



TARIFF ORDER

TRUE UP FOR FY 2022-23

REVIEW FOR FY 2023-24

AND

DETERMINATION OF AGGREGATE REVENUE REQUIREMENT

&

RETAIL TARIFF FOR FY 2024-25

FOR

POWER & ELECTRICITY DEPARTMENT

GOVERNMENT OF MIZORAM

Petition (ARR & Tariff) No.2 of 2024

JOINT ELECTRICITY REGULATORY COMMISSION

FOR MANIPUR AND MIZORAM

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ABBREVIATIONS

Abbreviation	Description
A&G	Administrative and General
AAD	Advance Against Depreciation
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CWIP	Capital Work in Progress
DPS	Delayed Payment Surcharge
E.Act 2003	Electricity Act, 2003
FSA	Fuel Surcharge Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
GOI	Government of India
HT	High Tension
IEGC	Indian Electricity Grid Code
IEX	Indian Energy Exchange
IR	Inter-Regional
ISGS	Inter State Generating Station
JERC	Joint Electricity Regulatory Commission for Manipur and Mizoram
kV	Kilovolt
kVA	Kilovolt-Ampere
kVAh	Kilovolt-Ampere hours
kW	kilowatt
kWh	kilowatt-hour
LT	Low Tension
MAT	Minimum Alternate Tax
MDI	Maximum Demand Indicators
MUs	Million Units
MYT	Multi Year Tariff
NEEPCO	North Eastern Electric Power Corporation
NHPC	National Hydro Electric Power Corporation
NLDC	National Load Despatch Centre
NTI	Non-Tariff Income
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
P&ED	Power & Electricity Department, Mizoram
PGCIL	Power Grid Corporation of India Ltd
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement

Abbreviation	Description
PWW	Public Water Works
R&M	Repair and Maintenance
RAPDRP	Restructured Accelerated Power Development and Return Program
RDSS	Revamped Distribution Sector System
RE	Revised Estimate
R&M	Repairs & Maintenance
RoE	Return of Equity
RPO	Renewable Purchase Obligation
RTS	Roof Top Solar
SBAR	State Bank Advance Rate
SLDC	State Load Despatch Centre
T&D	Transmission and Distribution
UI	Unscheduled Interchange
YOY	Year On Year

JOINT ELECTRICITY REGULATORY COMMISSION FOR MANIPUR AND MIZORAM
E18, TBL Bhawan, 2nd to 5th Floor, Peter Street,
Khatla, Aizawl, Mizoram – 796001

Petition (ARR & Tariff) No. 2 of 2024

In the matter of True up for FY2022-23, Annual Performance Review for FY 2023-24 and Determination of Aggregate Revenue Requirement (ARR), Wheeling Tariff and Retail supply Tariff for FY 2024-25 for P&ED, Mizoram.

FOR

Power & Electricity Department, Government of Mizoram**Petitioner**
(here in after referred to as P&ED)

Present

Mr. R.Thanga
CHAIRPERSON

Er. Benjamin L. Tlumtea
MEMBER

ORDER

1. The Power and Electricity Department, Government of Mizoram (herein after referred to as P&ED (Mizoram or Petitioner) is a deemed licensee in terms of section-14 of the Electricity Act 2003 (hereinafter referred to as Act), engaged in the business of generation, transmission and distribution of electricity in the State of Mizoram.

Regulation-17 of the JERC (M&M) (MYT) Regulations, 2014 specify that the distribution licensee shall file ARR and Tariff Petition with all relevant data along with requisite fee as specified in Commission's Fees, Fines and Charges Regulations on or before 30th November of the preceding year. As per the directive of the Commission, the P&ED Mizoram has filed the ARR and Tariff Petition for true up for FY 2022-23 and Annual Performance review for FY 2023-24 and determination of ARR, wheeling tariff and retail supply tariff for FY 2024-25 vide letter No.T.23012/01/20-EC(P)/Com/33, Dt. **16th January 2024.**

2. **ARR and Tariff Petition for FY 2024-25** by P&ED, being an integrated utility and functioning as an undivided power entity, which is responsible for three (3) activities such as **Generation, Transmission, and Distribution of electricity** within the State of Mizoram and also discharging trading functions through its **State Load Despatch Centre (SLDC)**.

The P&ED has filed the Petition for determination of ARR, wheeling tariff and retail tariff for FY 2024-25 along with true-up petition for FY2022-23 and Annual Review Petition for FY 2023-24. In the petition P&ED had estimated Rs.781.97Cr of net ARR and with a projected gap of Rs. 211.23 Crores for FY 2024-25 at the prevailing rates as per its ARR retail supply tariff filings, which is done in anticipation to be mitigated the same by Govt. subsidy U/s 65 of E.Act 2003 amount of Rs.211.23Cr during FY2024-25. There was no proposal by P&ED for tariff hike in FY 2024-25. While in the last year FY 2023-24, Govt. subsidy needed was determined at Rs.98.30Cr in Tariff Order and same was revised in their APR by P&ED to 112.56Cr based on their expenditure projection. As per the present submission the ARR projected for FY 2024-25 is as follows:

Details of ARR elements	(Rs in Crores)
	FY2024-25
Aggregate Revenue Requirement	781.97
Revenue from Retail Sales	433.39
Revenue from Outside State Sales (from 204.10MU units)	137.35
Gap/Deficit	211.23

3. Admission of Petition and Public Hearing Process

The Commission observed that the ARR filed by the petitioner was incomplete and requires lacking crucial and vital information as was specified in Commission's (MYT) Regulations 2014.

Subsequently, the P&ED was asked to submit the required additional information vide Commission's letter No.H.20013/48/23-JERC, Dt. 18.01.2024. Pending receipt of additional information, the ARR and Tariff Petition was admitted on **30.01.2024** and marked as Petition (ARR & Tariff) **No. 2 of 2024**. in order to avoid delay in processing of ARR submission and directed the P&ED to publish the summary of the ARR and Tariff proposal in an abridged form and manner as approved in accordance with section-64 of the Electricity Act 2003 to ensure public participation vide Commission's letter

No.H.20013/48/23-JERC, dt: 30.01.2024. The P & ED department submitted its replies to the additional information vide their Letter No.T-23012/04/20-EC(P)/Com/35, dt: 22.01.2024 and letter No.T-23012/01/20-EC(P)/Com/45, dt: 07.02.2024.

The notification of the proposed ARR and the proposed Tariff schedule for FY 2024-25 was published by the P&ED in the following newspapers.

Sl. No	Name of News paper	Language	Date of publication
1	Newslink	English	3 rd & 5 th February 2024
2	Vanglaini	Mizo	3 rd & 5 th February 2024

Through the public notice, the stakeholders/general public was invited to file their objections and suggestions on the petition on or before 22-02-2024.

4. Notice for Public Hearing:

The Commission, to ensure transparency in the process of determination of ARR and Tariffs for 2024-25 and providing proper opportunity to all stakeholders and public in general and consumers for making suggestions/objections on the ARR and Tariff petition, has also decided to hold a public hearing at the headquarters of the state. Accordingly, a notification was published by the Commission in the following leading newspapers giving due intimation to all stakeholders, general public, interested parties, and consumers about the public hearing to be held at 11.00 AM onwards at Aijal Club, Tennis Court, Aizawl on 14.03.2024.

Sl. No.	Name of News-paper	Language	Date of Publication
1	The Aizawl Post	Mizo	5th & 6 th March 2024.
2	Highlander	English	6th & 7 th March 2024.

5. Public Hearing details:

The transparency in Public hearing was maintained by Commission in the meeting held on 14.03.2024 in the Aijal Club, Tennis Court, Aizawl. During the public hearing each one of the objectors was provided with a time slot for presenting his/her views on the petition of P&ED, Mizoram before the Commission. The main issues raised by the objectors during the public hearing along with response of P&ED and Commission's comments there on are briefly reproduced in **Chapter - 4**.

6. Meeting of State Advisory Committee (SAC)

The proposal of the P&ED Mizoram was placed before the State Advisory Committee in its meeting held on 13-03-2024 in the Aijal Club, Tennis Court, Aizawl and discussed the ARR for FY 2024-25, wheeling & retail Tariff proposal for FY 2024-25 relating to P&ED, Mizoram. There was no objection from any of the members participated in the SAC meeting held on 13.03.2024 with regard to the revision of the existing tariff by the Commission for the FY 2024-25. The minutes of the SAC meeting held and the list of participants are placed at **Annexure - I** at the end of this tariff Order of the Commission.

7. The Commission has reviewed the directives issued to the P&ED (the petitioner) in all the earlier Tariff orders from FY 2010-11 onwards to FY 2023-24 and noted that those directives felt complied with thoroughly were dropped, while continuing the pending ones. The directives which were partly complied with and the remaining directives are now consolidated and fresh directives now felt required are being issued afresh.

8. In exercise of the powers vested under section 62(1) read with section 62(3) and 64 (3a) of the Electricity Act 2003 and Regulation 5.2 of JERC (M&M) MYT Regulations, 2014 (Notified on 09.06.2014) hereinafter referred to as "**Tariff Regulations 2014**", and other enabling provisions in this behalf, the Commission issues this order for truing up of the ARR and revenues for FY 2022-23 and Annual Performance Review for FY 2023-24 besides approving of the Tariff Order for 2024-25 with Wheeling charges and retail supply business tariff for FY 2024-25 towards power supply to retail consumers within the State of Mizoram, duly taking into consideration of the facts presented by P&ED Mizoram in its petition and in their subsequent filings in the form of additional data, suggestions/objections made by stake holders, consumer organizations, general public in the public hearings and also the minutes of the State Advisory Committee and the response of the P&ED Mizoram to the suggestions/objections.

9. True-up for FY 2022-23

The P&ED had submitted its true-up petition for FY 2022-23 together with approved audited annual accounts of FY 2022-23 by their Statutory Auditor issued on dt: 28.11.2023. The Commission, its Tariff Order dated 23.03.2022 had approved the net

ARR for FY 2022-23 to be Rs. 512.65Cr and it was revised in APR order to Rs.609.37Cr in Tariff Order Dt 28.03.2023. With the actual figures now furnished by the P&ED based on the audited annual accounts for FY 2022-23, the true-up calculation resulted in net ARR of Rs. 729.21Cr as against APR figure of Rs. 609.37Cr and the revenue surplus arrived at was Rs. 45.39Cr by Commission upon considering the total Revenue subsidy amount from Government of Rs. 189.03Cr. The P&ED claimed in its ARR filing a surplus of **Rs.1.35Cr** by adopting Rs.189.03Cr of actual subsidy amount received from state Government during FY 2022-23. This includes the release of additional revenue subsidy amount during FY 2022-23 duly certified by the Statutory Auditors of their Organisation. Thereby, the revenue gap of the licensee (i.e., P&ED) results into a revenue surplus status to an amount of **Rs.45.39 Crs** which amount will be subjected to claw-back adjustment as per the provisions of the MYT Regulation 2014. As per Regulations 12.1(i) of the JERC for Manipur and Mizoram (MYT) Regulation 2014 one-third ($\frac{1}{3}^{\text{rd}}$) share of surplus amount of **Rs.15.13Cr** is being passed on as rebate to the consumers in the ARR for FY 2022-23 and the **remaining ($\frac{2}{3}^{\text{rd}}$) excess amount of Rs.30.26Cr** would be allowed to be retained by the Licensee at its disposal to utilise it on their own accord.

10. Annual Performance Review for FY 2023-24

The P&ED have submitted annual review petition for FY 2023-24 based on its revised estimate afresh. The Commission has reviewed the earlier approved net ARR of Rs.567.77 Crs in its Tariff Order dated 28.03.2023 with due reference now the P&ED revised its APR net ARR figure to Rs.707.40 Crs before adjusting for any realised revenue at existing tariff, outside state sales revenue and State Government revenue subsidy of Rs.112.56Cr it might have received during 2023-24 financial year. But Commission with the available information had allowed the net ARR to be Rs.707.40Cr as projected by P&ED and its estimated revenue from all sources would be Rs.540.68Cr thus leaving a revenue gap of Rs.54.16Cr subject to consideration of Govt. subsidy amount they might have received actually. **Hence, the Commission is not giving any opinion on the Gap status as it is too early to express at this juncture.**

11. Aggregate Revenue Requirement & Retail Tariff for FY 2024-25

The P&ED have submitted ARR petition for FY 2024-25 for a gross ARR amount of Rs.781.97Cr and with net revenue gap of **Rs.211.23 Crs** after adjusting for projected revenue realisation of Rs.570.73Cr (including surplus energy sales) but without any Government subsidy amount as it is still under consideration on the amount of subsidy to be announced. The Commission after detailed examination and scrutiny had arrived at a net revenue gap of **Rs.197.23Cr** (Rupees One hundred ninety-seven point twenty-three Crores only) by considering existing tariff-based revenue along with two freshly introduced categories last year (i.e., 2023-24) namely., HT Industrial-TOD, and Electric Vehicle Charging Station under LT & HT category but before any revenue yield from Outside state Sales quantum. If the Govt. subsidy amount derived if matches with the above gap, then the P&ED net Costs (i.e., net ARR) would get fully break-even. The Govt of Mizoram had announced a conditional Tariff subsidy amount for FY 2024-25 to be derived based on adopting **27.01%** on the net ARR finalised subject to a subsidy upper limit ceiling of Rs.211.23Cr as per their **letter No.19018/9/2022-P&E, Dt.16.01.2024** is placed at **Annexure-VIII** for reference. The above gap amount is duly matched with the figure derived by adopting the 27.01% on the net ARR of Rs.730.20Cr (before Outside State sales revenue amount) and it is well within the limits set by Government of Mizoram for subsidy derivation and Commission recommends the tariff subsidy as Rs.197.23Cr finally.

12. This Order contains thirteen (13) chapters as detailed below:

1. Chapter 1: Introduction.
2. Chapter 2: Summary of ARR, wheeling charges and Tariff petition for FY 2024-25.
3. Chapter 3: Power Sector in Mizoram - An over view.
4. Chapter 4: Public hearing process.
5. Chapter 5: True-up of ARR for FY2022-23.
6. Chapter 6: Annual performance Review of ARR for FY2023-24.
7. Chapter 7: Analysis of ARR for FY2024-25 and approvals of the Commission.
8. Chapter 8: Tariff principles and design and determination of tariffs for FY2024-25.
9. Chapter 9: Wheeling charges for FY 2024-25.
10. Chapter 10: Fuel and Power purchase cost Adjustment.

11. Chapter 11: ARR of Transmission Function and Transmission charges for FY2024-25.
12. Chapter 12: ARR of Generation Function for FY2024-25.
13. Chapter 13: Directives issued.
13. The P&ED should ensure implementation of the Order from the effective date after issuance of a public notice, in such a font size which is clearly & conspicuously visible in two daily newspapers having wider circulation with in the state within a week and submit in writing the compliance report of doing so to the Hon'ble Commission before the effective date itself.
14. This Order shall be effective from **1st April, 2024** and shall remain in force until the issuance of new Tariff Order by this Commission for ensuing year.

Sd/-

(Benjamin L. Tlumtea)
MEMBER

Sd/-

(R.THANGA)
CHAIRPERSON

Place: Aizawl

Date: 15/03/2024

1. Introduction

1.1. JERC for Manipur and Mizoram (JERC, M&M)

In exercise of the powers conferred as per Electricity Act 2003, (hereinafter referred to as Act) the Government of India has constituted Electricity Regulatory Commission for the States of Manipur and Mizoram to be known as “Joint Electricity Regulatory Commission for Manipur and Mizoram” vide GOI. Gazette (Extra Ordinary) Notification No.23/3/2002 R&R dated 18/01/2005, (hereinafter referred to as Commission) as per the authorization given by the Government of Manipur and the Government of Mizoram vide Memorandum of Agreement dated 23/07/2004. The Commission constituted is a two-member body designated to function as an autonomous authority responsible for regulation of the power sector in the States of Manipur and Mizoram. The powers and functions of the Commission are as prescribed in the Act. The head office of the Commission is presently located at Aizawl, the capital town of Mizoram. The Commission became functional w.e.f. 24th January, 2008.

In accordance with the provisions of the Act, the Joint Commission discharges the following functions:

- a). Determine the tariffs for generation, transmission, distribution of power supply whole sale/ bulk or retail and wheeling of electricity, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under Section-42, the State Commission shall determine the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- b). Regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- c). Facilitate intra-State transmission and wheeling of electricity;
- d). Issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- e). Promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of

electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

- f). Adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
- g). Levy fee for the purposes of this Act;
- h). Specify State Grid Code consistent with the Grid Standards specified under Clause (h) of sub-section (1) of Section 79 of the Act;
- i). Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- j). Fix the trading margin in the intra-State trading of electricity, if considered, necessary;
- k). Discharge such other functions as may be assigned to it under the Act.

1.1.1. Further, the Commission shall also advise the State Government on all or any of the following matters namely:

- a). Promotion of competition, efficiency and economy in activities of the electricity industry;
- b). Promotion of investment in electricity industry;
- c). Reorganization and restructuring of electricity industry in the State;
- d). Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by the State Government.

1.1.2. The State Commission shall ensure transparency while exercising its powers and discharging its functions.

1.1.3. In discharge of its functions, the State Commission is guided by the National Tariff Policy (NTP) has brought out by GOI in compliance to Section-3 of the E.Act 2003. The objectives of the NTP are to:

- a). Ensure availability of electricity to consumers at reasonable and competitive rates;
- b). Ensure financial viability of the sector and attract investments;
- c). Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;

d). Promote competition, efficiency in operations and improvement in quality of supply.

1.2. Power & Electricity Department (P & ED) and Tariff Petition

P&ED, being an integrated utility, is responsible for generation, Transmission and Distribution of electricity in the State of Mizoram and it also discharges trading functions through its SLDC. As per the Tariff regulations, the utility is required to submit the ARR and the Petition in the month of November for fixing the Tariff for the next financial year.

The objectives of the P&ED are:

1. Focuses on demand and distribution network growth.
2. Lays emphasis on metering to help reduce distribution losses (100% metering)
3. Focuses on metering to raise correct demand.
4. Focuses on collection of revenue to reduce commercial losses and improve cash flow.
5. Concentrated efforts into computerization of billing for efficient billing and in turn better and faster recovery.
6. Focuses on to arrest power theft and correct metering and energy audit to improve efficiency.

2. Summary of ARR & Tariff Petition for FY 2024-25

2.1. Aggregate Revenue Requirement (ARR)

The P&ED Mizoram, in its petition has projected the Aggregate Revenue Requirement (ARR) and Tariffs for FY 2024-25 and expected revenue with the existing tariffs and the resultant gap. The ARR and revenue gap are shown in Table below.

Table 2.1: Aggregate Revenue Requirement projected by P & ED for FY 2024-25
(Rs. / Cr)

Sl. No.	Particulars	FY2024-25
1	Cost of Power Purchase	511.67
2	Cost of Generation	13.51
3	Cost of Fuel	0.00
4	Operation & Maintenance Expenses	150.85
5	Transmission charges (CTU)	57.93
6	Intra- state Transmission Charges (STU)	48.46
7	Interest on Loan	0.00
8	Depreciation	1.58
9	Interest on Working Capital	9.93
10	Return on Equity	0.00
11	Prior period expenses	0.00
12	Provision for Bad Debt	0.00
13	Contribution to Contingency Reserve Fund	0.00
14	Total Revenue Requirement	793.92
15	Less: Non-Tariff Income	11.96
16	Less: Efficiency Gains & 1.3 rd surplus	0.00
17	Less: Revenue from units sold in Power-Exchanges	137.35
18	Net Revenue Requirement (14-15-16-17)	644.61

(Source: Table 2.23 & 2.24 of Petition)

2.2. Tariff

The P&ED, Mizoram in its petition has submitted the existing and proposed tariffs for the FY 2024-25 as detailed in the table below.

Table 2.2: Existing V/s. Proposed Tariff for FY 2024-25

Sl. No.	Consumer Category	Existing Tariff		Proposed Tariff	
		Energy Charge (Rs. /Month)	Fixed Charge (In Rs.)	Energy Charge (Rs. /Month)	Fixed Charge (In Rs.)
1	Kutir Jyothi				
i)	First 20 kWh	2.55/kWh	25/Connct	2.55/kWh	25/Connct
ii)	All above 20 kWh	3.55/kWh	25/Connct	3.55/kWh	25/Connct
2	Domestic				
	A.Low Tension				
i)	First 100 kWh	4.90/kWh	50/CL/ kW	4.90/kWh	50/CL/ kW
ii)	Next 100 kWh	7.10/kWh	50/CL/ kW	7.10/kWh	50/CL/ kW
iii)	All above 200 kWh	8.20/kWh	50/CL/ kW	8.20/kWh	50/CL/ kW
	B.High Tension	8.65/kVAh	50/BD/ kVA	8.65/kVAh	50/BD/ kVA
3	Non-Profit Public purpose (New) / Non-Domestic (previously)				
	A.Low Tension				
i)	First 150 kWh	7.60/kWh	60/CL/ kW	7.60/kWh	60/CL/ kW
ii)	All above 150 kWh	8.30/kWh	60/CL/ kW	8.30/kWh	60/CL/ kW
	B. High Tension	8.75/kVAh	60/BD/ kVA	8.75/kVAh	60/BD/ kVA
4	Commercial				
	A.Low Tension				
i)	First 150 kWh	8.20/kWh	80/CL/ kW	8.20/kWh	80/CL/ kW
ii)	All above 150 kWh	8.45/kWh	80/CL/ kW	8.45/kWh	80/CL/ kW
	B. High Tension	8.90/kVAh	80/BD/ kVA	8.90/kVAh	80/BD/ kVA
5	Public Lighting	11.35/kWh	80/CL/ kW	11.35/kWh	80/CL/ kW
6	Irrigation & Agriculture				
	A. Low Tension	3.80/kWh	50/CL/ kW	3.80/kWh	50/CL/ kW
	B. High Tension	3.85/kVAh	50/BD/ kVA	3.85/kVAh	50/BD/ kVA
7	Public Water Works				
	A. Low Tension	11.10/kWh	90/CL/ kW	11.10/kWh	90/CL/ kW
	B. High Tension	9.85/kVAh	90/BD/ kVA	9.85/kVAh	90/BD/ kVA
8	Industrial				
A	A. Low Tension				
i)	First 400 kWh	7.10/kWh	80/CL/ kW	7.10/kWh	80/CL/ kW
ii)	All above 400 kWh	8.05/kWh	80/CL/ kW	8.05/kWh	80/CL/ kW
	B. High Tension				
	Option-1 (Existing)	9.05/kVAh	80/BD/ kVA	9.05/kVAh	80/BD/ kVA
	Option-2 (TOD based consumption)				
	TOD energy usage hours during the day				
	6AM upto 5PM (Normal)	10.05/kVAh	80/BD/ kVA	10.05/kVAh	80/BD/ kVA
	5PM upto 10PM (Peak hrs)	11.55/kVAh	80/BD/ kVA	11.55/kVAh	80/BD/ kVA
	10PM upto 6AM (Off-Peak)	8.55/kVAh	80/BD/ kVA	8.55/kVAh	80/BD/ kVA
9	Bulk Supply	6.85/kVAh	90/BD/ kVA	6.85/kVAh	90/BD/ kVA
10.	Electric Vehicle Charging Station				
	A. LT category	8.20/kWh	75/CL/KW	8.25/kWh	75/CL/KW
	B. HT Category	8.65/kVAh	75/BD/kVA	8.70/kVAh	75/BD/kVA

Note: (CL=Contracted Load), (BD=Billing Demand), (Connct = Connection)

2.3. Prayer

- Approve True-up Petition for FY 2022-23 and APR for the FY 2023-24, ARR and Tariffs for FY 2024-25 in respect of distribution function, transmission function and generation function for P&ED, Mizoram formulated in accordance with the guide

lines out lined in the regulations of Joint Electricity Regulatory Commission (JERC) and the principles contained therein.

- Condone any inadvertent delay / omissions / errors / rounding off / differences / short comings and the P&ED may please be permitted to add / change / modify / alter the petition during its process.
- Permit P&ED, Mizoram to file additional data / information as may be necessary.
- Pass such further and other orders as the Hon'ble Commission may deem fit and proper keeping in view the facts and circumstances of the case.

3. Power Sector in Mizoram - An Overview

3.1. Geographical Reality

The P&ED, Mizoram is responsible for supply and distribution of electricity in the State of Mizoram which has a total area of 21081 Sq KM with ten (10) districts, viz. Aizawl, Mamit, Kolasib, Champhai, Serchhip, Lunglei, Lawngtlai, Khawzawl, Hnahthial and Saiha. The State shares more than 700 Kms of international boundary with Bangladesh and Myanmar. The total population of Mizoram State is 10.97 Lakhs as per 2011 census. The per capita consumption is about 348.78 kWh during FY 2022-23. The P&ED projects to serve about 334207 consumers of various consumer categories during FY2024-25.

3.2. Power supply

3.2.1. Own Generation

P&ED has its own generating plants. The total installed capacity of the State-owned generating stations and the projected energy generated during FY2022-23 as furnished by P&ED is as in the Table below:

Table 3.1: Own Generating Stations output proposed during FY2022-23

Sl. No.	Station	Installed Capacity	Date of COD	Generation	Auxl. Cons @1%	Net Energy
I	Small Hydel	(MWs)	Date	(MU)	(MU)	(MU)
1	Serlui-A	1.00	24.04.84	0	0	0
2	Tuirivang --	0.30	14.08.89	0.01	0	0.01
3	Tuipanglui	3.00	17.12.04	0	0	0
4	Lamsial	0.50	26.08.08	0	0	0
5	Khawiva	1.05	08.12.88	1.34	0.00	1.33
6	Tuipui	0.50	15.12.91			
7	Kau-Tlabung	3.00	05.05.05	6.55	0.00	6.55
8	Teirei	3.00	12.10.99	4.95	0.05	4.90
9	Maicham-I	2.00	5.01.96	0.08	0.00	0.08
10	Maicham-II	3.00	11.11.09	3.25	0.01	3.24
11	Tlawva	5.00	13.05.2022	1.81	0.02	1.79
12	Kawlbem	4.00	15.12.2022	0.14	0.01	0.13
	Sub-Total	26.35		18.13	0.10	18.03
12	Serlui 'B'	12.00	In-Firm power	12.47	0.34	12.13
	Grand Total	38.35		30.60	0.44	30.16

Mini Hydel Stations maintained by Amazon Engineering on behalf of P&ED

Sl. No.	Mini Hydel Stns	Installed Capacity	Actuals in FY20-21	Actuals in FY21-22	Actuals in FY22-23
	Amazon Engineering	(MWs)	(MU)	(MU)	(MU)
1	Khawiva SHP	1.05	1.38	1.21	1.30
2	Tuipui	0.50	1.04	0.46	0
4	Kau-Tlabung	3.00	8.10	6.76	6.55
3	Teirei	3.00	4.93	4.05	4.90
	Grand Total	7.55	15.45	12.48	12.75

P&ED has replied that in addition to the above 38.35MWs., they also possess two more generation plants namely Lengpui diesel set and Bairabi thermal plant. **The diesel generating set of 0.50 MW is dedicatedly kept in Lengpui Airport and the heavy fuel plant of 22.92 MW at Bairabi capacity is kept on standby mode for the purpose of meeting any emergency requirements only as its usage is un-economical because of heavy furnace oil and department is not interested to run it.** The rest are mini Hydel plants having seasonal generation. Of late, P&ED have handed over three (3) plants to M/s. Amazon Engineering company to manage the plants listed above separately to the extent of 7.55MWs consisting of Khawiva (1.05MW), Tuipui (0.50MW) and Kau-Tlabung (3MW) SHP plants and one plant Teirei (3MW) is now being managed by M/s.Assam Petroleum as per its Generation ARR petition submission made now. On ascertaining through additional information, it is noted that Serlui-A (1MW), Tuirivang (0.30MW), Tuipanglui (3MW) and Lamsial (0.50MW) totalling to 4.80 MW SHPs are not in operation and not generating any energy. Hence, remaining plants effective in some power generation is managed by P&ED is only 26MWs capacity including Serlui-B and without considering the Bairabi 22.92MW heavy fuel thermal plant. The Serlui-B (12MW capacity plant) is still to achieve its Commercial Operation date for various reasons relating to clearances issues. This plants PLF during 2021-22 generated net energy of 10.66MU and in FY2022-23 its generated net energy of 12.13MU and in FY 2024-25 P&ED had adopted 22.58% PLF for Serlui-B. The overall PLF adopted for all the units in operation by P&ED and Outside agencies is 13.66% and auxiliary consumption is adopted at 1.37%, while the approved value is at 1% as per Regulation. Thus, P&ED is more dependent on Central Generating stations power only.

3.2.2. Power Purchase

The State mostly dependent upon outside state energy sources for meeting all its energy requirement. The State has got allocated share from Central Sector Generating Stations and total firm share from the Central Sector Generating Stations namely NEEPCO, NHPC and NTPC is 180.67MW. Besides, the P&ED is also procuring TSECL power to a tune of 10.50 MW from NEC funded Baramura Gas based thermal power plant and OTPC power of 42MW from Palatana Gas based power plant in Tripura state. Therefore, the total share allocation to Mizoram state from the generating stations outside the State is 272.02 MW as furnished by the P&ED is depicted in the Table below:

**Table 3.2: Available MW capacity share from All Generating Station sources
(in MW)**

Sl. No.	Source	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW
A	Central Generating Stations			
I	NTPC			
1	Bongaigaon TPS	750.00	5.415	40.613
2	Farakka STPS	1600.00	0.142	2.272
3	Kahalgaon STPS	840.00	0.142	1.193
4	Talcher STPS	1000.00	0.142	1.420
	NTPC-Total	4190.00		45.497
II	NHPC			
1	Loktak HEP	105.00	5.020	5.271
	NHPC-Total	105.00		5.271
III	NEEPCO			
1	Kopili HEP	200.00	4.61	9.22
2	Kopili - II HEP	25.00	6.040	1.51
3	Khandong HEP	50.00	3.940	1.97
4	Ranganadi HEP	405.00	5.700	23.09
5	Doyang HEP	75.00	5.250	3.94
6	Pare HEP	110.00	5.765	6.34
7	Tuirial HEP	60.00	100.00	60.00
8	AGBPP	291.00	5.410	15.74
9	AGTPP	135.00	6.00	8.10
	NEEPCO-Total	1351.00		129.91
IV	TSECL			
1	B'mura - IV	21.00	25.000	5.25
2	B'mura - V	21.00	25.000	5.25
	TSECL-Total	42.00		10.50
V	OTPC			
1	Palatana	726.00	5.785	42.00
	OTPC-Total	726.00		42.00
VI	Other Stations/IPPs			
1	Power exchange through IEX			
	Others-Total			

Sl. No.	Source	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW
B	State generating Stations			
1	All Units	38.35	100.000	38.35
	Plants In operation	26.00	Managed by P&ED	26.00
	Not in generation	4.80		4.80
	Amazon & Assam (4HEPs)	7.55	Leased out	7.55
G	GRAND TOTAL	6448.85		272.02

(Source: Format – F1 of ARR Petition)

The energy drawn from various Central Generating Stations and from Tripura state is given in Table below:

Table 3.3: Energy drawal from all external Sources and the State-owned Generation submitted by P & ED for FY 2022-23

Sl. No	Energy Source	Procured energy (MU)
A	Central Generating Stations	
I	NTPC	
1	Bongaigaon TPS	90.04
2	Farakka STPS	14.85
3	Kahalgaon STPS	7.60
4	Talcher STPS	10.14
	NTPC-Total	122.14
II	NHPC	
1	Loktak HEP	23.52
	NHPC-Total	23.52
III	NEEPCO	
1	Kopili HEP	0.00
2	Kopili - II HEP	0.00
3	Khandong HEP	0.00
4	Ranganadi HEP	77.96
5	Doyang HEP	8.93
6	Pare HEP	30.08
7	Tuirial HEP	172.17
	Free Power from Tuirial	23.48
8	AGBPP (Gas)	62.05
9	AGTPP (Gas)	38.32
	NEEPCO-Total	412.98
IV	TSECL – Tripura State Electricity Corp Ltd.	
1	Baramura – IV (Gas)	33.855
2	Bar'mura – V (Gas)	33.855
	TSECL-Total	67.71
V	OTPC – ONGC Tripura Power Corporation	
1	Palatana (Gas)	260.61
	OTPC-Total	260.61
VI	Other Stations/IPPs	
1	Amazon Engg. & Assam petroleum (4 HEPs stns of P&ED)	12.75
2	Rooftop Solar generation	3.57

Sl. No	Energy Source	Procured energy (MU)
3	Solar Generation	2.31
	NVVN Ltd	2.55
	Others-Total	21.18
B	State Own generating Stations	
1	From all Generating Plants	17.41
	State Generating Stations-Total	17.41
C	IEX power exchange purchases	0.00
D	UI / (Over Drawl)	0.00
E	UI/ (Under Drawl)	-61.60
	Total of C to E	-61.60
	GRAND TOTAL Energy (MU)	863.94

(Source: Format F1 of Petition, page-9)

3.3. Transmission and Distribution

For drawing power from CGS and other outside state sources, there are 3 (three) Nos. of 132kV transmission lines and 1 (one) 400kV D/C line (charged at 132kV) owned by PGCIL connecting Mizoram as given below.

- i). 132kV S/C Jiribam (Manipur) – Aizawl
- ii). 132kV S/C Badarpur (Assam) – Aizawl
- iii). 132kV S/C Kumarghat (Tripura) – Aizawl
- iv). 400kV D/C Silchar- Aizawl (Melriat)

All these lines terminate at 132KV Luangmual SS, Aizawl and Melriat (PG) under PGCIL, from where power is drawn to different load centres through 2 (two) No. 132 kV lines of P&ED.

Being a hilly State with its population unevenly dispersed in the remote areas, the State of Mizoram is having large network of HT and LT lines as well as distribution sub-station/transformers.

The details of transmission and distribution network, owned & operated by P&ED and furnished as on 31.03.2023 are given in Table below:

Table 3.4: Network Details as on 31.03.2023

Sl. No.	Particulars	FY 2022-23			
		At year beginning	Additions made	With-drawn services	At the end of year
1	Length of lines (ckt-km)				
	132 kV	878	0		878
	66 kV	94	0	0	94
	33 kV	1532	0	0	1532

Sl. No.	Particulars	FY 2022-23			
		At year beginning	Additions made	With-drawn services	At the end of year
	11 kV	5555	0	0	5555
	LT	3410	0	0	3410
	Total	11469	0	0	11469
2	Number of 33/11 kV substations	64	0	0	64
3	No. of Power Transformers (33/11 kV)	117	0	0	117
4	Total MVA capacity of Power Transformers	629	0	0	629
5	No. of Distribution Transformers	2385	0	0	2385
6	Total MVA capacity of Distribution Transformers	292	--	0	292
7	Number of consumer meters				
	LT (less than 0.5 accuracy class)	274622	9041		283663
	LT (better than 0.5 accuracy class)		-		
	HT (less than 0.5 accuracy class)	672	154		826
	HT (0.2 accuracy class)		-		
	HT (better than 0.2 accuracy class)		-		
	Total	275294	9195	0	284489
5	Number of Interface meters				
	0.5 accuracy class	0	0	0	0
	0.2 accuracy class	0	0	0	0
6	Metered Sales (in MU)				
	a. Low Tension sale (LT)	335623	22366		357989
	b. High Tension sale (HT)	125143	9943	0	135087
	c. Extra High-Tension sale (EHT)	--			--
	Total	460766	32309	0	493075
7	Metered Consumers (in Nos.)				
	a. Low Tension (LT)	274622	9041	283663	274622
	b. High Tension (HT)	672	154		826
	c. Extra High Tension (EHT)		-		
	Total	275294	9195	-	284489

3.4. Distribution losses

The distribution losses of P&ED system as filed were 26.75% during the year 2022-23 as against the approved Tariff Order Losses of 17.83% resulting in a deviation of 8.92%. The segregation of details between technical and commercial losses were not made available by P&ED anywhere in their ARR filing submission to examine.

3.5. Consumer profile and Energy sales

The consumers profile and corresponding energy sales during the year FY2022-23 are given in Table below:

Table 3.5: Consumer Profile and Energy Sales for FY 2022-23 (Audited actuals)

Sl. No.	Category	No. of Consumers	Connected Load (MW)	Sales (MU)
1(a)	Kutir Jyoti - LT	17441	4484.70	4.88
1(b)	Domestic - LT	243058	313460.67	291.22

Sl. No.	Category	No. of Consumers	Connected Load (MW)	Sales (MU)
1(c)	Domestic - HT	11	2100.35	2.23
2(a)	Non-Profit Public purpose - LT	8212	94418.10	11.79
2(b)	Non- Profit Public purpose - HT	55	9999.39	3.98
3(a)	Commercial - LT	13176	42114.22	38.81
3(b)	Commercial - HT	497	15881.33	7.91
4	Public Lighting - LT	520	986.05	2.48
5(a)	Irrigation & Agriculture - LT	52	70.86	0.05
5(b)	Irrigation & Agriculture - HT	23	4537.75	1.01
6(a)	Public Water Works - LT	177	1204.77	6.32
6(b)	Public Water Works - HT	55	44475.01	89.64
7(a)	Industrial - LT	1027	5081.60	2.44
7(b)	Industrial - HT	26	8288.82	10.98
8	Bulk Supply - HT	146	16562.65	13.57
9	Temporary Connection & Theft -	13	904	0.53
10	Outside State Sale - UI / Trading			221.39
	GRAND TOTAL	284489	564270.27	714.47

(Source: Form No: R1 of petition)

3.6. Demand

The allocation of power (firm and un-firm (un-allocated) from various central generating stations, NEC funded Baramura Gas Based Thermal Power Plant and all others is 272.02 MW during FY 2022-23. The peak load demand of Mizoram state during the FY 2022-23 of P&ED department is 159.12 MW as on 19.01.2023 and during FY 2023-24 (provisional) the peak load was 163.10 MW as on 27.01.2024.

The energy procured by P&ED during the year 2022-23 was 925.54 MU including own net generation of 30.16 MU. Within this Amazon Engineering supply of 12.75MU and excluding nil RPO obligation related energy purchases.

4. Public Hearing Process

4.1. Introduction:

On admitting the ARR and retail Tariff Petition for FY 2024-25, the Commission directed the P&ED to make available the copies of the petition to the general public, post the petition on their website and also publish the same in newspapers in abridged form and invite comments/objections/suggestions from them. One (1) written objection was received from various consumers from general public.

4.2. Public Hearing:

In order to ensure transparency in the process of determination of tariff as envisaged in the Electricity Act, 2003, Public Hearing was held at Aizawl on 14.03.2024 as scheduled in the Aijal Club, Tennis Court, Aizawl from 11:00 A.M. to 1:00 P.M. During the Public Hearing the participants from general public were given an opportunity to offer their views in respect of the ARR and Tariff Petition for FY 2024-25 of P&ED.

The list of stakeholders & general public who attended the Public Hearing is given in **Annexure-II**.

The Officers of P&ED who attended the Public Hearing have responded on the issues raised by the objectors during the hearing process.

4.3. Proceedings of Public Hearing:

The Commission received **One (1) written objection** within the stipulated time from the general public of P&ED consumers. The objector wise, response of the P & ED, Mizoram against each objection are furnished below.

Objector: Mr. Vanlalruata, Tuikual South, Aizawl.

Objections & Replies from P&ED:

Objection No-1: Employee cost of Rs.135.59 crore since on higher side as actual numbers of employees for transmission, distribution and generation cannot be segregated by P&E Department. Considering the maximum power demand and small geographical area of the state it may be requested that the employee cost may not be increased.

Reply by P&ED: Component of Employee Cost are Salary, Wages, Work charged and

Grant-in-aid salary. An increase of Employee Cost is usually affected by annual increment of regular employees as well as regularization of provisional employees as per Govt. of Mizoram DP&R letter No. A.12034/55/2020-P&AR (GSW) Dt. 28.09.2020. Projected/Estimated amount of Rs.135.59 crore Employee cost for distribution function for the FY 2024-25 is computed from revised estimate for Employee cost for distribution function for the FY 2023-24 i.e. Rs. 128.25 crore (proposed for FY 2023-24 Review petition) by adding 5.723% and this estimated Employee cost is inclusive of Medical treatment for employee.

In this connection, P&ED mentioned that Mizoram State Budget Revised Estimate (RE) for Employee Cost, i.e. total summation of salary, wages, work charged and grant-in-aid salary for the FY 2023-24 for generation, transmission and distribution function is Rs. 203.57 crore (i.e. Rs.119.09 Cr. + Rs.42.97 Cr. + Rs.37.71 Cr.+ Rs.3.80 Cr.) and, Employee Cost as per Budget Estimate for FY 2024-25 is Rs. 191.59 Cr (i.e.Rs.112.86 Cr.+Rs.39.34 Cr.+ Rs.35.18Cr.+Rs.35.18 Cr.+Rs.4.21Cr.).

Objection No.2: Interest of working capital of Rs. 9.93 crore cannot be accepted as P&ED is purely Government Department and not company / corporation. They do not depend on working capital like those of company/corporation and is purely supported by government budget.

Reply by P&ED: As per Joint Electricity Regulatory Commission for Manipur and Mizoram's Multi Year Tariff Regulations 2014 Clause No. 29, Power & Electricity Department, Mizoram has the right to request the Hon'ble Commission for interest on working capital when filing of tariff petition. However, since P&ED is a government department expenditure of the department is expenditure of the State government and, all revenue collection of the department is remitted into the State government revenue as non-tax revenue of the state government. Since interest on working capital is purely expenditure of the state government it has to be included in the Aggregate Revenue Requirement (ARR) of the state government for determination of Tariff by the Hon'ble Commission.

Commission's Comments:

The objections raised by the Stakeholders/ Public and replies of the P&ED are noted.

& & & &

5. True-up of ARR for 2022-23

5.1. Back ground

Multi Year Tariff Order for the control period of 5 years from FY 2018-19 to FY 2022-23 was issued by the Hon'ble Commission vide Order dated 12.03.2018 under the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014.

The Hon'ble Commission determined the Aggregate Revenue Requirement for the FY 2018-19 to FY 2022-23 & Tariff for the FY 2018-19 vide Order dated 12.03.2018. Further, Tariff Order for the FY 2022-23 was issued vide Order dated 23.03.2022.

Regulation 10(1) & (2) of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 provides as follows:

“10.1 Where the Aggregate Revenue Requirement and expected revenue from tariff and charges of a Generating Company or Transmission Licensee or Distribution Licensee is covered under a Multi-Year Tariff framework, then such Generating Company or Transmission Licensee or Distribution Licensee, as the case may be, shall be subject to truing up of expenses and revenue during the Control Period in accordance with these Regulations.

10.2 The Generating Company or Transmission Licensee or Distribution Licensee shall file an Application for Truing up of the previous year and determination of tariff for the ensuing year, within the time limit specified in these Regulations”

Further, the Hon'ble Commission notified the First Amendment Regulations, 2019 is as follows:

“5.2 The filing of the Control Period under these Regulations shall be as under.

(i).....

(ii) From the second year of the Control Period onwards and upto the last year of the Control Period, the petition in each year shall comprise of:

- a. Truing Up for the previous year with audited accounts, and Annual Performance Review (APR) with revision of ARR approved in MYT Order for current year and revised projection of ARR approved in MYT Order for the ensuing year in accordance with these Regulations;*
- b. Revenue from the sale of power at existing tariffs and changes for the current year;*
- c. Revenue gap for the ensuing year calculated based on the revised projection of ARR and truing up of the previous year;*
- d. Application for determination of tariff for the ensuing year.”*

The Hon’ble Commission carried out the review of the FY 2022-23 vide order dated 28.03.2023. The actual figures for the FY 2022-23 are now available. As required by the Regulations, P&ED Mizoram is submitting the Audited Annual Accounts for the FY 2022-23 and Asset & Depreciation Register.

Further, in accordance with the Regulation 10(1) & (2) of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 & Regulation 5.2 (ii) of First Amendment Regulations, 2019 as given above, the P&ED Mizoram is submitting the present true-up petition for the FY 2022-23 on the basis of the audited Annual Accounts.

P&ED Mizoram requests the Hon’ble Commission to carry out the true-up of expenses in accordance with the Regulation 10 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 read with First Amendment Regulations, 2019.

Data given in this chapter is for the entire year i.e. FY 2022-23.

5.2. Energy sales

The actual sales vis-à-vis the sales approved by the Hon’ble Commission in its Tariff Order dated 23.03.2022 & 28.03.2023 for the FY 2022-23 is as summarized below:

Table 5.1: Retail Energy Sales of FY 2022-23

(In MUs)

Sl. No.	Category	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Audited Accounts
	LT Consumers			
1	Kutir Jyoti	7.92	5.91	4.88
2	Domestic	304.01	301.35	291.22
3	Non-Domestic	9.04	9.18	11.79
4	Commercial	37.70	36.05	38.81
5	Public Lighting	2.33	2.46	2.48
6	Public Water Works	0.87	6.51	6.32
7	Agriculture	0.07	0.05	0.05
8	Industrial	4.47	2.77	2.44
	Total LT	366.41	364.28	357.99
	HT Consumers			
9	Domestic	4.79	3.45	2.23
10	Non-Domestic	0.28	13.48	3.98
11	Commercial	11.10	13.68	13.14
12	Public Water Works	90.03	84.00	89.64
13	Agriculture	0.11	0.09	1.01
14	Industrial	6.11	7.39	10.98
15	Bulk Supply	16.16	17.30	14.11
	Total HT	128.58	139.39	135.09
16	Total LT & HT	494.99	503.67	493.08
17	Outside State - Trading	46.87	201.88	221.39
	Total	541.86	705.55	714.47

Commission analysis:

The Commission approves energy sales of LT & HT category within the State including Outside State Sales at 714.47 MU so stated by P&ED based on actuals basis for FY 2022-23 for true-up purpose as they are matching with the statutory auditor figures approved in the audited financial accounts.

5.3. Distribution Loss & Energy Balance

The actual values of the distribution loss for the FY 2022-23 arrived in accordance with the actual energy sales & energy purchase.

Table 5.2: Distribution Loss for FY 2022-23

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
	2	3	4	5
1	Distribution Loss	17.83%	24.00%	26.75%

Commission's analysis

The Commission in its Tariff Order dt.23.03.2022 had approved Distribution Loss at 17.83% for FY2022-23 based on the available data then submitted by P&ED through ARR filings petition. The P&ED at present is claiming actual distribution losses at 26.75% with an abnormally steep hike of 8.92% (i.e.,26.75%-17.83%) distribution losses over approved losses value. While in review order (APR) these losses were revised based on their request to 24% depending upon the prevailing circumstances. But, even these losses could not be achieved by the P&ED in 2022-23 as the figure now indicated to be 26.75% which is even higher by 2.75% than the review order value. The details of energy handling and its disposal from 2019 onwards is tabulated below for understanding the real causes for this failure to curtail losses.

