00 per month per kVA of Billing Demand.

B) Energy charge per month:

Metered Supply:

Consumption Range	Energy Charge (Rs. /kWh)
All Units	9.50

6.4.6. HT Category-6: Bulk Supply

Applicability:

This tariff is applicable for all installations, including mixed loads similar to LT Category-1 and LT Category-2 such as private sector installation, educational institution, defence installation, Government and Public Sector offices and complexes and Hospital, etc., that arrange their own distribution system of power within the premises with the approval of competent authority. This will not include industrial complexes comprising mixed load of LT Category-2 & 3.

Tariff
Rates:

A) Demand Charge: Rs. 150.00 per month per kVA of Billing Demand.

B) Energy Charge per month:

Metered Supply:

Consumption Range	Energy Charges (Rs. /kWh)
All Units	10.00

6.5. Temporary Power Supply

Applicability: Temporary power supply shall be given through correct meter and carried out as per procedure laid down in Clause 4.56 to 4.70 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments. If the applicant provides the materials for service line, it shall be

treated as per Clause 4.133 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments. If the licensee/MSPDCL desires to delegate power to various levels of officers, it may be done through an Executive Order by the licensee. However, in all cases, overall duration should not violate the Supply Code mentioned above. If the service line is arranged by consumer, it shall be treated as per Clause 4.133 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 (with latest amendments), and it shall be returned to the consumer after the period of supply is over. Energy charges bill shall be served as per the following rates:

Tariff Rates:

- A) Fixed/Demand charge: 1.5 times the rate of fixed/demand charge of the applicable tariff category for which power supply is given.
- B) Energy charge per month: 1.5 times the rate of the highest slab rate of the applicable tariff category for which energy is supplied.

6.6. Computation of energy consumed for un-metered supply:

6.6.1. This shall be applicable to consumer (inclusive of street lightings) without meter from initial connection and have not been covered under any of the metering schemes. The monthly energy consumption shall be computed as below: -

Energy Consumption = $L \times H \times F \times D$.

Where L = Contracted load in kW or Billing Demand in kVA, (as per clause 1.9 of this tariff schedule)

H = (a) For consumer in general: - Total number of hours in a month during which power is actually supplied to that consumer through that feeder / through that DT concerned, whichever is less, (after taking into account all interruptions of power feeding that) or (730 minus total hours interruptions of power feeding that consumer); where 730 is average number of hours in a month in a non-leap year. (Note: - Interruption shall mean breakdowns of Feeders, Part of feeder, Distribution Transformer, load shedding, all types of shut downs which should be recorded and informed to concerned billing station) (b) For Street Lights:- Total number of hours in a month during which power is actually supplied to street lights through that feeder / through that DT concerned. (12 Hrs per day in Gregorian calendar)

month or 365 hrs per month on average basis. However, number of hours where power supply is not made due to interruptions available shall be deducted.

(Note:- Interruption shall mean breakdowns of Feeders, Part of feeder, Distribution Transformer, load shedding , all types of shutdowns which occurs between dawn to dusk,. which should be recorded and informed to concerned billing station)

F = Load Factor shall be as stipulated for theft cases in ANNEXURE

11.19 of the Joint Electricity Regulatory Commission for Manipur& Mizoram (Electricity Supply Code) Regulations, 2013, which is reproduced for convenience sake:-

S.	Particulars	Load factor
1.	Domestic (LT/HT)	40%
2.	Non-domestic/Commercial (LT/HT)	50%
3.	Industrial (LT/HT)	75%
4.	Public Water supply(LT/HT)	50%
5.	Bulk supply	50%
6.	Agriculture/Irrigation(LT/HT)	50%
7.	Street light	50%
8.	Direct theft– All categories	100%

D = Demand factor which shall be taken as (1) 100 % in case of street lighting and (2) 45 % in case of other consumption.

- 6.6.2. Short period of unmetered supply: - For un-meter (meter not available) supply as a result of defective, burnt, lost meter shall be treated as per the provisions of 6.11 – 6.13 of the Electricity Supply Code Regulations, 2013 (together with latest amendment) issued in this regard by this Commission.
- 6.6.3. For Un-authorized consumer/theft (includes by-pass of meter)/pilferage and cases are cover by section 135 of the Act. The energy consumed shall be computed as per provisions indicated at the Annexure 11.1.19 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 (together with latest amendments). The energy so computed shall be evaluated as follows:

(a) Load less than 10 kW

- (1) First instance: - Thee (3) times the rate of the applicable tariff (fixed and variable charges) for which the unauthorised/theft of energy was so utilized.