(Million Units)

Fin. Year	Retail Sale	IEX Sales	Sub-Total	Power bought	UI U/Drw	T&D Loss	Dist. Loss	D.L (%)
0	1	2	3=1+2	4	5	6=(4-5-3)	7	8
2019-20	486.41	249.41	735.82	882.83	0	147.00	126.68	20.66%
2020-21	444.92	69.72	514.64	709.59	0	194.95	182.14	29.05%
2021-22	464.28	90.15	554.43	762.75	*26.61	181.71	169.08	26.65%
2022-23	493.08	221.39	714.47	908.25	0	193.79	180.05	26.75%

*- In FY 2021-22, the Distribution Losses were adopted as 25%. But in reality, 14.33MU of excess losses were noticed in system added to T&D Loss as well as Dist. Losses.

As seen from the above table, despite increased power purchase, IEX sales and the T&D losses there was no perceivable improvement in the loss reduction approaches by P&ED.

It can also be observed that the energy procured for outside state sales almost 50% of Retail sales is strongly objectionable. Where was the need to procure so much of excess energy and struggle to dispose it of in IEX Market? The Commission wants to verify whether this IEX Sales are profitable or incurring loss to P&ED. If so, that much of identified loss will be disallowed for TRUE-UP purpose.

The losses as at FY2021-22 are still static and constant. Therefore, Commission strongly infer it to lack of diligent vigilance from P&ED staff which resulted into steep shot-up of commercial losses within the state such as **theft, pilferage and raise of billing demand improperly leaving some sale of energy unaccounted.** If FY2020-21 high losses are attributed to Covid pandemic, the other following years losses are no way better and glaringly indicates thorough improvement needed even now in FY

2024-25. This is the situation, despite imposing penalty for poor performance in FY2019-20 onwards to FY2021-22.

Table 5.3: T&D loss calculation Approved by the Commission for FY 2022-23 upon true-up

S.No.	Details of Energy Balance for FY 2022-23	Approved
A	State Grid Energy requirement for Distribution activity	(MU)
1	Retail Sale of energy (LT & HT) - (Input data)	493.08
2	Distribution Loss (%) - (derived)	26.80%
3	Distribution Loss (MU) - (4-1)	180.53
4	Energy at Distribution Periphery -- (derived from data input)	673.61
5	a) State Transmission Loss (%) - (ARR filed)	2.00%
	b) State Transmission Loss (MU) - (6 - 4)	13.75
6	Total Grid Energy needed at State periphery	687.36
B	Sources of Energy Availability (Energy Balance 2021-22)	(MU)
7	Purchases from Eastern Region (ER) - Input)	32.09
8	a) Inter-State Losses on ER Energy (%) (Annexure-VII)	2.00%
	b) Inter-State Losses on ER Energy (MU)	0.64
9	Net ER Energy after Losses (7 - 8b)	31.45
10	Purchases from North Eastern Region (Excl. Tuirial HEP energy)	661.76
11	UI Energy Purchase (Net) & UI Deviations	0.00
12	RPO obligation met from Outside the State	Nil
13	Energy handled at NER grid (9 to 12)	693.21
14	a) Inter-State Trans. loss in NER (%) - (Refer Annexure-VI)	2.33%
	b) Inter-State Trans. loss in NER (MU)	16.15
15	Net energy available at NERLDC for Mizoram (13-14b)	677.06
16	Energy purchases from Tuirial HEP	172.17
17	Free Power from Tuirial HEP	23.48
18	State Owned Small HEPs Generation exported to Grid	17.41
19	Supply of power by Amazon Engineering from 4 HEPs	12.75
20	Roof top Solar & Solar Generation	5.88
21	Gross energy available to P&ED from all energy sources (15 to 20)	908.75
22	Sale of Energy through Banking	0.00
23	Sale of energy at IEX (Input data)	-159.79
24	UI Under Draws deviation	-61.60
25	Available energy at State Periphery - [21- (22 to 24)]	687.36

The above figures of energy balance for FY2022-23 are now approved based on actual values furnished in the audited accounts and their filing submissions. **(Both the Compendium pages of NER & ER are placed at Annexure-VI & VII at the end of this Tariff Oder.)**

5.4. P&ED's Own Generation

The P&ED Mizoram's own generation approved for the FY 2022-23 and actual value of own generation made by the P&ED Mizoram for the FY 2022-23 is provided in the table below:

Table 5.4:P&ED Mizoram's Own Generation FY 2022-23

				In (MUs)
Sl. No.	Particulars	Approved in T.O. dt. 23.03.2022	Approved in T.O. dt.28.03.2023	As per Accounts
1	2	3	4	5
1	Total Generation (Net)	26.73	31.07	30.16
	Total	26.73	31.07	30.16

It is submitted that Amazon Engineering has been undertaking Operation & Maintenance (O&M) of **Khawiva SHP, Tuipui SHP, Teirei SHP & Kau Tlabung SHP** on behalf of P&ED Mizoram. Further, the **Installed Capacity & energy generation is included in the books of P&ED Mizoram.**

Commission Analysis:

The net energy generated by M/s. Amazon Engineering on behalf of P&ED intimated through additional information as 12.75MU during FY 2022-23 and hence it can be inferred that out of the total 30.16MU, the Own generation by P&ED from the remaining SHPs is only 17.41 MU. Each Station wise energy generated by these four plants managed by M/s. Amazon Engineering during FY 2022-23 is tabulated below for a glance.

Sl. No.	Name of SHP Station	Installed Capacity (MW)	Generation in (MUs)
1	Khawiva	1.05	1.30
2	Tuipui	0.50	0.00
3	Teirei	3.00	4.90
4	Kau-Tlabung	3.00	6.55
	Grand Total	7.55	12.75

The reply received from P&ED about the O&M charges being paid to M/s. Amazon Engineering for running the four (4) SHP plants and it is paid at Rs.1.68Cr towards maintenance charges. Hence, the cost to be attributed would be considered at Rs.1.68Cr. Accordingly, these plants would not be given any Generation related ARR amount during FY 2022-23.

5.5. Power Purchase

The power purchase approved for the FY 2022-23 and actual units of power purchase made by the P&ED Mizoram for the FY 2022-23 is provided in the table below:

Table 5.5: Power Purchase Units FY 2022-23

In (MUs)				
Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Power Purchase Units	634.05	863.42	925.54
	Total	634.05	863.42	925.54

Commission's Analysis

The Commission approves of power purchase quantum indicated above with an adjustment for the Under-drawl quantum of 61.60MU shown by Licensee under Outside State sales instead of reducing it from power purchase quantity so as to make it as 863.95MU finally.

5.6. Energy Balance

The actual energy balance for the FY 2022-23 and the approvals accorded are compared in the table provided below:

Table 5.6: Energy Balance FY 2022-23

Sl. No.	Energy Balance	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
A	Energy Requirement			
1	Energy Sales	494.99	503.67	493.08
2	Distribution Loss (%)	17.83%	24.00%	26.75%
3	Distribution Loss (MUs)	107.39	159.04	180.05
4	Total Energy Requirement	602.38	662.71	673.13
B	Energy Availability			
5	Own Generation	26.73	13.67	30.16
6	Energy Purchase from ER	31.72	33.40	32.10

Sl. No.	Energy Balance	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
7	Less: ER Pool Loss (%)	1.95%	1.95%	3.57%
8	Less: ER Pool Loss (Mus)	0.62	0.65	1.15
9	Net Energy for ER	31.10	32.75	30.95
10	Energy Purchase from NER (Exl. Tuirial HEP)	468.86	629.82	661.77
11	UI / Deviation / IEX through exchange	0.00	3.59	0.00
12	Sub Total	499.96	666.16	692.72
13	Less: NER Pool Loss (%)	2.54%	2.36%	2.33%
14	Less: NER Pool Loss (MUs)	12.70	15.72	16.14
15	Net Energy at NERLDC	487.26	650.44	676.58
16	Energy purchases from Tuirial HEP	115.42	170.93	172.17
17	Free Energy from Tuirial HEP	15.74	23.31	23.48
18	Amazon Engineering	14.09	17.40	0.00
19	Rooftop Solar Generation	0.00	2.37	3.57
20	Solar Generation	2.31		2.31
21	Energy Available	661.54	878.12	908.26
22	Less: Outside State - Trading	46.87	201.88	221.39
23	Total Energy Available	614.67	676.24	686.87
24	Less: Intra State Tr. Loss (%)	2.00%	2.00%	2.00%
25	Less: Intra State Tr. Loss (MUs)	12.29	13.52	13.74
26	Net Energy Available	602.38	662.71	673.13
27	Less: Energy requirement at State Periphery	602.38	662.71	673.13
28	ENERGY SURPLUS/(DEFICIT)	0.00	0.00	0.00

Commission's Analysis

Actual distribution losses arrived at were to be **26.80%** as calculated vide **Table 5.3 Supra** but what was submitted by P&ED is 26.75%. **The extract of the NER Losses at 2.33% so published in their compendium for FY 2022-23 is attached as an annexure-VI at the end of the Tariff Order for reference.** Duly considering the 221.39MU surplus power for Outside state sales at 159.79MU after deducting the UI Under Drawl quantum of 61.60MU while the P&ED in their submission indicated it to be 221.39MU and silent about UI Under Drawl quantum.

5.6.1. Fuel Cost

The values of fuel cost are compared with the same approved by the Hon'ble Commission in the Tariff Order dated 23.03.2022 & 28.03.2023 for the FY 2022-23. The actual fuel cost based on the audited annual accounts as compared to the approved figure is provided in the table below.

Table 5.7: Fuel Cost for FY 2022-23

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Cost of Fuel	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission Analysis:

The Commission hereby prefers to approve **NIL fuel cost** for FY 2022-23 for true-up purposes, though P&ED in its replies to additional information that Lengpui has generated 0.02MU in FY 2022-23 but no cost aspect has been claimed in True-up. **Logically also that any power supplied from this plant is not made available to retail consumers and hence, no fuel cost charges be allowed for this plant**

5.6.2. Cost of Generation**Commission Analysis:**

The petitioner is silent about this cost element in its submission despite having got approved for Rs.3.34Crs in the Tariff Order for FY 2022-23. As petitioner is claiming **NIL** amount against Tariff Order approved value of Rs.3.34Crs, now Commission feels it appropriate to approve **Rs.1.68Crs** under this head for having paid to M/s. Amazon Engg. in FY2022-23 towards operating & maintenance of four (4) SHPs with installed capacity of 7.55MWs but added erroneously these charges under R&M expenses. Hence, those charges are allowed under this head of cost of Generation by Commission instead of under the head R&M Expenses item.

5.6.3. Power Purchase Costs**Petitioner's submission**

The Hon'ble Commission in the Tariff Order dated 28.03.2023 for the FY 2022-23 had approved a power purchase quantum of 863.42 MUs at a total cost of 443.14 Crores. P&ED Mizoram has actually procured 895.39 MUs during the FY 2022-23 at a total cost of ₹ 459.39 Crores. The actual power purchase cost based on the audited annual accounts as compared to the approved figure is provided in the table below.

Table 5.8: Power Purchase Cost FY 2022-23

(In Crores)				
Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Power Purchase Cost	358.72	443.14	459.39
	Total	358.72	443.14	459.39

Commission's analysis

The power purchase cost approved for FY 2022-23 by the commission is detailed in the table below.

Table 5.9: Actual Power Purchase Cost for FY 2022-23 approved by Commission

Sl. No.	Generation Sources	Plant Capacity (MW)	P&ED Share (%)	P&ED Share (MW)	Energy Purchased (MU)	Total Charges (Rs./Cr)	Per unit cost (Rs/kWh)
A	Central Generating Stations						
I	NTPC						
1	Bongaigaon TPS	750	2.655	19.91	90.04	69.35	7.70
2	Farakka STPS	1600	0.142	2.27	14.35	8.38	5.84
3	Kahalgaon STPS	840	0.142	1.19	7.60	4.10	5.39
4	Talcher STPS	1000	0.142	1.42	10.14	3.31	3.26
	NTPC-Total	4190	0.59%	24.79	122.14	85.15	6.97
II	NHPC						
1	Loktak HEP	105	5.02	5.27	23.52	9.16	3.89
	NHPC-Total	105		5.27	23.52	9.16	3.89
III	NEEPCO						
1	Kopili HEP	200	4.61	9.22	0.00	0.00	
2	Kopili - II HEP	25	6.04	1.51	0.00	0.00	
3	Khandong HEP	50	3.94	1.97	0.00	0.00	
4	Ranganadi HEP	405	5.70	23.09	77.96	19.18	2.46
5	Doyang HEP	75	5.25	3.94	8.93	6.74	7.55
6	Pare HEP	110	5.765	6.34	30.08	15.14	5.03
7	Tuirial HEP	60	100	60	172.17	95.44	5.54
	Free Power share				23.48		
8	AGBPP	291	5.409	15.74	62.05	48.43	7.80
9	AGTPP	135	6.005	8.11	38.32	27.45	7.16
	NEEPCO-Total	1351		129.91	412.98	212.38	5.14
IV	TSECL						
1	B'mura - IV	21	25	5.25	67.71	37.34	5.51
2	B'mura - V	21	25	5.25			
	TSECL-Total	42		10.50	67.71	37.34	5.51
V	OTPC						
1	Palatana	726	5.785	42.00	260.61	86.52	3.32
	OTPC-Total	726		42.00	260.61	86.52	3.32
B	State Own generation						
1	All Units (incl. Lengpui set)	38.85	100	38.85	30.16	0.00	0.00
	Owned Generation Total	38.85		38.85	30.16	0.00	0.00
C	IEX Exchange purchase				0.00	0.00	0.00
D	a) UI Over drawl				0	0	0
	b) UI Under drawl				-61.60	-28.52	4.63

Sl. No.	Generation Sources	Plant Capacity (MW)	P&ED Share (%)	P&ED Share (MW)	Energy Purchased (MU)	Total Charges (Rs./Cr)	Per unit cost (Rs/kWh)
	UI / Deviation-Total				-61.60	-28.52	4.63
E	Other RE Energy						
	1.Rooftop solar Generation				3.57	0.94	2.63
	2.Solar Generation				2.31	--	0.00
F	RP Obligation /REC Certificate						
G	LC Enhance/Renew charges					2.13	
H	Reactive Energy Charges					0.04	
I	Supplementary Bills (Addl.)					22.62	
J	NVVN Ltd				2.55	1.39	
k	Bilateral Power Purchase						
	1. Utility ...						
	GRAND TOTAL	6443.85		251.32	863.95	429.14	4.97

The Commission approves power purchase of 863.95MU excluding UI deviation (under Drawl) of 61.60 MU considering the free power from Tuirial of 23.48MU received in FY 2022-23 for true-up purpose based on actuals and the balance energy is treated as purchased is from all source's figures to 863.95MU. Similarly, the compensation of Rs.28.52Crs towards under drawl from power purchase cost and the Late payment charges levied by OTPC & NEEPCO amount of Rs.1.7214Cr which was considered is now reduced from power purchase cost under Additional supplementary bills head total claim reduced to Rs.22.62Cr.

With regard to Renewable Energy certificate purchase obligation for FY 2022-23, since the P&ED failed to procure the specified certificates worth Rs.1.74Cr as approved in the APR order of Power Purchased cost for FY 2022-23, they have to strictly comply with the provision of **Renewable Purchase Obligation and its Compliance) Regulations, 2010, clause-6 "Effects of default"** which is briefly reproduced below:

" 1) If the obligated entities does not fulfil the renewable purchase obligation as provided in these regulations during any year and also does not purchase the certificates, **the Commission may direct the obligated entity to deposit into a separate fund, to be created and maintained by such obligated entity, such amount as the Commission may determine on the basis of the shortfall in units of RPO and the forbearance price decided by the Central Commission: Provided that the fund so created shall be utilised, as may be directed by the Commission, for purchase of the certificates: Provided further that the Commission may empower an officer of the State Agency to procure from the Power Exchange the required number of certificates to the extent of the shortfall in the fulfilment of the obligations, out of the amount in the fund. "**

Failing which the following clause - 6(2) will be invoked by the Commission in this mater

"2) Where any obligated entity fails to comply with the obligation to purchase the required percentage of power from

renewable energy sources or the renewable energy certificates, it shall also be liable for penalty as may be decided by the Commission under section 142 of the Act: Provided that in case of genuine difficulty in complying with the renewable purchase obligation because of non-availability of certificates, the obligated entity can approach the Commission for carry forward of compliance requirement to the next year: Provided that where the Commission has consented to the carry forward of compliance requirement, the provision of clause (2) of the Regulation or the provision of section 142 of the Act shall not be invoked."

This issue will be placed in the Directives afresh and will be monitored separately for its compliance with an objective to fulfil it fully.

5.6.4. Inter State Transmission Charges

Petitioner's Submission

The Hon'ble Commission in the Tariff Order dated 28.03.2023 for the FY 2022- 23 had approved transmission charges of ₹ 60.31 Crores. The actual transmission charges for the FY 2022-23 is ₹ 76.01 Crores. The actual transmission charges based on the audited annual accounts as compared to the approved figure is provided in the table below.

Table 5.10: Transmission Charges FY 2022-23

(In ₹ Crores)				
Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Transmission Charges	56.78	60.31	76.01
	Total	56.78	60.31	76.01

Commission's Analysis

The Commission after thorough scrutiny of these expenses in detail with the additional information data provided by P&ED, it is noticed that an amount of Rs.4.4386Cr late payment surcharges were also included in the claim of Rs.76.01Cr. Eventually, Commission after disallowing the late payment surcharges paid to CTUIL, PGCIL, POSOCO amounting to Rs.4.4386Cr and **approves Inter-State Transmission Charges (CTU Charges) at Rs.71.5669Cr only for FY2022-23 for this True-up purpose, as the Commission is unwilling to pass-on these penalties to retail consumers.**

5.6.5. Intra -State Transmission Charges (State Transmission Charge)**Commission Analysis:**

The Licensee did not claim any Intra-state Transmission charges for FY 2022-23 based on the audited actuals so approved by their auditor. Accordingly, **the Commission approves Rs. Nil amount against Intra-State Transmission Charges in FY 2022-23 for True-up purpose in reality.**

5.6.6. O & M Expenses**a) Employee Cost****Petitioner's submission**

The Hon'ble Commission had approved employee cost of ₹ 151.85 Crores for the FY 2022-23 vide Tariff Order dated 28.03.2023. The audited accounts for department are not function wise, hence, segregated actual employee expenses for distribution function is not available. The actual employee cost provided below is total for the department as a whole.

It is submitted that in view of the fact that **the function wise segregated costs are not available and the audited costs are inclusive of the cost of generation & transmission function, P&ED Mizoram is not claiming the cost of generation & intra-state transmission charges separately.**

The Hon'ble Commission may kindly consider the above submission and true-up the employee cost for the FY 2022-23.

The approved employee cost and actual value of employee cost for FY 2022-23 is provided in the table below:

Table 5.11: Employee Cost FY 2022-23**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Employee Cost	135.97	151.85	197.06
	Total	135.97	151.85	197.06

Commissions Analysis:

As per the earlier Tariff order it was approved at Rs.135.97Cr and in the APR filed by the P&ED for 2022-23, it was for Rs.151.85Cr quoting various reasons for the claim made giving an impression that it is for entire P&ED. The Commission after careful consideration approved only Rs.151.85crs as the probable employee cost for FY2022-23. But in reality, the employee cost incurred as per audited accounts is at Rs.197.06Cr which is abnormally higher than what was projected in APR filings and actuals incurred for the indicated strength of 3648 number of employees now existing. It is apparently clear that the expenditure level is hovering around this figure even in the past also but licensee has not made any attempt to discuss & reason out anywhere in their ARR submission for incurring such higher cost in true-up claim. Since P&ED had received an additional revenue subsidy of Rs.79.81Cr as per Balance Sheet **Schedule-4** in addition to the Tariff subsidy of Rs.109.22Cr (as per Tariff Order), hence the additional employee expenditure amount is fully considered for true-up due to additional subsidy cushion now available for adjustment in FY2022-23 and more so **it would not burden the consumer in any way.**

Accordingly, the Commission too approves the same amount of **Rs.197.06Cr** for **true-up** relating to FY 2022-23 **towards employee cost of entire P&ED utility for all the three functions as a whole. It is done so as there is no functional segregation provided for each function by P&ED as per their records submitted.**

b) Repairs & Maintenance**Petitioner's submission:**

The Hon'ble Commission had approved repair & maintenance expenses of ₹ 10.18 Crores for the FY2022-23 vide Tariff Order dated 28.03.2023. Repair & maintenance expenses approved as above only relates to the distribution function. However, the audited accounts for department are not function wise hence, segregated actual repair & maintenance expenses for distribution function is not available. The actual repair & maintenance expenses provided below are total for the department as a whole.

It is submitted that in view of the fact that **the function wise segregated costs are not available and the audited costs are inclusive of the cost of generation & transmission function, P&ED Mizoram is not claiming the cost of generation & intra-state transmission charges separately.**

The Hon'ble Commission may kindly consider the above submission and true-up the repair & maintenance expenses for the FY 2022-23.

The approved repair & maintenance expenses and actual value of repair & maintenance expenses for FY 2022-23 is provided in the table below:

Table 5.12: Repair & Maintenance Expenses FY 2022-23

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Repair & Maintenance expenses	10.18	10.18	24.89
	Total	10.18	10.18	24.89

Further, it is submitted that ₹ 1.68 Crores out of ₹ 24.89 Crores is paid to M/s. Amazon Engineering for Operation & Maintenance of Khawiva SHP, Tuipui SHP, Teirei SHP & Kau Tlabung SHP for the FY 2022-23.

Commission Analysis:

This amount includes the O&M Charges paid to M/s. Amazon Engineering to the tune of Rs.1.68Cr. The filing is silent about the Lease charges to be received from M/s. Amazon Engineering company for maintaining the four (4) plants. However, a reply on this aspect is received stating that no charges are being received in this regard from M/s. Amazon Engineering.

Hence, now Commission approves the R&M expenses at Rs.23.21Cr as against Rs.24.89 Crore claimed in FY 2022-23 for True-up purpose. The Lease amount of Rs.1.68Cr was treated as amount paid towards Generation cost expenditure for True-Up purpose.

c) Administration & General Expenses

Petitioner's submission

The Hon'ble Commission had approved Administration & General Expenses of ₹ 4.83 Crores for the FY 2022-23 vide Tariff Order dated 28.03.2023. Administration & General Expenses approved as above only relates to the distribution function. However, the audited accounts for department are not function wise hence,

segregated actual Administration & General Expenses for distribution function is not available. The actual Administration & General Expenses provided below is total for the department as a whole.

It is submitted that in view of the fact that **the function wise segregated costs are not available and the audited costs are inclusive of the cost of generation & transmission function, P&ED Mizoram is not claiming the cost of generation & intra-state transmission charges separately.**

The Hon'ble Commission may kindly consider the above submission and true-up the Administration & General Expenses for the FY 2022-23.

The approved Administration & General Expenses and actual value of Administration & General Expenses for the FY 2022-23 is provided in the table below:

Table 5.13: Administration & General Expenses FY 2022-23

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Administration & General Expenses	5.16	4.83	3.67
	Total	5.16	4.83	3.67

Commission's Analysis

The Commission observes that P&ED has incurred lesser Administrative cost towards Travelling & Conveyance and Miscellaneous expenses than approved for in the APR Tariff Order figures for FY2022-23. Since, the claim for expenditure is lesser than the APR approved figure, **the Commission now approves actual claim of Administrative and General Expenses of Rs.3.67 Crores for entire department as a whole for the FY 2022-23 for True-up purpose.**

d) O&M Expenses

Abstract of actual O&M Expenses approved by Commission are as detailed in the Table below.

Table 5.14: O&M Expenses approved by the Commission for FY 2022-23 after true-up
(Rs. Cr)

Sl. No	Particulars (FY 2022-23)	Amount
1	Employee Cost	197.06
2	R&M Expenses	23.21
3	Administration and General expenses	3.67
4	Total O&M Expenses approved	223.94

5.6.7. Depreciation

The Hon'ble Commission had not approved any amount for Depreciation for the FY 2022-23 vide Tariff Order dated 28.03.2023. The approved Depreciation and 10% of the actual value of Depreciation as per the Fixed Asset & Depreciation Register for the FY 2022-23 is provided in the table below:

Table 5.15: Depreciation FY 2022-23

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Depreciation	0.00	0.00	4.85
	Total	0.00	0.00	4.85

Commissions Analysis

As seen from the audited accounts of FY 2022-23 the total depreciation during FY 2022-23 is Rs.48.5377 Crores and 10% of the depreciation is Rs.4.85 Crore is preferred by P&ED with an argument that 90% of its expenditure is funded with grants received from Government is the intention behind P&ED claiming for the above depreciation.

But, as seen from the following table, all the assets created are out of the capital subsidy value only and even for FY 2022-23 the OCFA (Original Cost of Fixed Assets) is only 39.75% of the total capital subsidy.

Table 5.16: Capital Asset Grants used for Assets Creation

Item details	2022-23	2021-22	2020-21
	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs
Capital Subsidy balance	261570.01	256003.46	249175.56
Add: subsidy Additions	0.00	0.00	6827.9
Capital Subsidy (A)	261570.01	256003.46	256003.46
Original Cost of Fixed Assets (B)	157610.56	142211.30	137916.10
Excess of Capital Subsidy over OCFA	103959.45	113792.16	118087.36
OCFA upon Capital subsidy (%)	39.75%	55.55%	53.87%

Since the Capital subsidy is more than OCFA so far, the Commission accordingly approves Nil depreciation for the FY 2022-23 for the sake of truing-up. It is also well known that the depreciation is a non-cash item and any reduction in this amount will no way affects the P&ED financially in any way but it benefits the Consumers in reduced tariff burden.

5.6.8. Interest & Finance Charges

The interest & finance charges approved for the FY 2022-23 and actual value of interest & finance charges made by the P&ED Mizoram for the FY 2022-23 is provided in the table below:

Table 5.17: Interest & Finance Charges FY 2022-23

(In ₹ Crores)				
Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Interest & Finance Charges	0.00	0.00	0.46
	Total	0.00	0.00	0.46

Commissions Analysis:

The Interest and Finance charges of P&ED during FY 2022-23 are payable to the following State Government Loan lenders and the interest charged to P&L A/c *is not actually paid but only created an outstanding Liability provision for the accrued interest as a book-entry adjustment and getting reimbursement from consumers*. The Interest being claimed in the annual accounts is not being paid but shown as outstanding liability even for the amount relating to past years also. Since the liability is not discharged, the entire amount shall not be allowed even in the True-up exercise and the same will only be considered for reimbursement when actually paid in future with proof of payment.

Since these dues found to be left uncleared even after 31st march 2023, the entire interest portion of unpaid will be clawed back at one go while truing-up for FY 2023-24 finally as these were already passed on to the consumers in the past but left unpaid till date and this is only an extra leeway given by the Commission to take suitable action as a last resort else the same will be recovered fully for certainty. **Therefore, no interest amount pertaining to FY2022-23 is allowed in pass through**

now and it will only be allowed when they were actually paid in full to the utilities and produce the proof of payment in future true-up for Commission's reference.

5.6.9. Interest on Working Capital

Petitioner's submission

The Interest on Working Capital as approved for the FY 2022-23 and actual value of Interest on Working Capital for the FY 2022-23 is provided in the table below:

Table 5.18: Interest on Working Capital FY 2022-23

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Interest on Working Capital	0.00	0.00	9.72
	Total	0.00	0.00	9.72

Commissions Analysis

As per the MYT Regulation 2014, the interest on working capital is a permissible element of ARR expenditure as per the following relevant provision:

- (i). As per regulation 29(4) of JERC for Manipur and Mizoram (MYT) Regulations 2014 the distribution licensee shall be allowed on estimated level of working capital computed as follows:
- O&M Expenses for one month; plus
 - Maintenance of spares at 1% of historical cost escalated at 6%; plus
 - Receivables equivalent to one month from sale of electricity at prevailing tariff minus.
 - Amount hold as Security deposit under clause (a) and (b) of sub-section (1) of 47 of the Act, from consumers except security deposit held in the form of Bank guarantee.
 - Interest shall be allowed at a rate equal to the State Bank Advance Rate (SBAR) as on 1st April of this financial year in which the petition is filed.

It is thoroughly observed that so far P&ED had not drawn any kind of working capital loan during the entire financial year of 2021-22 or was there any history of such loans being drawn in the past. Moreover, the P&ED while arriving at the working Capital requirement (form-F4, page 179 of Formats) is ignoring the Consumer security deposit (CSD) possessed by them to the tune of Rs.29.9265Cr in FY 2021-22 (Schedule-27 of Audited Balance sheet), though the regulation had provided for it

but still it prefers to claim higher amount in the form of interest on working capital ignoring CSD. It appears, P&ED is under mis-conception that Interest on Working Capital can be claimed irrespective of actual availment of short-term loan and same provision is not covered in the clause 29.3 & 29.4 of the MYT regulation 2014.

Therefore, Commission feels that admitting of interest on Working Capital will only be an additional burden on retail consumers as there is no need noted for allowing such cost element as they are fully dependent upon and was availing required funding from the State government itself for their day to day routine operations. Hence, no calculation needs to be made afresh for this purpose in FY 2022-23 and no amount is allowed for true-up under this head now and even in future if the same situation prevails.

5.6.10. Provision for Bad Debts

Petitioner's submission:

The Hon'ble Commission did not approve Provision for Bad & Doubtful Debt for the FY 2022-23 and actual provisions made in the Accounts for the FY 2022-23 is also nil.

Table 5.19: Provision for Bad & Doubtful Debt FY 2022-23

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Provision for Bad Debt	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission's Analysis:

The Commission also approves NIL bad debts provision for FY 2022-23. The Licensee shall therefore make some useful and Special Intensive drive efforts for more revenue recoveries from its defaulting consumers. It is very much desired that the P&ED shall make this effort assiduously and see that the dues are promptly collected from consumers to avoid financial crunch during any part of the financial year in future.

5.6.11. Return on Equity

The Hon'ble Commission did not approve return on equity for FY 2022-23. No provision for the return on equity is made in the Accounts by the P&ED Mizoram for FY 2022-23.

Table 5.20: Return on Equity FY 2022-23

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Return on Equity	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission Analysis:

Since P&ED is a Government Department with no equity component in their Annual Audited Accounts, the **Return on Equity is not allowable** and hence not considered for FY 2022-23 by the Commission. This kind of similar treatment would continue so long there is no Equity Capital stake in the P&ED financial structure.

5.6.12. Non-Tariff Income/Other Incomes**Petitioner submission:**

The Other Income approved for the FY 2022-23 and actual value of other income made by the P&ED Mizoram for the FY 2022-23 is provided in the table below:

Table 5.21: Other Income FY 2022-23

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Non-Tariff Income	11.20	8.02	10.70
	Total	11.20	8.02	10.70

Commission Analysis:

The Commission in its Tariff Order dated 23.03.2022 had approved for Rs.11.20 Crore as Non-tariff Income for the FY 2022-23. But the P&ED has reported a revised amount of Rs8.20Cr in their APR submission for FY 2022-23 and now as per their approved audited accounts it is only Rs.10.6954Cr and the same amount is considered in true-up now by the Commission.

Efficiency gains improvement already shown as Rs.20.13Cr in Tariff Order of FY 2022-23 against various issues as detailed in Table-7.33 under para-7.7.16 upon observing the poor performance by Licensee. But the P&ED didn't address those issues in its true-up submission, besides totally omitted this efficiency gains related item in True-up submission table.

In reply to the query raised about it in additional information, it was very casually replied that “no basis of arriving at efficiency gains amount of Rs.20.13Cr was provided/detailed in the Tariff Order for FY2022-23. Hence, the revised amount based on actuals/audited figures could not be projected”. The above reply was given without even referring to the Tariff Order for 2022-23 where in item-wise details were embedded for reference is treated as casual approach in providing replies.

Therefore, it is construed as no progress be achieved by P&ED in this regard and hence entire amount of Rs.20.13Cr is fully recovered in true-up towards efficiency gains recovery for FY2022-23 in the absence of proper & responsible reply from P&ED despite clear indication of requisite parameters in the relevant Tariff Order.

Contribution to contingency reserve fund: Though the amount already allowed in the Tariff Order of FY2022-23 at Rs.2.72Cr, the same was not spent by the Licensee. Instead this amount was merely remitted back to Government treasury after its collections from consumers and hence the same is now being taken back by fully recovering it in this True-up adjustment process.

5.6.13. Revenue from approved tariffs

Petitioner Submission:

The revenue from sale of power approved for the FY 2022-23 vide Tariff Order dated 23.03.2022 & 28.03.2023 and actual value of revenue from sale of power for the FY 2022-23 is provided in the table below:

Table 5.22: Revenue from Sales of Energy during FY 2022-23

(In ₹ Crores)				
Sl. No.	Category	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
	LT Consumers			
1	Kutir Jyoti	2.95		2.06
2	Domestic	179.24		182.54
3	Non-Domestic	8.12		9.62
4	Commercial	34.91		35.14
5	Public Lighting	2.74		4.38
6	Public Water Works	1.00		10.14

Sl. No.	Category	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts	
7	Agriculture	0.03	395.65	0.02	
8	Industrial	3.80		1.92	
	Total LT	232.79		245.82	
	HT Consumers				
9	Domestic	5.01		2.33	
10	Non-Domestic	0.31		4.00	
11	Commercial	12.14		15.20	
12	Public Water Works	109.02		119.71	
13	Agriculture	0.06		1.34	
14	Industrial	6.78		10.41	
15	Bulk Supply	19.55		12.59	
	Total HT	152.87		165.57	
16	Total LT & HT	385.66		395.65	411.39
17	Outside State	17.77		134.77	130.14
	Total	403.43		530.42	541.53

Commission's Analysis:

The revenue realisation from retail consumers for FY 2022-23 so tabulated by P&ED above is also considered by the Commission with one adjustment relating to Outside State Sales amount as it includes the under-drawl compensation amount of Rs.28.52Crs against 61.60MU. Both the units and compensation received were treated as sales and revenue realised by P&ED. The same is now reversed by deducting the U/D compensation from sales value to properly depict in the actual power purchase cost finally and the boosted OSS sales value is brought down to realistic value.

Detailed revenue realised comparison table is placed below for reference.

Sl. No.	Consumer Category (FY 2022-23)	As per Accounts	As per Commission
	LT Consumers	Rs.Crs	Rs.Crs
1	Kutir Jyoti	2.06	2.06
2	Domestic	182.54	182.54
3	Non-domestic	9.62	9.62
4	Commercial	35.14	35.14
5	Public Lighting	4.38	4.38
6	Public Water Works	10.14	10.14
7	Agriculture	0.02	0.02
8	Industrial	1.92	1.92

Sl. No.	Consumer Category (FY 2022-23)	As per Accounts	As per Commission
	Total LT	245.82	245.82
	HT Consumers		
9	Domestic	2.33	2.33
10	Non-Domestic	4.00	4.00
11	Commercial	15.20	15.20
12	Public Water Works	119.71	119.71
13	Agriculture	1.34	1.34
14	Industrial	10.41	10.41
15	Bulk Supply	12.59	11.97
16	Theft & Pilferage	---	0.62
	Total HT	165.57	165.57
	Grand Total	411.39	411.39

However, the Commission approves the same revenue amount from retail sale of energy at Rs.411.39 Crores during FY 2022-23 based on the details made available for Commission scrutiny for true-up purpose.

5.7. Summary of actuals filed by P&ED for true up & approved by Commission

Petitioner's submission:

It is submitted that in view of the fact the function wise segregated costs are not available and the audited costs are inclusive of the cost of generation & transmission function, P&ED Mizoram is not claiming the cost of generation & intra-state transmission charges separately.

The Annual Revenue Requirement approved for the FY 2022-23 and actual value of Annual Revenue Requirement for the FY 2022-23 is provided in the table below:

Table 5.23: True up of ARR FY 2022-23

(In ₹ Crores)

Sl. No.	Item of Expense	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
1	2	3	4	5
1	Cost of Fuel	0.00	0.00	0.00
2	Cost of Generation	3.34	3.34	0.00
3	Cost of Power Purchase	358.72	443.14	459.39
4	Transmission Charges	56.78	60.31	76.01
2	Intra-state Transmission Charges	7.25	0.00	0.00
3	Employee Costs	135.97	151.85	197.06
4	R&M Expenses	10.18	10.18	24.89
5	Administration and General Expenses	5.16	4.83	3.67

Sl. No.	Item of Expense	Approved in T.O. dated 23.03.2022	Approved in T.O. dated 28.03.2023	As per Accounts
6	Depreciation	0.00	0.00	4.85
7	Interest charges	0.00	0.00	0.46
8	Interest on Working Capital	0.00	0.00	9.72
9	Provision for bad debts	0.00	0.00	0.00
10	Return on NFA /Equity	0.00	0.00	0.00
11	Contribution to Contingency Reserve Fund	2.72	0.00	0.00
12	Total Revenue Requirement	580.11	673.65	776.04
13	Less: Non-Tariff Income	11.20	8.02	10.70
14	Less: Net surplus in true-up	36.13	36.13	36.13
15	Less: Efficiency Gains (Outstanding dues collection)	20.13	20.13	0.00
16	Net Revenue Requirement	512.65	609.37	729.21
17	Less: Revenue from Sale of Power	403.43	530.42	541.53
18	Gross Revenue Surplus/(Gap/Deficit)	-109.22	-78.95	-187.67
19	Less: Revenue Subsidy & Grant from State Govt.			189.03
20	Net Revenue Surplus/(Gap/Deficit)	-109.22	-78.95	1.35

It is prayed that the Hon'ble Commission may kindly consider the above submission and approve the Aggregate Revenue Requirement and Gap for the FY 2022-23.

Commission Analysis:

Table 5.24: Aggregate Revenue Requirement of FY 2022-23 approved for true-up (Rs. Cr)

Sl. No.	Item of Expense	Approved in T.O dt 23.03.22	As per Accounts	Commission Approved
1	Cost of Fuel	0.00	--	0
2	Cost of Generation	3.34	--	1.68
3	Cost of Power Purchase	358.72	459.39	429.14
4	Transmission Charges (CTU)	56.78	76.01	71.57
2	Intra-State Transmission Charges	7.25	--	0
3	Employee Costs	135.97	197.06	197.06
4	R&M Expenses	10.18	24.89	23.21
5	Admin & General Expenses	5.16	3.67	3.67
6	Depreciation	0.00	4.85	0
7	Interest charges	0.00	0.46	0
8	Interest on Working Capital	0.00	9.72	0
9	Provision for bad debts	0.00	0	0
10	Return on NFA /Equity	0.00	0	0
11	Contingency Reserve Contribution.	2.72	0	-2.72
12	Total Revenue Requirement	580.11	776.04	723.61
13	Less: Non-Tariff Income	11.20	10.70	10.70
14	Less: FY20-21 true-up surplus	36.13	36.13	36.13
15	Less: Efficiency Gains	20.13	0	20.13

Sl. No.	Item of Expense	Approved in T.O dt 23.03.22	As per Accounts	Commission Approved
	(for outstanding dues collection)			
16	Net Revenue Requirement	512.65	729.21	656.65
17	Less: Revenue from revised Tariff	403.43	411.39	411.39
	Less: Revenue from Outside Sales	17.17	130.14	101.62
18	Gross Revenue Deficit	109.22	187.67	143.64
19	Less: Revenue Subsidy from Govt.	109.22	189.03	189.03
20	Net Revenue surplus/(Gap) (18-19)	Nil	-1.35	45.39

5.8. Revenue gap/surplus after true up:

It is interesting to note that the P&ED had only considered the entire subsidy amount of Rs.189.03 Crore that was shown under schedule-4 of the Audited Balances Sheet. Accordingly, the organisation has attained a considerable surplus financial status to the tune of Rs.45.39Crs which was not duly reflected in their ARR filings.

As per regulation 13.1(i) of the JERC for M&M (MYT) Regulations, 2014, one-third ($\frac{1}{3}^{\text{rd}}$) of the gain amount Rs.15.1286Crs shall be passed on as a rebate to all the consumers in the tariff fixation for FY 2024-25.

Eventually, **Rs. 15.13 Crs being one-third (1/3rd) of surplus amount of Rs.45.39Crs is now passed on as a rebate in the ARR mount for FY 2024-25 as per the above cited Regulation.** The balance surplus is kept at the exclusive disposal of the P&ED to the tune of Rs.30.26Crs to utilise for any useful purpose by retaining it with them instead of remitting it back to Government Treasury by doing so it may lose its identity to trace back.

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6. Annual Performance Review (APR) for FY2023-24

6.1. Back ground

Petitioners Submission:

Multi Year Tariff Order for the control period of 5 years from FY 2023-24 to FY 2027-28 was issued by the Hon'ble Commission vide order dated 28.03.2023 under the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 read with First Amendment Regulations, 2019.

The Hon'ble Commission determined the Aggregate Revenue Requirement for the FY 2023-24 to FY 2027-28 & Tariff for the FY 2023-24 vide Order dated 28.03.2023.

Regulation 5.2 (iii) of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 provides as follows:

“In case of Mid-term Review of Business Plan under Regulation 4.2 (i), the Petition shall comprise of:

- a. Truing Up for previous year;*
- b. Modification of the ARR for the remaining year of the Control Period, if any, with adequate justification for the same;*
- c. Revenue from the sale of power at existing tariffs and charges for the ensuing year;*
- d. Revenue gap for the ensuing year calculated based on ARR approved in the MYT Order and truing up for the previous year;*
- e. Application for determination of tariff for the ensuing year.”*

Further, the Hon'ble Commission notified the First Amendment Regulations, 2019 is as follows:

“5.2 The filing of the Control Period under these Regulations shall be as under.

(i).....

(ii) From the second year of the Control Period onwards and upto the last year of the Control Period, the petition in each year shall comprise of:

- a. Truing Up for the previous year with audited accounts, and Annual Performance Review (APR) with revision of ARR approved in MYT Order for current year and revised projection of ARR approved in MYT Order for the*

ensuing year in accordance with these Regulations;

- b. Revenue from the sale of power at existing tariffs and changes for the current year;*
- c. Revenue gap for the ensuing year calculated based on the revised projection of ARR and truing up of the previous year;*
- d. Application for determination of tariff for the ensuing year.”*

Further, the Hon'ble Commission had directed the P&ED Mizoram to file APR for the current FY along with the Tariff Petition for the next FY.

In compliance with the above directive of the Hon'ble Commission, P&ED Mizoram is submitting the present petition for Review of FY 2023-24.

P&ED Mizoram requests the Hon'ble Commission to carry out the Review for the FY 2023-24 in accordance with the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 read with First Amendment Regulations, 2019.

Data given in this chapter is for the entire year i.e. FY 2023-24.

6.2. Energy Sales

It is submitted that the P&ED Mizoram has revised the projection of number of consumers, connected load & energy sales for the FY 2023-24 based on the audited actual figures of the FY 2022-23 and the actuals for the FY 2023-24 H1 (1st Half Year). The CAGR for the 3 years, 2 years and 1 year has been computed and appropriately applied to arrive at the revised number of consumers, connected load & energy sales for the FY 2023-24. This has been done as there was variation between the approved figure and the revised estimates of sales for the FY 2023-24. The details of projections are provided in the subsequent sections.

6.3. Number of Consumers

The estimates of category wise number of consumers have been revised based on the audited actual figures of the FY 2022-23 and the actuals for the FY 2023-24 (H1). The CAGR for the 3 years, 2 years and 1 year has been computed and appropriately applied to arrive at the revised number of consumers. Based on the audited actuals of FY 2019-20 to FY 2022-23, the growth rate of number of consumers and the revised number of consumers is detailed in the table below.

Table 6.1: Category-wise Growth in Number of Consumer FY 2023-24

Sl. No.	Category	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	CAGR for 3 Years	CAGR for 2 Years	CAGR for 1 Year	Considered	FY 23-24
1	KJ(Domestic)	21266	19790	21834	17441	-6.40	-6.12	-20.12	5.00	18313
2	Domestic LT	211718	223673	231040	243058	4.71	4.24	5.20	5.20	255697
3	Domestic HT	25	25	22	11	-23.94	-33.67	-50.00	5.00	12
	Total Domestic	233009	243488	252896	260510					274022
4	Non-Profit Public Purpose LT	5791	6914	7742	8212	12.35	8.98	6.07	6.07	8710
5	Non-Profit Public Purpose HT	77	11	17	55	-10.61	123.61	223.53	5.00	58
	Total Non-Profit Public Purpose	5868	6925	7759	8267					8768
6	Commercial LT	11888	11784	12646	13176	3.49	5.74	4.19	5.74	13932
7	Commercial HT	143	280	339	497	51.47	33.23	46.61	5.00	522
	Total Commercial	12031	12064	12985	13673					14454
8	Public Lighting	1192	1244	1316	520	-24.16	-35.35	-60.49	5.00	546
9	PWS LT	17	9	11	177	118.36	343.47	1,509.09	5.00	186
10	PWS HT	53	70	70	55	1.24	-11.36	-21.43	1.24	56
11	Agl LT	37	35	37	52	12.01	21.89	40.54	5.00	55
12	Agl HT	2	2	3	23	125.72	239.12	666.67	5.00	24
13	Industrial LT	1032	1034	1023	1027	-0.16	-0.34	0.39	1.00	1037
14	Industrial HT	18	23	16	26	13.04	6.32	62.50	6.32	28
15	Bulk Supply HT (Incl. Temp.)	235	228	212	159	-12.21	-16.49	-25.00	5.00	167
	Grand Total	253494	265122	276328	284489					299342

Commission analysis:

The Commission has noted the now there is reduction in number of consumers as against the values stated in the ARR filing for 2023-24. The earlier total consumer figure was at 301555, while it was drilled down in the fresh projection to 299342. Instead of catering to more, the consumers are reduced is bit unacceptable and hope this has no reflection on the consumer services being extended by the entity. This aspect needs more attention.

6.4. Connected Load.

The estimates of category wise connected load have been revised based on the audited actual figures of the FY 2022-23 and the actuals for the FY 2023-24 (H1). The CAGR for the 3 years, 2 years and 1 year has been computed and appropriately applied to arrive at the revised connected load. Based on the audited actuals of FY 2019-20 to FY 2022-23, the growth rate of connected load and the revised connected load is detailed in the table below.

Table 6.2: Consumer Category-wise Growth in Connected Load FY 2023-24

Sl. No.	Category	FY 2019-20	FY 2020-21	FY 2021-22	Fy 2022-23	CAGR for 3 Years	CAGR for 2 Years	CAGR for 1 Years	Consi dered	FY 2023-24
1	KJ(Domestic)	4.24	3.87	5.38	4.49	1.87	7.72	-16.56	5.00	4.71
2	Domestic LT	278.50	281.72	303.82	313.46	4.02	5.48	3.17	5.48	330.64
3	Domestic HT	4.97	5.70	4.51	2.10	-24.96	-39.31	-53.47	5.00	2.21
	Total Domestic	287.71	291.29	313.70	320.05					337.55
4	Non-Profit Public Purpose LT	12.05	14.71	17.10	94.42	98.64	153.33	452.02	5.00	99.14
5	Non-Profit Public Purpose HT	0.47	0.44	2.81	10.00	176.89	378.89	256.22	5.00	10.50
	Total Non-Profit Public Purpose	12.52	15.15	19.91	104.42					109.64
6	Commercial LT	37.89	34.66	42.47	42.11	3.59	10.23	-0.84	3.59	43.63
7	Commercial HT	8.99	9.94	17.23	15.88	20.87	26.43	-7.83	5.00	16.68
	Total Commercial	46.88	44.59	59.70	58.00					60.30
8	Public Lighting	0.89	0.91	1.29	0.99	3.40	3.98	-23.39	3.98	1.03
9	PWS LT	3.26	0.27	0.96	1.21	-28.25	112.84	25.65	5.00	1.27
10	PWS HT	43.13	79.29	55.15	44.48	1.03	-25.11	-19.35	5.00	46.70
11	Agl LT	0.07	0.11	0.08	0.07	2.99	-18.54	-11.25	2.99	0.07
12	Agl HT	0.17	0.17	0.21	4.54	198.86	416.66	2,092.27	5.00	4.76
13	Industrial LT	5.32	5.00	11.68	5.08	-1.51	0.85	-56.47	5.00	5.34
14	Industrial HT	6.73	5.43	5.89	8.29	7.19	23.61	40.68	7.19	8.88
15	Bulk Supply HT (Incl. Temp.)	14.29	54.84	18.38	17.47	6.92	-43.56	-4.97	6.92	18.68
	Grand Total	420.97	497.03	486.95	564.57					594.22

Commission Analysis:

Why the P&ED is attempting to project for an year (FY 2023-24) that is coming to an end. Instead they must adopt this technique to estimate the probable values for FY 2024-25 instead of making an analysis for the values pertaining to an year that is coming to an end.

6.5. Category wise sales

The estimates of category wise sales have been revised based on the audited actual figures of the FY 2022-23, the actuals for the FY 2023-24 (H1) and the revised number of consumers & connected load as detailed above. Further, CAGR for the 3 years, 2 years and 1 year has been computed and appropriately applied to arrive at the revised sales. Based on the audited actuals of FY 2019-20 to FY 2022-23, the growth rate of sales and the revised sales is detailed in the table below.

Table 6.3: Consumer Category-wise Growth in Energy Sales FY 2023-24

Sl. No.	Category	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	CAGR for 3 Years	CAGR for 2 Years	CAGR for 1 Year	Considered	FY 2023-24
1	2	3	4	5	6	7	8	9	10	11
1	KJ(Domestic)	7.41	7.19	5.63	4.88	-13.00	-17.61	-13.39	5.00	5.12
2	Domestic LT	279.54	271.90	276.95	291.22	1.37	3.49	5.15	5.15	306.21
3	Domestic HT	9.38	4.35	3.29	2.23	-38.06	-28.41	-32.23	5.00	2.34
	Total Domestic	296.32	283.43	285.87	298.32					313.67
4	Non-Profit Public Purpose LT	9.03	8.20	8.68	11.79	9.29	19.93	35.79	5.00	12.38
5	Non-Profit Public Purpose HT	0.53	0.25	12.84	3.98	95.31	295.85	-69.04	5.00	4.17
	Total Non-Profit Public Purpose	9.57	8.45	21.52	15.77					16.56
6	Commercial LT	34.49	34.20	35.10	38.81	4.02	6.53	10.58	6.53	41.34
7	Commercial HT	13.81	10.07	12.79	13.14	-1.63	14.27	2.75	2.75	13.51
	Total Commercial	48.30	44.26	47.89	51.95					54.85
8	Public Lighting	2.11	2.11	2.35	2.48	5.48	8.35	5.67	5.67	2.62
9	PWS LT	0.91	0.79	6.20	6.32	91.06	182.25	1.90	5.00	6.64
10	PWS HT	63.38	81.66	74.34	89.64	12.25	4.77	20.58	4.77	93.92
11	Agl LT	0.08	0.06	0.05	0.05	-17.33	-12.57	-4.40	5.00	0.05
12	Agl HT	0.06	0.10	0.09	1.01	159.97	217.66	1,028.57	5.00	1.07
13	Industrial LT	2.96	4.06	2.54	2.44	-6.16	-22.41	-3.82	5.00	2.57
14	Industrial HT	7.96	5.54	7.04	10.98	11.32	40.76	55.82	5.00	11.53
15	Bulk Supply HT (Incl. Temp.)	54.77	14.45	16.37	14.11	-36.37	-1.20	-13.81	5.00	14.81
	Grand Total	486.41	444.92	464.27	493.08					518.28

The above table reflects the category wise CAGR for three years, two years and one year. Depending on the trend of the growth in individual categories over the period of three years, two years and one year, CAGR has been applied and the same is reflected in the column 10 of the above table. Accordingly, category wise revised sales estimate for the FY 2023-24 has been arrived.

Further, there has been substantial variations have been observed in the energy sales for other categories as well in the H1 of the FY 2023-24 which shall have substantial impact on the revenue & gap for the FY 2023-24.

In view of the above, category wise revised sales estimate is proposed for the consideration and approval of the Hon'ble Commission. The comparison of category wise revised sales estimate and the sales approved by the Hon'ble Commission for the FY 2023-24 is provided in the table below.

Table 6.4: Energy Sales FY 2023-24

(In MUs)				
Sl. No.	Category	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
	LT Consumers			
1	KJ (Domestic)	6.21	5.12	-1.09
2	Domestic	305.34	306.21	0.87
3	Non-Profit Public Purpose	9.74	12.38	2.64
4	Commercial	36.97	41.34	4.37
5	Public Lighting	2.61	2.62	0.01
6	Agriculture	0.06	0.05	-0.01
7	Public Water Works	6.84	6.64	-0.20
8	Industrial	2.80	2.57	-0.23
9	Electric Vehicle Charging	2.00	0.00	-2.00
	Total LT	372.57	376.94	4.37
	HT Consumers			
10	Domestic	3.62	2.34	-1.28
11	Non-Profit Public Purpose	14.15	4.17	-9.98
12	Commercial	14.10	13.51	-0.59
13	Agriculture	0.10	1.07	0.97
14	Public Water Works	84.22	93.92	9.70
15	Industrial	8.27	11.53	3.26
16	Electric Vehicle Charging	0.75	0.00	-0.75
17	Bulk Supply	14.80	14.81	0.01
	Total HT	140.01	141.34	1.33
18	Total LT & HT	512.58	518.28	5.70
19	Outside State - Trading	93.80	191.20	97.40
	Total	606.38	709.48	103.10

Commission's Analysis

The estimations made for FY 2023-24, should have been extrapolated for FY 2024-25 which the year of concern and not the year under annual review and which is about to conclude by the time this order is issued. But there are no traces of adopting this method in deriving the annual sales for FY 2024-25 is not stated anywhere in the filing submission is not comprehensible. The purpose of this is not much of any use.

6.6. Distribution Loss for FY 2023-24

The distribution loss trajectory approved by the Hon'ble Commission for the FY 2023-24 & the estimated distribution loss considered by the P&ED Mizoram for the FY 2023-24 is provided in the table below. However, actual distribution loss shall be submitted for consideration of the Hon'ble Commission for Truing– up after the end of the financial year when the accounts are audited.

Table 6.5: Distribution Loss for FY 2023-24

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Distribution Loss	22.61%	26.00%	3.39%

Commissions Analysis:

Basically, the distribution losses in FY 2023-24 shall be matching with the RDSS based loss trajectory already determined by the fund disbursing authority. Unless those values so agreed to is not disclosed, the Commission too can't finalise the losses for this year. The said information was called for through additional information and it is informed that vide MoP Letter No.12/11(01)/2021-UR&SI-II (263835) Dt.21.03.2023 the following are the Loss trajectory fixed under the RDSS scheme:

Scheme period of RDSS	2021-22	2022-23	2023-24	2024-25
AT&C Losses	24.00%	21.00%	17.50%	14.00%

Since, the information was just disclosed by P&ED to Commission upon insistence, thus the loss trajectory of FY2023-24 can't be altered at this eleventh hour to make any fruitful change as the financial year would be concluding by the time this order be issued. Hence, Commission awaits the frozen actuals by the end of this FY2023-24 and watch for the outcome without altering the distribution losses at this juncture.

6.7. P&ED's Own Generation

The P&ED Mizoram's own generation approved by the Hon'ble Commission for the FY 2023-24 & the estimated own generation considered by the P&ED Mizoram for the FY 2023-24 is provided in the table below:

Table 6.6: P&ED Mizoram's Own Generation FY 2023-24**(In MUs)**

Sl. No.	Particulars	Approved in T.O.dt 28.03.23	Revised Estimate	Deviation
1	2	3	4	5
1	Total Generation (Net)	31.07	39.63	8.56
	Total	31.07	39.63	8.56

It is submitted that Amazon Engineering have been undertaking Operation &

Maintenance (O&M) of **Khawiva SHP, Tuipui SHP, Teirei SHP & Kau Tlabung SHP** on behalf of P&ED Mizoram. Further, the Installed Capacity & energy generation is included in the books of P&ED Mizoram.

Commission's Analysis

The Commission in its order dated 23.03.2022 had approved own generation at 26.725 MU for FY 2022-23, basing on the data now furnished then by P&ED for 2022-23 and the actuals indicated even for FY 2021-22 was at 25.89MU. Since the P&ED is already procuring the energy from M/s. Amazon Engineering even from 2020-21 onwards on lease basis but the same factual was not reflected in FY2020-21 APR submitted by them last year. This is sometime really surprising the Commission for not having disclosing the factual events in the ARR petition.

As seen from the present APR filing submission P&ED indicated overall own generation capacity of 38.85 MW instead of the MYT approved 31.07MU. During the last filing the P&ED had not considered the **Kawlbem SHP- 4MWs plant** which was commissioned on 15th December 2022 into the installed capacity and same omission continued in FY2023-24 to FY 2027-28 installed capacity too. However, this new plant was considered in this 2024-25 ARR filing afresh. Thus, the total installed capacity rose to 38.35MWs including the **Serlui-B station constantly awaiting Commercial Operation**.

After having carefully observed, leaving aside the three (3) plants leased to **M/s. Amazon Engineering PVT Ltd** and the **Teirei-3MWs SHP** now stated to have leased out to by **M/s. Assam Petroleum Ltd**, the effective remaining SHPs in operation are the following tabulated plants with installed capacity of 26MWs only but not the grand figure 38.35MWS as because there are some old plants with installed capacity of 4.80MWs are not generating any power. **The following table will clearly depict the power station now in effective operation.**

Sl. No.	SHP Name	Inst. Cap (MWs)	COD Date	Present Plant Status
A - SHP Power Plants not Generating Power				
1.	Serlui-A SHP	1.00	24.04.1984	Out of Commission
2.	Tuirivang SHP	0.30	14.08.1989	---- do ----
3.	Tuipanglui SHP	3.00	17.12.2004	No generation
4.	Lamsial SHP	0.50	26.08.2008	---- do ----
5.	Lengpui (diesel)	0.50	No data	Out of Commission

Sl. No.	SHP Name	Inst. Cap (MWs)	COD Date	Present Plant Status
Subtotal (A)		5.30	Nil Energy	
B – Effectively Power producing Small Hydro Plants (SHP)				
5.	Maicham-I	2.00	05.01.1996	Generating power
6.	Maicham-II	3.00	11.11.2009	-- do --
7.	Tlawva	5.00	13.05.2022	---- do ----
8.	Kawlbem	4.00	15.12.2022	---- do ----
9.	Serlui-B	12.00	Awaiting COD	Infirm power
Subtotal (B)		26.00	Power is being Generated	
C - SHPs managed by outside Agencies				Pvt Agency name
10.	Khawiva SHP	1.05	08.12.1988	Amazon Engg.
11.	Tuipui SHP	0.50	15.12.1991	-- do --
12.	Kau Tlabung SHP	3.00	05.05.2005	-- do --
13.	Teirei SHP	3.00	12.10.1999	Assam Petroleum
Subtotal (C)		7.55		
Grand Installed Capacity		38.85	Installed Capacity adopted in ARR	

Three (3) plants being maintained by M/s. Amazon Engineering and one (1) by M/s. Assam petroleum was also included in P&ED own generation capacity in this year FY2023-24 but in reality, these plants were leased-out to outside agencies besides P&ED is paying the O&M charges to them to the tune of **Rs.1.68Cr**s as intimated in respect of FY2022-23 in their addl. Information replies towards Operating and maintenance charges for these plants. Hence, these plants are technically cannot form at all part of P&ED Own Generation since they are being managed by outside agencies but not by P&ED. Hence, claim for separate Generation charges for these plants will not be considered in FY2024-25 but these charges will be adopted in lieu of generation ARR figures.

Thus Commission, draws an inference that effectively own energy generation is only from five (5) plants. The energy expected from outside agencies is not clearly indicated in their filing but shown in Generation related ARR expecting about **10.154MU from those plants**. Accordingly, the balance generation of **29.476MU** so projected is construed to be contributed by Own power producing SHPs as shown in the above table during FY 2023-24 as well as in 2024-25 also so as to make the total expected energy to be **39.63MU**. But as per the Generation ARR filing submission the energy projected only for 39.603MU in all and this variation is left unexplained.

6.8. Power Purchase quantum:

The power purchase units approved for the FY 2023-24 is 752.37 MUs. The revised

estimate for power purchase units for the FY 2023-24 has been arrived at on the basis of actual power purchase for the H1 (1st half year) of the FY 2023-24 and actual purchase for H2 (2nd half year) of the FY 2022-23. Accordingly, the power purchase units estimate for the FY 2023-24 is revised at 883.93 MUs. The approved & estimated power purchase units for FY 2023-24 are provided in the table below:

Table 6.7: Power Purchase Units FY 2023-24

In (MUs)				
Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Power Purchase Units	752.37	883.93	131.56
	Total	752.37	883.93	131.56

Commission Analysis:

The above figures indicated in table are exclusive of the Own Generation by P&ED., the total power purchase quantity approved in Tariff Order is 783.44MU. The estimations made by the P&ED in its review petition for 2023-24 on the power share allocation and purchase of energy in Central generating stations capacity, the commission now considers everything as it is and the details of share allocations and quantity of energy expected to procure in FY 2023-24 in the following table for detailed reference:

Table 6.8: Power Purchase quantum approved by Commission for FY 2023-24

(Figures in MWs & MU)

Sl. No	Energy Generation Source (2023-24)	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW	MU Purchased/generated (ex-bus)
A	Central Generating Stations	(MW)	(MW)	(MW)	(MU)
I	NTPC				
1	Bongaigaon TPS	750.00	5.415	40.61	142.16
2	Farakka STPS	1600.00	0.142	2.27	13.29
3	Kahalgaon STPS	840.00	0.142	1.19	7.58
4	Talcher STPS	1000.00	0.142	1.42	10.94
	NTPC-Total	4190.00		45.49	173.98
II	NHPC				
1	Loktak HEP	105.00	5.020	5.27	12.55
	NHPC-Total	105.00		5.27	12.55
III	NEEPCO				
1	Kopili HEP	200.00	4.610	9.22	21.79
2	Kopili - II HEP	25.00	6.040	1.51	10.82
3	Khandong HEP	50.00	3.940	1.97	0.51
4	Ranganadi HEP	405.00	5.700	23.09	72.76

Sl. No	Energy Generation Source (2023-24)	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW	MU Purchased/generated (ex-bus)
5	Doyang HEP	75.00	5.250	3.94	8.73
6	Pare HEP	110.00	5.765	6.34	27.74
7	a) Tuirial HEP	60.00	100.000	60.00	120.90
	b) Free Power share				16.49
8	AGBPP	291.00	5.410	15.74	38.50
9	AGTPP	135.00	6.000	8.10	24.47
	NEEPCO-Total	1351.00		129.91	342.71
IV	TSECL				
1	B'mura - IV	21.00	25.000	5.25	53.83
2	B'mura - V	21.00	25.000	5.25	
	TSECL-Total	42.00		10.50	53.83
V	OTPC				
1	Palatana	726.00	5.785	42.00	264.72
	OTPC-Total	726.00		42.00	264.72
B	State generating Stations				
	All Units (incl. Lengpui diesel set)	38.85	100	38.85	39.63
	Owned Generation Total	38.85		38.85	39.63
C	UI / Deviation & IEX Purchase				0
	UI / Deviation-Total				0
D	Other RE Energy				
	1.Roof-top solar Generation				34.02
	2.Solar Generation				2.12
E	RPO Obligation / REC Certificate				0
F	LC Enhancement/Renewal charges				0
G	Bilateral Power Purchase				
1	Utility 1				
	Bilateral-Total				0.00
	GRAND TOTAL	6452.85		272.02	923.55

Since the financial year will be coming to an end by the time this order is issued, the Commission don't want to alter any values in this major head of expenditure power purchase so submitted by the Licensee. Mere changing of these values will not yield any fruitful result.

6.9. Energy Balance

The revised estimate of energy balance based on the energy requirement and energy availability for the FY 2023-24 is provided in the table below:

Table 6.9: Energy Balance FY 2023-24

Sl. No	Energy Balance	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
A	Energy Requirement			
1	Energy Sales	512.58	518.28	5.70
2	Distribution Loss (%)	22.61%	26.00%	3.39%
3	Distribution Loss (MUs)	149.79	182.12	32.33
4	Total Energy Requirement	662.37	700.40	38.03
B	Energy Availability			
5	Own Generation	31.07	39.63	8.56
6	Energy Purchase from ER	33.40	31.81	-1.59
7	Less: ER Pool Loss (%)	1.95%	3.57%	0.02
8	Less: ER Pool Loss (Mus)	0.65	1.14	0.48
9	Net Energy for ER	32.75	30.68	-2.07
10	Energy Purchase from NER (Exl. Tuirial HEP)	522.36	678.59	156.23
11	UI / Deviation	0.00	0.00	0.00
12	Sub Total	555.11	709.27	154.16
13	Less: NER Pool Loss (%)	2.36%	2.33%	0.00
14	Less: NER Pool Loss (MUs)	13.10	16.53	3.43
15	Net Energy at NERLDC	542.01	692.74	150.73
16	Energy purchases from Tuirial HEP	170.93	120.90	-50.03
17	Free Energy from Tuirial HEP	23.31	16.49	-6.82
18	Amazon Engineering	0.00	0.00	0.00
19	Rooftop Solar Generation	0.07	34.02	33.95
20	Solar Generation	2.30	2.12	-0.18
21	Energy Available	769.69	905.89	136.21
22	Less: Outside State - Trading	93.80	191.20	97.40
23	Total Energy Available	675.89	714.69	38.81
24	Less: Intra State Tr. Loss (%)	2.00%	2.00%	0.00
25	Less: Intra State Tr. Loss (MUs)	13.52	14.29	0.78
26	Net Energy Available	662.37	700.40	38.03
27	Less: Energy requirement at State Periphery	662.37	700.40	38.03
28	ENERGY SURPLUS/(DEFICIT)	0.00	0.00	0.00

Commission's Analysis

The distribution Losses so projected by P&ED at 26% is far higher when compared with the RDSS scheme-based targets of 17.50% and the gap between the two is 8.50% which is apparently difficult to bridge the gap. Despite, fully aware of the set target of 17.50% to achieve, the P&ED had filed the distribution Losses at 26.00% leave aside the efficiency in revenue collections to 100% of billed revenue during the year.

Since, the figures were known just now by the Commission is not in a position to make any useful decision now at this fag-end of the financial year except the await the actuals to be known during their true-up submission in due course and no

suggestive energy balance figures are indicated now in this APR order for this year.

6.10. Fuel Cost

Petitioner's submission

The values of fuel cost approved for the FY 2023-24 are not proposed to be revised at this stage. However, the actuals shall be submitted at the time truing-up.

Table 6.10: Fuel Cost FY 2023-24

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Cost of Fuel	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission's Analysis

The above fuel cost pertains to DG Set used at Lengpui Airport which equipment is being used on a standby basis but never seems to have kept under usage. Thus, the Commission now approves Nil Fuel Cost for FY 2023-24 after performance review and it will be linked to the actual costs if any at the time of truing-up.

6.11. Cost of Generation

Petitioner's submission

The values of cost of generation approved for the FY 2023-24 are not proposed to be revised at this stage. However, the actuals shall be submitted at the time truing-up

Table 6.11: Cost of Generation FY 2023-24

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Cost of Generation	5.56	5.56	0.00
	Total	5.56	5.56	0.00

Commission Analysis:

The Commission after considering of the factual details pertaining to FY2022-23, now approves generation cost for FY 2023-24 at the same level approved earlier and to watch the actuals if any spent.

6.12. Power Purchase Cost

Petitioner's submission

The Hon'ble Commission in the Tariff Order for the FY 2023-24 had approved a power purchase quantum of 752.37 MUs at a total cost of ₹ 359.92 Crores. As submitted above the estimate of power purchase quantum for the FY 2023-24 is proposed to be revised to 883.93 MUs. Accordingly, the power purchase cost is also proposed to be revised. The detail calculation is provided in the Format No. F1(i) & F1a(i). Further, Power purchase cost for the FY 2023-24 has been arrived at in following manner: -

- i. Actual power purchase cost for the H1 of the FY 2023-24 has been considered.
- ii. For estimating the power purchase cost of H2, the estimated quantum of power purchase units for H2 has been taken from actual power purchase unit of FY 2022-23 and source wise average cost of FY 2022-23 escalated at 5.72% has been applied.

Further, the cost towards RPO has been arrived in accordance with the RPO targets prescribed in the RPO regulations. The target for Wind RPO, HPO & Other RPO % is given in the table below:

Table 6.12: Percentage of Target for Wind RPO, HPO & Other RPO

Sl. No.	FY	Wind RPO	HPO	Other RPO	Total
1	2	3	4	5	6
1	2023-24	1.60%	0.66%	24.81%	27.07%

For all the RPO category, the prescribed target as per above table has been applied on the base figure of 700.40 MUs for the FY 2023-24.

Further, for the Wind RPO category, P&ED Mizoram has not been procured any power during the FY 2023-24. Accordingly, 11,206.37 MWh (11.21 MUs) is computed as the Wind RPO for the FY 2023-24. The rate as prescribed by CERC has been considered to arrive at the cost of RPO of ₹ 1.12 Crores for the FY 2023-24.

For the HPO category, P&ED Mizoram has not been procured any power during the FY 2023-24. Accordingly, 46,22,626 kWh is computed as the HPO for the FY 2023-24. The rate as prescribed by CERC has been considered to arrive at the cost of HPO at ₹ 2.94 Crores for the FY 2023-24.

P&ED Mizoram shall meet the requirement of Other RPO from its power procurement which is projected at 173.77 MUs for the FY 2023-24. Accordingly, there is no fund needed for meeting other RPO target, its already projected as achieve.

The Power purchase cost also includes charges towards purchase of REC certificates to meet the RPO obligation. Total cost of REC certificates (for Wind RPO, HPO & Other RPO) is ₹ 4.07 Crores for the FY 2023-24.

The comparison of the approved power purchase cost and the revised estimate as arrived above is given in the table below.

Table 6.13: Power Purchase Cost FY 2023-24

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Power Purchase Cost	359.92	507.57	147.65
	Total	359.92	507.57	147.65

Commissions Analysis

The power purchase cost of Rs.507.57Crores including RPO Obligation of Rs.4.07 Crs (for 2.30MU) is now not altered after review based on their purchase quantum by the Commission as detailed in the table below.

Table 6.14: Power Purchase Cost Commission approved for FY 2023-24

Sl. No.	Source	Plant Installed capacity			Approved (APR Order)		
		(MW)	P&ED Share (%)	P&ED Share (MW)	Energy (MU)	Total Cost (Rs Cr)	CPU (Rs/ kWh)
A	CGS - NTPC Stations						
1	NTPC Bongaigaon Unit I -NER	750	5.415	40.61	142.16	101.01	7.11
2	Farakka STPS - ER	1600	0.142	2.27	13.29	8.71	6.56
3	Kahalgaon STPS - ER	840	0.142	1.19	7.58	3.87	5.11
4	Talcher STPS - ER	1000	0.142	1.42	10.94	3.60	3.29
	Sub Total - NTPC	4190		45.50	173.97	117.20	6.74
B	CGS - NHPC						
1	Loktak HEP	105.00	5.020	5.27	12.55	6.53	5.20
	Sub-Total - NHPC	105.00		5.27	12.55	6.53	5.20
C	NEEPCO						
1	Kopili - I HE	200	4.610	9.22	21.79	8.09	3.71
2	Kopili - II HE	25	6.040	1.51	10.82	2.63	2.43
3	Khandong HE	50	3.940	1.97	0.51	0.17	3.33
4	Ranganandi HE Project	405	5.700	23.09	72.76	21.11	2.90
5	Doyang HE Project	75	5.250	3.94	8.73	6.85	7.85
6	Pare HEP	110	5.765	6.34	27.74	14.88	5.36

Sl. No.	Source	Plant Installed capacity			Approved (APR Order)		
		(MW)	P&ED Share (%)	P&ED Share (MW)	Energy (MU)	Total Cost (Rs Cr)	CPU (Rs/ kWh)
7	Tuirial HEP	60	100	60.00	120.90	82.17	5.98
8	Tuirial HEP - Free Power				16.49		
9	Assam GBPP	291	5.410	15.74	38.50	39.69	10.31
10	Agartala GTPP	135	6.000	8.10	24.47	21.97	8.98
	Sub-total	1351		129.91	342.71	197.55	5.76
D	Other Supplies						
1	Baramura GBPP Unit IV & V	42.00	25.00	10.50	53.83	37.54	6.97
2	OTPC - Pallatana	726.00	5.79	42.00	264.72	91.29	3.45
	Sub-total	768.00		52.50	318.55	128.83	4.04
	Total CGS & Other Purchases	6414.00		233.18	847.78	450.11	5.31
E	Short-term power purchase						
	IEX Purchase	-	--	0.00	0.00	0.00	0.00
	Sub-total	0.00	0.00	0.00	0.00	0.00	0.00
F	State Own Generation						
	P&ED SHP Units	38.85	0.0	38.85	39.63	0.00	
G	UI Over drawl	-	-	0.00	0.00	-	
	UI Under drawls	-	-	0.00	0.00	-	0.00
H	REC Certificate/Obligation				-	4.07	
I	Roof-top Solar Generation				34.02	13.40	3.94
J	Solar Generation				2.12	-	
K	Reactive Energy charges					0.06	
L	LC Enhance/Renewal charge.					22.41	
M	Addl. Supplementary Bills			0.00		17.52	0.00
	TOTAL POWER PURCHASE	6452.85		272.03	923.55	507.57	5.50

Note: The above amount of Power Purchase cost now approved, is inclusive of M/s Amazon Engineering & M/s. Assam petroleum Lease cost amount and the same will be segregated at the time of True-up when preferred by P&ED.

The O&M charges actuals if any paid to M/s. Amazon Engineering will be added to R&M expenses so paid by P&ED like it had reported in FY 2022-23. But It is not appropriate to show the same in power purchase cost to reflect realistic transaction nature.

Note: *The REC Certificate Obligation of Rs.4.07Cr needs to be accomplished by P&ED without fail. Else, the Clause-6 of Renewable purchase obligation Regulation 2010 will be invoked by the if circumstances demands. However, exact amount of RPO obligation will be determined based on actual purchase quantum at the time of true-up.*

6.13. Inter-state Transmission Charges for 2023-24 by P&ED

The estimate of transmission charges for the FY 2023-24 is proposed to be revised based on the actuals for the FY 2022-23 and H1 of FY 2023-24. The comparison of the approved transmission charges and the revised estimate is given in the table below.

Table 6.15: Transmission Charges FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Transmission Charges	63.76	55.70	-8.06
	Total	63.76	55.70	-8.06

Commission analysis:

The Commission also approves Inter-state transmission charges (PGCIL charges) at Rs. 55.70 Crores for FY 2023-24 as submitted by P&ED after the review. But, the reason for projecting at a cost lower than actuals spent in 2022-23 Rs.76.01CRs is not reasoned out by the licensee.

6.14. Intra-state Transmission Charges

The values of intra-state transmission charges approved for the FY 2023-24 are not proposed to be revised at this stage. However, the actuals shall be submitted at the time truing-up.

Table 6.16: Intra-state Transmission Charges FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Intra-state Transmission Charges	53.20	53.20	0.00
	Total	53.20	53.20	0.00

Commission Analysis:

The Commission approves Nil intra-state transmission charges for FY 2023-24 based on the review of this cost element behaviour with reference to earlier years Audited statements and found to be Nil charges in final actuals when True-up claimed is made.

6.15. O & M Expenses**i. Employee Cost:****Petitioner's submission**

The value of employee cost approved for the FY 2023-24 is ₹ 144.95 Crores. The revised estimate of employee cost for the FY 2023-24 has been arrived at on the basis

of actual employee cost for the H1 (1st half year) of the FY 2023-24 of ₹ 91.61 Crores for P&ED Mizoram. Accordingly, the employee cost estimate for the FY 2023-24 is revised at ₹ 128.25 Crores for **only relates to the distribution function**.

The approved & estimated employee cost for the FY 2023-24 is provided in the table below:

Table 6.17: Employee Cost FY 2023-24

(In ₹ Crores)				
Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Employee Cost	144.95	128.25	-16.70
	Total	144.95	128.25	-16.70

Commissions Analysis

The Employee cost now projected for FY 2023-24 is lesser than what has been approved in the Tariff Order. Thus, the amount of Rs.128.25Cr is now approved by the Commission.

ii. Repairs & Maintenance

Petitioner's submission

The value of Repair & Maintenance Expenses approved for the FY 2023-24 is ₹11.96 Crores. The revised estimate of Repair & Maintenance Expenses for the FY 2023-24 has been arrived at on the basis of actual Repair & Maintenance Expenses for the H1 (1st half year) of the FY 2023-24 of ₹ 12.95 Crores for P&ED Mizoram. Accordingly, the Repair & Maintenance Expenses estimate for the FY2023-24 is revised at ₹ 9.89 Crores for **only relates to the distribution function**. The approved & estimated Repair & Maintenance Expenses for the FY 2023-24 is provided in the table below:

Table 6.18: Repair & Maintenance Expenses FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Repair & Maintenance Expenses	11.96	9.89	-2.07
	Total	11.96	9.89	-2.07

Commission analysis:

The R&M cost now projected for FY 2023-24 is lesser than what has been approved in the Tariff Order. Thus, the amount of Rs.9.89Cr is now approved by the Commission.

iii. Administration & General Expenses

The value of Administration & General Expenses approved for the FY 2023-24 is ₹ 2.10 Crores. The revised estimate of Administration & General Expenses for the FY 2023-24 has been arrived at on the basis of actual Administration & General Expenses for the H1 (1st half year) of the FY 2023-24 of ₹ 3.24 Crores for P&ED Mizoram. Accordingly, the Administration & General Expenses estimate for the FY 2023-24 is revised at ₹ 4.54 Crores for only relates to the distribution function. The approved & estimated Administration & General Expenses for the FY 2023-24 is provided in the table below:

Table 6.19: Administration & General Expenses FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Administration & General Expenses	2.10	4.54	2.44
	Total	2.10	4.54	2.44

Commission's Analysis:

The Commission accordingly approves Administration and General Expenses at Rs. 4.54 Crore for the FY 2023-24 as estimated by P&ED and these values will be verified with actuals at the time of true up.

iv. Abstract of O&M Expenses Filed Vs. Approved for 2023-24:

Table 6.20: O&M Expenses approved by the Commission after Review

Sl. No.	Expenses details	As per APR of P&ED (Rs.Crs)	Commission approved (Rs.Crs)
1	Employee Cost	128.25	128.25
2	Repair & Maintenance Expenses	9.89	9.89
3	Administration & General Expenses	4.54	4.54
	Total O&M Expenses	142.68	142.68

6.16. Depreciation**Petitioner's submission**

The Hon'ble Commission has approved the Depreciation for the FY 2023-24. In this regard it is submitted that the GFA for the FY 2022-23 has got revised in accordance with the audited annual accounts for which true-up proposal is being submitted. The Fixed Asset & Depreciation Register for the FY 2022-23 is also being submitted. Therefore, the GFA & corresponding depreciation for the FY 2023-24 also stands revised. The Depreciation is estimated for the FY 2023-24 at ₹ 1.66 Crores for **only relates to the distribution function.**

In view of the above it is requested that the Hon'ble Commission may kindly consider & approve the revised depreciation for the FY 2023-24. The depreciation approved by the Hon'ble Commission and revised depreciation for the FY 2023-24 is provided in the table below:

Table 6.21: Depreciation FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Depreciation	0.00	1.66	1.66
	Total	0.00	1.66	1.66

Commission Analysis

Hence, the licensee claimed the depreciation at Rs.1.66 Crores after review, cannot be approved by the Commission as they are not eligible to claim depreciation under Regulatory Accounting System and nil amount is considered from FY2023-24. What has been so far allowed will not be chosen to be disturbed at this juncture.

6.17. Interest & Finance Charges

The interest & finance charges approved for the FY 2023-24 was on the basis of the schedule of loan & repayment and there has been no change in the same as of now. However, the actuals shall be submitted at the time truing-up. The interest & finance charges as approved for the FY 2023-24 are provided in the table below:

Table 6.22: Interest & Finance Charges FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
	Interest & Finance Charges	0.00	0.14	0.14
	Total	0.00	0.14	0.14

Commission's Analysis

The Commission observed that the Interest & Finance charges at Rs. 0.82 Crore for the FY 2021-22 and the charges of 0.46Crs now considered for 2022-23 are not being paying to lenders/borrowers despite recovering from consumers through tariff pedantically every year. This is only a book entry in annual accounts but actual liability is not getting discharges for since past. **Therefore, these charges will not be allowed for the reason stated above to avoid unnecessary burden on consumers. It will be considered upon producing the verifiable proof of payment made to Lender in future ARR finalisation.**

6.18. Interest on Working Capital**Petitioner's Submission**

The Hon'ble Commission did not approve interest on Working Capital for the FY 2023-24. Further, the working capital estimate has been reworked based on the changed determinants. The interest on working capital as approved and the revised estimate for the FY 2023-24 are provided in the table below:

Table 6.23: Interest on Working Capital FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	Interest on Working Capital	0.00	9.41	9.41
	Total	0.00	9.41	9.41

Commission's Analysis

As per the MYT Regulation 2014, the interest on working capital is a permissible element of ARR expenditure. However, it is observed that P&ED had not obtained any working capital loan during the entire financial year 2021-22 or was there any history of such loans being drawn. The admitting of Interest on working capital is only an additional burden on the consumers and there is no need for allowing this cost element as they are fully dependent/availing funding only from the State government and no other source drawn for day to day routine operations. Hence, no calculation is made afresh for this purpose in FY 2023-24 and **NIL amount of IWC is considered.**

But these charges will be considered for allowing if short-term loans are availed practically during the period adopting the same analogy as that in the case of Return on Equity to off-load the unnecessary burden on Consumers.

6.19. Interest on Consumer Security Deposit

The Hon'ble Commission did not approve interest on Consumer Security Deposit for the FY 2023-24 and the P&ED Mizoram is not proposing any provisions for the same.

Table 6.24: Interest on Consumer Security Deposit FY 2023-24

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Interest on Consumer Security Deposit	0.00	0.00	0.00
	Total	0.00	0.00	0.00

6.20. Provision for Bad Debts

The Hon'ble Commission did not approve Provision for Bad & Doubtful Debt for the FY 2023-24 and the P&ED Mizoram is not proposing any provisions for the same.

Table 6.25: Provision for Bad & Doubtful Debt FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Provision for Bad Debt	0.00	0.00	0.00
	Total	0.00	0.00	0.00

6.21. Contributions to Contingency Reserve fund

The Hon'ble Commission did not approve Contribution to Contingency Reserve Fund for the FY 2023-24 and the P&ED Mizoram is not proposing any provisions for the same.

Table 6.26: Contribution to Contingency Reserve Fund FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Contribution to Contingency Reserve Fund	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission Analysis:

It is replied in the additional information that P&ED is not in a position to invest the amount into Contingency Reserve fund as all money is being deposited into Government treasury and without consent of Government of Mizoram (GoM) the fund creation in a non-drawl account is not possible in the absence of no financial control independence to P&ED. Hence, the creation of fund proposal is hence forth withdrawn by the Commission and the funds collected so far will be clawed back in true-up of FY 2023-24 in the ensuing year.

6.22. Return on Equity

The Hon'ble Commission did not approve return on equity for the FY 2023-24 and the P&ED Mizoram is not proposing for the same.

Table 6.27: Return on Equity FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Return on Equity	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission Analysis:

The also approved NIL amount towards Return on Equity for FY 2023-24, which is similar to the same situation prevailing in FY 2022-23 in this regard.

6.23. Non-tariff Income

The Other Income approved for the FY 2023-24 is ₹ 8.48 Crores. Further, the other income estimate has been reworked based on the changed determinants. The other income approved & estimated is provided in the table below:

Table 6.28: Other Income FY 2023-24**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
1	2	3	4	5
1	Non-Tariff Income	8.48	11.31	2.83
	Total	8.48	11.31	2.83

Commission Analysis:

The Commission accordingly approves Rs.11.31 Crores towards Non-tariff Income for the FY 2023-24 same as estimated by P&ED.

The P&ED shall endeavour to be vigilant to collect outstanding dues and to bring the amount of outstanding not more than 2 months sales value as an acceptable level. This is possible with proper levying of NTI amount for delays in payments, so that the NTI amount will be used as a tool to recover the pending and doubtful dues at the earliest.

Revenue from sale of power**Petitioner's Submission:**

The P&ED Mizoram has considered the revised estimate of energy sale as detailed in para 1.2 above for calculating the estimated revenue from sale of power. The

comparison of approved revenue & revised estimate for the FY 2023-24 is provided in the table below:

Table 6.29: Revenue from Sales of Energy during FY 2023-24

(In ₹ Crores)

Sl. No.	Category	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Deviation
	LT Consumers			
1	KJ(Domestic)	2.45	1.97	-0.48
2	Domestic	186.39	184.64	-1.75
3	Non-Profit Public Purpose	8.93	16.76	7.83
4	Commercial	35.22	38.50	3.28
5	Public Lighting	3.10	3.07	-0.02
6	Agriculture	0.03	0.02	0.00
7	Public Water Works	7.71	7.50	-0.20
8	Industrial	3.22	2.36	-0.87
9	Electric Vehicle Charging	1.75	0.00	-1.75
	Total LT	248.79	254.83	6.04
	HT Consumers			
10	Domestic	3.81	2.39	-1.42
11	Non-Profit Public Purpose	14.01	4.90	-9.11
12	Commercial	15.97	15.13	-0.84
13	Agriculture	0.06	0.32	0.26
14	Public Water Works	99.47	108.39	8.92
15	Industrial	9.41	12.54	3.12
16	Electric Vehicle Charging	0.80	0.00	-0.80
17	Bulk Supply	14.53	13.52	-1.02
	Total HT	158.07	157.19	-0.88
18	Total LT & HT	406.85	412.02	5.16
19	Outside State - Trading	62.62	128.67	66.05
	Total	469.47	540.68	71.21

Commission Analysis

The Commission provisionally approves probable revenue from existing tariffs from all sources at Rs.540.68 Crore during FY 2023-24 from the retail sale of 518.28MU and the revenue expected to be realisable from outside State sales revenue at Rs.128.67Cr from the IEX sale of 191.20MU only. However, the final actuals need be compared with approved Audited accounts to determine the gap status in due course.

6.24. Review of FY2022-23 ARR filings

The Annual Revenue Requirement approved for FY 2023-24 and revised value of Annual Revenue Requirement for FY 2023-24 is provided in the table below:

Table 6.30: Review of ARR FY 2023-24**(In ₹ Crores)**

Sl. No.	Item of Expense	Approved in T.O. dated 28.03.2023	As per Revised Estimate	Commission Approved ARR
1	2	3	4	5
1	Cost of Fuel	0.00	0.00	0.00
2	Cost of Generation	5.56	5.56	5.56
3	Cost of Power Purchase	359.92	507.57	507.57
4	Transmission Charges	63.76	55.70	55.70
5	Intra State Transmission	53.20	53.20	0.00
6	Employee Costs	144.95	128.25	128.25
7	R&M Expenses	11.96	9.89	9.89
8	Administration and General Expenses	2.10	4.54	4.54
9	Depreciation	0.00	1.66	0.00
10	Interest charges	0.00	0.14	0.00
11	Interest on Working Capital	0.00	9.41	0.00
12	Interest on Consumer Security Deposit	0.00	0.00	0.00
13	Provision for bad debts	0.00	0.00	0.00
14	Return on NFA/Equity	0.00	0.00	0.00
15	Contribution to Contingency Reserve Fund	0.00	0.00	0.00
16	Total Revenue Requirement	641.45	775.91	711.50
17	Less: Non-Tariff Income	8.48	11.31	11.31
18	Less: 1/3 Surplus transferred from FY21-22	57.20	57.20	52.53
19	Less: Efficiency Gains (for dues collection)	8.00	0.00	8.00
20	Net Revenue Requirement	567.77	707.40	639.66
21	Less: Revenue from Sale of Power	469.47	540.68	540.68
22	Gross Revenue Surplus/(Gap/Deficit)	-98.30	-166.72	98.97
23	Less: Revenue Subsidy & Grants from State Govt.	98.30	112.56	112.56
24	Net Surplus/ (Gap/Deficit) (23-22)	0.00	-54.16	13.59

It is prayed that the Hon'ble Commission may kindly consider the above submissions and approve the review of Aggregate Revenue Requirement and Gap for the FY 2023-24. Further, Actual Revenue Subsidy & Grants from State Govt. shall be submitted for consideration of the Hon'ble Commission for Truing-up after the end of the financial year when the accounts are audited.

6.25. Govt. Subsidy amount for FY 2023-24

Commission's Analysis:

As against the revised gap of Rs.54.16 Crore assessed by the P&ED, the final gap status will have to be determined only after considering the actual subsidy received from Government known at the time of truing-up in due course. It is too early to make any decide upon it at this juncture.

7. Analysis of ARR for FY 2024-25 and its Approval

7.1 Background

The P&ED Mizoram's tariff determination is now governed by "Joint Electricity Regulatory Commission for Manipur & Mizoram (Multi Year Tariff) Regulations, 2014" (referred to as "MYT Regulations, 2014") which came into force from 09.06.2014. Further, the Hon'ble Commission has notified First Amendment Regulations, 2019. The MYT Regulations, 2014 read with First Amendment Regulations, 2019 provide a framework for calculating tariffs on a cost-plus basis and allow the licensee to recover operational expenses including depreciation, interest on working capital, debt and return on equity amongst others.

Multi Year Tariff Order for the 3rd control period of 5 years from FY 2023-24 to FY 2027-28 was issued by the Hon'ble Commission vide order dated 28.03.2023 under the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 read with First Amendment Regulations, 2019.

The Hon'ble Commission determined the Aggregate Revenue Requirement for the FY 2023-24 to FY 2027-28 & Tariff for the FY 2023-24 in the MYT Order dated 28.03.2023.

Regulation 5.2 (iii) of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 provides as follows:

"In case of Mid-term Review of Business Plan under Regulation 4.2 (i), the Petition shall comprise of:

- a. Truing Up for previous year;*
- b. Modification of the ARR for the remaining year of the Control Period, if any, with adequate justification for the same;*
- c. Revenue from the sale of power at existing tariffs and charges for the ensuing year;*
- d. Revenue gap for the ensuing year calculated based on ARR approved in the MYT Order and truing up for the previous year;*
- e. Application for determination of tariff for the ensuing year."*

Further, the Hon'ble Commission notified the First Amendment Regulations, 2019 is as follows:

“5.2 The filing of the Control Period under these Regulations shall be as under.

(i).....

ii) From the second year of the Control Period onwards and upto the last year of the Control Period, the petition in each year shall comprise of:

- a. Truing Up for the previous year with audited accounts, and Annual Performance Review (APR) with revision of ARR approved in MYT Order for current year and revised projection of ARR approved in MYT Order for the ensuing year in accordance with these Regulations;*
- b. Revenue from the sale of power at existing tariffs and changes for the current year;*
- c. Revenue gap for the ensuing year calculated based on the revised projection of ARR and truing up of the previous year;*
- d. Application for determination of tariff for the ensuing year.”*

As per the above regulation, the Joint Electricity Regulatory Commission for Manipur and Mizoram requires the P&ED Mizoram to apply for determination of tariff for the ensuing year which in the instant case is FY 2024-25. Accordingly, based on the Aggregate Revenue Requirement approved by the Hon’ble Commission for the FY 2024-25, P&ED Mizoram is required to propose the tariff for sale of energy during the FY 2024-25.

It is submitted that there has been changes in certain parameters and determinants of ARR for the FY 2024-25 based on the performance during the FY 2022-23 & FY 2023-24 (H1). Accordingly, P&ED Mizoram is submitting the revised ARR & proposal for determination of tariff for the FY 2024-25.

P&ED Mizoram requests the Hon’ble Commission to kindly consider the submission and approve the revised ARR & tariff for the FY 2024-25 in accordance with the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 read with First Amendment Regulations, 2019.

7.2 Overall Approach for present filing

7.2.1 Petition for determination of Tariff for the FY 2024-25

P&ED Mizoram hereby submits its petition for approval of Tariff for the FY 2024-25. This petition is submitted in compliance with the Regulation 5(ii)(d) of MYT Regulations, 2014 read with First Amendment Regulations, 2019. The petitioner is

attempting to comply with the various guidelines in the Act and regulations within the limitations of availability of data.