(2) Second and subsequent instances: Six (6) times the rate of the applicable tariff (fixed and variable charges) for which the theft/unauthorised energy was so utilized.

(b) Load exceeding 10 kW

(1) First instance: - Three (3) times the rate of the applicable tariff (fixed and variable charges) for which the unauthorised/theft of energy was so utilized.

(2) Second and subsequent instances: - Six (6) times the rate of the applicable tariff (fixed and variable charges) for which the unauthorised/theft energy was so utilized.

Note: - Additional punishment be given for such theft of energy shall be under the Electricity Act 2003 (with latest amendment) and/or as per the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013, with up to date amendment.

6.7. Miscellaneous Charges

6.7.1. Meter Rent

6.7.1.1. Meter Rent for non-prepaid meters: Monthly charges for hiring of the meter, indicator payable shall be as follows:

- a. AC single phase Energy meter, whole current: Rs. 10.00 per Month.
- b. AC, Three phase Energy meter, whole current: Rs. 20.00 per Month.
- c. AC, Three phase Energy meter, CT operated: Rs. 50.00 per Month
- d. AC, Three phase Energy meter, CT & PT operated: Rs. 500.00 per meter per Month.

6.7.1.2. Meter Rent for Pre-Paid Meters: Monthly charges for hiring of the meter, indicator payable shall be as follows:

- a. AC, Single phase PP, Energy meter, whole current: Rs. 20.00 per month
- b. AC, Three phase PP, Energy meter, whole current: Rs. 40.00 per month

6.7.1.3. Other charges for meter:

a) Meter shifting charge:

1. Rs 100.00 per shifting if resulted from reconstruction / modification of building and at consumer's request. Material to be borne by interest party.
2. Free of cost if shifting is done in the interest of licensee. Required material to be borne by licensee.

Meter shifting shall be carried out as per Chapter -5 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.

b) Replacement of meter: Licensee shall have stock of energy meter as per Clause 5.51 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment. Replacement of meter shall be carried out as per Clause 5.31 to 5.50 of the same Code mentioned above. Charges for other materials will be extra.

However, in case of replacement of post-paid meter by prepaid meter by the utility, no meter replacement charge shall be borne by the consumer and the entire charge shall be borne by the utility.

c) Execution charge for re-installation/installation of meter:

1. For existing consumer shall be Free of cost.
2. For disconnected consumer being re-connected (if meter is removed) shall be charged @ Rs75.00.
3. For new consumer, it shall be included in the cost of service connection as under execution charges.

d) Cost of Energy Meters supplied by Licensee: As per the Licensee's purchase rate plus testing fee, if supplied from the Licensee (energy meters approved / tested by the Licensee only shall be used). However, when the cause leading to subsequent replacement is either manufacturing defect or fault of Licensee, then it shall be free of cost.

e) Charges for testing of Meters at the request of consumers: (Testing charge is inclusive of costs of meter re-sealing materials/equipment)

- (i) For AC single phase LT energy meter: Rs. 50.00 per meter per

testing.

(ii) For AC three phase LT energy meter whole current: Rs.75.00 per meter per testing.

(iii) For AC three phase LT energy meter, CT operated: Rs. 100.00 per meter per testing.

(iv) For energy meter AC three phase, CT & PT operated: Rs.150.00 per meter per testing.

(v) For any other type of meter, HT supply: Rs.200.00 per meter per testing

In case the meter installed at the consumer premises is found to be defective from initial fitting, testing and replacement of meter shall be carried out as per clause

5.31 to 5.50 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013, with up to date amendment.

6.7.2. Testing of Consumer's Installation:

The first test and inspection will be carried out free of cost as per Clause 4.47 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment. Should any further test or inspection be necessitated due to fault in the installation or due to non-compliance with the condition of supply by the consumer, an extra charge of Rs. 100.00 per test, payable in advance, shall be levied. In the event of the consumer failing to pay the testing charge in advance within stipulated time, the Licensee will be at liberty to disconnect the consumer's premise from the supplier's main.

6.7.3. Disconnection and Reconnection:

a) Disconnection: Disconnection of an installation in all cases will be free of charges.

b)Reconnection:

i. For AC single phase LT supply: Rs.80.00 ii. For AC three phase LT supply: Rs.150.00 iii. For AC HT supply: Rs.400.00

Note: - *Extra material required will be chargeable.*

6.7.4. Charges for change of category:

Charges for change of category will be done as per Clause 4.72 to 4.80, Clause 4.85 to 4.86 and Clause 4.90 to 4.93 of the Joint Electricity Regulatory Commission for Manipur & Mizoram (Electricity supply Code) Regulations, 2013.with up to date.