P&ED Mizoram is filing the petition based on the overall frame work of parameters approved by the Hon'ble Commission in the MYT Order. However, P&ED Mizoram has also proposed revisions in certain determinants of ARR. P&ED Mizoram has studied the past trends and taken cognizance of other internal and external developments to estimate the likely performance during the FY 2024-25.

7.2.2 Approach for filing

The MYT Regulations, 2014 segregate the items impacting tariffs into controllable and uncontrollable factors. Items that are uncontrollable are passed through to the consumers. Further, the MYT Regulations, 2014 identifies the uncontrollable and controllable parameters as follows:

The Uncontrollable Factors

The "uncontrollable factors" comprises of the following factors:

- (i) Force Majeure events;
- (ii) Change in law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
- (iii) Variation in the price of fuel and/ or price of power purchase according to the FPPPA formula approved by the Hon'ble Commission from time to time;
- (iv) Variation in the number or mix of consumers or quantities of electricity supplied to consumers
- (v) Transmission Loss;
- (vi) Variation in market interest rates; (vii) Taxes and Statutory levies;
- (viii) Taxes on Income:
- (ix) Non-Tariff Income;

The Controllable factors

Controllable factors include, but are not limited to the following:

- (i) Variations in capitalization on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;
- (ii) Variation in Interest and Finance Charges, Return on Equity, and Depreciation on account of variation in capitalization, as specified in clause (i) above;
- (iii) Variations in technical and commercial losses of Distribution Licensee;
- (iv) Variations in performance parameters;

- (v) Variations in working capital requirements;
- (vi) Failure to meet the standards specified in the Joint Electricity Regulatory Commission for the states of Manipur and Mizoram (Standard of Performance for Distribution and Transmission Licensees) Regulations, 2010, as amended from time to time except were exempted in accordance with those Regulations;
- (vii) Variations in labour productivity;
- (viii) Variation in operation & maintenance expenses;
- (ix) Variation in Wires Availability.

In view of the above, the present petition has been filed keeping the controllable factors unchanged as far as possible. However, changes have been proposed where new developments have taken place making it necessary to incorporate the same in the ARR.

The subsequent sections provide the various expenses as approved by the Hon'ble Commission and proposed additional expenses for the FY 2024-25.

7.3 Category wise sales Forecast

Petitioner's submission

Energy sales

The P&ED Mizoram proposes to revise the energy sales for various categories of consumers based on the actual sales for the FY 2022-23 & revised estimate of FY 2023-24. The energy sales for the FY 2024-25 as approved by the Hon'ble Commission and revised sales figures are provided in the table below:

Table 7.1: Energy Sales FY 2024-25

(In MUs)				
Sl. No.	Category	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
	LT Consumers			
1	Kutir Jyoti	6.52	5.38	-1.14
2	Domestic	320.61	321.98	1.37
3	Non-Profit Public Purpose	10.32	13.00	2.68
4	Commercial	37.94	44.04	6.10

Sl. No.	Category	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
5	Public Lighting	2.75	2.77	0.02
6	Agriculture	0.06	0.05	-0.01
7	Public Water Works	7.18	6.97	-0.21
8	LT Industrial	2.94	2.69	-0.25
9	Electric Vehicle Charging	0.00	0.00	0.00
	Total LT	388.32	396.89	8.57
	HT Consumers			
10	Domestic	3.80	2.46	-1.34
11	Non-Profit Public Purpose	14.86	4.38	-10.48
12	Commercial	14.81	13.88	-0.93
13	Agriculture	0.10	1.12	1.02
14	Public Water Works	86.49	98.40	11.91
15	HT Industrial	8.16	12.10	3.94
16	Electric Vehicle Charging	0.00	0.00	0.00
17	Bulk Supply	18.90	15.55	-3.35
	Total HT	147.12	147.89	0.77
18	Total LT & HT	535.44	544.79	9.35
19	Outside State-Trading	92.11	204.10	111.99
	Total	627.55	748.89	121.34

Commission's Analysis

The retail energy sales projections made for the FY2024-25 as indicated above and preferred by the licensee are also approved by the Commission and the break-up details of retail consumers for FY 2024-25 are tabulated below.

Table 7.2: Energy sales approved by the Commission FY 2024-25

Sl. No.	Category	Approved by Commission
	LT Consumers	(MU)
1	Kutir Jyoti	5.38
2	Domestic	321.98
3	Non-Profit Public Purpose	13.00
4	Commercial	44.04
5	Public Lighting	2.77
6	Agriculture	0.05
7	Public Water Works	6.97
8	LT Industrial	2.69
9	Electrical Vehicle Charging Stations	1.00
	Total LT	397.89
	HT Consumers	
10	Domestic	2.46
11	Non-Profit Public Purpose	4.38
12	Commercial	13.88
13	Agriculture	1.12

Sl. No.	Category	Approved by Commission
14	Public Water Works	98.40
15	HT Industrial (Opt-1&2)	12.10
16	Electric vehicle Charging – HT	1.00
17	Bulk Supply	15.55
	Total HT	148.89
	LT & HT Total	546.79

The Commission approves retail energy sales during FY 2024-25 at 546.79 MU as projected by the P&ED, Mizoram including EV Charging Stations sales of LT & HT and H.T Industrial (TOD) category sales added afresh and Outside State sales quantum is drilled down to 137.75MU finally from projected 204.10MU by P&ED.

7.4 Distribution Loss

Petitioner's submission

It is submitted that the P&ED Mizoram is making all efforts to meet the trajectory of distribution loss given by the Hon'ble Commission in the MYT Order. Accordingly, P&ED Mizoram is proposing the distribution loss percent for the FY 2024-25 for approval of the Hon'ble Commission. However, actuals & deviations if any shall be submitted for consideration & approval at the time of True-up. The distribution loss for the FY 2024-25 as proposed by P&ED Mizoram & approved by the Hon'ble Commission is provided in the table below:

Table 7.3: Distribution Loss for FY 2024-25

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Distribution Loss	21.62%	25.00%	3.38%

Commissions Analysis

The awaited information on RDSS based losses details were received from PED in the form of replies to additional query information. Accordingly, the Distribution Losses relevant for FY 2024-25 shall have to be 14% as approved in the RDSS Scheme loss trajectory. In this regard, though the P&ED filed the distribution losses to be 25%, the Commission felt it sapient to adopt the RDSS scheme approved losses at 14.00% for FY 2024-25 as P&ED have been funded by the authority and also provided various meters and other equipment for arresting of AT&C Looses. Hence, the Energy

balance, power purchase quantum and the outside State Sales were arrived at with this loss levels which are indicated below at relevant foregoing paras.

7.5 Power purchases & Own generation

7.5.1 P&ED Mizoram's Own Generation

The P&ED Mizoram's own generation for the FY 2024-25 as approved by the Hon'ble Commission & P&ED Mizoram revised the own generation based on the actual generation for the FY 2022-23 & revised estimate for the FY 2023-24. Details are provided in the table below:

Table 7.4: P&ED Mizoram's Own Generation FY 2024-25 (In MUs)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Total Generation (Net)	31.07	39.63	8.56
	Total	31.07	39.63	8.56

It is submitted that P&ED Mizoram is not operating the Khawiva SHP, Tuipui SHP, Teirei SHP & Kau Tlabung SHP and these SHPs except Teirei SHP have been operated and managed by M/s Amazon Engineering Pvt. Ltd. and, Teirei SHP is operated and managed by M/s Assam Petroleum Ltd. Hence, the Installed Capacity & energy generation does not include in Own Generation. However, P&ED Mizoram has procured the energy generated from the above SHPs and has incorporated the same in the power purchase for the year.

Commission's Analysis

As seen from the present ARR filing submission P&ED indicates Own generating capacity as 38.85MW instead of the MYT approved 31.07MU. During the last filing the P&ED had not considered the Kawlbem-4Mws SHP which was commissioned on 15th December 2022 into the installed capacity and same omission was continued in FY2023-24 to FY 2027-28 installed capacity too. Now this new SHP plant was shown afresh in FY2024-25 ARR filing now made. Thus, the total P&ED installed capacity rose to 38.35MWs including the Serlui-B station constantly awaiting its Commercial Operation.

After having carefully observed, leaving aside the three (3) plants leased to

M/s. Amazon Engineering PVT Ltd and the Teirei-3MWs SHP now stated to have leased out to by M/s. Assam Petroleum Ltd, the effective remaining SHPs in operation are the following tabulated plants with installed capacity of 26MWs only but not the grand figure 38.35MWs as because there are some old plants with installed capacity of 4.80MWs are not generating any power. The following table clearly depict the power station now in effective operation.

Sl. No.	SHP Name	Inst. Cap (MWs)	COD Date	Present Plant Status
A - SHP Power Plants not Generating Power				
1.	Serlui-A SHP	1.00	24.04.1984	Out of Commission
2.	Tuirivang SHP	0.30	14.08.1989	---- do ----
3.	Tuipanglui SHP	3.00	17.12.2004	No generation
4.	Lamsial SHP	0.50	26.08.2008	---- do ----
5.	Lengpui (diesel)	0.50	No data	Out of Commission
	Subtotal (A)	5.30		Nil Energy
B - Effective Power producing Small Hydro Plants (SHP)				
5.	Maicham-I	2.00	05.01.1996	Generating power
6.	Maicham-II	3.00	11.11.2009	-- do --
7.	Tlawva	5.00	13.05.2022	---- do ----
8.	Kawlbem	4.00	15.12.2022	---- do ----
9.	Serlui-B	12.00	Awaiting COD	Infirm power
	Subtotal (B)	26.00		Power is being Generated
C - SHPs managed by outside Agencies				Name of Pvt Agency
10.	Khawiva SHP	1.05	08.12.1988	Amazon Engg.
11.	Tuipui SHP	0.50	15.12.1991	-- do --
12.	Kau Tlabung SHP	3.00	05.05.2005	-- do --
13.	Teirei SHP	3.00	12.10.1999	Assam Petroleum
	Subtotal (C)	7.55		
Grand Installed Capacity		38.85	Installed Capacity shown in ARR	

The three (3) plants being maintained by M/s. Amazon Engineering and the one (1) managed by M/s. Assam petroleum was also included in their own generation in year (FY2023-24), but in reality, these plants were leased-out to outside agencies besides P&ED have been paying the O&M charges to the tune of **Rs.1.68Cr**s as intimated to Commission for FY2022-23 in their addl. Information replies towards Operating and Maintenance charges of these plants. Thus, these plants are technically not forming part of P&ED Own Generation since they are managed by an outsider but not by P&ED. **Hence, the P&ED instead of claiming Generation ARR individually for each such plants shall only claim the actual maintenance charges paid for these four (4) plants.**

Thus Commission, draws an inference that effectively Own energy generation is only from five (5) plants. The energy expected from outside agencies is not clearly

indicated in their filing but shown in Generation related ARR expecting about **10.154MU** from those plants. Accordingly, the balance generation of **29.476MU** so projected is construed to be contributed by Own power producing SHPs as shown in the above table during FY 2023-24 as well as in 2024-25 also so as to make the total expected energy to be **39.63MU**. But as per the Generation ARR filing submission the energy projected only for 39.603MU in all and this variation is left unexplained.

7.5.2 Power Purchase

Petitioners Submission:

It is submitted that the power purchase units for the FY 2024-25 have been revised based on the actual purchase for the FY 2022-23 & revised estimate for the FY 2023-24. The power purchase units for the FY 2024-25 as approved by the Hon'ble Commission & revised estimate is provided in the table below:

Table 7.5: Power Purchase Units FY 2024-25

(In MUs)				
Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Power Purchase Units	772.37	924.24	151.87
	Total	772.37	924.24	151.87

7.5.3 Energy draws and cost from all CGS stations and other external sources:

Table 7.6: Power Purchase from CGS & State Own generation for FY 2024-25

Sl. No.	Energy Source for FY2024-25	P&ED (ARR Based filing)		
		Units (MU)	Total Cost (Rs Cr)	CPU (Rs/kWh)
A	CGS - NTPC Stations			
1	NTPC Bongaigaon Unit I	142.16	106.79	7.51
2	Farakka STPS	13.29	9.21	6.93
3	Kahalgaon STPS	7.58	4.09	5.40
4	Talcher STPS	10.94	3.81	3.48
	Sub Total - NTPC	173.98	123.90	7.12
B	CGS - NHPC			
1	Loktak HEP	12.55	6.90	5.50
	Sub-Total - NHPC	12.55	6.90	5.50
C	NEEPCO			
1	Kopili - I HE	36.64	15.39	4.20
2	Kopili - II HE	12.79	3.25	2.54
3	Khandong HE	24.00	8.19	3.41
4	Ranganandi HE Project	72.76	22.32	3.07
5	Doyang HE Project	8.73	7.24	8.29
6	Pare HEP	27.74	15.73	5.67
7	Tuirial HEP	120.90	86.87	7.18

Sl. No.	Energy Source for FY2024-25	P&ED (ARR Based filing)		
		Units (MU)	Total Cost (Rs Cr)	CPU (Rs/kWh)
8	<i>Tuiria HEP - Free Power</i>	16.49		
9	Assam GBPP	38.50	41.96	10.90
10	Agartala GTPP	24.47	23.23	9.49
	Sub-total	383.03	224.16	5.85
D	Other Supplies			
1	Baramura GBPP Unit IV & V	53.83	39.69	7.37
2	OTPC - Pallatana	264.72	96.51	3.65
	Sub-total	318.55	136.20	3.93
	Total CGS & Other Purchases	888.09	491.18	5.53
E	Short-term power purchase			
	IEX Purchase	0.00	0.00	0.00
	Sub-total	0.00	0.00	0.00
F	State Own Generation			
	P&ED Own SHP Units	39.63	0.00	
G	UI Over drawl	0.00	0.00	0.00
	UI Under draws	-0.00	-0.00	0.00
H	REC Certificate/Obligation		7.03	
I	Roof-top Solar Generation	34.02	13.40	3.94
J	Solar Generation	2.12		
K	Reactive Energy charges		0.06	
L	LC Enhance/Renewal charges.		0.00	
M	Addl. Supplementary Bills		0.00	
	TOTAL POWER PURCHASE	963.87	511.67	5.31

P&ED has projected that the quantum of power purchase from CGSs will be based on the firm & infirm allocations. The details of the computation of power purchases from CGS are provided in Format – F1 & F1a of the Format relating to FY 2024-25 were submitted along with the filing. For projecting the net energy availability at P&ED periphery for FY 2024-25, the external PGCIL losses at ER periphery of 3.57% & NER periphery of 2.33% have been considered.

Based on the Energy balance and trend of energy requirement during peak demand period it is estimated that in addition to the firm as well as infirm allocation of power from various CGS, there will be excess of energy requirement for FY 2024-25. For the purpose of estimation of power purchase cost, P&ED has considered the rates at which power was procured through bilateral agreements/other sources during the FY 2022-23 after escalating the same by a percentage increase year over year to factor in the rise in the rates.

Commission's Analysis

The power purchase quantum for FY 2024-25 approved by the Commission from all sources works out to be 801 MU are detailed in the table below.

Table 7.7: Power purchase quantum approved by the Commission for FY 2024-25

Sl. No	Source	Installed Capacity (MW)	P&ED Share (%)	P&ED Share (MW)	Energy Purchase (MU)
A	Central Generating Stations				
I	NTPC				
1	Bongaigaon TPS	750	5.415	40.61	111.73
2	Farakka STPS	1600	0.142	2.27	13.29
3	Kahalgaoon STPS	840	0.142	1.19	7.58
4	Talcher STPS	1000	0.142	1.42	6.94
	NTPC-Total	4190		45.49	139.54
II	NHPC				
1	Loktak HEP	105	5.02	5.27	12.55
	NHPC-Total	105		5.27	12.55
III	NEEPCO				
1	Kopili HEP	200	4.61	9.22	36.64
2	Kopili - II HEP	25	6.04	1.51	0
3	Khandong HEP	50	3.94	1.97	16.12
4	Ranganadi HEP	405	5.70	23.09	0
5	Doyang HEP	75	5.25	3.94	8.73
6	Pare HEP	110	5.765	6.34	27.74
7	Tuirial HEP	60	100	60.00	121.90
	Free Power Units				16.49
8	AGBPP	291	5.41	15.74	18.50
9	AGTPP	135	6.00	8.10	14.47
	NEEPCO-Total	1351		129.91	260.59
IV	TSECL				
1	B'mura - IV	21	25	5.25	83.83
2	B'mura - V	21	25	5.25	
	TSECL-Total	42		10.50	83.83
V	OTPC				
1	Palatana	726	5.785	42.00	228.72
	OTPC-Total	726		42.00	228.72
C	Own Generation	38.85	100	38.85	39.63
D	UI / Deviation				---
E	Roof-Top Generation				34.02
F	Solar Generation				2.12
G	RPO Obligation				0.00
	GRAND TOTAL	6452.85		272.02	801.00

UI purchase transactions are not considered as P&ED have adequate surplus power. However, the P&ED may resort to UI purchases only to tide over any exigencies in order to meet the short-term power requirement and to overcome interruption in supply of power within state. However, the RPO obligation requirement was also derived based on Commission approved power purchases quantum. It is suggested to go for procurement of RPO obligation certificates instead of buying the energy quantity and RPO related required quantity and amount needed for investment is

arrived at and relevant cost components is added for arriving cost of power purchase cost in FY2024-25.

7.6 Energy Balance

7.6.1 The energy balance approved by the Hon'ble Commission for FY2024-25

Table 7.8: Energy Balance FY 2024-25

Sl. No.	Energy Balance	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
A	Energy Requirement			
1	Energy Sales	535.49	544.79	9.30
2	Distribution Loss (%)	21.62%	25.00%	3.38%
3	Distribution Loss (MUs)	147.68	181.56	33.88
4	Total Energy Requirement	683.17	726.34	43.17
B	Energy Availability			
5	Own Generation	31.07	39.63	8.56
6	Energy Purchase from ER	33.40	31.81	-1.59
7	Less: ER Pool Loss (%)	1.95%	3.57%	0.02
8	Less: ER Pool Loss (Mus)	0.65	1.14	0.48
9	Net Energy for ER	32.75	30.67	-2.07
10	Purchase from NER (Exl. Tuirial HEP)	542.36	718.90	176.54
11	UI / Deviation	0.00	0.00	0.00
12	Sub Total	575.11	749.57	174.47
13	Less: NER Pool Loss (%)	2.36%	2.33%	0.00
14	Less: NER Pool Loss (MUs)	13.57	17.47	3.89
15	Net Energy at NERLDC	561.54	732.11	170.57
16	Energy purchases from Tuirial HEP	170.93	120.90	-50.03
17	Free Energy from Tuirial HEP	23.31	16.49	-6.82
18	Amazon Engineering	0.00	0.00	0.00
19	Rooftop Solar Generation	0.07	34.02	33.95
20	Solar Generation	2.30	2.12	-0.18
21	Energy Available	789.22	945.26	156.05
22	Less: Outside State - Trading	92.11	204.10	111.99
23	Total Energy Available	697.11	741.16	44.06
24	Less: Intra State Tr. Loss (%)	2.00%	2.00%	0.00
25	Less: Intra State Tr. Loss (MUs)	13.94	14.82	0.88
26	Net Energy Available	683.17	726.34	43.17
27	Less: Energy needed at State Periphery	683.17	726.34	43.17
28	ENERGY SURPLUS/(DEFICIT)	0.00	0.00	0.00

Commissions' Analysis

Based on the energy balance projected by P&ED for the FY 2024-25 is re-casted by the Commission adopting the applicable ER and NER loss values published in their

compendium of FY2022-23 and those approved by the Commission is provided in the table below:

Table 7.9: Energy Balance adopted by Commission for FY2024-25

Sl. No.	Energy Balance FY 2024-25 (Commission Approved)	PED Projected	Approved
A	Energy Requirement	MU	MU
1	Energy Sales (MU)	544.79	544.79
2	Distribution Loss (%)	25.00%	14.00%
3	Distribution Loss (MUs)	181.56	89.01
4	Total Energy Requirement	726.35	635.80
B	Energy Availability		
5	State Own Generation	39.63	39.63
6	Energy Purchase from ER	31.81	27.81
7	Less: ER Pool Loss (%)	3.57%	2.00%
8	Less: ER Pool Loss (Mus)	1.14	0.56
9	Net Energy for ER (MU)	30.67	27.25
10	Purchase from NER (Exl. Turrial HEP)	718.90	559.03
11	Add: UI / Deviation	-	-
12	Sub Total (9+10)	749.57	586.28
13	Less: NER Pool Loss (%)	2.33%	2.33%
14	Less: NER Pool Loss (MUs)	17.47	13.66
15	Net Energy at NERLDC (12-14)	732.11	572.62
16	Energy purchases from Turrial HEP	120.90	121.90
17	Free Energy from Turrial HEP	16.49	16.49
18	Rooftop Solar Generation	34.02	34.02
19	Solar Generation	2.12	2.12
20	Energy Purchases total	945.27	786.78
21	Less: Outside State - Trading	204.10	138.01
22	Total Energy Available at State Periphery	741.17	648.77
23	Less: Intra State Tr. Loss (%)	2.00%	2.00%
24	Less: Intra State Tr. Loss (MUs)	14.82	12.98
25	Net Energy Available	726.35	635.80
26	Less: Input Energy for Distribution	726.35	635.80
27	ENERGY SURPLUS/(DEFICIT)	0.00	0.00

In this process, this year the Commission had adopted a step by step procedure that is practically adopted in energy handling with an intention to depict the situation much closer to reality and arrived at the losses and the Outside state sales quantum after drilling down the projected energy quantum from costly stations judiciously to economise the total cost. In this process, the Commission had to assume the transmission losses to be at 2% of the energy input at state periphery point for entire for FY 2024-25 was proposed by P&ED.

Thus, the energy balance adopting 14% Distribution Losses resulted in surplus of power at 138.01MU (instead of the projected quantum of 204.10MU) which the P&ED may contemplate to sell through traders or under IEX. The Commission have already

made a directive in this matter upon observing the losses quantum in the Tariff Order Dt 20th March 2020. However, as already explained, the NERLDC losses were adopted at 2.33% as per NER Compendium data for FY 2022-23 and ERLDC losses were considered at 2% as per its annual compendium for 2022-23 for FY 2024-25 in the absence of accurate data. (Both the compendium pages are placed at Annexure-VI & VII at the end of the Tariff Oder.)

7.7 Aggregate Revenue Requirement

7.7.1 Cost of Fuel

The fuel cost for the FY 2024-25 as approved by the Hon'ble Commission is provided in the table below. P&ED Mizoram is not proposing any changes to the approved cost.

Table 7.10: Fuel Cost FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Cost of Fuel	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission Analysis:

The Commission too approved NIL charges towards fuel costs for FY 2024-25, basing on the historical cost data on this head of account.

7.7.2 Cost of Generation

Petitioners Submission:

The Cost of Generation for the FY 2024-25 as approved by the Hon'ble Commission & revised estimate is provided in the table below.

Table 7.11: Cost of Generation FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Cost of Generation	5.74	13.51	7.77
	Total	5.74	13.51	7.77

Commission Analysis:

Upon scrutiny of the Generation function ARR filed separately by the P&ED for FY 2024-25, the Commission had approved cost of Generation ARR amount for each of

the plant separately but adopting the O&M amount of Rs.1.68Cr being paid to four stations leased out are detailed below.

Generation function ARR approved by Commission

Particulars	FY2024-25
Cost of Generation	9.16 Crs

The Commission had reworked on the Generation cost for own managed plants totalling to Rs.7.48Cr for current FY 2024-25 including the newly commissioned **Kawlbem SHP-4MWs** station on 15.12.2022 as it was not listed in the MYT Generation ARR filing last year. In addition, the maintenance charges of Rs.1.68Cr is considered for the four leased out plants provisionally. The detailed cost determination has been indicated under Generation ARR chapter separately dealt in this Tariff Order.

7.7.3 Power Purchase Cost

Petitioner's submission

The Hon'ble Commission in the Tariff Order dated 28.03.2023 had approved a power purchase quantum of 772.37 MUs at a total cost of ₹ 395.66 Crores for the FY 2024-25. As submitted above the estimate of power purchase quantum for the FY 2024-25 is proposed to be revised to 924.24 MUs. It is submitted that the power purchase cost for the FY 2024-25 has been revised based on the actual purchase for the FY 2022-23 & revised estimate for the FY 2023-24. Accordingly, the power purchase cost is also proposed to be revised.

Further, the cost towards RPO has been arrived in accordance with the RPO targets prescribed in the RPO regulations. The target for Wind RPO, HPO & Other RPO % for the FY 2024-25 is given in the table below:

Table 7.12: Percentage of Target for Wind RPO, HPO & Other RPO

Sl.No.	FY	Wind RPO	HPO	Other RPO	Total
1	2	3	4	5	6
1	2024-25	2.46%	1.08%	26.37%	29.91%

For all the RPO category, the prescribed target as per above table has been applied on the base figure of 726.34 MUs for the FY 2024-25.

Further, for the Wind RPO category, P&ED Mizoram has not been procured any power during the FY 2024-25. Accordingly, 17,868.04 MWh (17.87 MUs) is computed as the

Wind RPO for the FY 2024-25. The rate as prescribed by CERC has been considered to arrive at the cost of RPO of ₹ 1.79 Crores for the FY 2024-25.

For the HPO category, P&ED Mizoram has not been procured any power during the FY 2024-25. Accordingly, 78,44,507 kWh is computed as the HPO for the FY 2024-25. The rate as prescribed by CERC has been considered to arrive at the cost of HPO at ₹ 5.25 Crores for the FY 2024-25.

P&ED Mizoram shall meet the requirement of Other RPO from its power procurement which is projected at 191.54 MUs for the FY 2024-25. Accordingly, there is no fund needed for meeting other RPO target, its already projected as achieve.

The Power purchase cost also includes charges towards purchase of REC certificates to meet the RPO obligation. Total cost of REC certificates (for Wind RPO, HPO & Other RPO) is ₹ 7.03 Crores FY 2024-25.

Detailed power purchase station wise units and cost is provided in the Format – F1 (ii) & F1a (ii). Considering the above the Hon'ble Commission is requested to allow the power purchase costs as projected by P&ED Mizoram for the FY 2024-25. The comparison of the approved power purchase cost and the revised estimate as arrived above is given in the table below.

Table 7.13: Power Purchase Cost FY 2024-25

(In ₹ Crores)				
Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Power Purchase Cost	395.66	511.67	116.01
	Total	395.66	511.67	116.01

Commission analysis:

As against the above power purchase quantity of 924.24MU and projected cost of Rs.511.67Cr by the P&ED, the Commission after careful examination had approved the following quantum and cost each year-wise but the value indicated for year FY2024-25 are derived upon some percentage increase over FY 2022-23 actual prices of each station and those values quoted for certain stations were felt reasonable were

left unaltered and the station wise quantum and cost details as per P&ED and also as per Commission approved are tabulated below for reference.

Table 7.14: Power Purchase Cost projected by the P & ED for the FY 2024-25

Sl. No.	Sources of Energy FY 2024-25	Plant Capacity (MW)	P&ED Share (%)	P&ED Share (MWs)	Energy (MU)	Total Cost (Rs.Crs)	CPU (Rs./kWh)
A	CGS - NTPC Stations						
1	NTPC Bongaigaon Unit I	750	5.415	40.61	142.16	106.79	7.51
2	Farakka STPS	1600	0.142	2.27	13.29	9.21	6.93
3	Kahalgaon STPS	840	0.142	1.19	7.58	4.09	5.40
4	Talcher STPS	1000	0.142	1.42	10.94	3.81	3.48
	Sub Total - NTPC	4190		45.49	173.98	123.90	7.12
B	CGS - NHPC						
1	Loktak HEP	105	5.02	5.27	12.55	6.90	5.50
	Sub-Total - NHPC	105		5.27	12.55	6.90	5.50
C	NEEPCO						
1	Kopili - I HE	200	4.61	9.22	36.64	15.39	4.20
2	Kopili - II HE	25	6.04	1.51	12.79	3.25	2.54
3	Khandong HE	50	3.94	1.97	24.00	8.19	3.41
4	Ranganandi HE Project	405	5.70	23.09	72.76	22.32	3.07
5	Doyang HE Project	75	5.25	3.94	8.73	7.24	8.29
6	Pare HEP	110	5.766	6.34	27.74	15.73	5.67
7	Tuirial HEP	60	100	60.00	120.90	86.87	6.32
8	Tuiria HEP - Free Power				16.49		
9	Assam GBPP	291	5.409	15.74	38.50	41.96	10.90
10	Agartala GTPP	135	6.005	8.10	24.47	23.23	9.49
	Sub-total	1351		129.91	383.03	224.16	5.85
D	Other Supplies						
1	Baramura GBPP Unit IV & V	42	25	10.50	53.83	39.69	7.37
2	OTPC - Pallatana	726	5.785	42.00	264.72	96.51	3.65
	Sub-total	768		52.25	318.55	136.20	4.28
	Total CGS & Other Purchases				888.09	491.18	5.53
E	Short-term power purchase						
	IEX Purchase				0	0	0
	Sub-total				0	0	0
F	State Own Generation						
	P&ED maintained Units	38.85	100	38.85	39.63	0	
G	UI Over drawl				0	0	0
	UI Under draws				0	0	0
H	Roof-top Solar Generation				34.02	13.40	3.94
I	Solar Generation				2.12	0	0.00
J	REC Certificate/Obligation					7.03	
K	Reactive Energy charges					0.06	
L	LC Enhance/Renewal charges.					0	
M	Addl. Supplementary Bills					0	
	GRAND TOTAL	6452.85		272.02	963.86	511.67	5.31

Commission's analysis

As such the Commission has now considered power purchase from all those stations projected by P&ED with suitable revision in the quantity from each of those stations whose average cost is expensive and thus the total power purchase quantity approved for FY2024-25 has been limited to **801MU** as against the 963.87MU filed by the P&ED. Accordingly, the applicable Power purchase cost is approved by Commission for FY 2024-25 as detailed in the table below:

Table 7.15: Power Purchase Cost approved by the Commission for the FY 2024-25

Sl. No.	Energy Source	Plant Capacity (MW)	Share (%)	P&ED Share (MWs)	Energy Purchase (MU)	Total Cost (Rs./Crs)	CPU (Rs/kWh)
A	CGS - NTPC Stations						
1	NTPC Bongaigaon Unit I	750	5.415	40.61	111.73	98.99	8.86
2	Farakka STPS	1600	0.142	2.27	13.29	9.23	6.95
3	Kahalgaon STPS	840	0.142	1.19	7.58	4.09	5.40
4	Talcher STPS	1000	0.142	1.42	6.94	2.42	3.480
	Sub Total - NTPC	4190		45.49	139.54	114.73	8.22
B	CGS - NHPC						
1	Loktak HEP	105	5.02	5.27	12.55	6.90	5.50
	Sub-Total - NHPC	105		5.27	12.55	6.90	5.50
C	NEEPCO						
1	Kopili - I HE	200	4.61	9.22	36.64	15.39	4.20
2	Kopili - II HE	25	6.04	1.51	0.00	0.00	0.00
3	Khandong HE	50	3.94	1.97	16.12	5.56	3.45
4	Ranganandi HE Project	405	5.70	23.09	0.00	0.00	0.00
5	Doyang HE Project	75	5.25	3.94	8.73	7.24	8.290
6	Pare HEP	110	5.766	6.34	27.74	15.73	5.67
7	Tuirial HEP	60	100	60.00	121.90	87.52	6.32
8	<i>Tuiria HEP - Free Power</i>				16.49		
9	Assam GBPP	291	5.409	15.74	18.50	22.16	11.98
10	Agartala GTPP	135	6.005	8.10	14.47	15.73	10.87
	Sub-total	1351		129.91	260.59	169.33	6.50
D	Other Supplies						
1	Baramura GBPP Unit IV & V	42	25	10.50	83.83	61.78	7.37
2	OTPC - Pallatana	726	5.785	42.00	228.72	101.09	4.42
	Sub-total	768		52.50	312.55	162.88	5.21
	Total CGS & Other Purchases				725.23	453.84	6.26
E	Short-term power purchase						
	IEX Purchase				---		
	Sub-total				0		
F	State Own Generation						
	P&ED maintained Units	38.85	100	38.85	39.63	0	0.00
G	UI Over drawl				0	0	
	UI Under draws				0	0	
H	Roof-top Solar Generation				34.02	13.40	3.94
I	Solar Generation				2.12	0	0

Sl. No.	Energy Source	Plant Capacity (MW)	Share (%)	P&ED Share (MWs)	Energy Purchase (MU)	Total Cost (Rs./Cr)	CPU (Rs/kWh)
J	REC Certificate/Obligation					27.48	
K	Reactive Energy charges					0.06	
L	LC Enhance/Renew charges.					0	
M	Addl. Supplementary Bills					0	
	GRAND TOTAL	6452.85		272.02	801.00	494.78	6.18

It is stated by the P&ED that the amount of Rs.1.68Cr has been paid in FY 2022-23 to M/s. Amazon Engineering purely towards maintenance charges for the leased four stations as they are still owned by P&ED itself. Hence this amount is not considered in deriving the Power purchase cost. It is more appropriate to show it as O&M related cost in Generation ARR and considered in Generation ARR amount as O&M expenses paid to Amazon Engineering and M/s. Assam Petroleum the outside agencies.

The above purchase cost includes RPPO obligation of Rs.27.48Cr was considered since the Licensee though presuming but it is not procuring any power from hydel station commissioned after 8th March 2019 and hence the liability rose to Rs.27.48Cr from their meagre projection to comply with RPO obligation.

7.7.4 Inter-State Transmission Charges

Petitioners Submission:

It is submitted that the transmission charges for the FY 2024-25 has been revised based on the actual transmission charges for the FY 2022-23 & revised estimate for the FY 2023-24. The transmission charges for the FY 2024-25 as approved by the Hon'ble Commission & revised estimate is provided in the table below.

Table 7.16: Transmission Charges FY 2024-25

(In ₹ Crores)				
Sl. No.	Particulars	Approved in T.O. dated 8.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Transmission Charges	67.40	57.93	-9.47
	Total	67.40	57.93	-9.47

Commission's Analysis:

These Inter-state transmission charges as was approved by the Commission for FY 2024-25 in the MYT Order was more compared to Rs.57.93Cr now projected by the

Licensee for this year. Hence, Commission too adopted the cost value of **Rs.57.93Cr**s so projected by the Licensee instead of the MYT Order value of Rs.67.40Cr.

7.7.5 Intra-State Transmission Charges

The Intra- State Transmission Charges for the FY 2024-25 as approved by the Hon'ble Commission & revised estimate is provided in the table below.

Table 7.17: Intra- State Transmission Charges FY 2024-25

(In ₹ Crores)				
Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Intra-State Transmission Charges	54.53	48.46	-6.07
	Total	54.53	48.46	-6.07

Commission Analysis:

These Intra-state transmission charges as was approved by the Commission for FY 2024-25 in the MYT Order was more compared to Rs.48.46Cr now projected by the Licensee for this year. However, Commission had derived the applicable Transmission charges afresh as Rs.45.74Cr and the details are available in the Transmission function ARR chapter.

7.7.6 O&M Expenses

Operation & maintenance expenses comprise of the following heads of expenditure viz.

- Employee Expenses
- Administration & General Expenses
- Repair & Maintenance Expenses

(a) Employee Expenses

It is submitted that the Employee cost for the year FY 204-25 has been revised based on the actual Employee cost for the FY 2022-23 & revised estimate for the FY 2023-24. The actual employee cost for the FY 2023-24 (H1) i.e. 1st April, 2023 to 30th September, 2023 is ₹91.61 Crores for P&ED Mizoram as a whole (Distribution, Transmission & Generation). Similarly, ₹ 91.61 Crores projected for FY 2023-24 (H2) for P&ED Mizoram as a whole (Distribution, Transmission & Generation). Accordingly, the employee expenses for the FY 2024-25 based on cost estimated in FY 2023-24 after escalating the same by 5.72% year over year to factor in the rise in the rates. The employee cost of ₹ 135.59 Crores as projected **for the FY 2024-25 only relates to the distribution function.** The

Employee cost for the FY 2024-25 as projected & approved by the Hon'ble Commission is provided in the table below.

Table 7.18: Employee Cost FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED	Deviation
1	2	3	4	5
1	Employee Cost	147.56	135.59	-11.97
	Total	147.56	135.59	-11.97

Commission's Analysis

It is not understood as to how it is adequate looking at the APR value for FY 2023-24 at Rs.128.25, while the same cost in FY 2022-23 for the entity is Rs.197.06Crs. Even in FY2024-25 also the total claim for Employee cost for all three functions together is Rs.183.95crs which is lesser by about Rs.15Crs comparing with FY 2022-23 actuals. Keeping in view the Licensee projection, the Commission accords approval of employee cost at Rs.135.59Crs without making any change.

(Rs. Crs)

Particulars FY 2024-25	Approved in MYT order	PED projected	Approved by Commission
Employee cost	147.56	135.59	135.59

So long the P&ED don't indicate the functional wise employee details, the estimation of distribution cost for ARR purpose will be on a crude basis and same needs to be realised by Licensee. it is purely on account of P&ED's intransigency to provide accurate data.

(b) Administrative and General Expenses

Petitioner's submission

It is submitted that the Administration & General Expenses for the FY 2024-25 has been revised based on the actual Administration & General Expenses for the FY 2022-23 & revised estimate for the FY 2023-24. The actual A&G expenses for the FY 2023-24 (H1) i.e. 1st April, 2023 to 30th September, 2023 is ₹ 3.24 Crores for P&ED MIZORAM as a whole (Distribution, Transmission & Generation). Similarly, ₹ 3.24 Crores projected for FY 2023-24 (H2) for P&ED Mizoram as a whole (Distribution, Transmission & Generation). Accordingly, the A&G expenses for the FY 2024-25 based on cost estimated in FY 2023-24 after escalating the same by 5.72% year over year to factor in the rise in the rates. The Administration & General Expenses of ₹ 4.80 Crores

as projected only relates to the distribution function. The Administration & General Expenses for the FY 2024-25 as projected & approved by the Hon'ble Commission is provided in the table below.

Table 7.19: Administration & General Expenses FY 2024-25

(In ₹ Crores)

Sl. No	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED	Deviation
1	2	3	4	5
1	Administration & General Expenses	2.15	4.80	2.65
	Total	2.15	4.80	2.65

Commission's Analysis

Since the A&G Expenses now claimed for FY 2022-23 was at 3.67crs for the entire entity. The Commission had approved A & G expenses at ₹.4.05Cr for FY 2024-25 adopting year on year annual escalation of 5% over the initial value of FY 2022-23.

c) Repairs and Maintenance Expenses

It is submitted that the Repair & Maintenance Expenses for the FY 2024-25 has been revised based on the actual Repair & Maintenance Expenses for the FY 2022-23 & revised estimate for the FY 2023-24. P&ED Mizoram has projected the R&M expenses in accordance with the Regulation 89.6 of The Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014. The actual R&M expenses for the FY 2023-24 (H1) i.e. 1st April, 2023 to 30th September, 2023 is ₹ 12.95 Crores for P&ED Mizoram as a whole (Distribution, Transmission & Generation). Similarly, ₹ 12.95 Crores projected for FY 2023-24 (H2) for P&ED Mizoram as a whole (Distribution, Transmission & Generation). Accordingly, the R&M expenses for the FY 2024-25 based on cost estimated in FY 2023-24 after escalating the same by 5.72% year over year to factor in the rise in the rates. The Repair & Maintenance Expenses of ₹ 10.46 Crores as projected only relates to the distribution function. The Repair & Maintenance Expenses for the FY 2024-25 as projected & approved by the Hon'ble Commission is provided in the table below.

Table 7.20: Repair & Maintenance Expenses FY 2024-25

In ₹ Crores)				
Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED	Deviation
1	2	3	4	5
1	Repair & Maintenance	12.65	10.46	2.19
	Total	2.15	4.80	2.65

Commission Analysis:

The Commission also considers to approve R & M expenses at the same level projected by the petitioner for the distribution function only and it is exclusive of the Maintenance charges being paid to outside agencies leasing the four SHPs state in the foregone paras.

The Summary of O & M expenses approved by the commission are Tabulated below:

Table 7.21: O & M expenses approved by the Commission for MYT period

(₹. Crores)

Summary of approved O&M Expenses		2024-25
a) Employee cost		135.59
b) Admin & General expenses		4.05
c) Rep & maintenance expenses		10.46
O&M expenses approved		150.10

7.7.7 Capital Investment**Commission Analysis:**

Summary of CWIP from FY 2022-23 to FY 2024-25 is furnished by the P&ED vide **Form F2C** is provided in the table below.

Sl. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
A	Opening Balance of CWIP	1,143.06	1,041.40	1,057.58
B	Fresh Investment during the year	52.33	22.53	28.00
C	Investment capitalised out of opening CWIP	153.99	6.35	25.99
D	Investment capitalised out of fresh investment			
	Total Capitalisation during the year (C+D)	153.99	6.35	25.99
	Closing Balance of CWIP (A + B - C - D)	1,041.40	1,057.58	1,059.59

7.7.8 Gross Fixed Assets & Depreciation

7.7.8.1 Gross Fixed Assets

P&ED has projected the Gross Fixed Asset in accordance with the Regulation 23 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014.

It is submitted that opening value of gross fixed assets (GFA) for the FY 2022-23 has been taken from Fixed Asset Register as on 31.03.2022 & the audited accounts for the FY 2021-22 and the same has been increased by addition of assets during the estimated addition during the FY 2022-23. Thereafter, planned additions during the FY 2023-24 and FY 2024-25 have been considered and accordingly, GFA has been computed for the FY 2023-24 & FY 2024-25.

Table 7.22: Details of Gross Fixed Assets filed by P&ED

(₹. Cr)

Sl. No.	Assets particulars	FY 2022-23			FY 2023-24			FY 2024-25		
		Year Begning	Addition During Year	Year Ending	Year Begning	Addition During Year	End of the Year	Year Begning	Addition During Year	End of the Year
1	Land & Land rights	1.45	0.00	1.45	1.45	0.00	1.45	1.45	0.00	1.45
2	Building and Civil Works	35.16	0.02	35.18	35.18	0.00	35.18	35.18	0.00	35.18
3	Plant & Machinery	803.63	146.80	950.43	950.43	0.00	950.43	950.43	0.00	950.43
4	Tools & Plants	14.67	0.02	14.68	14.68	0.00	14.68	14.68	0.00	14.68
5	Line Cable Networks etc.	549.91	6.94	556.85	556.85	6.35	563.19	563.19	25.99	589.19
6	Vehicles	3.07	0.22	3.29	3.29	0.00	3.29	3.29	0.00	3.29
7	Furniture & fixtures	2.83	0.00	2.83	2.83	0.00	2.83	2.83	0.00	2.83
8	Office Equipments	11.40	0.00	11.40	11.40	0.00	11.40	11.40	0.00	11.40
9	Assets Purchased in second hand	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Assets of Partnership projects etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Assets taken over & pending final valuation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Any other items	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Total (1 to 12 excluding 10)	1,422.11	153.99	1,576.11	1,576.11	6.35	1,582.45	1,582.45	25.99	1,608.45

The commission feels it enigmatic, as to how the entity could have a split in assets segregation only from 2021-22 now but expressed inability in the earlier year filing. What precludes them from doing so is not explained. If they can have a functional wise split now with ease, it is could also be possible for any year under consideration in the past. This logic appears weird with the earlier expressions made to evade assets split.

7.7.8.2 Depreciation

Petitioners' submission

P&ED Mizoram has projected the depreciation in accordance with the Regulation-28 of The Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year

Tariff) Regulations, 2014.

In this regard it is submitted that the GFA for the FY 2022-23 has got revised in accordance with the audited annual accounts for which true-up proposal is being submitted. The Fixed Asset & Depreciation Register for the FY 2022-23 is also being submitted. Therefore, the GFA & corresponding depreciation for the FY2023-24 & FY 2024-25 also stands revised. Details of category wise Assets & Depreciation is provided in the Format – F2 & F2a.

In view of the above it is requested that the Hon'ble Commission may kindly consider & approve the revised depreciation for the FY 2024-25. The depreciation approved by the Hon'ble Commission and revised depreciation for the FY 2024-25 is provided in the table below:

Table 7.23: Depreciation FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED	Deviation
1	2	3	4	5
1	Depreciation	0.00	1.58	1.58
	Total	0.00	1.58	1.58

Commission's Analysis

Table 7.24: Depreciation approved by the Commission for FY 2024-25

(₹. Cr)

Sl. No.	Particulars	2019-20 Amount	2020-21 Amount	2021-22 Amount	2022-23 Amount
1	Closing balance of Contributions, Grants & subsidies for Capital Assets costs (Schedule-34)	2432.15	2491.76	2560.03	2615.70
2	Gross Block of Assets (OCFA) (Sch-19)	1294.02	1379.16	1422.11	1576.10
3	Excess of capital subsidy over OCFA	1138.13	1112.60	1137.92	1039.60
4	The Ratio of Gross block to Capital Subsidies (%) – (2/1x100)	53.20%	55.35%	55.55%	60.26%
5	Own funds spent for Assets	0%	0%	0%	0%
6	Eligibility to claim depreciation on assets in each year in the past	Nil	Nil	Nil	Nil

As seen from the ratio of Gross Block of Assets to Capital Subsidies received for creation & capitalisation of assets only just above 50% and hence, it appears no own funds were spent by P&ED in any of the above previous years. Hence, the option of claiming 10% of the annual depreciation claiming under the pretext of 10% own fund investment is not a fact as the Capital Subsidy amount is very much higher (twicer) than the Gross Asset values so far created based on the Audited Balance Sheets figures.

Though, the licensee had been continuously claiming depreciation in their ARR for all years of MYT period, this issue was also debated in the public hearing for understanding the opinion of the public and Licensee. The Licensee has deeply expressed its concern for disallowing the 10% value of the total depreciation as it will send wrong signal to the general public despite possessing huge assets spread across all over the state catering to consumers of all walks of life and but no nominal depreciation was considered for in ARR. Thus, P&ED had requested to reconsider the nominal depreciation amount of 10% of overall depreciation reflected in the financial accounts. The general public participated too had not raised any objection or resentment on this aspect for including 10% value in ARR of FY 2024-25.

Hence, Rs.1.58Cr depreciation amount is approved for by the commission for FY 2024-25. However, this consideration now given by the Commission is only from FY 2024-25 onwards and not applicable for FY2022-23 and also for FY 2023-24 and no such claim if any made would not be entertained for those two years mentioned above.

7.7.9 Interest and Finance Charges

Petitioner's submission

The Interest & Finance charges for the FY 2024-25 as approved by the Hon'ble Commission & projected by P&ED Mizoram is provided in the table below.

Table 7.25: Interest & Finance Charges FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Interest & Finance	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission's Analysis

The Licensee too didn't claim any interest & finance cost for FY 2024-25 and same depiction is seen in form-3b. Hence no charges on this head of account is allowed in the ARR determination for this year.

7.7.10 Interest on Working Capital**Petitioner's Submission**

The Interest on Working capital for the FY 2024-25 as approved by the Hon'ble Commission and the revised interest on working capital is provided in the table below:

Table 7.26: Interest on Working Capital FY 2024-25**(In ₹ Crores)**

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Interest on Working Capital	0.00	9.93	9.93
	Total	0.00	9.93	9.93

Commission's Analysis

As per the MYT Regulation 2014, the interest on working capital is a permissible element of ARR expenditure. However, it is observed that P&ED had not obtained any working capital loan during the entire financial year or was there any history of such loans being drawn. The admission of Working Capital Interest will only burden the consumers by an extra charge for which they need not pay for it for the services rendered by P&ED and hence there is no need for allowing this cost element as P&ED is fully dependent/availing funding only from the State government and not from any other source for their day to day routine revenue expenses.

Hence, the Commission **disapproves** Interest on Working Capital amount for FY 2024-25 adopting the same analogy as in the case of Return on Equity to off-load the unnecessary burden on Consumers **besides general public were seriously protesting this cost element admissibility in every public hearing gathering in this regard.**

7.7.11 Interest on Consumer Security Deposit

The interest on Consumer Security Deposit approved for the FY 2024-25 was on the basis of closing balance of Consumer Security Deposit. The interest on Consumer

Security Deposit as approved and the revised estimate for the FY2024-25 are provided in the table below:

Table 7.27: Interest on Consumer Security Deposit FY 2024-25

(In ₹ Crores)

Sl. No	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Interest on Consumer Security Deposit	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission's Analysis:

The Hon'ble Commission did not approve Interest on consumer security deposit for the FY 2024-25.

7.7.12 Contributions to Contingency Reserve Fund

Petitioner Submission:

The Contingency Reserve Fund for the FY 2024-25 as approved by the Hon'ble Commission and the revised interest on working capital is provided in the table below:

Table 7.28: Contribution to Contingency Reserve Fund FY 2024-25

(In ₹ Crores)

Sl. No	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Contribution to Contingency Reserve Fund	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission Analysis:

The Hon'ble Commission did not approve any provision for creation of contingency reserve fund for the FY 2024-25.

7.7.13 Bad Debts

Petitioner's submission

The Hon'ble Commission did not approve Provision for Bad & Doubtful Debt for the FY 2024-25.

Table 7.29: Provision for Bad & Doubtful Debt FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Provision for Bad Debt	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission's Analysis

In view of the above the Commission would not consider/allow such provision for bad debts during MYT period. In case of these bad debts found unrecovered, the P&ED which has to mitigate such losses by its improved and efficient performance only and it cannot be passed to consumers in the form of ARR cost.

7.7.14 Return on Equity**Petitioner's submission**

The Hon'ble Commission did not approve Return on Equity for the FY 2024-25.

Table 7.30: Return on Equity FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Return on Equity	0.00	0.00	0.00
	Total	0.00	0.00	0.00

Commission's Analysis

Since P&ED is a Government Department, Return on Equity is not considered for in the absence of identifiable Equity component in their Audited annual Accounts statement.

7.7.15 Non-Tariff Income**Petitioner's submission**

The Other Income for the FY 2024-25 as approved by the Hon'ble Commission is provided in the table below. P&ED Mizoram is not proposing any changes to the approved Other Income.

Table 7.31: Other Income FY 2024-25

(In ₹ Crores)

Sl. No.	Particulars	Approved in T.O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	2	3	4	5
1	Non-Tariff Income	8.96	11.96	3.00
	Total	8.96	11.96	3.00

Commission's Analysis

The Non-Tariff Income so projected by the Licensee is approved at the same level without any modification for the FY 2024-25. The detailed break-up submitted in response to directives is placed below for item-wise break-up of Non-Tariff Income.

Sl No	Particulars	in Rs
1	Pole Hiring Charge	12,00,000.00
2	Charges for Disconnection & Reconnection	1,00,000.00
3	Agency / Department Charges	80,00,000.00
4	Re-rating of installation charge	1,60,000.00
5	Meter Shifting / replacement / testing charges	75,000.00
6	Charges for replacement of connection wire, cut-out fuse etc	10,000.00
7	Hiring charge of M&E	2,000.00
8	Interest on staff loans & advances	0.00
9	Delayed payment charges from consumers	0.00
10	Meter rent	1,76,00,000.00
11	Recovery from theft of energy	37,00,000.00
12	Dividend from NETCL	7,82,00,000.00
13	Misc. receipts	1,05,53,000.00
	Total	11,96,00,000.00

7.7.16 Efficiency Gains expected from Performance improvement by Licensee

Commissions Analysis:

The Licensee on his own accord projected ₹15Cr as the efficiency gains amount in each year of the entire MYT period. The Commission adopts ₹.8.00Cr towards the Efficiency gains improvement amount for FY 2023-24 as reduction from Gross ARR amount to arrive at the Net ARR of FY 2023-24 and allows ₹15Cr for each year of the remaining MYT period. But in the present filing the Licensee had made no projection towards Efficiency gains for FY 2024-25 its performance to gain some additional income without causing undue burden on sincere and honest consumers for the cause of some few delinquent consumers. However, after careful consideration Commission adopt Rs.2.00Cr of towards efficiency gains instead of Rs.15.00Cr as indicated in MYT Order for FY 2024-25. The Licensee is directed to furnish the achievement of Rs.2.00Cr target in FY 2024-25.

7.7.17 Revenue from sale of power

P&ED Mizoram has calculated the Revenue from sale of power for the FY 2024-25 on the basis of the revised sale and existing tariff. The Revenue from sale of power for the FY 2024-25 on the basis of the existing tariff & Revenue on the basis of the revised sale is provided in the table below:

Table 7.32: Revenue at Existing Tariff for FY 2024-25 by P&ED**(In ₹ Crores)**

Sl. No.	Category	Revenue at Existing Tariff
	LT Consumers	
1	Kutir Jyoti	2.06
2	Domestic	194.19
3	Non-Profit Public Purpose	17.60
4	Commercial	40.90
5	Public Lighting	3.25
6	Agriculture	0.02
7	Public Water Works	7.88
8	LT Industrial	2.48
9	Electric Vehicle Charging	0
	Total LT	268.37
	HT Consumers	
10	Domestic	2.51
11	Non-Profit Public Purpose	5.14
12	Commercial	15.59
13	Agriculture	0.76
14	Public Water Works	113.58
15	HT Industrial	13.19
16	Electric Vehicle Charging	0
17	Bulk Supply	14.23
	Total HT	165.01
18	Total LT & HT	433.39
19	Outside State - Trading	137.35
	Total	570.73

Commission's Analysis:

The above revenue calculation had not considered the revenue from sale of Industrial HT Option-2 (TOD) category consumers and also the Electrical Vehicle Charging station both in LT and HT category. In the FY 2023-24, the Commission had introduced these new categories by fixing separate tariff to those categories of consumers. But the Licensee did not indicate any quantity of units for sale to these categories in this year. No tariff revision was proposed by P&ED in this year. Accordingly, the Commission had made a nominal quantity projection for deriving the revenue to be realised in 2024-25. The details are tabulated below:

Table 7.33: Revenue at prevailing Tariff for FY 2024-25 by Commission
(In ₹ Crores)

Sl. No.	Category	Revenue at Existing Tariff
	LT Consumers	
1	Kutir Jyoti	2.06
2	Domestic	195.91
3	Non-Profit Public Purpose	17.59
4	Commercial	40.89
5	Public Lighting	3.25
6	Agriculture	0.02
7	Public Water Works	7.88
8	LT Industrial	2.48
9	Electric Vehicle Charging	0.865
	Total LT	270.95
	HT Consumers	
10	Domestic	2.52
11	Non-Profit Public Purpose	5.14
12	Commercial	15.59
13	Agriculture	0.81
14	Public Water Works	113.58
15	HT Industrial (Opt-1&2)	13.60
16	Electric Vehicle Charging	0.99
17	Bulk Supply	14.23
	Total HT	166.46
18	Total LT & HT	437.41
19	Outside State - Trading	95.56
	Total	532.97

7.8 Aggregate Revenue Requirement

It is submitted that P&ED Mizoram has proposed revisions in few components of Aggregate Revenue Requirement approved by the Hon'ble Commission in the MYT Order dated 28.03.2023 and the same has been discussed in the paras above. The approved ARR and the revised ARR & the corresponding Revenue Gaps at existing tariff is provided in the table below:

Table 7.34: Annual Revenue Requirement FY 2024-25

(In ₹ Crores)

Sl. No.	Item of Expense	Approved in T.O. dated 28.03.2023	Proposed by P&ED	Deviation
1	2	3	4	5
1	Cost of Fuel	0.00	0.00	0.00
2	Cost of Generation	5.74	13.51	7.77
3	Cost of Power Purchase	395.66	511.67	116.01
4	Transmission Charges	67.40	57.93	-9.47

Sl. No.	Item of Expense	Approved in T.O. dated 28.03.2023	Proposed by P&ED	Deviation
5	Intra State Transmission	54.53	48.46	-6.07
6	Employee Costs	147.56	135.59	-11.97
7	R&M Expenses	12.65	10.46	-2.19
8	Administration and General Expenses	2.15	4.80	2.65
9	Depreciation	0.00	1.58	1.58
10	Interest charges	0.00	0.00	0.00
11	Interest on Working Capital	0.00	9.93	9.93
12	Interest on Consumer Security Deposit	0.00	0.00	0.00
13	Provision for bad debts	0.00	0.00	0.00
14	Return on NFA /Equity	0.00	0.00	0.00
15	Contbn to Contingency Reserve Fund	0.00	0.00	0.00
16	Total Revenue Requirement	685.69	793.92	108.23
17	Less: Non-Tariff Income	8.96	11.96	3.00
18	Less: 1/3 Surplus transferred	0.00	0.00	0.00
19	Less: Efficiency Gains	15.00	0.00	-15.00
20	Net Revenue Requirement	661.73	781.97	120.24

Commission's Analysis

Based on the approved costs the Aggregate Revenue Requirement for MYT period is indicated in the table below:

Table 7.35: Commission approved ARR for FY 2024-25 (Rs Crs)

Sl. No.	Particulars	Projected by P&ED	Commission Approved
1	Cost of Fuel	0.00	0.00
2	Cost of Generation	13.51	9.16
3	Cost of Power Purchase	511.67	494.78
4	Operation & Maintenance Exps	150.84	150.10
	a) Employee Cost	135.59	135.59
	b) Repairs & maintenance	10.46	10.46
	c) Administrative & General Expenses	4.80	4.05
5	Inter-State Transmission charges	57.93	57.93
6	Intra- state Transmission Charges	48.46	45.74
7	Interest on Loan	0.00	0.00
8	Depreciation	1.58	1.58
9	Interest on Working Capital	9.93	0.00
10	Return on Equity	0.00	0.00
11	Provision for Bad Debt	0.00	0.00
12	Contingency Res. Fund contribution	0.00	0.00
13	Total Revenue Requirement	793.92	759.29
14	Less: Non-Tariff Income	11.96	11.96
15	Less: Efficiency Gains	0.00	2.00
16	Less: 1/3 rd True-Up surplus of FY 2022-23	0.00	15.13

Sl. No.	Particulars	Projected by P&ED	Commission Approved
17	Net ARR requirement [13- (14 to 16)]	781.96	730.20
18	Less: Revenue from OSS/ IEX Sales	137.35	95.56
19	ARR after Revenue from Outside state sales	644.61	634.64
20	Revenue from Retail Sales	433.39	437.41
21	Revenue Surplus/ (Deficit) (20-19)	211.22	197.23

Tariff Proposal for FY 2024-25

P&ED Mizoram in the previous sections has discussed the Aggregate Revenue Requirement for the FY2024-25 and the revenue gap at the existing tariff. In this section, tariff proposal of the Department for recovery of the ARR has been discussed.

7.9 Recovery of Revenue Gap for FY 2024-25

Petitioner's Submission:

The estimated gap for the FY 2024-25 has been computed by deducting the revenue at existing tariff from the net ARR as detailed above.

P&ED Mizoram does not propose to recover the Gap as these may result in huge burden on the consumers. Tariff is a sensitive subject having substantial impact on social, economic and financial well-being of the public at large as well as the viability and growth of power sector. Recovery of entire Gap through tariff increase is not practicable as this would make power unaffordable to the general consumers. P&ED Mizoram being a Government Department funded by budgetary support from State Government, there is not proposes any hike for gap recovery.

In view of the above, the tariff proposal for the FY 2024-25 for various categories of consumers is given below along with the comparison with existing tariff.

Table 7.36: Tariff – Existing vs. Proposed

Sl. No.	Type of installation	Existing		Proposed	
		Energy Charges (₹/Month)	Fixed Charges (In ₹ per kW or kVA)	Energy Charges (₹/Month)	Fixed Charges (In ₹ per kW or kVA)
		A	B	A	B
1	Kutir Jyothi				
	i) First 20 kWh	2.55/kWh	25/Connection	2.55/kWh	25/Connection
	ii) Balance above 20 kWh	3.55/kWh	25/Connection	3.55/kWh	25/Connection
2	Domestic				
A	Low Tension				
	i) First 100 kWh	4.90/kWh	50/Contracted Load in kW	4.90/kWh	50/Contracted Load in kW

Sl. No.	Type of installation	Existing		Proposed	
		Energy Charges (₹/Month)	Fixed Charges (In ₹ per kW or kVA)	Energy Charges (₹/Month)	Fixed Charges (In ₹ per kW or kVA)
ii)	Next 100 kWh	7.10/kWh	50/Contracted Load in kW	7.10/kWh	50/Contracted Load in kW
iii)	Balance above 200 kWh	8.20/kWh	50/Contracted Load in kW	8.20/kWh	50/Contracted Load in kW
B	HT - Domestic	8.65/kVAh	50/Billing Demand in kVA	8.65/kVA	50/Billing Demand in kVA
3	Non-Profit Public Purpose				
A	Low Tension				
i)	First 150 kWh	7.60/kWh	60/Contracted Load in kW	7.60/kWh	60/Contracted Load in kW
iii)	Balance above 150 kWh	8.30/kWh	60/Contracted Load in kW	8.30/kWh	60/Contracted Load in kW
B	High Tension- NPPP	8.75/kVAh	60/Billing Demand in kVA	8.75/kVA	60/Billing Demand in kVA
4	Commercial				
A	Low Tension				
i)	First 150 kWh	8.20/kWh	80/Contracted Load in kW	8.20/kWh	80/Contracted Load in kW
iii)	Balance above 150 kWh	8.45/kWh	80/Contracted Load in kW	8.45/kWh	80/Contracted Load in kW
B	High Tension	8.90/kVAh	80/Billing Demand in kVA	8.90/kVA	80/Billing Demand in kVA
5	Public Lighting	11.35/kWh	80/Contracted Load in kW	11.35/kWh	80/Contracted Load in kW
6	Irrigation & Agriculture				
A	LOW TENSION	3.80/kWh	50/Contracted Load in kW	3.80/kWh	50/Contracted Load in kW
B	HIGH TENSION	3.85/kVA	50/Billing Demand in kVA	3.85/kVA	50/Billing Demand in kVA
7	Public Water Works				
A	LOW TENSION	11.10/kWh	90/Contracted Load in kW	11.10/kWh	90/Contracted Load in kW
B	HIGH TENSION	9.85/kVA	90/Billing Demand in kVA	9.85/kVA	90/Billing Demand in kVA
8	Industrial services				
A	LOW TENSION				
i)	First 400 kWh	7.10/kWh	80/Contracted Load in kW	7.10/kWh	80/Contracted Load in kW
ii)	Balance above 400	8.05/kWh	80/Contracted Load in kW	8.05/kWh	80/Contracted Load in kW
B	HIGH TENSION				
	Option - 1	9.05/kVA	80/Billing Demand in kVA	9.05/kVA	80/Billing Demand in kVA
	Option - 2 (TOD) usage				
i)	06:00 Hrs. upto 17:00 Hrs. (Normal TOD)	10.05/kVAh	80/Billing Demand in kVA	10.05/kVAh	80/Billing Demand in kVA
ii)	17:00 Hrs. upto 22:00 Hrs. (Peak TOD)	11.55/kVAh	80/Billing Demand in kVA	11.55/kVAh	80/Billing Demand in kVA
iii)	22:00 Hrs. upto 06:00 Hrs. (Off-Peak TOD)	8.55/kVAh	80/Billing Demand in kVA	8.55/kVAh	80/Billing Demand in kVA
9	Bulk Supply	6.85/kVAh	90/Billing Demand in kVA	6.85/kVAh	90/Billing Demand in kVA
10	Electric Vehicle (EV) Charging Station				
A	LOW TENSION	8.20/kWh	75/Contracted Load in kW	8.25/kWh	75/Contracted Load in kW
B	HIGH TENSION	8.65/kVA	75/Billing Demand in kVA	8.70/kVA	75/Billing Demand in kVA

7.10 Additional Revenue at Proposed Tariff

Based on the tariff proposed above, P&ED Mizoram has not proposed for any additional revenue at the proposed tariff rates.

Table 7.37: Additional Revenue at proposed Tariff

(In ₹ Crore)

Sl. No.	Particulars	FY 2024-25
1	2	3
1	Additional Revenue from Proposed tariff revision	0.00
	Total	0.00

Commission's Analysis:

In the above proposed revenue gap of Rs.211.23Cr, Licensee presumed to receive entire amount as Government subsidy and accordingly proposed no Tariff hike in FY 2024-25. The **Government of Mizoram issued a tariff subsidy related letter on 16th January 2024 (copy enclosed as annexure-VII at the end of the Tariff Order)**. It was stated by the Govt. of Mizoram that it may give maximum subsidy amounting of ₹211.23Cr or the amount derived by adopting 27.01% on the net derived ARR after finalisation whichever is less. Adopting 27.01% on net ARR amount of **₹730.20Cr** as approved by Commission would yield **₹197.23Cr** as the amount of government subsidy. Therefore, entire deficit would be fully covered by the Government subsidy of **₹197.23Cr** and eventually the unmet gap will be **Nil** since the gap matches with the eligible subsidy amount. Accordingly, the Commission had too strongly felt there is no need for upward revision of existing tariffs of various retail consumer categories to generate any additional revenue over and above **₹437.41Cr** resulting from prevailing tariffs in force. The revised revenue from each consumer category for FY2024-25 is tabulated below:

Table 7.38: Revised revenue (Commission approved) at Existing Tariffs for FY 2024-25

Sl. No	Category (FY 2024-25)	Energy	Revenue	CPU
	LT Consumers	(MU)	(Cr)	Rs./kWh
1	Kutir Jyoti	5.38	2.064	3.84
2	Domestic	321.99	195.91	6.08
3	Non-Profit Public purpose	13.00	17.59	13.53
4	Commercial	44.04	40.89	9.29
5	Public Lighting	2.77	3.25	11.72
6	Agriculture	0.05	0.02	4.70
7	Public Water Works	6.97	7.88	11.31
8	LT Industrial	2.70	2.48	9.20
9	Electric Vehicle Charging Station-LT	1.00	0.856	8.56
	Total LT	397.90	270.94	6.81
	HT Consumers			
10	Domestic	2.46	2.52	10.24
11	Non-Profit Public purpose	4.38	5.14	11.74
12	Commercial	13.88	15.59	11.23
13	Agriculture	1.12	0.81	7.26
14	Public Water Works	98.40	113.58	11.54
15	HT Industrial (Opt-1)	10.00	11.071	11.07
16	HT Industrial (Opt-2)	2.10	2.534	12.07
17	Electric Vehicle Charging Station - HT	1.00	0.99	9.86
18	Bulk Supply	15.55	14.23	9.15
	Total HT	148.89	166.47	11.18

Sl. No	Category (FY 2024-25)	Energy	Revenue	CPU
	LT Consumers	(MU)	(Crs)	Rs./kWh
	Total LT & HT	546.79	437.41	8.00
19	Outside State - Trading	138.01	95.56	6.92
	Grand Total of LT & HT	684.54	532.97	7.79

Note: Detailed calculation based on approved subsidised Tariff is placed as Annexure – III

7.11 Impact of Tariff on Consumers

Petitioners Submission:

The revenue gap and the average tariff hike proposed are presented in the table below:

Table 7.45: Impact of Tariff

Sl. No.	Particulars	Units	FY 2024-25	
			Existing	Proposed
1	ARR	₹ in Crores	781.97	781.97
2	Revenue from tariff	₹ in Crores	433.39	433.39
3	Revenue from sale of power outside the state	₹ in Crores	137.35	137.35
4	Total Revenue	₹ in Crores	570.73	570.73
5	Gap (1 – 2 - 3)	₹ in Crores	211.23	211.23
6	Sales within State	MUs	544.79	544.79
7	Sale of power outside the state	MUs	204.10	204.10
8	Total Sales	MUs	748.89	748.89
9	Average Cost of Supply within state $\{(1-3)/6\}$	₹ per kWh	11.83	11.83
10	Average Revenue (2/6)	₹ per kWh	7.96	7.96
11	Pure Gap (9-10)	₹ per kWh	3.87	3.87
12	Average Hike in Tariff	₹ per kWh		0.00
13	Hike in Tariff	%		0.00

Commissions Analysis:

Table 7.39: Revenue Gap for FY 2024-25 as approved by the Commission

Sl. No.	Particulars	Units	Existing Tariff	Post Revision
1	Net Aggr. Revenue Requirement	Rs. Crs	730.20	730.20
2	Less: Outside state sales revenue	Rs. Crs	95.56	95.56
3	ARR after Outside State Sales (1 - 2)	Rs. Crs	634.64	634.64
4	Revenue from retail sale of power	Rs. Crs	437.41	437.41
5	Revenue Gap (3 – 4)	Rs. Crs	197.23	197.23
6	Tariff subsidy from Govt.	Rs. Crs	197.23	197.23
7	Unmet Revenue Gap (5 – 6)	Rs. Crs	0.000	---
8	Retail Sales within State	MUs	546.79	546.79
9	Outside State power Sales	MUs	138.01	138.01
10	Total Sales from all Sources (8 + 9)	MUs	684.54	684.54

Sl. No.	Particulars	Units	Existing Tariff	Post Revision
11	Average Cost of Supply within state (3/8)	Rs./kWh	11.607	11.607
12	Average Revenue (4/8)	Rs./kWh	8.00	8.00
13	Pure Gap rate (11-12) or (6/8)	Rs./kWh	3.607	3.607
14	Average Hike in Tariff - (7/8)	Rs./kWh		0.000
15	Hike adopted in Tariff (7/4)	%		0.000%

7.12 Government Tariff Subsidy/Support

As seen from the above, it is clear that the revenue from sale of power is not sufficient to meet the ever-increasing expenditure and the P&ED shall continue to depend upon the subsidy/support from Government of Mizoram as the retail consumers are predominately Domestic category and very negligible from other Commercial categories from LT & HT. The net revenue gap of ₹.197.23 Crores so arrived at by the Commission shall be met totally within the announced Government subsidy/support.

The ARR & Tariff Petition for FY 2024-25 filed by the P&E Department was done with the prior approval of the State Government. The Licensee, in their submitted Tariff Petition, had proposed no tariff hike over the prevailing tariffs of FY 2023-24 resulting in a revenue gap amounting to ₹.197.23 Crs arrived at by Commission which needs to be absorbed only by way of subsidy from the State Government of Mizoram and to this effect the letter already cited above dated:16th January 2024 issued by Under Secretary(tech) of GoM in assurance of tariff subsidy is placed at **(Annexure-VIII)**. In addition, in the said letter issued by Govt. of Mizoram vide No.B.19018/9/2022-P&E, Dt.16th January 2024 as an assurance of blanket Tariff subsidy to all class of consumers by specifying a condition that State Government subsidy amounting to Rs.211.23Crs or 27.01% be applied over upon the final ARR whichever is less. Be given as subsidy, in order to achieve the objective of year on year tariffs progressively to reflect the cost of electricity supply, the grant of subsidy shall have to be reduced every year in decrementing fashion and ultimately make the power utility to manage without Government subsidy support.

The Section-65 of the Electricity Act 2003 mandates that the State Government shall release subsidy amount due to the Licensee in advance so as to enable the licensee to implement the subsidized tariffs to their consumers as per subsidised Tariff rates in

Table-8.2 (Detailed Revenue calculation at subsidised Tariff is given at Annexure-III).

The Ministry of Power have recently given amendment to Rule-15 of Electricity Rule 2005 (which is called Electricity Second Amendments Rules 2023) dated 26th July, 2023 and the amended details are given below:

Subsidy accounting and payment . -

- (1) The accounting of the subsidy payable under section 65 of the Act, shall be done by the distribution licensee, in accordance with the Standard Operating Procedures issued by the Central Government, in this regard.
- (2) A quarterly report shall be issued by the State Commission for each distribution licensee, in its jurisdiction, giving findings whether demands for subsidy were raised by the distribution licensee in the relevant quarter based on accounts of the energy consumed by the subsidised category and consumer category wise per unit subsidy declared by the State Government, the actual payment of subsidy in accordance with section 65 of the Act and the gap in subsidy due and paid as well as other relevant details.

Explanation:

For the purpose of this rule, (The term “Unit” means Kilo Watt Hour (kWh) or Kilo Watt (kW) or Horse Power (HP) or Kilo Volt Ampere (kVA), in accordance with the relevant Regulations or the Tariff Orders issued by the Appropriate Commission.

- (3) The quarterly report shall be submitted by the distribution licensee within thirty days from end date of the respective quarter and the State Commission shall examine the report, and issue it with corrections, if any, in accordance with sub-rule (2), within thirty days of the submission.
- (4) In case the subsidy has not been paid in advance, then the State Commission shall issue order for implementation of the tariff without subsidy, in accordance with provisions of the section 65 of the Act.
- (5) If subsidy accounting and the raising bills for subsidy is not found in accordance with the Act or Rules or Regulations issued there under, the State Commission shall take appropriate action against the concerned officers of the licensee for non-compliance as per provisions of the Act

Note: The procedural steps to adopted while dealing with Subsidy Accounting were clearly defined and notified by MoP (Standard of Operating Procedures) vide its Letter No. F.No.14/12/2022-UR&SI-II-Part-(I)-(E-263842) dated 01st July, 2022 which are to be followed scrupulously.

Accordingly, the State Government should release the above stated subsidy amount in Twelve (12) equal monthly instalments amounting to **₹ 16.43583 Crores (Rupees Sixteen point four three five eight three crores only) every month in advance as enshrined in Section-65 of E.Act 2003**. However, in the event of delay or non-receipt of subsidy in advance in any month from the Government, the licensee shall adopt the applicable full cost tariff (FCT) rates indicated at **Table 8.3 of chapter -8** while issuing the monthly energy demand bill for that relevant month/months.

Ministry of Power has issued rules mandating distribution licensees to provide 24x7 power supply with instances of frequent interruptions resulting in penal action to ensure uninterrupted supply to the consumers.

State Governments may provide subsidies to distribution licensees which must be paid in advance as mandated in the Act. If the state government fails to provide advance subsidy payments the Commission suo-moto directs distribution licensees to charge the full cost tariff. It is made clear that such advance subsidies should further be utilised and result in improving the performances of the distributing licensees.

Detailed calculation of Revenue at FCT is placed at **Annexure-IV** for reference. A brief summary of Full cost tariff-based revenue from various consumers is tabulated below for reference.

Table 7.40: Commission approved Full Cost Tariff based Revenue for FY 2024-25

Sl. No	Full Cost Category Revenue	Energy	Revenue	CPU
	LT Consumer category	(MU)	(Cr)	Rs./kWh
1	Kutir Jyoti	5.38	5.11	9.49
2	Domestic	321.99	361.16	11.22
3	Non-Profit Public purpose	13.00	17.78	13.68
4	Commercial	44.04	55.90	12.69
5	Public Lighting	2.77	3.46	12.51
6	Agriculture	0.05	0.06	12.20
7	Public Water Works	6.97	8.72	12.51
8	LT Industrial	2.70	3.33	12.36
9	Electric Vehicle Charging Station-LT	1.00	1.25	12.46
	Total LT	397.90	456.77	11.48
	HT Consumer category	(MU)	(Cr)	Rs./kWh
10	Domestic	2.46	3.05	12.41
11	Non-Profit Public purpose	4.38	5.37	12.26
12	Commercial	13.88	17.02	12.26
13	Agriculture	1.12	1.36	12.10
14	Public Water Works	98.40	115.52	11.74
15	HT Industrial (Opt-1)	10.00	12.22	12.22
16	HT Industrial (Opt-2)	2.10	2.58	12.28
17	Electric Vehicle Charging Station - HT	1.00	1.21	12.14
18	Bulk Supply	15.55	19.54	12.56
	Total HT	148.89	177.87	11.95
	Total LT & HT	546.79	634.64	11.61

There could be a situation, where the outstanding monthly subsidy pending was released by the government after passage of much time elapse and thereby consumers were to be billed at full cost tariffs in those relevant month or months when subsidy was not paid in advance.

Given the situation, the entire excess amount so charged to all consumers on account of full cost tariff adoption shall have to be refunded as deduction by treating such excess amount laying with Licensee **as an advance payment** to the licensee be settled **at one time** in the immediate monthly billing cycle where bills are being issued to respective consumers soon after receipt of such pending subsidy relating to the past month/months. If in case, the excess amount so refundable is exceeding the monthly billing amount to be so adjusted in case of any consumer/consumers, then such excess amount unrefunded may be carried forward and be adjusted in the immediately following monthly bill/bills to be issued to such consumer/consumers until full settlement is done in toto.

Lastly, the brief summary of the Commission calculations in support of subsidy amount deduced, the average of supply and the average revenue realisation details are tabulated in the following table.

Table 7.41: Average Cost of Power supply in Mizoram State for FY 2024-25

Sl. No	Particulars	Units	Proposed by P&ED	Commission Approved
1	Net overall ARR	Rs. Cr	781.97	730.20
2	Sale of surplus power revenue	Rs. Cr	137.35	95.56
3	Net ARR within the state (1-2)	Rs. Cr	644.62	634.64
4	Net Revenue from Retail Sales	Rs. Cr	433.39	437.41
5	Net Revenue Gap (3-4)	Rs.Crs	211.23	197.23
6	Govt. subsidy/ Support	Rs. Cr	211.23	197.23
7	Energy sale within the state	MU	544.79	546.79
8	Average Cost of Supply (3/7)	Rs/KWH	11.83	11.607
9	Avg. rate of Revenue realization - (4/7)	Rs/KWH	7.96	8.00
10	Avg. rate of Subsidy per unit (7-8)	Rs/kWh	3.87	3.607

8 Tariff Principles and Design

8.1 Background

While determining the revenue requirement and in fixation of the retail supply tariff of the P&ED, Mizoram for the year 2023-24 the Commission had been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy (NTP), CERC Regulations on Terms and Conditions of Tariff and JERC Regulations for Manipur and Mizoram (Multi Year Tariff) Regulation, 2014. Section 61 of the E. Act 2003 laid down the broad principles, which shall guide determination of retail supply tariffs. As per these statutory provisions, the tariff shall “Progressively reflect cost of supply” and also reduce cross subsidies components “within the period to be specified by the Commission”. The Act also lays special emphasis on safeguarding consumer interests and mandates that tariff determination should be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment.

The Tariff Policy notified by Government of India in January 2006 and also in 2016 provides comprehensive guidelines for determination of tariff and in working out the revenue requirement of power utilities. The Commission had made conscious endeavour to follow these guidelines as far as possible.

NTP mandates that the Multi-Year-Tariff (MYT) framework be adopted for determination of tariff from 1st April 2006. Consequently, the Commission had introduced the MYT Regime in the State from 2015-16 onwards.

The National Tariff Policy of 2006 mandate that as a result of existence of cross subsidy component the tariffs so determined shall be well within plus / minus 20% of the average cost of supply before FY 2010-11 itself. But, this could not be accomplished due to high cost of power purchase, low paying capacity of the consumers and lack of industrialization in the state. Until this date, the P&ED could not submit the voltage-wise cost of supply. In this regard, a directive has been issued to build up data to arrive at the cost of supply at various voltage levels etc so as to accomplish the object mandated in the National Tariff Policy. While in arriving at the cost of supply, the

Commission has taken the average cost of supply as the basis in the absence of relevant data to work out consumer category wise cost of supply. In this tariff order an element of performance target has been indicated to maintain the set target for distribution loss reduction for the year 2022-23. But, the P&ED is still to show better performance by achieving reduction in loss levels, which will result in substantial reduction in average cost of supply on account of lesser power purchases. The loss levels noticed were very high at the range of 30% in 2018-19 and had projected slight improvement in FY 2019-20, and same needs to be monitored. The existing and proposed tariff of P&ED is a two-part tariff adopted under telescopic billing.

8.1.1 Section 8.3 of Tariff Policy lays down the following principles for tariff design:

1. In accordance with the National Electricity Policy, consumers below poverty line whose consumption is below a specified level, say 30 units per Month, may receive a special support in the form of cross subsidy. Tariffs for such group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.
2. For achieving the objective that the tariff shall progressively reflect the cost of supply of electricity the roadmap is within $\pm 20\%$ of the average cost of supply except in the case of government category services like Public Lighting and Public Water Services under LT&HT at the expressed strong opinions of the general public in the Public Hearings conducted. The road map would have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.
3. For example, if the average cost of service is ₹.3/- per unit, at the end of year 2010-11 the tariff for the cross subsidized categories excluding those referred to in para-1 above should not be lower than ₹.2.40 per unit and that for any of the cross-subsidizing categories should not go beyond ₹.3.60 per unit.
4. While fixing tariff for agricultural use, it is imperative to keep in view of usage of ground water resources in a sustainable manner in addition to the average cost of supply component. The tariff for agricultural use may be set at different levels for different parts of the State depending on the condition of the ground water table to prevent excessive depletion of ground water.”

National Electricity Policy (NEP) aims at increased access to electricity, supply of reliable and quality power at reasonable rates, minimum lifeline consumption and financial turnaround of consumer interest. The Commission has considered factors as far as possible which aim at achieving the objectives of NEP while determining the revenue requirement of the P&ED and designing the retail tariff for its consumers. The Commission considered a special treatment to **Kutir Jyoti** connection and **Agricultural** sector. It has also aimed at to raise the per capita consumption of the State from the existing FY 2022-23 level of 349 kWh to 358 kWh by the end of FY 2023-24. The Commission endeavours that the tariff progressively reflects Cost of Supply in a shortest possible period and the government subsidy is reduced gradually. The tariffs have been rationalized with regards to inflation, paying capacity of consumers and avoidance of high tariff shock.

8.2 Tariff Proposed by P&ED and Approved by the Commission

8.2.1 Tariff Categories

In the last year ARR and Tariff Petition of FY 2023-24, P&ED had proposed changes to some existing categories of consumers and the same is being continued in this year 2024-25 also.

Various categories proposed by P&ED for FY2024-25:

The Commission considers in retaining the existing/proposed categories as follows:

- | | | |
|------------------------------------|---|-------------------|
| 1 (a) Kutir Jyoti (LT) | (b) Domestic (LT) | (c) Domestic (HT) |
| 2 (a) Non-Profit Public Service LT | 2 (b) Non-Profit Public Service HT | |
| 3 (a) Commercial LT | 3 (b) Commercial HT | |
| 4 Public Lighting LT | | |
| 5 (a) Irrigation & Agriculture-LT | 5 (b) Irrigation & Agriculture-HT | |
| 6 (a) Public Water Works-LT | 6 (b) Public Water Works-HT | |
| 7 (a) Industrial-LT | 7 (b) Industrial-HT Opt-1 and Opt-2 TOD based Tariff | |
| 8 Bulk Supply HT | 9 Electric Vehicle charging Stations at LT & HT Level. | |

8.2.2 Existing & Proposed Tariff

P&ED in its tariff petition for FY 2024-25 has proposed to fix the same prevailing two-part retail supply tariffs of FY 2023-24 to various categories of consumers resulting in huge revenue

gap of **Rs.211.23Cr**s which is to be provided by the State Government of Mizoram as Tariff subsidy.

The summary of the tariff proposal by P&ED for FY 2024-25 is furnished in table below:

Table 8.1: Existing v/s Proposed Tariff for FY 2024-25 by P&ED

Sl. No.	Type of installation	Existing		Proposed	
		Energy Charges (₹/Month)	Fixed Charges (In ₹)	Energy Charges (₹/Month)	Fixed Charges (In ₹)
		(A)	(B)	(A)	(B)
1	Kutir Jyothi				
i)	First 20 kWh	2.55/kWh	25/Connection	2.55/kWh	25/Connection
ii)	Balance above 20 kWh	3.55/kWh	25/Connection	3.55/kWh	25/Connection
2	Domestic				
A	LT				
i)	First 100 kWh	4.90/kWh	50/Contracted Load in KW	4.90/kWh	50/Contracted Load in KW
ii)	Next 100 kWh	7.10/kWh	50/Contracted Load in KW	7.10/kWh	50/Contracted Load in KW
iii)	Balance above 200 kWh	8.20/kWh	50/Contracted Load in KW	8.20/kWh	50/Contracted Load in KW
B	HT	8.65/kVAh	50/Billing Demand in KVA	8.65/kVAh	50/Billing Demand in KVA
3	Non-Profit Public Purpose				
A	LT				
i)	First 150 kWh	7.60/kWh	60/Contracted Load in KW	7.60/kWh	60/Contracted Load in KW
iii)	Balance above 150 kWh	8.30/kWh	60/Contracted Load in KW	8.30/kWh	60/Contracted Load in KW
B	HT	8.75/kVAh	60/Billing Demand in KVA	8.75/kVAh	60/Billing Demand in KVA
4	Commercial				
A	LT				
i)	First 150 kWh	8.20/kWh	80/Contracted Load in KW	8.20/kWh	80/Contracted Load in KW
iii)	Balance above 150 kWh	8.45/kWh	80/Contracted Load in KW	8.45/kWh	80/Contracted Load in KW
B	HT	8.90/kVAh	80/Billing Demand in KVA	8.90/kVAh	80/Billing Demand in KVA
5	Public Lighting	11.35/kWh	80/Contracted Load in KW	11.35/kWh	80/Contracted Load in KW
6	Irrigation & Agriculture				
A	LT	3.80/kWh	50/Contracted Load in KW	3.80/kWh	50/Contracted Load in KW
B	HT	3.85/kVAh	50/Billing Demand in KVA	3.85/kVAh	50/Billing Demand in KVA
7	Public Water Works				
A	LT	11.10/kWh	90/Contracted Load in KW	11.10/kWh	90/Contracted Load in KW
B	HT	9.85/kVAh	90/Billing Demand in KVA	9.85/kVAh	90/Billing Demand in KVA
8	Industrial				
A	LT				
i)	First 400 kWh	7.10/kWh	80/Contracted Load in KW	7.10/kWh	80/Contracted Load in KW
ii)	Balance above 400 kWh	8.05/kWh	80/Contracted Load in KW	8.05/kWh	80/Contracted Load in KW
B	HT				
	Option - 1	9.05/kVAh	80/Billing Demand in KVA	9.05/kVAh	80/Billing Demand in KVA
	Option - 2 (TOD) usage				
	i) from 06:00 Hrs. upto 17:00 Hrs. (Normal TOD)	10.05/kVAh	80/Billing Demand in KVA	10.05/kVAh	80/Billing Demand in KVA
	ii) from 17:00 Hrs. upto 22:00 Hrs. (Peak TOD)	11.55/kVAh	80/Billing Demand in KVA	11.55/kVAh	80/Billing Demand in KVA
	iii) from 22:00 Hrs. upto 06:00 Hrs. (Off-Peak TOD)	8.55/kVAh	80/Billing Demand in KVA	8.55/kVAh	80/Billing Demand in KVA
9	Bulk Supply	6.85/kVAh	90/Billing Demand in KVA	6.85/kVAh	90/Billing Demand in KVA
10	Electric Vehicle (EV) Charging Station				
A	LT category	8.20/kWh	75/Contracted Load in KW	8.25/kWh	75/Contracted Load in KW
B	HT Category	8.65/kVAh	75/Billing Demand in KVA	8.70/kVAh	75/Billing Demand in KVA

8.2.3 Tariffs Approved by the Commission

(a) Subsidized Tariff Approved for FY 2024-25

The Commission worked out the average rate to be **₹.8.00/kWh** for FY 2024-25 upon

adopting the existing tariffs of FY 2023-24 based on the revised number of consumers, load and energy consumption projected for 2024-25 in their filing submission. Having considered the petition of P&ED Mizoram for approval of Aggregate Revenue Requirement (ARR) and determination of Retail Tariff for supply of energy and having approved the Aggregate Revenue Requirement (ARR) with a gap of ₹.197.23Crore vide **Para 7.8, Table-7.34 of Chapter-7**, as against the proposed gap of ₹.211.23Cr without any tariff hike by P&ED is detailed below:

Table 8.2: Category wise Subsidised Tariff approved by the Commission for FY 2024-25

Sl. No.	Type of installation	Existing Tariff Rates		Approved Tariff Rates	
		Energy (in Rs.)	Fixed (in Rs.)	Energy (in ₹.)	Fixed (in ₹.)
		A	B	A	B
1	Kutir Jyothi (KJ)				
i)	First 20 kWh	2.55/kWh	25/Connection	2.55/kWh	25/Connection
ii)	Balance >20 kWh	3.55/kWh	25/Connection	3.55/kWh	25/Connection
2	Domestic				
A	Low Tension (LT)				
i)	First 100 kWh	4.90/kWh	50/CL/kW	4.90/kWh	50/CL/kW
ii)	Next 100 kWh	7.10/kWh	50/CL/kW	7.10/kWh	50/CL/kW
iii)	Balance > 200 kWh	8.20/kWh	50/CL/kW	8.20/kWh	50/CL/kW
B	High Tension (HT)	8.65/kVAh	50/BD/kVA	8.65/kVAh	50/BD/kVA
3	Non-Profit Public Service (Previously Non-Domestic)				
A	Low Tension (LT)				
i)	First 150 kWh	7.60/kWh	60/CL/kW	7.60/kWh	60/CL/kW
iii)	Balance > 150 kWh	8.30/kWh	60/CL/kW	8.30/kWh	60/CL/kW
B	High Tension (HT)	8.75/kVAh	60/BD/kVA	8.75/kVAh	60/BD/kVA
4	Commercial				
A	Low Tension (LT)				
i)	First 150 kWh	8.20/kWh	80/CL/kW	8.20/kWh	80/CL/kW
iii)	Balance > 150 kWh	8.45/kWh	80/CL/kW	8.45/kWh	80/CL/kW
B	High Tension (HT)	8.90/kVAh	80/BD/kVA	8.90/kVAh	80/BD/kVA
5	Public Lighting	11.35/kWh	80/CL/kW	11.35/kWh	80/CL/kW
6	Public Water Works				
A	Low Tension (LT)	11.10/kWh	90/CL/kW	11.10/kWh	90/CL/kW
B	High Tension (HT)	9.85/kVAh	90/BD/kVA	9.85/kVAh	90/BD/kVA
7	Irrigation & Agriculture				
A	Low Tension (LT)	3.80/kWh	50/CL/kW	3.80/kWh	50/CL/kW
B	High Tension (HT)	3.85/kVAh	50/BD/kVA	3.85/kVAh	50/BD/kVA
8	Industrial				
A	Low Tension (LT)				
i)	First 400 kWh	7.10/kWh	80/CL/kW	7.10/kWh	80/CL/kW
ii)	Balance > 400 kWh	8.05/kWh	80/CL/kW	8.05/kWh	80/CL/kW
B	High Tension (HT)				
	Option-1 (existing)	9.05/kVAh	80/BD/kVA	9.05/kVAh	80/BD/kVA
	Option-2 (TOD) power usage in various durations			Optional	Optional

Sl. No.	Type of installation	Existing Tariff Rates		Approved Tariff Rates	
		Energy (in Rs.)	Fixed (in Rs.)	Energy (in ₹.)	Fixed (in ₹.)
	i) from 06.00 Hrs upto 17.00Hrs (Normal)	10.05/ kVAh	80/BD/ kVA	10.05/kVAh	80/BD/ kVA
	ii) from 17.00 Hrs upto 22.00Hrs (Peak)	11.55/kVAh	80/BD/ kVA	11.55/kVAh	80/BD/ kVA
	iii) from 22.00 Hrs upto 06.00Hrs (Off-peak)	8.55/kVAh	80/BD/ kVA	8.55/kVAh	80/BD/ kVA
9	Bulk Supply	6.85/kVAh	90/BD/kVA	6.85/kVAh	90/BD/kVA
10	Electric Vehicle Charging Stations				
	A. LT category	8.20/kWh	75/CL/KW	8.20/kWh	75/CL/KW
	B. HT Category	8.65/kVAh	75/BD/kVA	8.65/kVAh	75/BD/kVA

Note: CL= Contracted Load, BD = Billing Demand

Note: -Fixed charge for LT Supply is at per kW of Contracted Load except for Kutir Jyoti and for HT Supply it is per kVA of Billing Demand. In the case of Energy charge it is at per kWh for LT supply and at per kVAh for HT supply and all LT high value services ought to have provided with MDI meters.

The above table depicts fixed and energy charge only. However, Tariff Charges with detailed narrative description are given in the Tariff Schedule chapter of this Order.