6.7.5. Charges for Replacement of Connection Wire, Cut-out, Fuse,etc.:

Cost of replacement after initial fixation of connection wire, cut-out, fuses, etc., will be borne by the consumers and shall be payable by the consumer in advance as per purchase rate of the Licensee. The Licensee may supply the materials or the consumer may arrange the required materials as per the required specifications of the Department.

The execution charge shall be as given below:

1. For Cable and wire:

- i. Single phase connection: Rs.400.00 per connection.
 - ii. LT three phase connection: Rs.600.00 per connection. iii.
- HT three phase connection: Rs.900.00 per connection

2. For Cut out & Fuse: -

- i. Rs 15.00 per cut-
 - out. ii. Rs 5.00 per
- fuse

3. For replacement of meters

a) Single Phase: Rs.40/-; b) Three Phase: Rs.60/-; c) CT operated: Rs.80/-; d) CT & PT operated: Rs.80/-

Works shall be executed only on production of payment receipt from concerned office.

6.7.6. Re-rating of Installation

This charge is for meeting expenses toward spot verification of load and other connected recording works. Fees for re-rating of the consumer's installation at the request of the consumer shall be Rs.100.00 per connection.

These charges shall be payable by the consumer in advance. The aforesaid charges do not include the charges payable by the consumer for other works

connected due to change of connected load. Rerating shall be carried out as per Clause 4.94 to 4.107 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.

6.7.7. Security Deposit:

i) Load Security:

The amount of load/meter security shall be calculated as per the procedure prescribed in Clause 4.123 – 4.127 and determined as per Annexure 11.18 of the JERC for M&M (Electricity Supply Code) Regulations, 2013, with up to date amendment. However, consumer with prepaid meter shall not be required to pay load security deposit.

ii) Meter Security (if Licensee's own meter is used):

The amount of Security deposit for meter security shall normally be the price of the meter as fixed by the licensee from time to time in line with Section 55 of Electricity Act 2003.

6.7.8. Charges for Replacement of tamper proof Meter Box:

For AC single phase LT or three phase LT without CT or with CT, the charge will be as per Licensee's purchase rate in case the energy meter box is replaced by the Licensee from its store.

The execution charges shall be as follows:

a) Single Phase: Rs.20/-; b) Three Phase: Rs.30/-; c) CT operated: Rs.40/-; d) CT & PT operated: Rs.40/-

6.7.9. Service Lines & Service Connection

i) Type of Service Connection: Type of service connection and distance for service connection will be as per Clause 4.2 read with Clause 5.10 of Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.

ii) Cost of Service Connection: As stipulated in Clauses 4.37 and 4.131 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment. If the consumer desires to arrange service connection materials, the Licensee (not below rank of Junior Engineer concerned) will check all the materials.

- 6.7.10. Mutation Fee: Mutation fee, i.e., fee for change of name shall be Rs 50 per change. This shall be carried out as per Clause 4.81 to 4.84 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013.
- 6.7.11. Cost of Application Form: The Application Form shall be free of cost vide Clause 4.14 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with up to date amendment.
- 6.7.12. Operation & Maintenance (O&M) Charge on dedicated assets: - The O&M charge of assets created out of such amount received without any obligation to return the same and no interest costs attached to such subvention, from Consumer Contribution, Deposit work and any similar nature shall be as follows: -
- 1) The completion costs shall be escalated at the rate of 4 % per annum from the year of completion to arrive the costs of the assets for 2015-16 level.
 - 2) The annual O&M charges/expenses shall be 5 % from the 2015-16 level costs.
 - 3) The O&M charges/expenses for each subsequent year will be determined by escalating the base charges/expenses determined above for 2015-16, at the escalation factor of 5.72 % to arrive at possible O&M charges / expenses for each year.

Chapter 7: Prayers

MSPDCL requests Hon'ble Commission to:

- a. Admit the Petition for Final True-up for FY 2021-22, MYT of Third control period FY 2023-24 to FY 2027-28, as submitted herewith;
- b. Approve the amounts claimed in the true up of FY 2021-22;
- c. Approve the amounts claimed in the ARR for FY 2023-24;
- d. Approve the category-wise tariffs proposed by MSPDCL for FY 2023-24;
- e. Condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date;
- f. Permit submission of any additional information required by the Commission during the processing of this Petition;
- g. Pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case.

Manipur State Power Distribution Company Limited

Petitioner

Place: Imphal

Dated: November 2022

Chapter 8: Annexures

Audited Annual Accounts of FY 2021-22