(b) Approved Full Cost Tariff (FCT)

With the approved ARR for FY 2024-25, the Commission also works out the average cost of supply at the rate of ₹.11.61/kWh. In the event of non-receipt of subsidy in advance in any respective month from the State Government, the Commission considers to indicate the Full Cost Tariff (FCT) for charging the consumer during such month/months is tabulated below:

Table 8.3: Category wise full cost Tariff (i.e., without subsidy) approved by the Commission for FY 2024-25

Sl. No.	Consumer Category	Approved Full Cost Tariff (FCT)	
		Energy Charges (Rs/month)	Fixed Charges (Rs.)
1	Kutir Jyothi		
i)	First 20 kWh	7.77/kWh	25/Connection
ii)	Balance above 20 kWh	10.81/kWh	25/Connection
2	Domestic		
A	Low Tension		
i)	First 100 kWh	9.53/kWh	50/kW of Contracted Load
ii)	Next 100 kWh	13.81/kWh	50/kW of Contracted Load
iii)	Balance above 200 kWh	15.94/kWh	50/kW of Contracted Load
B	High Tension	10.60/kVAh	50/kVA of Billing Demand
3	Non-Profit Public Service		
A	Low Tension		

Sl. No.	Consumer Category	Approved Full Cost Tariff (FCT)	
		Energy Charges (Rs/month)	Fixed Charges (Rs.)
i)	First 150 kWh	7.74/kWh	60/kW of Contracted Load
ii)	Balance above 150 kWh	8.45/kWh	60/kW of Contracted Load
B	High Tension	9.23/kVAh	60/kVA of Billing Demand
4	Commercial		
A	Low Tension		
i)	First 150 kWh	11.56/kWh	80/kW of Contracted Load
ii)	Balance above 150 kWh	11.92/kWh	80/kW of Contracted Load
B	High Tension	9.83/kVAh	80/kVA of Billing Demand
5	Public Lighting	12.14/kWh	80/kW of Contracted Load
6	Public Water Works		
A	Low Tension	12.30/kWh	90/kW of Contracted Load
B	High Tension	10.03/kVAh	90/kVA of Billing Demand
7	Irrigation & Agriculture		
A	Low Tension	11.30/kWh	50/kW of Contracted Load
B	High Tension	8.21/kVAh	50/kVA of Billing Demand
8	Industrial		
A	Low Tension		
i)	First 400 kWh	10.21/kWh	80/kW of Contracted Load
ii)	Balance above 400 kWh	11.58/kWh	80/kW of Contracted Load
B	High Tension (Op-1)	10.09/kVAh	80/kVA of Billing Demand
	High Tension (Op-2)	10.71/kVAh	80/kVA of Billing Demand
9	Electric Vehicle charging Stns (LT)	12.10/kWh	75/kW of Billing Demand
10	Electric Vehicle charging Stns (HT)	10.70/kVAh	75/kVA of Billing Demand
11	Bulk Supply	9.92/kVAh	90/kVA of Billing Demand

(c) Miscellaneous Charges and Important Conditions of Supply

The detail Tariffs including rates for un-metered categories of consumer, miscellaneous charges and Important Conditions of Supply furnished by P&ED are examined and approved as given in the **Tariff Schedule in the Appendix.**

###

9 Wheeling Charges

9.1 Background

Wheeling charges has been calculated in accordance with the Regulation-71 read with Regulation-72 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014. Since, **the P&ED is not maintaining separate accounts for the Distribution Wire Business & Retail Supply Business**; the ARR of the wheeling business is arrived at in accordance with the allocation matrix as prescribed in the Regulation-72 of the said MYT Regulation. The allocation matrix is given as below.

Table 9.1: Allocation Matrix

Sl. No	Particulars	Wire Business (%)	Retail Supply Business (%)
1	2	3	4
1	Cost of Power Purchase	0	100
2	Stand by Charges	0	100
3	Employee Expenses	60	40
4	Administration & General Expenses	50	50
5	Repair & Maintenance Expenses	90	10
6	Depreciation	90	10
7	Interest & Finance Charges	90	10
8	Interest on Working Capital	10	90
9	Interest on Consumer security Deposit	10	90
10	Provision for Bad Debt	0	100
11	Income Tax	90	10
12	Intra- state Transmission Charges	0	100
13	Contribution to contingency reserves	100	0
14	Return on Equity	90	10
15	Non-Tariff Income	10	90

9.2 ARR for Wheeling Business

The ARR of the wheeling Business arrived at in accordance with the above methodology is provided below:

Table 9.2: ARR of Wheeling Business for the FY 2024-25

(Rs. Crs)

Sl. No.	Particulars	FY 2024-25	
		Total	Wheeling
1	2	5	6
1	Cost of Power Purchase	511.67	0.00
2	Cost of Generation	13.51	0.00
3	Cost of Fuel	0.00	0.00
4	Employee Cost	135.59	81.35
5	Administration & General Expenses	4.80	2.40
6	Repair & Maintenance Expenses	10.46	9.41
7	Transmission charges	57.93	0.00
8	Intra- state Transmission Charges	48.46	0.00
9	Interest on Loan	0.00	0.00
10	Depreciation	1.58	1.42
11	Interest on Working Capital	9.93	0.99
12	Return on Equity	0.00	0.00
13	Provision for Bad Debt	0.00	0.00
14	Contribution to Contingency Reserve Fund	0.00	0.00
15	Revenue Requirement	793.92	95.58
16	Non-Tariff Income	11.96	1.20
17	Efficiency Gains	0.00	0.00
18	Net Revenue Requirement (15-16-17)	781.97	94.39

Commissions Analysis

ARR for wheeling business arrived based on approved ARR and methodology vide Table 9.1 supra is as detailed in table below.

Table 9.3: ARR of wheeling business approved by the Commission for FY 2024-25

Sl. No	Particulars	Total ARR	Wires Business	Retail Supply business	Wires ARR	Retail Supply ARR
A	Expenditure	Rs.Crs	(%)	(%)	Rs.Crs	Rs.Crs
1	Cost of Generation	9.16	0%	100%	0	9.16
2	Cost of fuel	0	0%	100%	0	0
3	Cost of power purchase	494.78	0%	100%	0	494.78
4	Inter-State Transmission Charges	57.93	0%	100%	0	57.93
5	Intra-State Transmission charges	45.74	0%	100%	0	45.74
6	O&M Expenses	150.10			92.79	57.31
	Employee Expenses	135.59	60%	40%	81.35	54.24
	Repair & Maintenance expn.	10.46	90%	10%	9.41	1.05
	Administrative & General Expn	4.05	50%	50%	2.03	2.03
7	Depreciation	1.58	90%	10%	1.42	0.16
8	Interest on Loan	0	90%	10%	-	-
9	Interest on Working Capital	0	10%	90%	-	-
10	Interest on consumer Security Deposit	0	10%	90%	-	-
11	Contribn to Contingency Reserve	0	100%	0%	-	-

Sl. No	Particulars	Total ARR	Wires Business	Retail Supply business	Wires ARR	Retail Supply ARR
12	Provision for bad debts	0	0%	100%	-	-
13	Return on Equity	0	90%	10%	-	-
14	Income Tax	0	90%	10%	-	-
	Total Gross ARR - (A)	759.29			94.22	665.08
B	Less: Non-Tariff Income	11.96	10%	90%	1.20	10.76
	Less: Efficiency Gains	2.00	0%	100%	0.00	2.00
	Less: 1/3 rd of surplus in FY 2022-23	15.13	0%	100%	0.00	15.13
	Deductions total – B	29.09			1.20	27.89
	Net Aggregate Revenue Requirement (A-B)	730.20			93.02	637.18

9.3 Wheeling Tariff

Based on the revised ARR, P&ED Mizoram proposes the revised wheeling Tariff at ₹ 1.73/kWh as detailed below:

Table 9.4: Wheeling for the FY 2024-25 filed by P&ED

Sl. No.	Particular	FY2024-25
1	ARR for wheeling function	94.39
2	Total Energy sold	544.79
3	Wheeling Tariff (Rs. /unit)	1.73

Table 9.5: Commission approved Wheeling charges for FY 2024-25

Sl. No.	Particular	FY2024-25
1	ARR for wheeling function (Rs.Crs)	93.02
2	Total Energy sold (MU)	546.79
3	Wheeling Tariff (Rs./unit)	1.70

The P&ED estimated the wheeling Tariff at ₹.1.73/kWh, while the Commission has approved these wheeling charges at ₹.1.70/kWh for FY 2024-25.

9.4 Response from P&ED on Voltage-wise cost of supply

The P&ED had expressed its inability to provide the required data to Commission for determination of Voltage-wise cost of supply in response to the additional information queries called for from P&ED by stating that since functional wise as well as voltage wise segregation of cost, sales and losses are not possible at this juncture.

Thus, the Commission could not determine the Voltage wise cost of supply for FY 2024-25, in the absence of any useful data & information flown from P&ED to make a beginning in this matter.

10 Fuel and Power Purchase Cost Adjustment

10.1 Background

Section 62 sub-section 4 of the Electricity Act, 2003 provides that no tariff or part of any tariff may ordinarily be amended, more frequently than once in every financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified. This provision of the Act requires the Commission to specify the formula for fuel surcharge recovery.

Accordingly, the Commission had issued by JERC for Manipur and Mizoram (Fuel and Power Purchase Cost Adjustment) Regulations, 2023 through Notification No. H.13011/27/12-JERC, dated 25th October, 2023 in this matter for deriving the Fuel Price adjustment. Henceforth, the provisions enshrined in this Regulations shall be invoked in this matter.

11 Transmission function ARR for FY2024-25

11.1 Introduction & Basis of MYT filing

P&ED's tariff determination is now governed by "Joint Electricity Regulatory Commission for Manipur & Mizoram (Multi Year Tariff) Regulations, 2014" (referred to as "MYT Regulations, 2014") read with First Amendment Regulations, 2019 which came into force from 09.06.2014. The MYT Regulations, 2014 provide a framework for calculating tariffs on a cost-plus basis for a period of five years and allow the licensee to recover operational expenses including depreciation, interest on working capital and debt, and return on equity amongst others. The MYT Regulations, 2014 provide for the methodology & principles to be followed for determination of Transmission charges.

Further, the Regulations segregate the items impacting tariffs into controllable and uncontrollable factors. Items that are uncontrollable are passed through to the consumers. The MYT Regulations, 2014 identifies the uncontrollable and controllable parameters as follows:

UNCONTROLLABLE FACTORS: -

The "uncontrollable factors" comprises of the following factors:

- (i). Force Majeure events;
- (ii). Change in law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
- (iii). Variation in the price of fuel and/or price of power purchase according to the FPPPA formula approved by the Commission from time to time; (for distribution function);
- (iv). Variation in the number or mix of consumers or quantities of electricity supplied to consumers;
- (v). Transmission Loss;
- (vi). Variation in market interest rates; (vii) Taxes and Statutory levies;
- (vii). Taxes on Income:
- (viii). Non-Tariff Income;

CONTROLLABLE FACTORS: -

Controllable factors include, but are not limited to the following:

- (i). Variations in capitalization on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;
- (ii). Variation in Interest and Finance Charges, Return on Equity and Depreciation on account of variation in capitalization, as specified in clause (i) above;
- (iii). Variations in technical and commercial losses of Distribution Licensee;
- (iv). (iv) Variations in performance parameters;
- (v). Variations in working capital requirements;
- (vi). Failure to meet the standards specified in the Joint Electricity Regulatory Commission for the states of Manipur and Mizoram (Standard of Performance for Distribution and Transmission Licensees) Regulations, 2010, as amended from time to time except where exempted in accordance with those Regulations;
- (vii). Variations in labour productivity;
- (viii). Variation in operation & maintenance expenses;
- (ix). Variation in Wires Availability.

11.2 OVERALL APPROACH FOR PRESENT FILING**a) Transmission Charges for FY 2024-25:**

P&ED hereby submits its petition for approval of Multi Year Transmission Tariff for the third control period i.e., FY 2023-24 to FY 2027-28. This petition is being submitted in compliance with the provisions of MYT Regulations, 2014. The petitioner has attempted to comply with the various guidelines in the Act and regulations within the limitations of availability of data.

P&ED, Mizoram is filing the petition based on the past performance and expected changes in each element of cost and revenue for the ensuing year. P&ED has studied the past trends and taken cognizance of other internal and external developments to project the likely performance during the FY 2024-25.

b) Approach for the Filing

The subsequent sections provide projection for various expenses as approved by the Hon'ble Commission and the projected expenses for the FY 2024-25.

Projections of various cost components required for determination of Aggregate

Revenue Requirement along with the rationale for estimation of such cost, the philosophy adopted by P&ED for projecting power to be transmitted for the FY 2024-25 has been covered in various sections.

For the purpose of projecting the financial & technical parameters, P&ED has considered its actual performance during FY 2021-22 and FY 2022-23 (H1) as base and has projected the figures for the FY 2024-25 with supporting rationales.

c) AGGREGATE REVENUE REQUIREMENT FOR CONTROL PERIOD I.E. FY 2023-24 TO FY 2027-28

This section outlines the Aggregate Revenue Requirement of the P&ED for FY 2024-25, which takes into consideration:

- i. Actual Performance in FY 2022-23;
- ii. Estimated Performance for FY 2023-24 based on the Actual performance for the period 01.04.2023 to 30.09.2024;
- iii. Projection based on the Actual performance in FY 2022-23 and estimated performance in FY 2023-24;
- iv. Principles outlined in Tariff Regulations of JERC (M&M).

Past trends have been taken into cognizance in case of certain elements as deemed necessary. The present section has been structured in the following manner:

- **Determination of Energy to be transmitted**
 - o Energy input Projections
 - o Loss Trajectory
 - o Energy Balance
- **Proposed Capital Expenditure and capitalization**
 - o **Scheme wise details**
 - Capital Expenditure
 - Asset Capitalization
- **Determination of the Aggregate Revenue Requirement**
 - o Power Generation/Purchase Costs
 - o Transmission Charges
 - o Operation and Maintenance Expenses
 - o Depreciation
 - o Interest charges (including interest on working capital)
 - o Return on NFA
 - o Provision for Bad and Doubtful Debts
 - o Return on Equity

11.3 Capacity allocation and Energy Requirement

The Transmission capacity requirement and allocation to the long term & medium-term users of the license area is determined based on the expected transmission of energy in the area during the period under consideration. The Transmission function of P&ED primarily handles power required by the Distribution function and hence the forecast/projection would completely depend on the sales/energy transmission projection of the distribution function. Accordingly, the transmission system requirement projection by the P&ED for FY2024-25 is as given in the succeeding paragraphs.

The energy requirement of the state is mainly met from outside Generating sources as the State's HEPs generations are seasonal in nature. The share allocation of Mizoram from various Central Sector Generating Stations & Own generation capacity is provided in the tables below. Apart from the allocation from the Central Sector Generating Stations & own sources, Mizoram has to resort to additional short-term purchases through other sources i.e. UI/Deviation over drawal & IEX.

Table 11.1: Power Availability sources/ share (Other than Own Generation)

Sl. No.	Source	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW
A	Central Generating Stations			
I	NTPC			
	Bongaigaon TPS	750	5.415	40.613
	Farakka STPS	1600	0.142	2.268
	Kahalgaon STPS	840	0.142	1.190
	Talcher STPS	1000	0.142	1.417
	NTPC-Total	4190		45.487
II	NHPC			
	Loktak HEP	105	5.020	5.271
	NHPC-Total	105		5.271
III	NEEPCO			
	Kopili HEP	200	4.610	9.220
	Kopili - II HEP	25	6.040	1.510
	Khandong HEP	50	3.940	1.970
	Ranganadi HEP	405	5.700	23.085
	Doyang HEP	75	5.250	3.938
	Pare HEP	110	5.765	6.342
	Tuirial HEP	60	100.00	60.000
	AGBPP	291	5.410	15.743
	AGTPP	135	6.000	8.100
	NEEPCO-Total	1351		129.907
IV	TSECL			

Sl. No.	Source	Plant Capacity (MW)	Licensee's Share in %	Licensee's Share in MW
	B'mura - IV	21	25.00	5.250
	B'mura - V	21	25.00	5.250
	TSECL-Total	42		10.500
V	OTPC			
	Palatana	726	5.785	42.000
	OTPC-Total	726		42.000
VI	Grand Total	6414		233.165

Table 11.1: Power Sources for FY2024-25- Own HEP Generation

Sl. No.	Name of Station	Installed Capacity (MW)
1.	Serlui-A	1.00
2.	Tuirivang	0.30
3.	Khawiva HEP	1.05
4.	Tuipui HEP	0.50
5.	Maicham-I	2.00
6.	Teirei HEP	3.00
7.	Tuipanglui	3.00
8.	Kau-Tlabung HEP	3.00
9.	Lamsial	0.50
10.	Maicham-II	3.00
11.	Tlawva	5.00
12.	Kawlbem	4.00
13.	Serlui-B	12.00
	Total	38.35

Commission Analysis:

To transmit power within the State, P&ED has the following transmission network position indicated for FY 2023-24, but there is no update on the following data:

Table 11.2: Estimated Transmission Network position in FY 2023-24

Sl. No	Particulars	Beginning of the year	Additions in the year	Withdrawal from service	At the end of year
	Type of Line		(ckt-km)	(ckt-km)	(ckt-km)
1	132 Kv	895	22	--	918
2	66 kV	95	2	--	97
3	33 kV	1563	31	--	1594
	11 kV	5667	113		5780
	LT	3478	70		3548
4	33/11 kV SS	68	1	--	69
5	(33/11KV) PTs in MVA capacity	97	2	--	99

11.4 Transmission Loss**Petitioner's submission:**

P&ED has been trying to reduce the transmission losses during recent years. P&ED

submits that the system improvement works executed every year under the plan schemes have also contributed to the reduction of transmission losses. However, it may also be noted that reduction of transmission losses may not be possible beyond a certain level due to topographical conditions and technical limitations. The Department is currently not equipped to measure the exact energy flowing into and out of the state grid at various levels due to the inadequate metering equipment. Therefore, State Transmission losses has been calculated on the basis of the net input energy in the State Transmission System periphery. The transmission losses have been considered at 2% as approved by the Hon'ble Commission in the Tariff Order for the FY 2024-25. The table below provides the calculation of transmission loss for the period.

Table 11.3: Transmission Loss

Sl. No.	Description	Unit (MU)/%	Approved in T.O 28.03.23	Proposed by P&ED	Deviation
1	Energy available at State Trans. Grid including local generation	Mus	663.36	709.27	45.91
2	Transmission Loss %	%	2%	2%	0.00
3	Transmission Loss (1 X 2)	MUs	13.27	14.19	0.92
4	Net Energy available for sale at Transmission level (1 - 3)	MUs	650.09	695.08	44.99

Commission Analysis:

The above tabulated data on transmission loss is an outcome of the commission Tariff Order of FY 2023-24 and P&ED has not made any additional contribution to the data for FY2024-25. As seen from the **Form No. P4 – Physical Statistics of the network**, the data pertaining to Number of Interface meters for 0.5 & 0.2 accuracy class meters has now indicated meter installed number data deliberately. Obviously, the P&ED has no other option but to bank upon the Transmission Loss for all the 5 years in MYT at 2% transmission loss levels only and no progress has ever attempted to depict in the MYT filing for Transmission function is very much perturbing. There is no action plan indicated as to how they manage to achieve this task of 2% transmission loss constantly and measure the loss accurately. Otherwise, the loss over and above 2% would get added to distribution loss and reflect their performance badly on distribution function ultimately.

The Commission accordingly approves transmission loss at 2.00% for FY 2024-25.

11.5 Capital Expenditure & Capitalization

P&ED has undertaken significant capital expenditure during the previous years and has plans to implement schemes for development of infrastructure during the FY 2024-25. The infrastructure of P&ED is insufficient to cater to the present & projected load and hence to meet the increasing demand, capital expenditure is absolutely necessary.

The objective of incurring the capital expenditure is to continue the up-gradation and strengthening of the transmission network to meet the desirable standards of performance and provide better network reliability and sustainable performance.

Commission Analysis:

The above statement has no relevance to the actual performance being noticed in the form of loss reduction strategies and still unable to provide accurate transmission losses sustained in the state with authenticity. They could not even specify the number of interface meters installed in the transmission network right from FY 2021-22 onwards. Where all the investments made so far in transmission activity had not given any fruitful results and needs thorough scrutiny. The capital investments seem to be not used for intended purpose. This is something very much causing displeasure to the Commission to note this window dressing performance on paper only.

11.6 Aggregate Revenue Requirement

Based on the provisions of the Tariff Regulations, the estimate for the Aggregate Revenue Requirement (ARR) would consist of the following elements:

- Return on Equity
- Interest and Finance charges on Loan Capital
- Depreciation
- Operation and Maintenance Expenses
- Interest on working capital

The above Aggregate Revenue Requirement is netted off for Non-Tariff Income for determining the net ARR for transmission function of P&ED.

11.7 Return on Equity

Petitioner's submission

Regulation 26 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 read with Regulation 22 provides the methodology for calculation of the Interest & Finance Charges. It provides that 30% of the capital employed shall be considered as equity and balance 70% is to be considered as loan.

In this regard it is submitted that the P&ED being a Government Department, the entire capital employed till date has been funded through fund infusion by the Government in form of budgetary support which are generally **in the nature of grants and aids through financial institutions.**

In view of the above, the financial principal of debt-equity ratio of 70:30 and return on equity thereon as provided in regulation 26 read with regulation 22 may not be applicable to the P&ED. **Therefore P&ED has not considered return on equity while computing the ARR.**

Commission's analysis

Keeping in view of the above highlighted submission of the Licensee, **the Commission too had not considered any ROE for transmission function** separately for FY 2024-25 as has been followed as a convention being adopted in the earlier years also as the same is considered in the distribution function itself.

11.8 Interest and Finance charges

Petitioner's submission

Regulation 27 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 provides the methodology for calculation of the Interest & Finance charges. It provides that 30% of the capital employed shall be considered as equity and balance 70% is to be considered as loan. The regulation provides for normative loan irrespective of actual loan availed by the utility. Repayment of loan and interest are also to be considered on normative basis.

In this regard it is submitted that the P&ED being a Government Department, the entire capital employed till date has been funded through fund infusion by the

Government inform of budgetary support which are generally in the nature of grants.

In view of the above, the financial principal of debt-equity ratio of 70:30 as provided in regulation 27 read with regulation 22 may not be applicable to the P&ED. **Therefore P&ED has not considered Interest and finance charges while computing the ARR.**

Commission's analysis

Keeping in view of the above submission by the Licensee duly highlighted, the Commission **too did not consider any Interest and Finance charges** for transmission function for FY 2024-25 onwards as has been following as a convention applied even in the past as the same is once again considered fully in the distribution ARR function itself.

11.9 Gross Fixed Assets and Depreciation

11.9.1 Gross Fixed Assets

Petitioner's submission

P&ED has projected the Gross Fixed Asset in accordance with the Regulation 23 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014.

It is submitted that opening value of gross fixed assets (GFA) for the FY 2021-22 has been taken from Fixed Asset Register as on 31.03.2022 & the audited accounts for the FY 2022-23 and the same has been increased by estimated addition during the FY 2023-24. Thereafter, planned additions during the FY 2024-25 have been considered and accordingly, GFA has been computed for the FY 2024-25. The GFA movement is given in the table below:

Table 11.4: Gross Fixed Asset movement projected by P & ED

	(₹. Cr)		
Particulars	Approved in T.O 28.03.2023	Proposed by P&ED	Deviation
Opening Balance	164.64	329.39	164.75
Additions during the year	2.40	0.00	-2.40
Closing Balance	167.04	329.39	162.35

Commission's analysis

The Opening balance of transmission functional wise net block break-up of fixed assets as per FY 2021-22 audited balance sheet is only 151.3212 Crs and for FY 2022-23 is Rs.141.28Crs hence it can't be ₹. 329.39 crs as closing in FY2022-23 which is opening for FY2023-24 and how the P&ED is able to figure out functional wise OCFA figure without any pragmatic approach and basic record. Besides, as seen from the form-F2b (Investment Plan-Master) the transmission related investment during 2022-23 to FY2024-25 is Nil as there is no investment for 2nd evacuation line of 60MW Tuirial HEP. Hence, the details so provided for the period is not acceptable in the absence of verifiable authentic data from Licensee. Basing on this the depreciation cannot be allowed on arbitrary figure, which are varying from one year to another inconsistently. The Commission can't approve the growth of GFA for MYT period as per the details indicated in the above table by the Licensee Despite, the liberal approvals of CAPEX investment for strengthening the transmission network in each year, the transmission losses are still not yet achieved at desirable level and the losses are only presumed but not authenticated by the meter record.

The Licensee still expresses his inability of accurately measure energy inflows and outflows at the State Grid on account of metering equipment shortage which cannot be considered as an excuse at this juncture and the same excuse is being repeated in the previous filings also. Besides, the licensee has not specifically indicated any action plan to tackle this perpetual problem. This kind of attitude of the licensee is very much displease the Commission and it shall come-out with a suitable investment on this aspect for Commission's approval after seeking desirable fund approvals from the State Government also. Failing which, the Commission feels it high time to implement the Efficiency Gains concepts and adopt a suitable quantum of cut/rebate in their ARR in future ARRs which may also include the true-ups being given from FY 2021-22 onwards in this year onwards in this matter.

11.9.2 Depreciation

Petitioner's submission

P&ED has projected the depreciation in accordance with the Regulation 28 of The Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014.

The Depreciation as approved by the Hon'ble Commission & proposed by the P&ED Mizoram is in the Table below:

Table 11.5: Depreciation for MYT period projected by P & ED

(Rs. Cr)

Particulars	Approved in T.O 28.03.2023	Proposed by P&ED	Deviation
Opening GFA	164.64	329.39	164.75
Additions During the Year	2.40	0.00	-2.40
Closing GFA	167.04	329.39	162.35
Average GFA	165.84	329.39	162.35
Avg. Depreciation	3.13	3.15	0.02
Total depreciation	5.19	10.37	5.17
10% Depreciation	0.52	1.04	0.52

Commission's Analysis

The Commission find the Opening GFA balance as on 31.03.2023 is only **Rs.141.28Cr** (as per schedule-20 of audited annual accounts of FY 2022-23) and there were no additions to assets took place in FY2023-24. Hence, the opening GFA figure so stated by P&ED can't be Rs.329.39Cr as it could not be corroborated with financial accounts. Hence, the above values are disagreed to and Commission wishes to adopt the MYT approved values of Rs.0.519Cr pertaining to FY2024-25 and not the above filing figures.

While the Capital subsidy received so far by the Entity when compared with the GFA possessed after due consideration of work-in progress amount based on the Audited balance sheet of FY 2022-23 the own contributions by the entity is only to the extent of 0.069% of OCFA existing. Hence, the allowing of depreciation at 10% of depreciation amount towards own funds is far higher than the entitlement. Hence, no depreciation is considered for transmission function.

11.10 Operation and Maintenance expenses

Petitioner's submission

Operation & Maintenance expenses comprise of the following heads of expenditure viz.

- Employee Expenses
- Administration & General Expenses
- Repairs & Maintenance Expenses

The operation & maintenance expenses have been arrived at in accordance with the Regulation 62.5 of The Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014. It is submitted that the P&ED Mizoram is an integrated utility carrying out the three functions of Generation, Transmission & Distribution and the complete segregation of function wise accounts has not been done yet. In view of the above the operation & maintenance expenses has been allocated among the various functions on the principle allowed by the Hon'ble Commission in the Tariff order for the FY 2014-15.

The allocated actual expenses for the FY 2022-23 has been considered as the operation & maintenance expenses and the same has been escalated at the escalation factor of 5.72% to arrive at the operation & maintenance expenses for the FY 2023-24. The operation & maintenance expenses for the FY 2024-25 has been determined by further escalating the estimated operation & maintenance expenses for the FY 2023-24 by the escalation factor of 5.72% YOY.

Accordingly, details of operation & maintenance expenses viz. Employee Expenses, Administration & General Expenses & Repairs & Maintenance Expenses are provided in the subsequent sections.

11.10.1 Employee Expenses

The expense head of employee cost consists of salary and allowance, bonus, Leave Travel Concession (LTC) & Honorarium etc. The Employee Expenses as approved by the Hon'ble Commission & proposed by the P&ED Mizoram is given in the table below.

Table 11.6: Employee Expenses projected by P&ED

Particulars	Rs.Crores		
	Approved in T.O 28.03.2023	Proposed by P&ED	Deviation
Employee Expenses	45.14	38.74	-6.40

Commission Analysis:

The employee cost now approved for FY 2024-25 is Rs.38.74Crs as the same value is preferred by P&ED.

Moreover, in the past P&ED was initially claiming Transmission ARR and later on it claims all its cost elements under Distribution function itself and discarding the earlier ARR amount preferred. This means the ARR filing for Transmission is done for the sake of it to file an ARR only.

The projection so made by the Licensee is made without the break-up details of employee strength existing in transmission function and many a time failed to provide the break-up in the past. Hence, the transmission employee cost is not basing on number of employees. However, the commission approves the following amount for transmission function subject to reducing these values finally in finalizations of distribution function as a whole.

Table 11.7: Employee Expenses now approved by commission for FY2024-25

Financial year	Now revised Employee cost
	₹.Crs
Employee Cost	38.74

11.10.2 Administration and General Expenses**Petitioner's submission**

A&G expenses comprise of the following broad subheads of expenditure, viz.

- Domestic Travelling Expenses
- Office Expenses
- Legal, Regulatory & Consultancy Fees
- Insurance etc.

The expense head of A&G expenses consists of Domestic Travelling Expenses, Office Expenses, Legal Regulatory & Consultancy Fees & Insurance etc. The A&G Expenses as approved by the Hon'ble Commission & proposed by the P&ED Mizoram is given in the table below.

Table 11.8: Administrative and General Expenses projected for FY 2024-25**(Rs. Cr)**

Particulars	Approved in T.O 28.03.2023	Proposed by P&ED	Deviation
Administration & General Expenses	1.54	1.37	-0.17

Commission's analysis

The Commission's earlier approved Administration and General Expenses for FY2024-25 of Rs.1.54Cr is reduced to **Rs.1.37Cr**s as preferred by the Licensee.

11.11 Repairs and Maintenance expenses**Petitioner's submission**

P&ED Mizoram has been undertaking various Repairs and Maintenance activities as a step towards improvement of systems, reduction in breakdowns, reduction in response time and increasing preventive maintenance. The R&M Expenses as approved by the Hon'ble Commission & proposed by the P&ED Mizoram is given in the table below.

P&ED has projected the R&M expenses in accordance with the Regulation 89.6 of The Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 and the methodology described in the para 4.4. It is therefore kindly requested that Hon'ble Commission may approve the R&M expenses as projected.

Table 11.9: Repair and Maintenance expenses projected by P&ED**(₹. Cr)**

Particulars	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
Repair & Maintenance Expenses	6.92	5.63	-1.29

Commission's analysis:

The Commission approves R&M Expenses for FY 2024-25 at Rs.5.63Cr as against the MYT approved value of Rs.6.92Cr so projected by P & ED indicated in the above table.

These values will be reduced from the distribution figure finalization.

Table 11.10: Overall summary of O&M Expenditure for the MYT Period by P&ED**(₹. Crore)**

Sr. No.	Particulars	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Employee Expenses	45.14	38.74	-6.40
2	Administration & General Expenses	1.54	1.37	-0.17

Sr. No.	Particulars	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
3	Repair & Maintenance Expenses	6.92	5.63	-1.29
4	Total O&M Expenses	53.60	45.74	-7.86

Table 11.11: Summary of O & M expenses Approved by Commission for Transmission

(₹. Crore)

Sl. No.	Particulars	Now approved by Commission
1	Employee Expenses	38.74
2	Administration & General Expenses	1.37
3	Repair & Maintenance Expenses	5.63
4	Total O&M Expenses	45.74

To the extent of above approved O&M expenses amount for Transmission function, there will be equal amount of reduction in the O&M expenses for Distribution besides the Generation function cost of O&M also as there is no proper assessment of this cost each function wise from the actual values of FY 2022-23.

11.12 Interest on Working Capital

Petitioner's submission

The P&ED has computed the Interest on Working Capital for the FY 2024-25 in accordance with the Regulation 29.2 of The Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014.

As per the Regulations, for the purpose of computation of normative working capital and Interest on working capital, the components of working capital are as follows:

- Operation and maintenance expenses for one month; plus
- Maintenance spares at one (1) percent of the historical cost escalated at 6% from the date of commercial operation; plus
- Receivables equivalent to one (1) month of the expected revenue from sale of electricity at the prevailing tariffs; minus
- Amount held as security deposits under clause (a) and clause (b) of sub-section (1) of Section 47 of the Act from consumers except the security deposits held in the form of Bank Guarantees;

Interest is required to be calculated at a rate equal to the State Bank Advance Rate (SBAR) as on 1st April of the financial year in which the Petition is filed.

Interest on working capital has been calculated accordingly and detailed in the table below:

Table 11.12: interest on Working Capital projected by P & ED for 2024-25

(₹. Cr)

Sl. No.	Particulars	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	O&M Exp for 1 Month		3.81	3.81
2	Maintenance Spares @1% of historical Cost escalated @6% from COD		3.49	3.49
3	One Month Receivables		4.04	4.04
4	Total		11.34	11.34
5	Rate of Interest		14.85%	0.15
6	Interest for the Year	0.00	1.68	1.68

Commission's Analysis

The Commission **disapproves Interest on Working Capital claimed** for FY2024-25 though projected by P&ED as there are no short-term loans have drawn during the past also to claim this element. It will only be considered on having actually availing Short-term loans in future during true-up time. This is the same analogy applicable to Distribution function also in each year.

11.13 Contribution to Contingency Reserve Fund

Regulation 62.7 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 provides that the Transmission licensee shall be allowed an annual appropriation of 0.5% of the original cost of fixed assets towards Contingency Reserve. It further provides that the maximum cumulative provision under the Contingency Reserve shall not exceed 5% of original cost of fixed assets. In our current scenario it is very difficult to create this type of funds. So, the P&ED Mizoram has not proposed any contingency reserve fund for the FY 2024-25. The Contribution to Contingency Reserve Fund as approved by the Hon'ble Commission & proposed by the P&ED Mizoram is given in the table below.

Table 11.13: Contribution to Contingency Reserve Fund

Particulars	(₹. In Crores)		
	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
Opening GFA	164.64	329.39	164.75
Additions During the Year	2.40	0.00	-2.40
Closing GFA	167.04	329.39	162.35
Rate	0.25	0.25	0.00
Total Contribution to Contingency Reserve Fund	0.41	0.00	-0.41

Commission's Analysis

As per the regulation, for the purpose of contribution to contingency Reserve fund, the rate to be adopted is @0.25% on the Opening value of OCFA but not on the average figure. Now any contribution to Contingency Reserve Fund should be based on @ 0.25% instead of 0.5% as proposed by the Licensee.

However, the P&ED expressed its inability to invest the contribution amount so collected in a non-drawl bank account for creation of contingency Reserve in the case of distribution function, hence the same treatment is applied to transmission also. Like in distribution function, any amount approved earlier is withdrawn fully. So is the treatment even here and the values earlier approved under MYT Order will be withdrawn and Nil amount is approved for this cost element in FY 2024-25.

11.14 Non- Tariff Income**Petitioner's Submission**

Regulation 63 of The Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014 provides that the Non-Tariff income shall be deducted from the ARR in calculating the Tariff. Non-tariff income includes revenue from rent on land and building, statutory investments, interest on delayed payments and other charges. The P&ED Mizoram has not considered Non-Tariff income for computing the ARR of the transmission function for the FY 2024-25.

Commission's Analysis

P & ED is an integrated utility. As such, Non-Tariff income so collected is being entirely accounted for under distribution business. The P&ED is conveniently not projecting NTI for Transmission activity, However, Non- Tariff income has not been

considered for the transmission business by the Commission also for FY 2024-25 now.

11.15 Aggregate Revenue Requirement

Based on the above projections, the ARR for the transmission function of P&ED Mizoram for the FY 2024-25 works out as under:

Table 11.14: Aggregate Revenue Requirement filed by the P&ED

(Rs. Cr)				
Sl. No.	Particulars	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Return on Equity	0.00	0.00	0.00
2	Interest & Finance Charges	0.00	0.00	0.00
3	Depreciation	0.52	1.04	0.52
4	O&M Expenses	53.60	45.74	-7.86
5	Interest on Working Capital	0.00	1.68	1.68
6	Contribution to Contingency Reserve Fund	0.41	0.00	-0.41
7	Non-Tariff Income	0.00	0.00	0.00
8	Income from Other Business	0.00	0.00	0.00
	Total	54.53	48.46	-6.07

P&ED Mizoram requests the Hon'ble Commission to kindly consider the submission and approve the ARR for the FY 2024-25 in accordance with the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014.

Commission Analysis:

Table 11.15: Transmission ARR approved by Commission for FY2024-25

(₹. Crores)				
Sl. No.	Particulars	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Now approved for 24-25
1	Return on Equity	0.00	0.00	0.00
2	Interest & Finance Charges	0.00	0.00	0.00
3	Depreciation	0.52	1.04	0.00
4	O&M Expenses	53.60	45.74	45.74
5	Interest on Working Capital	0.00	1.68	0.00
6	Contribution to Contingency Reserve Fund	0.41	0.00	0.00
7	Non-Tariff Income	0.00	0.00	0.00
8	Income from Other Business	0.00	0.00	0.00
	Total	54.53	48.46	45.74

11.16 Transmission Charges per Unit**Petitioner's submission**

Based on the above projections, the ARR for the transmission function of P&ED Mizoram for the FY 2024-25 works out as under:

Table 11.16: Transmission Charges for FY2024-25

Sl. No.	Particulars	Unit	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram
1	Aggregate Revenue Requirement	₹ in Crores	54.53	48.46
2	Total MW allocation	MW	248.14	271.52
3	Total transmitted energy (less: external loss)	MU	683.17	695.08
4	Transmission Charges	₹/MW/Month	183132.51	148736.41
5	Transmission Charges	₹/MW/Day	6020.79	4889.96
6	Transmission Tariff	₹/kWh	0.80	0.70

P&ED Mizoram requests the Hon'ble Commission to kindly consider the submission and approve the Transmission Charges for the FY 2024-25 in accordance with the Joint Electricity Regulatory Commission for Manipur and Mizoram (Multi Year Tariff) Regulations, 2014

Commissions Analysis

The Commission has calculated the transmission tariff with approved data as detailed in the table below.

Table 11.17: Transmission charges approved by the Commission for FY 2024-25

Sl. No.	Particulars	Proposed by P&ED Mizoram	Now Approved for 2024-25
1	Net ARR (Crores)	48.46	45.74
2	Total Allocation (MWs)	271.52	271.52
3	Total Energy Transferred at State. Periphery (MUs)	695.08	642.15 (&)
4	Transmission Charges (Rs. /MW/ month)	148736.41	140382.54
5	Transmission Charges (Rs. /MW /day)	4889.96	4615.32
6	Transmission Tariff (Rs. /kWH)	0.70	0.712

& - The energy indicated above is after due adjustment of the State-Owned energy net quantum

12 Generation Function ARR for FY 2024-25

12.1 Background

P&ED Mizoram's tariff determination is now governed by "Joint Electricity Regulatory Commission for Manipur & Mizoram (Multi Year Tariff) Regulations, 2014" (referred to as "MYT Regulations, 2014") read with First Amendment Regulations, 2019 which came into force from 09.06.2014. However, Regulation 35.1 of the MYT Regulations, 2014 provide as follows:

"The Regulations specified in this Chapter shall apply for determining the tariff for supply of electricity to a Distribution Licensee from conventional sources of generation and hydro generation stations of capacity more than 25 MW:

Provided that determination of tariff for supply of electricity to a Distribution Licensee from Renewable Energy sources of generation shall be in accordance with terms and conditions as stipulated in the relevant Regulations/Orders of the Commission."

The Joint Electricity Regulatory Commission for Manipur & Mizoram in exercise of powers conferred under Section 61 read with Section 181 (2) of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, issued Joint Electricity Regulatory Commission for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 vide notification dated 31.05.2010. Subsequently the Regulation was amended to incorporate certain changes and notified as the Joint Electricity Regulatory Commission for Manipur & Mizoram (Terms and Conditions for Tariff Determination from Renewable Energy Sources) (First Amendment) Regulations, 2014.

Regulation 3 of the above regulations provides as follows:

"These regulations shall apply in all cases where tariff, for a generating station or a unit thereof based on renewable sources of energy, is to be determined by the Commission under Section 62 read with Section 86 of the Act.

Provided that in cases of wind, small hydro projects, biomass power, non-fossil fuel-based cogeneration projects, solar PV and solar thermal power projects, these regulations shall apply subject to the fulfilment of eligibility criteria specified in

regulation 4 of these Regulations.”

Further, regulation 4(2) provides that these regulations shall apply to the Small Hydro Project with installed capacity lower than or equal to defining the eligibility criteria for applicability of the Renewable Energy sources regulations 25 MW. The extract of the regulation is reproduced below:

“Small hydro project – located at the sites approved by State Nodal Agency/ State Government using new plant and machinery, and installed power plant capacity to be lower than or equal to 25 MW at single location”.

The Power & Electricity Department, Government of Mizoram owns 12 Small Hydro Projects with installed capacity below 25 MW. Accordingly, the P&ED Mizoram has submitted the proposal for determination of tariff as per The Joint Electricity Regulatory Commission for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 read along with First Amendments Regulations, 2014.

12.2 Generation Charges for FY 2024-25

P&ED Mizoram hereby submits its petition for approval of Generation Charges for the FY 2024-25. This petition is being submitted in compliance with the provisions of Renewable Energy Sources Tariff Regulations, 2010 and its subsequent amendments. The petitioner has attempted to comply with the various guidelines in the Act and regulations within the limitations of availability of data.

P&ED Mizoram is filing the petition based on the past performance and expected changes in each element of cost and revenue for the ensuing year. P&ED Mizoram has studied the past trends and taken cognizance of other internal and external developments to estimate the likely performance during the FY 2024-25

12.3 Details of SHPS (Small Hydro Power Stations)

Details of Own SHPS are provided in the table below.

Table 12.1: Details of Small Hydro Power Station considered by P & ED

Sl. No.	Name of Station	Installed Capacity (MW)	Date of COD
1	Serlui- 'A'	1.00	24.04.1984
2	Tuirivang	0.30	14.08.1989
3	Khawiva	1.05	08.12.1988
4	Tuipui	0.50	15.12.1991
5	Teirei	3.00	12.10.1999
6	Kau-Tlabung	3.00	05.05.2005
7	Maicham-I	2.00	05.01.1996
8	Tuipanglui	3.00	17.12.2004
9	Lamsial	0.50	26.08.2008
10	Maicham-II	3.00	11.11.2009
11	Tlawva (New)	5.00	13.05.2022
12	Kawlbem (New)	4.00	15.12.2022
12	Serlui- 'B'	12.00	Not yet Commissioned
	Grand Total	38.35	

In this regard it is submitted that since the Serlui 'B' SHP has not been commissioned till date the same has not been considered for the calculation of Capital cost, ARR & Generation Tariff thereof in accordance with The Joint Electricity Regulatory Commission for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 read along with First Amendments Regulations, 2014.

However, the SHP is generating infirm power and the same is being injected in the state grid. The rate at which the energy supplied by the SHP is to be considered while arriving at the total cost of generation has been dealt with separately in the subsequent section of this submission.

Further, it is submitted that P&ED Mizoram is not operating the Khawiva SHP, Tuipui SHP, Teirei SHP & Kau Tlabung SHP and these SHPs except Teirei SHP have been operated and managed by M/s Amazon Engineering Pvt. Ltd. and, Teirei SHP is operated and managed by M/s Assam Petroleum Ltd.

However, P&ED MIZORAM has procured the energy generated from the above SHPs and has incorporated the same in the own generation for the year.

12.4 Aggregate Revenue Requirement for FY 2024-25

This section outlines the Aggregate Revenue Requirement of the P&ED Mizoram for the FY 2024-25, which takes into consideration:

- a) Actual Performance in FY 2022-23;
- b) Estimated Performance for FY 2023-24 based on the Actual performance for the period 01.04.2023 to 30.09.2024;
- c) Projection based on the Actual performance in FY 2022-23 and estimated performance in FY 2023-24;
- d) Principles / Normative Parameters outlined in Tariff Regulations of JERC (M&M).

Past trends have been taken into cognizance in case of certain elements as deemed necessary. The petition has been structured in the following manner:

SHp details

- Installed capacity & COD
- Capital Cost
- Design Energy

Proposed Capital Expenditure and capitalization

- Scheme wise details
- Capital Expenditure
- Asset Capitalisation

Determination of the Aggregate Revenue Requirement

- Loan & Finance Charges
- Depreciation
- Return on Equity
- Interest on Working Capital
- Operation and Maintenance Expenses

12.5 Capital Cost

Regulation 28 of the JERC for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 provides that the capital cost of Small Hydro Projects shall be determined as per the normative parameters defined in the regulation. The extract of the regulation is reproduced

below:

- (1) The normative capital cost for small hydro projects during first year of Control Period (FY 2012-13) shall be as follows:

Table 12.2: Normative Capital Cost

Sl. No	Project Size	Capital Cost (Rs. in Lakh /MW)
1	Below 5 MW	770
2	5 MW to 25 MW	700

- (2) The capital cost for subsequent years shall be determined on the basis of indexation formula as outlined under Regulation 29.

Further, regulation 29 provides the Capital Cost Indexation Mechanism. The provisions of the regulation are reproduced below:

The following indexation mechanism shall be applicable in case of small hydro power projects for adjustments in capital cost over the Control Period with the changes in Wholesale Price Index for **Steel and Electrical Machinery**.

$$CC(n) = P\&M(n) * (1+F1+F2+F3)$$

$$P\&M(n) = P\&M(0) * (1+d(n))$$

$$d(n) = [a * \{(SI(n-1)/SI(0)) - 1\} + b * \{(EI(n-1)/EI(0)) - 1\}] / (a+b)$$

Where,

CC(n) = Capital Cost for nth year

P&M(n) = Plant and Machinery Cost for nth year

P&M(0) = Plant and Machinery Cost for the base year

Note: - **P&M(0)** is to be computed by dividing the base capital cost (for the first year of the control period) by $(1+F1+F2+F3)$ i.e.

Table 12.3: Base Capital cost

Small hydro Project	Base Capital Cost (Rs. Lakh/MW)	Factor (1+F1+F2+F3)	P&M (0) (Rs. Lakh/MW)
SHP (<5MW)	770	1.40	550
SHP (5 - 25 MW)	700	1.40	500

d(n) = Capital Cost escalation factor for year (n) of Control Period

SI(n-1) = Average WPI Steel Index prevalent for calendar year (n-1) of the Control Period

SI(0) = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period i.e. **April,2011 to December March,2012**

EI(n-1) = Average WPI Electrical Machinery Index prevalent for calendar year (n-1) of the Control Period.

EI(0) = Average WPI Electrical and Machinery Index prevalent for calendar year at the beginning of the Control Period i.e. **April,2011 to December March,2012**

a = Constant to be determined by Commission from time to time, (In default it is 0.6), for weightage to **Steel Index**.

b = Constant to be determined by Commission from time to time, (In default it is 0.4), for weightage to **Electrical Machinery Index**.

F1 = Factor for Land and Civil Work (0.16)

F2 = Factor for Erection and commissioning (0.10)

F3 = Factor for IDC and Financing Cost (0.14)

Capital Cost of the SHPS has been calculated in accordance with the above defined norms and mechanism. The calculation of index capital cost is detailed below.

Table 12.4: Indexed Capital Cost

Sl. No.	Factors	Reference Year	Value
i	d(n)	2023-24	
ii	SI(n-1)	2022-23	136.00
iii	SI(0)	2011-12	100.00
iv	EI (n-1)	2022-23	128.80
v	EI (0)	2011-12	100.00
vi	a		0.60
vii	b		0.40
viii	F1+F2+F3		0.40
ix	P&M(0)	<5 MWs	550.00
X	P&M(0)	5MW to 25 MWs	500.00

For <5 MW Category

$$\begin{aligned} d(n) &= [a*\{(SI(n-1)/SI(0))-1\}+b*\{(EI(n-1)/EI(0))-1\}]/(a+b) \\ &= [0.6\{(136.00/100.00)-1\}+0.40\{(128.80/100.00)-1\}]/(0.60+0.40) \\ &= \mathbf{0.331} \end{aligned}$$

$$\begin{aligned} P\&M(n) &= P\&M(0)*\{1+d(n)\} \\ &= 550\{1+ 0.331\} \\ &= \mathbf{732.16} \end{aligned}$$

$$CC(n) = P\&M(n)*(1+F1+F2+F3)$$

$$= 732.16 (1+0.40)$$

$$= \mathbf{1025.02}$$

For 5 to 25 MW Category

$$\begin{aligned} d(n) &= [a*\{(SI(n-1)/SI(0))-1\}+b*\{(EI(n-1)/EI(0))-1\}]/(a+b) \\ &= [0.6*\{(136/100.00)-1\}+0.40*\{(128.80/100.00)-1\}]/(0.60+0.40) \\ &= \mathbf{0.331} \end{aligned}$$

$$\begin{aligned} P\&M(n) &= P\&M(0)*\{1+d(n)\} \\ &= 500\{1+ 0.331\} \\ &= \mathbf{665.60} \end{aligned}$$

$$\begin{aligned} CC(n) &= P\&M(n)*(1+F1+F2+F3) \\ &= 665.60 (1+0.40) \\ &= \mathbf{931.84} \end{aligned}$$

Therefore, the indexed cost of project per MW is ₹. **1025.02 Lakhs** for project belongs to <5MW category & Rs.931.84 Lakhs for projects belongs to 5 and up to 25 MW category. The indexed capital costs of the 11 SHPs are accordingly calculated below.

Table 12.5: Capital Cost projected by P & ED for SHPS for FY2022-23
(₹. Crs)

Sl. No.	Name of Station	Installed Capacity (MW)	Capital Cost (@Rs.1025.02/931.84 Lakhs/MW)
1	Serlui 'A'	1.00	10.25
2	Tuirivang	0.30	3.08
3	Khawiva	1.05	10.76
4	Tuipui	0.50	5.13
5	Teirei	3.00	30.75
6/8	Kau-Tlabung	3.00	30.75
7	Maicham-I	2.00	20.50
8	Tuipanglui	3.00	30.75
9	Lamsial	0.50	5.13
10	Maicham-II	3.00	30.75
11	Tlawva	5.00	46.59
12	Kawlben	4.00	4100
	Grand Total	26.35	265.94

Commission's Analysis

After having carefully observed, leaving aside the three (3) plants leased to **M/s. Amazon Engineering PVT Ltd** and the Teirei-3MWs SHP now stated to have leased out to by **M/s. Assam Petroleum Ltd**, the effective remaining SHPs in operation are the following tabulated

plants with installed capacity of 26MWs only but not the grand figure 38.35MWs as because there are some old plants with installed capacity of 4.80MWs are not generating any power.

The following table clearly depict the power station now in effective operation.

Sl. No.	SHP Name	Inst. Cap (MWs)	COD Date	Present Plant Status
A - SHP Power Plants not Generating Power				
1.	Serlui-A SHP	1.00	24.04.1984	Out of Commission
2.	Tuirivang SHP	0.30	14.08.1989	---- do ----
3.	Tuipanglui SHP	3.00	17.12.2004	No generation
4.	Lamsial SHP	0.50	26.08.2008	---- do ----
5.	Lengpui (diesel)	0.50	No data	Out of Commission
	Subtotal (A)	5.30		Nil Energy
B - Effective Power producing Small Hydro Plants (SHP)				
5.	Maicham-I	2.00	05.01.1996	Generating power
6.	Maicham-II	3.00	11.11.2009	-- do --
7.	Tlawva	5.00	13.05.2022	---- do ----
8.	Kawlbem	4.00	15.12.2022	---- do ----
9.	Serlui-B	12.00	Awaiting COD	Infirm power
	Subtotal (B)	26.00		Power is being Generated
C - SHPs managed by outside Agencies				Name of Pvt Agency
10.	Khawiva SHP	1.05	08.12.1988	Amazon Engg.
11.	Tuipui SHP	0.50	15.12.1991	-- do --
12.	Kau Tlabung SHP	3.00	05.05.2005	-- do --
13.	Teirei SHP	3.00	12.10.1999	Assam Petroleum
	Subtotal (C)	7.55		
Grand Installed Capacity		38.85	Installed Capacity shown in ARR	

Thus, Commission felt relevant to considers Capital costs of the remaining effective four Hydro stations (includes omitted new plant Kawlbem) which are in operation and the Serlui-B (12MWs) generating in-firm power so detailed by P & ED in its filings. However, the effective SHP plants were already considered in the MYT Tariff barring the newly commissioned Kawlbem-4MW SHP plant which will be taken into tariff calculation now which was omitted last year and the details are Tabulated below.

Table 12.6: Capital Cost approved by the Commission for FY 2024-25

(₹. Crs)

Sl. No.	Name of Station	Installed Capacity (MW)	Capital Cost@ (Rs.9.6111/ Rs.8.7374 Crs/MW)
1	Maicham-I	2.00	19.22
2	Maicham-II	3.00	28.83
3	Tlawva	5.00	43.69
4	Kawlbem	4.00	38.44
	Grand Total	14.00	130.18

For the SHPs managed by Outside agencies, the P&ED is paying the maintenance charges to them which will be treated as O&M expenses for those plants and no need for Capital cost derivation. In the case of those SHP plants out of commission will be ignored from the ARR of Generation function cost is a reasonable approach.

12.6 Determination of Annual Revenue Requirement

12.6.1 Loan and Finance Charges

Loan has not been availed by the P&ED, therefore interest on Loan and Finance charges has been considered as Nil for calculating of the AFC.

Commission Analysis:

The interest & finance charges on account of avilment of Long-term Loans for construction of projects **was not considered for in this tariff calculation** as the Licensee had categorically stated about non-availing of any outside loan for the above projects.

12.6.2 O & M expenses

Petitioner's Submission

Operation and Maintenance Expenses has been calculated in accordance with the regulation 18 of the JERC for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 along with amendments. The Operation and Maintenance Expenses of the SHPs for the control period is provided below:

Table 12.7: Operation and Maintenance Expenses Projected for FY2024-25

(Rs. Crs)

Sl. No.	Name of Station	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Serlui 'A'	2.87	0.00	6.95
2	Tuirivang		0.00	
3	Khawiva		0.51	
4	Tuipui		0.24	
5	Maicham-I		0.97	
6	Teirei		1.46	
7	Tuipanglui		0.00	
8	Kau-Tlabung		1.46	
9	Lamsial		0.00	
10	Maicham-II		1.46	
11	Tlawva		1.75	
12	Kawlbem		1.95	
13	Total		2.87	

Table 12.8: O & M expenses arrived at by the Commission for FY 2024-25

(Rs. Cr)

Sl. No.	Name of Station	Capacity (MWs)	Normative O&M Exp/MW			FY-2024-25
			Norm/MW	Lakhs/FY12-13	Escl.rate /Yr	
1	Maicham-I	2.00	25	50.00	5.72%	0.975
3	Maicham-II	3.00	25	75.00	5.72%	1.462
4	Tlawva	5.00	18	90.00	5.72%	1.754
5	Kawlbem	4.00	25	100.00	5.72	1.949
		14.00	Grand Total			6.140

In adopting the normative O&M cost per MW, the cost adopted for 5 MW SHP plant Tlawva, the cost approved in the amendment on 8th August 2014 for Renewable Energy Regulation 2010 was Rs.18 lakhs /MW. But the P&ED had claimed Rs125 Lakhs/MW in their petition is now revised.

The Commission approves the full O&M expenses for four plants at Rs. 6.140Cr based on the methodology adopted in the Tariff Order Dt 12.03.2018. But in the Distribution ARR filings, the licensee has adopted the employee cost for the entire sector, stating its difficulty in segregation of these charges each functional wise. Hence, the Commission feels it appropriate to adopt 50% of the total O&M cost to be attributable towards Employee cost towards Generation function. Therefore, the O&M Expenses are to be reduced to the extent of Rs.3.07Cr in order to avoid the duplication of employee cost already reflected in full under Distribution function. In addition, for meeting the O&M expenses of the stations under Amazon Engineering, the Commission is considering to allow it under O&M expenses to the tune of Rs.1.67Cr instead of allowing it under the power purchase cost. Therefore, the overall O&M expenses allowed is Rs.3.07Cr plus Rs.1.67crs towards O&M maintenance cost of four stations managed by Amazon Engineering.

12.6.3 Depreciation

Petitioner's Submission

Depreciation has been calculated in accordance with the regulation 15 of the JERC for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations,2010 along with amendments. The depreciation of the SHPs for the control period is provided below:

Table 12.9: Calculation of Depreciation for MYT period projected by P & ED, Mizoram

(Rs. Crs)

Sl. No.	Name of Station	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Serlui 'A'	0.0000	0.00	0.00
2	Tuirivang	0.0000	0.00	0.00
3	Khawiva	0.0000	0.00	0.00
4	Tuipui	0.0006	0.01	0.01
5	Maicham-I	0.0023	0.02	0.02
6	Teirei	0.0034	0.04	0.03
7	Tuipanglui	0.0034	0.00	0.00
8	Kau-Tlabung	0.0034	0.04	0.03
9	Lamsial	0.0006	0.00	0.00
10	Maicham-II	0.0034	0.04	0.03
11	Tlawva	0.0229	0.24	0.22
12	Kawlbem	0.0000	0.22	0.22
13	Total	0.0400	0.10	0.06

Commission's Analysis

The depreciation rate as revised in the Regulation for Renewable Energy Sources (first Amendment) regulation 2014 under clause-8 is adopted on the useful life of 35 (thirty-five) year for the Small Hydro Plant indicated in the said Regulation 2014. The details of the depreciation calculation & approved by the Hon'ble Commission is tabulated below year wise for the MYT.

Table 12.10: Calculation of Depreciation by the Commission and approved for 2024-25

(Rs. Cr)

Sl. No.	Name of Station	Date of COD	Capital Cost	No. of Years		Depreciation		
				since COD	Balance Life	upto 12th yr	from 13th Yr	FY24-25
1	Maicham -I	05.01.1996	19.22	28	7	1.01	0.23	0.23
2	Maicham -II	11.11.2009	28.83	15	20	1.51	0.34	0.34
3	Tlawva	11.08.2022	43.69	2	33	2.29	0.51	2.29
4	Kewlbem	15.12.2022	38.44	2	33	2.017	0.452	2.017
								4.88

The 1% of the above depreciation is 0.0488 or 0.049Crs is approved as depreciation for these plants in working condition.

12.6.4 Return on Equity

Petitioner's submission

The Fixed Assets of P&ED Mizoram are funded through the budgetary support by the Government of Mizoram and Grants and Aids through Financial Institutions under various schemes like RGGVY, APDRP etc. Approximately 90% of the funding is done through the Government funding/Grants. However, in line with the previous orders of the Hon'ble Commission in this regard Return on Equity has not been considered for computing the ARR for the financial year.

Commission's Analysis

Under the circumstances explained in supra by the P&ED, the Commission didn't consider Return on Equity for FY 2024-25. The Commission approves no ROE amount for this year.

12.6.5 Interest on Working Capital

Petitioner's submission

Interest on working capital has been calculated in accordance with the regulation 17 of the JERC for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 along with amendments. The Interest on working capital as approved by the Hon'ble Commission & proposed by the P&ED Mizoram is given in the table below:

Table 12.11: Interest on Working Capital for 2024-25 projected by P & ED
(Rs. Cr)

Sl. No.	Name of Station	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Serlui 'A'	0.00	0.00	0.00
2	Tuirivang	0.00	0.00	0.00
3	Khawiva	0.00	0.03	0.03
4	Tuipui	0.00	0.02	0.02
5	Maicham-I	0.00	0.06	0.06
6	Teirei	0.00	0.09	0.09
7	Tuipanglui	0.00	0.00	0.00
8	Kau-Tlabung	0.00	0.09	0.09
9	Lamsial	0.00	0.00	0.00
10	Maicham-II	0.00	0.09	0.09
11	Tlawva	0.00	0.11	0.11
12	Kawlbem	0.00	0.13	0.13
13	Total	0.00	0.62	0.62

Calculation of Interest on Working Capital for the FY 2026-27

(Rs. Cr)

Sl. No.	Name of Station	Operation & Maintenance Exp. For one Month	Receivables for two months	Maintenance Spares - 15% of O&M	Total	Interest
		One Month	Two Months	15%		12.30%
1	Serlui 'A'	0.05	0.10	0.08	0.22	0.03
2	Tuirivang	0.01	0.03	0.02	0.07	0.01
3	Khawiva	0.05	0.10	0.09	0.24	0.03
4	Tuipui	0.02	0.05	0.04	0.11	0.01
5	Maicham-I	0.09	0.20	0.16	0.45	0.06
6	Teirei	0.14	0.30	0.25	0.68	0.08
7	Tuipanglui	0.14	0.30	0.25	0.68	0.08
8	Kau-Tlabung	0.14	0.30	0.25	0.68	0.08
9	Lamsial	0.02	0.05	0.04	0.11	0.01
10	Maicham-II	0.14	0.30	0.25	0.68	0.08
11	Tlawva	0.23	0.53	0.41	1.16	0.14

Commission's Analysis

As a matter of uniformity in principle in the case of interest on working capital the Commission approves NIL interest on working capital for FY 2024-25 due to non-availing of any kind of short-term loans by the Licensee not even in one occasion and any approval of this item would only burden the consumers unduly. This amount will be considered upon P&ED substantial its working capital loan availment in future for consideration by the Commission.

12.6.6 Aggregate Revenue Requirement (ARR)**Petitioner's submission**

The ARR of the SHPs has been arrived at based on the components of tariff as detailed in the previous sections. The table below provides the ARR of SHPs.

Table 12.12: Annual Revenue Requirement projected by P&ED for FY 2024-25

(Rs. Cr)

Sl. No.	Name of Station	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Serlui 'A'		0.00	
2	Tuirivang		0.00	
3	Khawiva		0.54	
4	Tuipui		0.26	
5	Maicham-I		1.06	
6	Teirei		1.59	

Sl. No.	Name of Station	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
7	Tuipanglui	5.05	0.00	5.99
8	Kau-Tlabung		1.59	
9	Lamsial		0.00	
10	Maicham-II		1.59	
11	Tlawva		2.11	
12	Kawlbem		2.29	
13	Total	5.05	11.04	5.99

Commission's analysis

The ARR approved for all commissioned the SHP stations excluding the Serlui-B by the Commission is detailed below in the table.

Table 12.13: Annual Revenue Requirement Commission approved for 2024-25

Sl. No.	Name of Gnerating Station	2024-25 (Rs. Crs)
1	Maicham-I	0.98
2	Maicham-II	1.46
3	Tlawva	1.78
44	Kawlbem	1.97
	Grand Total	6.19

Therefore, Commission approves the adjusted ARR for the above commissioned SHP generating stations at the values indicated above for FY 2024-25 excluding the Serlui-B station related ARR amount for the MYT period. **The Station leased out to Amazon Engineering and M/s/Assam Petroleum were not considered in the O&M charges of P&ED but it will be separately added to arrive at the ARR amount of generation function at the end and some stations not contributing to energy generating were ignored now in the calculation of ARR for their non-contribution to power generation.**

12.6.7 Capacity Utilization factor

Petitioner's submission

Capacity Utilisation Factor has been calculated in accordance with the regulation-30 of the JERC for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 along with amendments. The extract of the regulation is reproduced below:

“Capacity Utilisation factor for the small hydro projects in Manipur and Mizoram shall be 45%.

Explanation: For the purpose of this Regulation normative CUF is net of free power to the home state if any, and any quantum of free power if committed by the developer over and above the normative CUF shall not be factored into the tariff.”

Whereas, P&ED Mizoram has been proposed the Auxiliary consumption and Net generation based on the Actual performance in FY2022-23 and estimated performance in FY 2023-24. The details are provided in the table below:

Generation of SHPs at the CUF of 45% is provided in the table below:

Table 12.14: Total Generation from all commissioned SHP plants

Sl. No.	Name of Station	Installed Capacity (MW)	Generation at 45% CUF	Projected Gross Energy (MU)
1	Serlui 'A'	1.00	3.942	0.00
2	Tuirivang	0.30	1.183	0.00
3	Tuipanglui	3.00	11.826	0.00
4	Lamsial	0.50	1.971	0.00
5	Khawiva	1.05	4.139	1.370
6	Tuipui	0.50	1.971	0.015
7	Teirei	3.00	11.826	2.906
8	Kau-Tlabung	3.00	11.826	5.926
9	Maicham-I	2.00	7.884	0.262
10	Maicham-II	3.00	11.826	2.565
11	Tlawva	5.00	19.710	1.575
12	Kawlberm	4.00	15.768	1.795
	Grand Total	26.35	103.872	16.414

Commission's Analysis

The Commission approved gross generation from the above stations is at 16.414 MU for FY 2024-25 excluding the first four SHP stations in the above table so projected by P&ED in their submissions. This assumption is made by Commission in the absence of any verifiable concrete information from Licensee. The station wise net energy table is place in the subsequent paras for relevance.

12.6.8 Auxiliary Consumption

Petitioner's submission

Auxiliary Consumption has been calculated in accordance with the regulation 30 of the JERC for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 along with amendments. The extract of the regulation is reproduced below:

“Normative auxiliary consumption for the small hydro projects shall be 1.00%”

Normative Auxiliary consumption and Net generation is calculated in the table below:

Table 12.15: Normative Auxiliary Consumption projected by P & ED

Sl. No.	Name of Station	Gross Generation (MUs)	Auxiliary Consumption (MUs)	Projected Net Generation (MUs)
1	Serlui 'A'	0.000	0.000	0.000
2	Tuirivang	0.000	0.000	0.000
3	Tuipanglui	0.000	0.000	0.000
4	Lamsial	0.000	0.000	0.000
5	Khawiva	1.370	0.019	1.351
6	Tuipui	0.015	0.003	0.013
7	Kau-Tlabung	5.926	0.003	5.924
8	Teirei	2.906	0.040	2.866
9	Maicham-I	0.262	0.000	0.262
10	Maicham-II	2.565	0.003	2.562
11	Tlawva	1.575	0.031	1.544
12	Kawlbem	1.795	0.023	1.772
	Total	16.414	0.122	16.294

Commission's analysis

The Licensee has not made any realistic projection, but done it on normative basis without any practicality of whether the power station is contributing any energy for consumption. The information is totally not supported by verifiable evidence and it was replied that projection was done with historical data of 2022-23 and H1 of 2023-24 only. Whereas in the net purchase quantum, so projected for FY 2024-25 in power purchases was shown as 39.63MU from all sources comprising of 38.35MW which excludes the Lengpui DG set. Hence, the energy generation shown here is impractical and not realistic because their actual power purchase from above stations in FY2022-23 is 30.16MU only and no extraordinary changes foreseen to improve the energy quantum to 39.63MU ultimately by the end of FY 2024-25.

12.6.9 Generation Tariff

Petitioner's submission

Generation tariff of the SHPs has been calculated on the basis of the ARR and net generation of the SHPs. Tariff per unit for all the SHPs for the FY 2024-25 is provided in the table below:

Table 12.16: Tariff for Generation projected by P & ED

Sl. No.	Name of Station	Net Generation (In Mus)	ARR (₹ in Crores)	Tariff
1	Serlui 'A'	0.000	0.00	0.00
2	Tuirivang	0.000	0.00	0.00
3	Tuipanglui	0.000	0.00	0.00
4	Lamsial	0.000	0.00	0.00
5	Khawiva	1.351	0.54	4.02
6	Tuipui	0.013	0.26	0.00
7	Kau-Tlabung	5.924	1.59	2.68
8	Teirei	2.866	1.59	5.54
9	Maicham-I	0.262	1.06	40.46
10	Maicham-II	2.562	1.59	6.20
11	Tlawva	1.544	2.11	13.69
12	Kawlbem	1.772	2.29	12.92
	Grand total	16.294	11.03	6.77

Commission's Analysis

As observed from the above P&ED projected Tariff table, the projected ARR claimed in respect of four (4) stations managed by outside agencies is Rs.3.98Cr for an expected net energy of 10.154MU resulting in an average Tariff of Rs. 3.92/Unit. While in the case of four (4) own functioning stations the total ARR claimed is Rs.7.05Cr for the net energy of 6.14MU is Rs.11.48/unit.

In finalizing the Generation Tariff for each functioning SHP plants and actively serving, those four (4) plants being handled by M/s. Amazon Engg Pvt Ltd and M/s. Assam Petroleum is separately assigned with a lumpsum amount of Rs.1.68Cr which was actually paid by P&ED in FY 2022-23 towards four plants maintenance charges and for the remaining four plants the ARR cost values are assigned individually as approved by the Commission. Tariff for each generating station for the following twelve (12) stations for FY 2024-25 is tabulated below.

Table 12.17: Generation Tariff approved by the Commission for 2024-25

Sl. No.	Name of Station	Net Generation (Mus)	ARR (₹ in Crs)	Tariff (Rs./kWh)
1	Serlui 'A'	0.000	0.00	0.00
2	Tuirivang	0.000	0.00	0.00
3	Tuipanglui	0.000	0.00	0.00
4	Lamsial	0.000	0.00	0.00
5	Khawiva	1.351	1.68	1.6545

Sl. No.	Name of Station	Net Generation (Mus)	ARR (₹ in Crs)	Tariff (Rs./kWh)
6	Tuipui	0.013		
7	Kau-Tlabung	5.924		
8	Teirei	2.866		
9	Maicham-I	0.262	0.98	37.40
10	Maicham-II	2.562	1.46	5.70
11	Tlawva	1.544	1.78	11.53
12	Kawlbem	1.772	1.97	11.11
	Grand Total	16.294	7.87	4.83

The average tariff rate payable towards the effective eight (8) plants is arrived at as Rs.4.83/kWh. The tariff in the case of **Serlui-B plant** which is still reeling under difficulties to achieve Commercial Operation date (CoD) is shown separately in the foregoing paras of this order.

12.6.10 TARIFF FOR THE ENERGY SUPPLIED FROM SERLUI 'B' SHP

As submitted in para 4.1 above since the Serlui 'B' SHP has not been commissioned till date the same has not been considered for the calculation of Capital cost, ARR & Generation Tariff thereof in accordance with The Joint Electricity Regulatory Commission for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010 read along with First Amendments Regulations, 2014.

However, the SHP is generating infirm power and the same is being injected in the state grid. The details of energy supplied from the SHP & the rate for the energy charge considered for arriving at the total cost of generation of the generation function is detailed in the subsequent sections.

Petitioner's submission

Energy Generation

The energy generated from the Serlui 'B' SHP is provided in the table below:

Table 12.18: Energy Generation from Serlui 'B':**(In Mus)**

Generation details of Serlui -B				
Sl. No.	Name of Station	Approved in T.O dated 28/03/2023	Proposed by P&ED	Deviation
1	Gross Generation		23.73	
2	Auxiliary Consumption		0.42	
3	Net Generation	6.49	23.31	16.82

Commission Analysis:

Having observed the performance of this plant since from FY 2019-20 onwards and it is yet to be commissioned and the energy projection so made for the FY 2024-25 the licensee had projected more energy than it would generate considering its past performance and its inherent restriction to go for COD. In the above net generation assessment, P&ED had adopted a PLF of 50.19% while the capacity utilisation factor can't go beyond 45% as per the prevailing Regulation 2010 for renewable energy sources.

The Commission however, feels it appropriate to consider the net energy to be equal to FY 2022-23 actual value of 12.13MU as indicated by P&ED in their replies to additional Information called for. Therefore, the net energy is now adopted by the Commission at 12.13MU is considered as the energy output of Serlui-B station.

Energy Charges

Rate of energy charge has been considered as Rs. 1.06 per unit in accordance with the Hon'ble Commission approved in the Tariff Order dated 23.03.2022. The total energy charge for FY 2024-25 has been calculated accordingly. The table below provides the details of energy charges.

Table 12.19: Energy Charges for Serlui 'B' by P&ED:**(Rs.Crores)**

Energy Charges for Serlui 'B'				
Sl. No.	Name of Station	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Net Generation	6.49	23.31	16.82
2	Rate	1.06	1.06	0.00
3	Total Energy Charge	0.69	2.47	1.78

Commission analysis:

The energy projected by P&ED from Serlui-B is by adopting 50.19% PLF for station still reeling under restriction for its full-fledged commissioning for various inexplicable reasons. Until last year FY 2022-23 The reason for adopting such high PLF for this plant and the sudden steep jump in PLF from FY2023-24 has been explained that they adopted historical actual generation in FY 2022-23 and H1 of FY2023-24 is not convincing to adopt.

Therefore, the Commission fees it appropriate to consider the net energy generation at 12.13MU being the actuals in FY2022-23 and not any more from Serlui-B for FY 2024-25 so long it do not achieve full-fledged commissioned plant status. Accordingly, the energy charges payable will also be at Rs. 1.286 Cr per Annum by adopting the energy unit rate as proposed by the P&ED for the indicated net generation of 12.13MU for this year prior to its full-fledged commissioning.

Energy Charges for Serlui 'B' (Commission approved)				
Sl. No.	Name of Station	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Now approved
1	Net Generation (MU)	6.49	23.31	12.13
2	Rate (adopted)	1.06	1.06	1.06
3	Total Energy Charge (Rs.Crs)	0.69	2.47	1.286

12.6.11 Aggregate Revenue Requirement (ARR)**Petitioner's submission**

Total ARR of the Generation function comprising of the commissioned SHPs and Serlui 'B' SHP which is generating infirm power is detailed in the table below:

Table 12.20: ARR of Generation Function projected by P & ED**(Rs. Cr)**

Sl. No.	Name of Project	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
1	Serlui 'A'	5.05	0.00	7.77
2	Tuirivang		0.00	
3	Khawiva		0.54	
4	Tuipui		0.26	
5	Maicham-I		1.06	
6	Teirei		1.59	
7	Tuipanglui		0.00	
8	Kau-Tlabung		1.59	
9	Lamsial		0.00	

Sl. No.	Name of Project	Approved in T. O. dated 28.03.2023	Proposed by P&ED Mizoram	Deviation
10	Maicham-II		1.59	
11	Tlawva		2.11	
12	Kawlbem		2.29	
13	Serlui 'B'	0.69	2.47	
	Total	5.74	13.51	7.77

P&ED Mizoram requests the Hon'ble Commission to kindly consider the submission and approve the ARR for the FY 2024-25.

Commission Analysis:

The ARR now approved for all stations in operation and Serlui 'B' (not yet commissioned) by the Commission for is as detailed below:

Table 12.21: Generation Function ARR approved by the Commission for FY 2024-25

(Rs. Crs)

Sl. No.	Name of Project	Approved in T. O. 28.03.23	Proposed by P&ED, Mizoram	Approved by Commission
1	Serlui 'A'		0.00	Nil
2	Tuirivang		0.00	
3	Tuipanglui		0.00	
4	Lamsial		0.00	
5	Khawiva	5.05	0.54	1.68
6	Tuipui		0.26	
7	Kau-Tlabung		1.59	
8	Teirei		1.59	
9	Maicham-I		1.06	0.98
10	Maicham-II		1.59	1.46
11	Tlawva		2.11	1.78
12	Kawlbem		2.29	1.97
13	Serlui 'B'	0.69	2.47	1.29
	Total	5.74	13.51	9.16

Rs.1.68Crs of leasing charges are considered for the four (4) stations leased to M/s. Amazon Engineering and M/s. Assam Petroleum together and accordingly the cost is added in Generation cost, though Licensee has ignored this practical transaction for the above four stations.

13 Directives

13.1 General

While examining the information and data contained in the proposed ARR and Tariff Petition for the FY 2023-24, it is observed that the computation and compilation of the data have been done based on assumptions only and as a result, there has been difficulties in finalization of the ARR and determination of retail tariff also. The above observation itself substantiates the fact that the administrative, technical and commercial performances of the P&ED require substantial improvement within a specified time frame.

Similar situation was noticed in the ARR & Tariff petition for the FY 2021-22. The Commission had observed that while there is ample scope for reducing cost and increasing internal efficiency in the operation of the department, serious efforts appear to be lacking. It is in the above context that 14 directives were given for compliance in the Tariff Order 2010-11 out of which some directives were fully complied with. Seven fresh Directives were issued in tariff order for FY 2012-13. The Commission expected that P&ED would take prompt action on the directives and monitor their implementation. Unfortunately, action is yet to be taken on most of the important directives, which could make significant difference to operational efficiency and cost. In some cases, though action has been initiated, but overall seriousness with which the directives were issued by the Commission does not appear to have been realized by the P&ED Mizoram.

Under the above background, the Commission is constrained to repeat the directives which have not been fully complied with and also issues specific new directives.

Directive 4: Management Information System

The PED has not maintained proper data in respect of sales, revenue and revenue expenses as also the category wise/ slab wise number of consumers, connected load/ demand etc. for proper analysis of the past data based on actual and estimate of proper projections for consideration in the ARR and Tariff Petition.

The PED is directed to take steps to build credible and accurate data base and

management information system to meet the requirements for filing ARR& Tariff Petition as per regulatory requirement and also suit the Multi Year Tariff principles which the Commission may consider at the appropriate time under Regulation-11 of JERC (Terms and Conditions for Determination of Tariff) Regulations, 2008. *The formats software and hardware may synchronize with the Regulatory Information and Management System (RIMS) circulated by Central Electricity Regulatory Commission (CERC).*

The PED should get a study conducted on computerized data base, on electronic media and shall give a proposal as to how the department proposes to achieve this. The PED is directed to provide age wise analysis before the next ARR and initiate action to update the arrears by 31/03/2011.

Compliance:

Power & Electricity Department Mizoram has maintained proper data in respect of sales of energy, revenue and expenses, category wise/slab wise number of consumers, connected load/demand etc. manually in the form of Consumer's Profile & Consumption data, Energy Audit & Accounting, etc. and, details of computerized consumers' data being implemented under RAPDRP can be extracted by using the applied billing software, i.e. SAP-ISU and this can be provided if required. While, in the case of the remaining consumers who are yet to be covered under Computerized Billing System using SAP - ISU, consumer indexing is under process and it is not possible to furnish status achieved so far in this regard to the Hon'ble Commission as Information Technology system with Operational technology (IT/OT works) works under Revamped Distribution Sector Scheme (RDSS) is not yet implemented till date. Regulatory Information and Management System (RIMS) circulated by Central Electricity Regulatory Commission (CERC) to meet the requirement for filing Aggregate Revenue Requirement (ARR) and tariff Petition is also not yet implemented by Power & Electricity Department, Mizoram as desired by the Hon'ble Commission. In this connection, production and development of software for maintaining computerised data base for implementation of information and management system in respect of consumer's data, etc under Information Technology system with Operational technology (IT/OT works) works of Revamped Distribution Sector Scheme (RDSS) is under process

Commission's comment

The SAP-ISU implementation under RAPDRP where it is already in force the progress achieved report and positive advantages noted due to usage along with any new town planning to be covered under the SAP-ISU may be submitted latest by 15th July 2023 positively for the status as on 1st half year. While, in the case of remaining consumers (Non-RAPDRP) who are being covered or yet to be covered by this SAP-ISU, the details of action plan and the status achieved report shall be furnished to the commission by 30th September 2023.

Commission's new comment

The above specified certain date for submission of the Data is still not submitted to the Commission. Even the reply from P&ED also cover any of those issues. Though the directive was issued long ago, the directive is still not complied with. As a last resort the Commission is giving one more chance to show the reasonable improvement, failing which the Commission would not hesitate to impose penalty for non-compliance of the directive sooner.

Directive 5: Pilferage of Energy

The P&ED has furnished the T&D losses at 41.7% during 2009-10 and projected the losses at 39.5% for 2010-11. The Department has not segregated the losses into technical and commercial losses. It is feasible that the losses projected may include commercial losses on account of pilferage.

Pilferage of energy may be by illegal tapings from electrical lines, tampering of meters etc. The Commission feels that there is a need to launch an extensive drive to revoke illegal connections, if any, check meter tampering replacement of defective meters proper account of consumer of un-metered services and keep constant vigil so that corrective measures could be taken to reduce the AT & C losses. Requisite action may be taken as per the provisions under sections-135 and 138 of Electricity Act, 2003.

The P&ED is directed to furnish an action plan to arrest the pilferage.

Compliance:

As desired by the Hon'ble Commission, the department rendered maximum efforts to reduce and eradicate pilferage / theft of energy within the state. Consumers' premises

were checked monthly from field offices, i.e. Sub-Division level to eradicate Meter by pass, direct hooking, meter tampering etc. in line with Regulation No.7 of JERC for M&M Electricity Supply Regulations, 2013. In this connection, action taken report in the form of half yearly vigilance report for the FY 2023-24 is furnished in the Annexure I.

In view of the above, it is submitted that Hon'ble Commission may kindly consider and as the eradication drive is on-going and continuous process which cannot be declared done. So, the directive may be dropped.

Commission's comment

The Commission needs to be appraised of the progress made and intimate status report on number of cases being booked and penalties recovered every quarter continuously in FY 2024-25.

Directive 6: Metering of Consumer installations / Replacement of non- functional defective meters and providing meters to un-metered connections.

Compliance:

There are no un-metered connections except Public Lighting/ Street Light maintained by Local Administration Department, Mizoram and, Non-functional defective meters of Consumers are replaced with Electronics meter having Maximum Demand Indicator (MDI) in line with Regulation No.5.31 – 5.50 of JERC for M&M Electricity Supply Regulations, 2013. Number of MDI meter installed so far is as given below:

Description	Cumulative as on 31.03.2023	Installed during 1 st half of the FY 2023-24	Cumulative as on 30.09.2023
New Installation/ New Service connection	69305	6997	76302
Replacement of defective meter	19584	1973	21557
Total	88853	8970	97859

In view of the above, it is submitted that Hon'ble Commission may kindly consider and drop the directive as it is an ongoing and continuous process.

Commission's comments

As no connection shall be given without correct meter, all Public lighting/ Street Lighting should be metered immediately. Quarterly report of the number of defective meters replaced and the number of Public Light/Street Light metering under AMC jurisdiction and LAD jurisdictions shall be submitted to the Commission within one month in the succeeding quarter during FY 2024-25.

Directive 8: Transmission and Distribution Losses

The P&ED has projected the transmission and distribution loss at 39.5% (35% Distribution loss + 4.5% Transmission losses) for the year 2010-11.

The P&ED is directed to get Energy Audit conducted by providing meters on all the feeders (132 kV, 66 kV, and 11 kV) and at distribution transformers to identify the high loss areas and take appropriate measures to reduce both technical and commercial losses to the level fixed by the Commission. The P&ED shall also comply with loss reduction trajectory for T&D losses for the next three years.

The investment required to reduce the losses shall be included in the investment plan for augmentation of T&D system be submitted to the Commission. Effective technical and administrative measures shall be taken to reduce the commercial losses. The action plan for energy audit and loss reduction measures shall be furnished to the Commission by June 2011.

Compliance

The T&D Loss for FY 2021-22 and 2022-23 as per audited Energy in line with audit format prescribed by Bureau of Energy Efficiency (BEE), Ministry of Power, Govt. of India is calculated as 18.94% and 19.37% respectively. Since submission of energy auditing for every financial year by accredited Energy Auditors and Energy Managers to BEE is mandatory for publication as per Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021, Power & Electricity Department Mizoram conducted Energy Auditing for the FY 2021-22 and FY 2022-23 with consultant of a BEE empaneled firm, i.e. A-Z Energy Engineers Pvt. Ltd. A copy of the audited report of the FY 2021-22 and FY 2022-23 is available in soft copy if required. Action has been taken by replacing damaged/ rectifying doubtful meters at transmission as well as distribution level for assessing real time T&D losses and, Power & Electricity Department Mizoram has taken action since the FY2022-2023 to reduce T&D Loss under Loss Reduction (LR) work of Revamped Distribution Sector Scheme (RDSS).

Commission's comments

The Distribution losses are in increasing trend even in FY 2023-24 APR filing submission and the losses have gone past the approved losses and this indicate the lack of control of P&ED on curtailment of Losses is conspicuous. But again, the Loss projections made for FY 2024-25 was also high at 25% when compared to RDSS loss trajectory level of 14% but not reachable in the near future. The increasing losses

indicates lots of Commercial related losses, rather than technical losses. There needs an increased vigilance to arrest pilferage and non-billing consumer who are on the raise.

There needs a lot of effort still required to put in to arrest all the losses especially by rectifying/replacing the damaged/defective/struck-up meters at all substations rapidly to capture the actual energy flows occurring at all level of transmission, sub-transmission and distribution levels to capture the real time losses in T&D by P&ED, besides arrest various kinds of Commercial losses rampant in Distribution sector and bring down the distribution losses alone to 14% in near future. It is advised to precisely indicate the T&D Losses by next year ARR filing submission. The assumptions will not be considered.

Directive 9: Consumers bills

At present current month consumption bill is being served to the consumer while taking meter reading of next Month, thereby collection postponed by one Month. It is high time to introduce spot billing with handheld computers and advance revenue realization by one Month. PED is directed to act upon accordingly and report action taken **by June 2011**.

Commission should establish the consumer grievances redressal forum immediately and give wide publicity of functioning of the said forum and report compliance.

Compliance

After implementation of the on-going RDSS work component of Smart metering and Information Technology Systems with Operational Technology, consumer will be billed on pre-paid mode and the question of current billing cycle for postpaid system will be resolved.

District/ Circle-wise Consumers' Grievance Redressal Forum as directed by the Hon'ble Commission vide letter No. H. 11019/5/18-JERC Dt. 08.12.2022 have been constituted for a period of 2 (two) years and a copy of which is submitted to the Hon'ble Commission vide No. T 23016/01/15-EC(P)/Com/103 Dt.08.05.2023; there has been no case report to be resolved by Consumers' Grievance Redressal Forum till date.

In view of the above, it is submitted that Hon'ble Commission may kindly consider and drop the directive.

Commission's comments

The directive is treated as dropped.

Directive 10: Investment and Capping of Capital Expenditure

Annual Investment Plan should be submitted to the Commission and approval of Commission should be obtained for all major capital works costing ₹5.00 crore and above before execution of the works.

Compliance

All investment plan under Power & Electricity Department Mizoram is funded by the Government of Mizoram. With the approval of the State Government, annual investment plan for all major works costing Rs.5.00 crores and above shall be submitted to the Hon'ble Commission from **FY2024-25** for approval of the Hon'ble Commission before execution of the works.

Commission's comments

The Commission is the authority for fixation of tariff of P&ED and all the cost components incurred will have to be made according to the approval of the Commission, even if the department is funded by the Government. That does not mean the department can make capital investment at their will without looking into its necessity & need, which will have to be examined by the Commission before its execution. The Regulation speaks about submission of investment plan prior approval is the regulation relevant in this aspect and it is the duty of the licensee to get himself familiar of the Regulations in force and available in the Commissions website. It is unwarranted the licensee is asking Commission to provide the Regulations and it shall not be the way to represent the lapses.

The P&ED is bound to obtain prior approval of the Commission before execution of the major capital works costing Rs.5 crores and above. It is the prerogative that for projects executed unilaterally can be disallowed by the Commission in the absence of prior approval leading to ignorance of those assets being capitalised and consequential recurring benefits financially. The P&ED is directed to tender the reasons for not taking the Commission approval for the above projects in execution on top-priority before 1st May 2023 and without fail. The reply is very casual in nature and not attentive. **Since, the compliance is pending, the directive is treated as in force.**

Directive 11: High Employee Cost of the Department

The employee cost projected by the PED is on very high side and alarming. PED is therefore directed to take measures to control the high employee cost.

Compliance

Considering an increase in annual increment of regular employees as well as regularization of provisional employees as per Govt. of Mizoram DP&R Letter No. A.12034/55/2020-P&AR(GSW) Dt. 28.09.2020 and retirement of staff on super annulation pension, the employee cost of the Department is either slightly higher or lower comparing to the projections made in the previous years. P&E Deptt like some other Department under the State Government, filling up of vacant post, transfer and posting is the prerogative of the state government. **Any new recruitment in staff if any shall be intimated to the Hon'ble Commission for approval of such recruitment from the Hon'ble Commission**

Commission's comments

The directive is intended to be more judicious in the recruitment of staff based on the need basis but not for allied reasons. It was already directed in Tariff Order for 2020-21 that any further recruitment in staff needs to be intimated to the Commission beforehand with proper justification of such appointment and seek approval of the same before claiming in the future ARR submissions. So far, no suitable action taken report was ever reported by the P&ED on this aspect.

The entire additional recruitment cost reflected in ARR will be disallowed in toto for not having done without Commissions concurrence in the forthcoming year onwards if the same status-quo of P&ED is continued.

Directive 12: Metering of H.T services with MD Indicators

Maximum Demand Meters should be provided for HT Consumers.

Compliance

In line with JERC for M&M Electricity Supply Code Regulations, 2013 Regulation No.5.5. (2), 3 Phase Tri-vector meters (LCD type) with MDI /3-Phase Current Transformer (CT) Operated Electronics Meters having Maximum Demand Indicator (MDI) are provided for all HT consumers metering at LT side as well as HT side. Number of HT Consumers as recorded on **30th September 2023** is as given below.:

Particulars	Cumulative upto 31.03.2020	Cumulative upto 31.03.2021	Cumulative upto 31.03.2022	Cumulative upto 31.03.2023	Cumulative upto Sept., 2023
No. of HT Consumers	500	601	641	813	820

Particulars	Cumulative upto 31.03.2020	Cumulative upto 31.03.2021	Cumulative upto 31.03.2022	Cumulative upto 31.03.2023	Cumulative upto Sept., 2023
No. of HT Consumer metering at LT side	468	569	609	781	788
No. of HT Consumer metering at HT side (i.e. some of the Public water works' consumers and, some Bulk Supply Consumers and Industrial HT supply consumers)	32	32	32	32	32

In view of the above, it is submitted that Hon'ble Commission may kindly consider and drop the directive.

Commission's comments

The directive is dropped as requested. However, the department should provide metering at HT side vigorously to avoid calculations of assumed transformer loss.

Directive 15: Contract Demand

With the introduction of two-part tariff in the Tariff Order of 2010-11 the consumers feel the impact of connected load in the Electricity bill is high. The PED stated that connected load and contract demand are the same in Mizoram. If so, the Commission has observed that the contract demand is high. PED is therefore directed to **reassess the contract demand by December, 2014 and submit a report.**

Compliance

Considering monthly unit consumption of consumers, Power & Electricity Department Mizoram used to check Consumer's Contracted Load from Maximum Demand in kW recorded by Consumer's MDI Energy meter. Based on such action being undertaken, rerating of contracted load is implemented in line with Regulation No.4.49 – 4.109 of JERC for M&M Electricity Supply Code Regulations, 2013. Record of Consumers' Category wise Contract demand/ contracted load of consumers of Power & Electricity Department, Mizoram during the FY 2023-24 upto September is furnished in the **Annexure - II**

In view of the above, it is submitted that Hon'ble Commission may kindly consider and drop the directive:

Commission's comments

The Directive is treated as dropped as the activities taken up in updating contracted Demand by the P&ED has been reported in detail in the last meeting of SAC. However, the Annexure-II shall be submitted by the Commission before 30th June, 2024, as the

same has not been received by the Commission.

Directive 16: Restructuring of Staff

PED has stated that the number of employees as on 31st March, 2012 is 4575. It is very high. The Department however, has pleaded shortage of staff for poor performance. The Commission has observed that deployment of the existing staff is not rational. PED is directed to prepare a restructuring plan by 31st December, 2014 and submit a report.

Compliance

Power &Electricity Department Mizoram has already laid out a proposal plan for restructuring of staff in different functions viz. Transmission, Distribution and Generation and, the proposal was submitted to the Government on Dt 27.06.2023 vide letter No. A. 11013/19/2020-EC(P)/106 and reply from the Government is still awaited. Unless and until re-structuring is implemented by the Government of Mizoram till date, functional wise employees & staff utilization in the organization, i.e. Power & Electricity Department Mizoram cannot be provided to the Hon'ble Commission

Commission's comments

The pointed issue is that P&ED shall provide the functional wise employees & staff utilisation in the organisation. The progress intimated by addressing the State Government is a desirable change noticed by Commission in this matter.

The directive will be in force and needs compliance with appropriate reply along with the decision of the Government in this matter.

Directive 19: Survey and physical verification of consumer's connections.

To conduct survey and physical verifications to find out their actual connected load and category in which supply is being availed and to analyse category wise single phase and 3 phase connections with their annual energy consumption and status of meters. This work should be completed by 31.10.2014 and details be furnished in next tariff petition invariably.

Compliance

Survey and physical verification of consumers connections is usually conducted by the Department and monthly action taken report on result of the verification of consumers' connection is furnished in the **Annexure - III**

Commission's comments

The revenue yield enhancement due to proper classification is very much desired on a righteous way. Commission wishes the Licensee to make this exercise continuously to earn the correct revenue in future, if these efforts are continued. The Annexure - III may be resubmitted for Commission examination as it is not found in the reply furnished.

This directive is still in force until Commission is thoroughly satisfied with the effort made in the report.

Directive 24: Scraping of Heavy fuel plants lying idle

Heavy fuel plant of capacity 22.93 MW at Bairabi is lying idle. The P&ED is advised either to operate the generator or write off the plant and utilise the man power elsewhere in the Department for better output.

Compliance

Due to high cost of procurement of the Heavy Furnace Oil (HFO) fuel up to the Bairabi Thermal Plant, continuous running of the plant is found not economical. With the availability of more Central Sector power as of now with considerable cost of energy as compared with that generated from Bairabi Thermal, the Department is no more interested to run the plant with such type of HFO. Further, it is realized in the field that the fuel tankers had shown no interest to carry the Heavy Furnace Oil (HFO) fuel due hardship in cleaning the oil tank since the requirement of volume of fuel in this plant is not that high as to be carried continuously.

The Department has submitted its petition to CEA to declare Bairabi HFO based power plant as non-operational. Response/approval has not been received till now. However, as per CEA bulletin published on 31.01.2017 for installed capacity of power utilities for Mizoram is brought out Zero (0) figure under Thermal. In the meantime, man-power engaged for the generating plant has been utilized elsewhere by the Department for operation & maintenance works undertaken by the Department.

Therefore, P&ED, Mizoram considered that an authority lies within the Central Government either to include or exclude Bairabi Thermal Plant from the statistical data of Local Generation.

However, being an incoming point for Bairabi town and Hachhek Hill in the western

part of Mizoram for feeding 33kV Bairabi Sub-station and 33kV Zamuang Sub-station, the State Government does not yet decide abandonment of the generating plant for the purpose of generating power.

In view of the above, it is submitted that Hon'ble Commission may kindly consider and drop the directive.

Commission's Comments

The progress made with the BHEL consultancy has not be appraised in the reply now provided, while it was replied so in FY 2022-23. However, the directive may be treated as dropped.

Directive 28: Segregation of expenses among generation, transmission and distribution.

From annual accounts of FY 2015-16 onwards all expenses such as employee cost, R&M expenses and Administration & General expenses and interest charges and depreciation shall be segregated among the three functions, viz. generation, transmission and Distribution.

Compliance

Head of Department level Sub Committee for restructuring of the Department was formed in the 18th Department Operational Co-Ordination Committee (DOCC) and the concept note was laid out in the 19th DOCC meeting held on 26.05.2023 which was approved by the Meeting and was submitted to the Government on Dt 27.06.2023 vide letter No. A. 11013/19/2020-EC(P)/106. A copy of the letter sent to the Govt. is enclosed as ANNEXURE - IV and reply from the Government is still awaited.

Commission's comment

Hence the latest status on this directive may be communicated sooner with the decision taken in this regard by Government of Mizoram. **The directive is still treated as not complied with.**

Directive 33: Installation of meters with MDI facility

P&ED should start using meters having MDI facility as CEA Meter Regulation, 2006. Contracted load/demand as well as connected load/demand should be recorded for consumers and fixed charge billed based on contracted load/demand. Contracted load/demand should be reviewed annually based on MDI record and supply code, 2013. All consumers under RAPDRP towns should be completed by 30.09.2016. Quarterly progress should be submitted to the Commission.

Compliance

Status of achievement during 3rd and 4th Quarter of the FY 2022-2023 is furnished in the Annexure - V

Commission's comment

The status achieved pertaining to the remaining period from 3rd & 4th quarter of FY2022-23 may be furnished with all details latest by 31st May 2024. **The copy of the Annexure-IV is missing in the reply sent, hence the same may be resubmitted.**

Directive 38: Projection of Non-Tariff Income

The projection for Non-Tariff Income for FY 2023-24 is as follows
The P&ED is directed to account for the income relating to above heads in the respective heads and furnish the information in the format without omissions from next ARR.

Compliance

An estimated amount against each element of Non-Tariff Income for the FY 2024-2025 ARR filing is as given below.

SI No	Particulars	in Rs
1	Pole Hiring Charge	12,00,000.00
2	Charges for Disconnection & Reconnection	1,00,000.00
3	Agency / Department Charges	80,00,000.00
4	Re-rating of installation charge	1,60,000.00
5	Meter Shifting / replacement / testing charges	75,000.00
6	Charges for replacement of connection wire, cut-out fuse etc	10,000.00
7	Hiring charge of M&E	2,000.00
8	Interest on staff loans & advances	0.00
9	Delayed payment charges from consumers	0.00
10	Meter rent	1,76,00,000.00
11	Recovery from theft of energy	37,00,000.00
12	Dividend from NETCL	7,82,00,000.00
13	Misc. receipts	1,05,53,000.00
Total		11,96,00,000.00

Commission's Comment

The P&ED should submit the estimated amount expected against each element of NTI in the next ARR filing invariably. The above detailed break-up data must have been submitted in the ARR submission of FY2024-25 but the same is not taken care in the relevant ARR submission and details provided here in reply to directive does not serve the purpose.

The Commission expects the P&ED to provide this break-up every year in the ARR filing submission invariably and hence the directive is treated as dropped.

Directive 40: Pre-Paid meters and Smart meters

The P&ED is directed to examine the feasibility of installation of pre-paid meters/smart meters in a phased manner so as to improve revenue collection and reduce leakages in power consumption which will cause reduction in distribution losses.

Compliance:

The feasibility of installation of pre-paid / smart meters is already examined and 2,92,081 Nos. of pre-paid /smart meters is prepared to be installed under Smart metering works of RDSS. Since awarding of work to the Contractor **is not yet finalised till date**, actual progress achieved with number of consumers installed with Smart meters cannot be furnished to the Hon'ble Commission till date

Commission's Comments

The reply does not provide any practical figures on the achievements made and about progress. Hence, the actual progress achieved with number of consumers installed with meters may be submitted to the Commission periodically for keeping the Commission abreast with the progress made and mere responding to the Tariff order Directive may not serve the intended purpose.

Directive 42: P&ED has to request State Government to allocate head of account for Generation, Transmission & Distribution

P&ED should request the State Govt. to allocate different heads of account for (i) Generation, (ii) Transmission and (iii) Distribution. Projection /Estimated expenditure should be classified accordingly or segregate the accounts by Department itself. Audited figure should also be in line with the allocated heads of account.

Compliance:

Department level Sub Committee for restructuring of the Department was formed in the 18th Department Operational Co-Ordination Committee (DOCC) and the concept note was laid out the 19th DOCC meeting held on 26.05.2023 which was approved by the Meeting and was sent to the Government on Dt 27.06.2023 vide letter No. A. 11013/19/2020-EC(P)/106. Copy of the letter sent to the Govt.is enclosed as ANNEXURE-IV

Commission's Comments

The P&ED should take up & discuss the matter with Finance department of the State until it allocates individual accounts heads for each function wise separately assiduously. Hence, the directive is still treated as not complied with and awaits the compliance. The Copy of the Annexure-IV may be resubmitted as the same is missing in the reply already furnished.

Directive 46

P&ED should strive to achieve AT&C Loss set in UDAY Scheme signed under unilateral agreement.

Compliance:

In pursuant to the Standard Operating Procedures (SoP) Clause No 3.5 of Revamped

Distribution Sector Scheme (RDSS) that all Government Departments should make 100% payment in timely manner, action has been taken by the Power & Electricity Department Mizoram to the concerned State Government Department(s) for payment of Govt. Departments' Electricity Bill dues quarterly for improvement of collection efficiency and, after implementation of RDSS all Government Departments will be put on pre-paid metering which will automatically contribute for reduction of AT&C loss.

Out of the Rs.56,40,20,176/- from Government Department Electricity Bill dues accumulated as on 30.09.2023, Rs.38,52,14,239/- was received by Power & Electricity Department Mizoram till date; necessary action has been taken for improvement of collection efficiency. AT&C Loss of Power & Electricity Department Mizoram during the FY 2022-2023 and, 1st & 2nd Quarter of the FY 2023-2024 based on audited energy and audited financial data are as given below.

Period	During FY 2022-2023 (as per CEA Format)	During 1st Quarter of FY 2023-2024 (as per REC Ltd Format for energy/ financial audit)	During 2nd Quarter of FY 2023-2024 (as per REC Ltd Format for energy/ financial audit)
AT&C Loss in Percent	26.75	5.97	18.62

Note: Collection Efficiency during the FY 2022-2023 was 112.20 %, but restricted to 100% for computation of AT&C Loss as per CEA Order. If Collection Efficiency of 112.20% is taken, AT&C Loss for the FY 2022-2023 shall be 17.81 %.

Commission's Comments

The reply provided is encouraging but explained in detail as to how the collection efficiency is being planned to improve for various consumers in Mizoram and the revenues collected from consumers other than Government dues.

The directive is therefore still in force and needs compliance with latest figure relating to FY 2023-24. Detailed report should be furnished in the next ARR filing, but not as the replies to directives.

New Directives

Directive 1: Voltage wise cost of supply submission

The Licensee shall submit the voltage-wise cost of supply in the next year ARR filing duly providing all the relevant details with regard to each distribution voltage level along with voltage wise losses being incurred. This data is very much essential for arriving at

the cost of supply to various categories of consumers at the time of tariff determination duly adhering to the National Tariff Policy principles.

Compliance:

Since segregation of expenses among generation, transmission and distribution function is not yet implemented for Power & Electricity Department, Mizoram, voltage wise segregated cost for Employee cost, repair & maintenance expenses and, administration & general expenses also are not available. Hence, submission of voltage wise cost of supply could not be done till date. Considering current technical man-power and infrastructure owned by the Department, Power & Electricity Department, Mizoram will take necessary action to record Voltage wise cost of supply from the FY 2024 - 2025 onwards.

Commission's Comments

The Directive is treated as not complied with and the compliance report is awaited as this matter is also being pursued by the CERC for the compliance and commission is awaiting your primary report on this issue. The P&ED must engage a consultant having the needed know how on the voltage wise cost of supply to file in ARR submission without fail. It is to mention that Manipur Distribution had provide some useful information in this matter and the Cost to supply each voltage wise has been determined by the Commission and what precluding the P&ED in giving this information is not comprehensive to commission and it is only an apprehension withholding the data sharing needed in this matter.

Directive 4: INSTALLATION OF SMART METERS

Smart meters have the advantages of remote metering and billing, implementation of peak and off-peak tariff and demand side management through demand response. These would become essential in future for load generation balancing due to increasing penetration of intermittent generation like wind and solar power.in line with Clause 8.4 of National Tariff Policy 2016, the Commission, therefore mandate Smart meters for the following consumers:

- a) Consumers with monthly consumption of 500 units and more at the earliest but not later than 31.12.2019.
- b) Consumers with monthly consumption above 200 units by 31.12.2019.

- c) The Smart meters shall also be provided to all those consumers who sell back electricity to the grid as and when they require by 15.03.2020.

Action taken report on installation of smart meters for the consumers stated above may be submit by the 1st week of January 2020 and again by end of March 2020 to the Commissions to monitor progress.

Compliance:

All the meters of the consumers under the Department are proposed to be replaced by Pre-paid Smart Meters under the on-going RDSS.

Commission's Comments

The reply is very much evasive and vague. **The directive is treated as pending and considered as not complied with.**

Fresh Directives in FY 2020-21 based on ARR Submission

Directive No.2 Outstanding Interest and Financial charges to State Government

Loans

Keeping In view of the above, the actual Interest & Finance charges amount of Rs. 1.90 Crores for the FY 2018-19 though not paid back to State government Loans, the Commission approves these charges in true-up **but directs the P&ED to clear all the outstanding arrears to the respective lenders by the end of the FY 2020-21 as all those interest charges were passed on to the consumers and were reimbursed to the Department. In case of failure to repay these charges, then the entire amount outstanding as on 31.03.2021 would be clawed back by the Commission in the ensuing ARR determination.**

Compliance:

As submitted in response to the above directive issued in previous years, P&ED reaffirms that it has not imposed any additional charges for the non-payment of interest on loans, and it will not levy such charges in the future. Furthermore, it is clarified that the responsibility for the loan remains with P&ED. Failure to pay the principal and interest does not relieve P&ED of this obligation, which will continue until the loan is fully repaid or adjusted, in line with proper accounting procedures. The resolution of this matter is contingent on the decisions made by the State

Government. **Meanwhile, interest on the loan will continue to accumulate, and P&ED is obligated to record this interest according to established commercial and accounting standards.**

In view of the above, it is submitted that Hon'ble Commission may kindly consider and drop the directive.

Commission's Comments:

As the reply made has no constructive assurance as to the clearing of dues referred in the above directive and any extra charge levied by the Lenders for the uncleared dues in future is again the lookout of the Commission in passing on to consumers or not. Hence, the P&ED shall address this issue repetitively with the Government for bring the issue to a logical end assiduously and the excuse given above cannot be entertained. The interest claimed in FY2021-22 & FY 2022-23 are disallowed for not making payment to the lender and only making the provision for liability. If no action is initiated, the entire amount so allowed earlier will be clawed back in FY2023-24 true-up totally for having given longer period to rectify the issue.

Hence, the above Directive is treated as uncompiled with and will be in force until it is complied with the way it is suggested.

Directive No.3 Levy of penalties for non-payment of revenue dues

The Commission feels, that the imposing of penalties/late payment surcharges is not happening at the level expected and unless penalties are strictly imposed the revenue collections is bound to be poor and the Organisation will have to face financial crunch on account of their own inaction. This is not a healthy practice and P&ED shall take serious note of the situation and order for intensive special revenue collections drive and see that these huge dues from sale of power comes down very soon by drawing an action plan and intimate the same to the Commission.

Compliance:

Penalties / Late Payment Surcharge is strictly imposed on consumers who defaulted in payment of bill within due date of the payment at the rate approved by the Commission. The amount of surcharge billed during FY 2022-23 is Rs. 35,00,60,577/- from total Revenue Collection amount of Rs.467,56,82,970/- during the FY 2022-2023 and, during FY 2023-24 (Upto September, 2023) is Rs. 6,93,28,102/- from total Revenue Collection amount of Rs.172,50,43,803/- upto September 2023 of the FY 2022-2023.

In view of the above, it is submitted that Hon'ble Commission may kindly consider and drop the directive.

Commission's Comments:

The Progress achieved in this matter needs to be monitored constantly to see the improvement achieved in arrear collections. Quarterly report shall be submitted for the FY 2024-25 for making decision by the Commission.

Directive No.5 Levying of the applicable charges in the case of Mixed Loads services:

Where any part of the connection given under one specific category, it shall not be utilized for any other purpose other than for which it is released that involves different higher applicable rate in the tariff schedule. A separate connection shall have to be taken invariably for such other loads/purpose under appropriate category, failing which the entire consumption (i.e., existing category consumption and additional consumption for different purpose) shall be billed in the category of consumption that corresponds to a higher applicable tariff for which any part of that connection is utilised.

Compliance:

The Department is persistently monitoring consumers connection and conversion of consumers category is constantly being done. The action taken report taken by the Department is enclosed as **Annexure-III**

Commission's Comments:

There appears, more of similar kinds of actions are required to be taken to set right the concealed defects and for raising more revenue in righteous way by the P&ED. Therefore, the Directive is still treated as not complied and it is still in force. The Annexure-III is missing in the reply provided and same may be resubmitted.

Fresh Directives in FY 2022-23 based on ARR submission

Directive -1: Functional wise submission of ARR with relevant Appendix prescribed.

From FY 2023-24 onwards, the licensee shall file ARR submission for it each functional separately with corresponding Appendix and annexures strictly as per the MYT Regulation guidelines without seeking any exemption for its compliance.

Compliance:

Submission of function wise ARR is compiled in the Tariff Petition for FY 2024-25.

Commission Comments:

The latest submission is a routine submission with same old excuses as made in the past and no new actual details of function wise ARR is indicated. It is not treated as complied with and it is still in force.

Directive -2: Submission of Non-domestic, Commercial and LT Industrial categories with no unit slabs from FY2023-24.

There shall not be any multiple slabs in the case of Non-domestic, Commercial and LT Industrial consumer Categories and submit with single slab of usage.

Compliance:

No reply provided for this directive by the P&ED.

Commission Comments:

No single slab submission for Non-public Profit purpose categories was adopted and still have more than one slabs in the submission made in FY 2024-25. Hence, the directive is not complied by P&ED.

Fresh directives for FY 2024-25

Directive No.1:

To Purchase REC certificates pertaining to FY 2022-23:

As per the power purchase cost approval given in APR ORDER FOR FY 2022-23, the P&ED is required to procure RE Certificate to the tune of Rs.1.74Cr, but the same was not fulfilled by P&ED during the scrutiny by Commission, the P&ED True-Up proposal and it was confirmed by P&ED in their replies to Additional Information queries called for. Commission now direct the P&ED to refer to clause-6(1) of the Renewable Purchase Obligation and its Compliance) Regulations, 2010 and comply with the stipulated provisions of the said clause and report the compliance within 15 days of issuance of this Order. Failing which the clause 6(2) will be invoked by the Commission in this matter without any hesitation.

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TARIFF SCHEDULE

APPENDIX

TARIFF SCHEDULE

1. General Conditions of Supply (For all categories of Consumers):

1.1 Rebate/Surcharge for availing supply at voltage higher/lower than base voltage: In spite of feasibility/availability to given supply at the specified voltage for the corresponding load as stipulated in clause-3.2 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 (with up to date amendments.)

(i) For consumers having contracted load up to 50 kW only, but the supply is given at higher voltage (HT/EHT level), then a rebate of 5% would be admissible on the energy and fixed charges applicable to that class of consumer for such period, he/she is so availing the supply at that voltage level.

(ii) For consumers having contracted load above 50 kW, but the consumer desires to draw supply at a voltage lower than that of base voltage he/she is eligible avail for corresponding load as per clause of supply code mentioned above, the consumer shall be required to pay additionally an extra charge of 10% on the bill amount (Energy charge & Fixed charge) calculated at the applicable voltage category tariff to which he/she should have normally availed.

(iii) All voltages mentioned above are normally available rated voltages as per clause 3.2 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013, with up to date amendments.

1.2 Payment: All payments shall be made by way of Cash/Banker's Cheque/by Demand Draft/through Money Order/E- transfer on line. While in the case of cash payments (the cash amount limit will be determined and notified by the Licensee in advance suiting his convenience).

1.3. Validity of existing Recharge Voucher: In the case of a consumer with prepaid meter supply having purchased recharge voucher prior to the effective date of new tariff, the existing voucher shall be continued until such time the recharged voucher amount is fully exhausted without levying any extra charge to such consumer. Therefore, as far as possible the Licensee shall issue recharge voucher(s) cautiously in such a way that

the voucher validity period doesn't exceed the number of days beyond the effective date from which new tariffs comes into force.

1.4. Due date: In case monthly bill is being paid by cheques mode it shall be issued **three (3) days** in advance from the normal due date specified for that bill. 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 up to date amendments).

1.5. Surcharge for late payment of bills: If payment is not received within the stipulated due date, a surcharge @ **two percent (2%) per month** (at simple interest) will be levied upon the outstanding principal amount for the actual number of days of delay occurred for every successive period of thirty (30) days or part thereof or until such period of time the due amount is left unpaid in full.

1.6. Single Point Delivery: This tariff is based on the supply being given through a single point of delivery and metering at one voltage level. If Supply is also availed by the same consumer from another point at other/different voltage level, then such consumption shall be metered separately and be billed accordingly treating it as a separate connection.

1.7. Voltage and frequency: All voltages and frequency shall be as per the provisions of clause 3.1 and 3.2 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 (with all latest amendments made).

1.8. Power Factor Incentive / Surcharge: -

- a) If the average monthly power factor of a HT consumer/LT 3Phase consumer /LT Industrial consumer increases above 95%, he shall be paid **an incentive** at the following rate:

Type of Event	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 HT consumer/LT 3Phase consumer / LT industrial consumer falls below 90%, he shall pay a **surcharge in addition** to his normal tariff, at the following rate:

Type of Event	Surcharge
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 average monthly power factor of the HT consumer/LT 3- phase consumer /LT industrial consumer falls below 85%, he shall pay a **surcharge in addition** to his normal tariff at the following rate:

Type of Event	Surcharge
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 HT consumer/LT 3Phase consumer /LT industrial consumer falls below 70%, then the Licensee shall have the right to disconnect supply to such consumer's installation after serving a notice of fifteen (15) days period. Supply may be restored only after steps have been taken to improve the power factor to desired level to the Utilities (licensees) satisfaction. However, this is without prejudice to the right to levying surcharge for such low power factor in the event of supply not being disconnected to such consumer.
- e) For this purpose, the "average monthly power factor" is defined as the ratio of total 'Kilo Watt hours' to the total 'Kilo Volt Ampere hours' recorded during the month. This ratio will be rounded-off to two-digital figures after decimal point. Figure 5 or above, in the third place after decimal point be rounded-off to the next higher figure to make it to a two-digit figure after the decimal point.
- f) Notwithstanding the above, if the average monthly power factor of a new consumer is found to be less than 90% at any time during the first 6 (six) months from the date of release of connection, and later on if he maintains the average monthly power factor at level not less than 90% in subsequent three months, then the surcharge so levied in the earlier bill on account of low power factor during the said period, shall be withdrawn and credited in the next month's consumption bill.

1.9. Transformer loss: In the case of HT supplies where metering of the HT service connection is on the Low Tension side i.e. on the secondary side of the transformer, the average losses in the transformer calculated as per the provisions at clause 5.7 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with its amendments thereof from time to time shall be added to the energy consumption indicated by the meter. However, metering of the HT service connection on the LT side of the transformer shall not continue more than six months from the effective date of the Tariff Order for FY 2024-25. If it is continued beyond the six months, the transformer loss shall no longer be added to the energy consumption and the consumer shall be billed based on the energy consumption indicated by the meter:

1.10. 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 as recorded by DISCOM official. Where the contracted load/billing demand found below 0.5 kW/ kVA shall be taken as 0.5 kW/kVA as the case may be. While all contracted load/billing demand recorded above 0.5 kW/kVA shall be taken as per actual recorded details available in the consumer historical profile data maintained by the Licensee.

The Licensee should update Contracted load/Billing demand as per the provisions of clause-4.108 of JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 (with up to date amendments).

1.11. Mixed Load: - No part of the connection given for any specific purpose under defined category shall not be utilized for a different purpose(s) other than for which such service connection was released which attracts a tariff higher than already released service category. A separate additional connection shall have to be taken invariably for such loads/purpose under different applicable category, failing which the entire consumption (i.e., existing category consumption and additional energy consumed for different purpose) shall be billed in that applicable category corresponding to higher tariff rate for which any part of that service connection is utilised.

1.12. Rounding of 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 rounded-off individually to nearest rupee (fraction of 50 paise and above be rounded-off to the next higher rupee and fraction lesser than 50 paise be ignored). In case of non-availability/scarcity of small change of rupees lesser than Rs.10/-, the consumer may be permitted to tender next higher amount divisible by 10 and however the excess amount so tendered by consumer shall be adjusted as credit in the next bill and interest on such excess will not be allowed or paid.

1.13. System of L.T Supply

1.13.1 Low Tension Supply

- i) Alternating Current 50 Hz, single phase 230 Volts up to 8 kW.
- ii) Alternating Current, three phase, 400 Volts, for loads above 8 kW and up to 50 kW subject to the availability of supply. 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.

1.13.2. 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.

1.14. The maximum demand: 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.

1.15. Billing demand: As defined in Clause 2.3(12) of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments. The clause reads as follows:

“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 Connected load sanctioned wherever contract demand has not been provided in the supply agreement.”

1.16. Government Subsidy: Section 65 of E.Act 2003 is hereby reproduced:

“ Provision of subsidy by State Government:- If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the State Government shall, notwithstanding any direction which may be given under section 108, pay, in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government:

Provided that no such direction of the State Government shall be operative if the payment is not made in accordance with the provisions contained in this section and the tariff fixed by the State Commission shall be applicable from the date of issue of orders by the Commission in this regard.”

Therefore, if the government subsidy is received promptly, the licensee shall adopt tariff ‘A’ (Subsidised Tariff) or in the event of non-receipt of said subsidy, the Licensee is at liberty to implement tariff ‘B’ (Full Cost Tariff i.e., without Subsidy) during the currency of period of its non-receipt.

There could be a situation, where the outstanding monthly subsidy due from Government was released with delay after passage of much time elapsing and thereby consumers are to be billed at full cost tariffs in that relevant month or months during which no subsidy was paid. Later on, if subsidy arrears were released and received by Licensee, the entire excess amount so charged to all consumers on account of full cost tariff adoption shall have to be refunded as deduction by treating such excess amount laying with Licensee **as advance payment** by the licensee **at one time** in the immediate monthly billing cycle where bills are being issued to respective consumers soon after receipt of such subsidy

relating to the past month/months. If in case, the excess amount so refundable is exceeds the monthly billing amount to be so adjusted to any consumer/ consumers, then such excess amount left unrefunded may be carried forward and be adjusted in the following monthly bill/bills to be issued to such consumer/ consumers until full refund settlement is made to consumer(s).

1.17. Applicable Taxes or Duties:

The tariff notified above does not include any taxes (including GST) or duties etc., on electrical energy that may be payable at any time in accordance with changes in any Law or Central Government/State Government Rules in force. Such charges, if any, shall be payable in addition to tariff charges by the consumer/user.

Accordingly, applicable GST shall be charged/levied on (i) **Application Fee** for releasing any Service connection (ii) Rental Charges against metering equipment, (iii) Testing Fee for meters/transformers, capacitor etc. and (iv) Labour Charges to be borne by customers for shifting of meters or shifting of service lines.

1.18. Contingency: In case of any inconsistency between provisions of this Tariff schedule and the Electricity Supply Code Regulations 2013 issued by JERC for Manipur and Mizoram (with up to date amendments). the provision, meaning and contend of the said Supply Code shall only prevails.

A: SUBSIDISED TARIFF**2 LT SUPPLY****2.1 LT Category-1: Kutir-Jyoti Service**

Applicability: Applicable to all household who has been given connection under Kutir-Jyoti Scheme or similar connection under any scheme of the State Government or Central Government for the benefit of poorer section for domestic purpose. If the total consumption in three months exceed 45 kWh, as per existing norms of KJS unless superseded by other new norms, the connection should be converted to LT Category-2 (Domestic).

Permitted Load: Initially starts with one single light point connection which can be extended later on by one or two light points or as per norms specified by the competent authority from time to time.

Rates:

a) Fixed charge	Rs 25.00 per month per Connection	
b) Energy charge (per month)		
i)	First 20 kWh	@ Rs 2.55 per kWh
ii)	All units above 20 kWh	@ Rs 3.55 per kWh

Note-1- if the total consumption of any consecutive three months is more than 45 kWh, the consumer shall be re-categorized/converted under normal domestic category permanently from the very 1st/2nd/3rd month of that consecutive three months. Whenever, total units consumed exceeds the specified limit of 45 kWh from that month instance the bill be served treating the consumer permanently under 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: Where a Kutir Jyoti /BPL consumer was converted as domestic consumer, the re-categorised/converted consumer shall be required to deposit load security/meter security amount as applicable for a domestic consumer but it should not contravene the provisions of clause 5.9 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments.

2.2 LT Category - 2: Domestic Service

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 dwelling house has attached kitchen/kitchen facility.** This is applicable for each floor for a multi storied building. 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 used. *This will not be applicable to institutions conducting commercial activities of any nature.*

Rates:

a) Fixed charge	Rs. 50.00 per month per kW of contracted load	
b) Energy charge (per month)		
i)	First 100 kWh	@ Rs 4.90 per kWh
ii)	Next 100 kWh	@ Rs 7.10 per kWh
iii)	All units above 200 kWh	@ Rs. 8.20 per kWh

2.3 LT Category 3: Non-Profit Public Service (Non-Domestic previously)

Applicability: Applicable for supply of energy to all lights, all types of fans, heating devices, Television, VCR/VCP, Radio, Computers, Refrigerator, Air Conditioner, lift motors, water pump and all other electrical appliances **for the purpose of public interest including other small power.** This tariff includes power loads for Non-Profit Public purposes such as Government offices/ establishments / institutions, where rental charges are not being levied such as offices, hospitals, nursing homes, clinics, dispensaries, health centres, schools, colleges, libraries, research institutes, boarding / lodging houses, rest houses, tourist lodges, guest house, circuit house, rest house, Go-downs; Public building/hall, community halls/YMA halls (not for hiring), religious premises like churches, temples, mosques, gurudwaras, religious offices.

This category shall include NGO's offices and any other establishment (Not setup for the purpose of undertaking some sort of trading/profit-making). This tariff is also applicable to orphanage/recognized charitable institutions where no fees/rental of any kind whatsoever are charged/levied

Rates:

a) Fixed charge	Rs 60.00 per month per kW of contracted load	
b) Energy charge (per month)		
i)	First 150 kWh	@ Rs 7.60 per kWh
ii)	All units above 150 kWh	@ Rs 8.30 per kWh

2.4 LT Category - 4: Commercial Service

Applicability: Applicable for supply of energy to all lights, all types of fans, heating devices, Television, VCR/VCP, Radio, Computers, Refrigerator, Air Conditioner, Lift motors, Water pump and all other appliances for private gains including other small power. This tariff includes power loads for commercial purposes like Semi-government/non-government offices, shops, book stalls / shops, parlours, hospitals, educational institutes, nursing homes, clinics, dispensaries, health centres, restaurants, bars, hotels, clubs, guest houses, rest houses (*includes home Stay houses*), tourist lodges, picnic spots, resorts, farm/garden houses, clubs, markets, optical houses, stadiums, meeting/conference halls, all types of studios, tea stalls, professional chambers (like Advocates, chartered Accountants, consultants, Doctors, etc.), private trusts, marriage houses, public halls, show rooms, centrally air-conditioning units, commercial establishments, X-ray plants, diagnostic centres, pathological labs, carpenters and furniture makers, repair workshops, laundries, typing institutes, internet cafes, STD/ISD PCO's, FAX/photocopy shops, tailoring shops, Non- Government Institutions such as 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/Cable TV establishment with sub-operators' installations, printing presses, commercial trusts, societies, banks, financial institutions, theatres, cinema halls, circus, coaching institutes, common facilities in multi-storeyed 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 telecommunication system/towers, leased of Government property(ies) to private party(ies) such as Guest house, tourist lodges, restaurants and others commercial applications those not covered under any other categories. It shall also include store/stock yard, parking lot, Storage godowns and any other applications for private/company/government gain.

It will broadly apply to all offices/establishment so setup for the purpose of trading/profit making.

Rates:

a) Fixed charge	Rs 80.00 per month per kW of contracted load	
b) Energy charge (per month)		
i)	First 150 kWh	@ Rs 8.20 per kWh
ii)	All units above 150 kWh	@ Rs 8.45 per kWh

2.5 LT Category - 5: Public Lighting Service (Street/thorough fare lighting)

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

Rates:

a) Fixed charge	Rs 80.00 per month per kW of contracted load.	
b) Energy charge (per month)		
	For all units (kWh)	@ Rs 11.35 per kWh

2.6 LT Category – 6: Public Water Works

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

Rates:

a) Fixed charge	Rs 90.00 per month per kW of contracted load.	
b) Energy charge (per month)		
	For all units (kWh)	@ Rs 11.10 per kWh

2.7 LT Category -7: Irrigation & Agriculture Service

Applicability: This tariff is applicable to irrigation/pumping for agricultural purpose only.

Rates:

a) Fixed charge	Rs 50.00 per month per kW of contracted load.	
b) Energy charge (per month)		
	For all units (kWh)	@ Rs 3.80 per kWh

2.8 LT Category – 8: Industrial Service

Applicability: Applicable for supply of energy for Industrial purposes, such as manufacturing/ processing / preserving of goods as such, cold storage plants/units, all types of workshops using electrical energy for such works, power looms, weaving houses, carpentry works, steel fabrication works, tyre re-treading works, black-smiths, Gold-smiths, saw mills, flour/rice mills, oil mills, re-rolling mills, motor body building works, coffee/ginger/turmeric processing units, winery plants, fruits processing plants, Ice candy units, fodder cutting units, poultry farming/ hatchery units, silk

rearing/processing units, pisciculture, prawn culture units, mushroom production units, floriculture in green houses, sugarcane crushing, milk/meat processing units, bamboo processing units, paper/steel/aluminium recycling units, construction of power generating stations/substations and power supply to any generating stations.

Rates:

a) Fixed charge	Rs 80.00 per month per kW of contracted load.
b) Energy charge (per month)	
First 400 kWh	@ Rs 7.10 per kWh
All units above 400 kWh	@ Rs 8.05 per kWh

2.9 LT Category – 9: Electric Vehicle Charging Stations

Applicability: This tariff is applicable to those consumers who use electricity installations exclusively for charging Electric Vehicles (i.e., two-wheeler to four-wheeler). The consumer shall obtain a separate service connection for this purpose.

Rates:

a) Fixed charge	Rs 75.00 per month per kW of contracted load.
b) Energy charge (per month)	
All units consumed	@ Rs 8.20 per kWh

Note: Consumers can charge their Own Electric Vehicles (for personal usage) at their respective house/residence, paying the charge applicable to the consumer category he/she belongs to.

3: HT SUPPLY

Applicability: - The tariffs are applicable for Consumer availing supply at voltage above 400Volts irrespective of connected load/contracted demand. It is mandatory to supply with voltage above 400V, to consumer having a contracted Load of above 50 kW or Contracted Demand of above **55.56 kVA**, as per clause 3.2 of JERC for M&M (Electricity Supply Code) Regulations, 2013, with upto date amendment.

3.1 HT Category - I: Domestic Service

Applicability: This tariff is applicable for the similar purposes as already defined in LT category- 2 above and rates are as follows:

Rates:

a) Demand charge	Rs 50.00 per month per kVA of Billing Demand.
b) Energy charge (per month)	
All kVAh	@ Rs 8.65 per kVAh

3.2 HT Category - 2: Non-Profit Public Service

Applicability: This tariff is applicable for the similar purposes as already defined in LT Category-3 above and rates are as follows:

Rates:

a) Demand charge	Rs 60.00 per month per kVA of Billing Demand.
b) Energy charge (per month)	
All kVAh	@ Rs 8.75 per kVAh

3.3 HT Category - 3: Commercial Service

Applicability: This tariff is applicable for the similar purposes as already defined in LT Category-4 above and rates are as follows:

Rates:

a) Demand charge	Rs 80.00 per month per kVA of Billing Demand.
b) Energy charge (per month)	
All kVAh	@ Rs 8.90 per kVAh

3.4 Category 4: Public Water Works (PWW)

Applicability: This tariff is applicable for the similar purposes as already defined in LT Category- 6 above and rates are as follows:

Rates:

a) Demand charge	Rs 90.00 per month per kVA of Billing Demand.
b) Energy charge (per month)	
All kVAh	@ Rs 9.85 per kVAh

3.5 HT Category - 5: Irrigation & Agriculture Service

Applicability: This tariff is applicable for the similar purposes as already defined in LT Category- 7 above and rates are as follows:

Rates:

a) Demand charge	Rs 50.00 per month per kVA of Billing Demand.
b) Energy charge (per month)	
All kVAh	@ Rs 3.85 per kVAh

3.6 HT Category -6: Industrial Service

Applicability: This Tariff is applicable for all the similar purpose as already defined in LT

Category – 8 above and rates are as follows:

A consumer may give change of existing supply option to another depending on their requirements by making a prior intimation to concerned billing unit working under P&ED, Mizoram.

Individuals those willing to switch over to avail power supply under Option-2 (ToD) shall invariably exercise such choice of swift-over to option-2 in writing to the Department official concern else all the existing HT Industrial consumer would be treated as covered under existing category i.e., Option–1 only.

Note: Any Consumer once exercised his willingness to change over may apply for such change of option/reverting to old option will be allowed/permitted only after the expiry of one (1) year period completion from the date of such switching to the present supply option.

Option-1 Rates: (TOD tariff is not be applicable)

a) Demand charge	Rs 80.00 per month per kVA of Billing Demand
b) Energy charge (per month)	
All kVAh	@ Rs 9.05 per kVAh

Option-2 Rates: (on switching over to TOD power supply from option-1)

a) Demand charge	Rs 80.00 per month per kVA of Billing Demand	
b) Energy Charge (per month) power consumption in three (3) varied time slots during every day		
NORMAL TOD	from 6.00 Hrs upto 17.00 Hrs	@ Rs 10.05 per kVAh
PEAK TOD	from 17.00 Hrs upto 22.00 Hrs	@ Rs 11.55 per kVAh
OFF-PEAK TOD	from 22.00 Hrs upto 6.00 Hrs	@ Rs 8.55 per kVAh

3.7 HT Category - 7: Bulk supply within the State

Applicability: Applicable for HT Consumers having single point metering of mixed load of housing complex, multi-storeyed building, Military Engineering Service (MES), Border Road Task Force (BRTF), etc. where the supply is used predominantly for domestic purpose (with domestic load not less than 85 % of the total load) and internal maintenance of power supply is carried out by the bulk consumers themselves, Tariff Rate applicable is as follows:

Rates:

a) Demand charge	Rs 90.00 per month per kVA of Billing Demand.
b) Energy charge (per month)	
All kVAh	@ Rs 6.85 per kVAh

3.8 HT Category - 8: Electric Vehicle Charging Station

Applicability: This tariff is applicable for the similar purposes as already defined in LT Category-9 above and rates are as follows.

Rates:

a) Fixed charge	Rs 75.00 per month per kVA of contracted load.
b) Energy charge (per month)	
All units consumed	@ Rs 8.65 per kVAh

B: FULL COST TARIFF (FCT) (i.e., WITH NO SUBSIDY)

Sl. No.	Consumer Category	Approved Full Cost Tariff (FCT)	
		Energy Charges (Rs/month)	Fixed Charges (Rs.)
1	Kutir Jyothi		
i)	First 20 kWh	7.77/kWh	25/Connection
ii)	Balance above 20 kWh	10.81/kWh	25/Connection
2	Domestic		
A	Low Tension		
i)	First 100 kWh	9.53/kWh	50/kW of Contracted Load
ii)	Next 100 kWh	13.81/kWh	50/kW of Contracted Load
iii)	Balance above 200 kWh	15.94/kWh	50/kW of Contracted Load
B	High Tension	10.60/kVAh	50/kVA of Billing Demand
3	Non-Profit Public Service		
A	Low Tension		
i)	First 150 kWh	7.74/kWh	60/kW of Contracted Load
ii)	Balance above 150 kWh	8.45/kWh	60/kW of Contracted Load
B	High Tension	9.23/kVAh	60/kVA of Billing Demand
4	Commercial		
A	Low Tension		
i)	First 150 kWh	11.56/kWh	80/kW of Contracted Load
ii)	Balance above 150 kWh	11.92/kWh	80/kW of Contracted Load
B	High Tension	9.83/kVAh	80/kVA of Billing Demand
5	Public Lighting	12.14/kWh	80/kW of Contracted Load
6	Public Water Works		
A	Low Tension	12.30/kWh	90/kW of Contracted Load
B	High Tension	10.03/kVAh	90/kVA of Billing Demand
7	Irrigation & Agriculture		
A	Low Tension	11.30/kWh	50/kW of Contracted Load
B	High Tension	8.21/kVAh	50/kVA of Billing Demand
8	Industrial		
A	Low Tension		
i)	First 400 kWh	10.21/kWh	80/kW of Contracted Load
ii)	Balance above 400 kWh	11.58/kWh	80/kW of Contracted Load
B	High Tension (Op-1)	10.09/kVAh	80/kVA of Billing Demand
	High Tension (Op-2)	10.71/kVAh	80/kVA of Billing Demand
9	Electric Vehicle charging Stns (LT)	12.10/kWh	75/kW of Billing Demand
10	Electric Vehicle charging Stns (HT)	10.70/kVAh	75/kVA of Billing Demand
11	Bulk Supply	9.92/kVAh	90/kVA of Billing Demand

4. Temporary 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/Discom desired to delegate power to its various level of officers, it may be done so through an executive order issued by the licensee/Discom. However, in all cases, overall duration should not violate the supply code duration 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 be returned to the consumer after the period is over. Bill shall be served at the following rates:

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 rated slab of the applicable tariff category for which energy is supplied.

5. Computation of un-metered energy:

5.1 Street light billing: - (1) As per Section 55 of Electricity Act 2003 and also as per clause 5.1 of the JERC for Manipur & Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendments, no installation should be serviced without appropriate and correct meter. Keeping in view, the elapse of many more years from E. Act 2003 promulgation and also after several years elapsed from the supply code effective date, the formula for computation of energy consumed for un-metered supply in crude way is felt unnecessary and hence withdrawn. P&ED should install meters for all street lighting supply at all points along with DT metering and bill them accordingly.

5.2 P&ED has achieved 100% metering of all consumers as per report in the 18th State Advisory Committee meeting. Hence, separate computation methodology is no longer required and hence deleted fully & withdrawn forthwith. **(5.1 above shall not be applicable).** Billing under defective, burnt, lost meter shall be made as per the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013 with latest amendment.

5.3 For Un-authorized consumer/theft (includes by-pass of meter)/pilferage and cases cover by section 135 of the Act: The energy consumed shall be computed as per Annexure 11.1.19 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. **with up to date amendment.** The energy so computed shall be evaluated as follows:

(a) Load less than 10 kW

(1) **First instance:** - Three (3) times of the rate of the applicable tariff (fixed and variable

charges) for which the stolen energy was utilized.

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

(b) Load exceeding 10 kW

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

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

6. Miscellaneous Charges (Part of Non-Tariff Income)

- 6.1 Meter Rent for (non-Smart/Smart) meters:** Monthly charges for hiring of the meter, indicator shall be as follows:

6.1.1 LT Metering: (Non-Smart) meters

a) AC, Single phase 1Ø Energy meter whole current	Rs.20.00 per month
b) AC, Three phase 3Ø Energy meter, whole current	Rs.35.00 per month.
c) AC, Three phase 3Ø Energy meters, CT operated	Rs.50.00 per month
d) Any other type of meter/indicator	Rs.100.00 per month

For Smart Meters rental charges	
a) AC, Single phase 1Ø Energy meter whole current	Rs.50.00 per month
b) AC, Three phase 3Ø Energy meter, whole current	Rs.60.00 per month.

6.1.2 HT Metering: (Non-Smart meter rental)

a) AC, Three phase 3Ø Energy meter, CT & PT operated	Rs.200.00 per month.
b) Any other type of meter/indicator	Rs.300.00 per Month.

For Smart Meter Rentals for HT	
AC, three phase 3Ø Smart Energy meter, CT & PT operated	Rs.250.00 per month.

6.2. Pole/Tower usage charge per month

6.2.1 For supporting of internet/media/telephone cables:

This charge shall be borne by Operator/Distributor of visual media network.

- a) Rs.10.00 per pole per cable per month in case of internet cable/ media cables/visual media cables
- b) Rs.20.00 per pole per month per cable in case of landline telephone cable. (a cable having up to 5 pair of lines shall be taken as one cable for this purpose) Telephone cable having more than 5 pairs shall be considered as 2, 3 etc, by dividing actual number of pairs by 5 to arrive at equivalent number of cables. Any fraction shall be rounded to next higher

integer.

6.3. Other charges for meter:

(a) Meter shifting charge:

- i) Rs.200.00 per shifting if it resulted from reconstruction/ modification of building by consumer or at consumer's request. Material to be borne by interest party.
- ii) Free of cost if shifting is done in the interest to 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) The cost of replacement and execution charge:

Utility 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.

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

- a) For existing consumer, it shall be Free of cost.
- b) For disconnected consumer with meter removed: Rs.100.00
- c) For new consumer, it shall be included in the cost of service connection under the nomenclature **execution charges**.

ii) Cost of Energy Meters supplied by Licensee:

If the consumer prefers to buy meter from the Licensee for new connection or for replacement for a faulty meter, the price will be at the Licensee's purchase rate if supplied by the Licensee after collection of Rs.100/- towards storage charges (*Prima facie energy meters installed for usage shall be of those approved or tested & approved by the Licensee*).

However, when the cause leading to subsequent replacement instance either due to manufacturing defect or fault on the part of licensee then, **it shall be done free of cost**.

c) Testing charge of Meter at the request of consumers: (Testing charge is inclusive of costs of meter re-sealing materials/equipment).

Sl. No	Type of Meter for testing	Charges payable
i)	For AC, Single phase LT energy meter	Rs.75.00 per meter per testing.
ii)	For AC, three phase LT energy meter whole current	Rs.100.00 per meter per testing.

Sl. No	Type of Meter for testing	Charges payable
iii)	For AC, three phase LT energy meter, CT operated	Rs.200.00 per meter per testing.
iv)	For energy meter, AC three Phase, CT & PT operated	Rs.300.00 per meter per testing.
v)	For any other type of meter HT supply	Rs.300.00 per meter per testing.

In case the meter supplied by the Licensee fitted to 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.

6.4 Testing charge of Consumer's Installation:

The first test and inspection will be carried out free of cost as per Clause 4.47 of JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. 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.150.00** (excluding GST) 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.

6.5 Disconnection and Reconnection:

(1) **Disconnection:** -Disconnection of an installation in all cases will be **free of charges**.

(2) **Reconnection:** - Reconnection charge shall be as follows: -

(i)	For AC single phase LT supply	Rs.100.00
(ii)	For AC three phase LT supply	Rs.150.00
(iii)	For AC HT supply	Rs.400.00

Note: - Any extra material required during reconnection will be charged extra.

6.6 Change of category:

Change of category will be carried out as per clause 4.72 to 4.80, clause 4.85 to 4.86 and 4.90 to 4.93 of the Joint Electricity Regulatory Commission for Manipur and Mizoram (Electricity supply Code) Regulations, 2013. with up to date amendment.

6.7 Mutation Fee: -Mutation fee i.e. fee for change of name shall be Rs 50.00 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 with up to date amendment.

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

Cost of replacement after initial fixation of connection wire, cut-out, fuses, meters etc. will be borne by the consumers and shall be payable by the consumer in advance. If the Licensee

supplies the materials, or the consumer may arrange required materials as per the required specifications of the Licensee. The execution charges shall be as follows:

(1) For Cable and wire (if meter cost borne by consumer):

(a)	Single phase connection:	Rs. 400.00 per connection.
(b)	Three phase connection:	Rs. 600.00 per connection.
(c)	HT three phase connection:	Rs. 900.00 per 100 meters of the HT line.

Note: - In case if meter is provided by Licensee, the additional cost payable by consumer(s) will be as specified by the Licensee along with applicable Taxes if any.

(2) For Cut-Out & Fuse: -

1) per Cut-Out - Rs 10.00
2) per Fuse - Rs 3.00

1) 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.

6.9 Re-rating charge of Consumer's Installation:

This charge is for meeting expenses toward spot verification of load and other connected recording works. Charge for re-rating of the consumer's installation at the request of the consumer shall be Rs.150.00 per rerating per connection. Inspection for re-rating should be carried out only on advance payment in the concerned office and on production of such payment receipt.

The aforesaid charges do not include the charges payable by the consumer for other works connected due to change of connected load (like additional load security, etc. However excess security paid by consumer should be returned by way of adjustment in monthly bill in one instalment). 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.

6.10 Security Deposits: -

(i) Meter Security deposit (if Licensee's 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**.

(ii) Load Security deposit:

The amount of load shall be calculated as per the procedure prescribed in clause 4.123 – 4.127 and determine 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.

6.11- Charges for Replacement of tamper proof Meter Housing Box:

For AC single phase LT or three phases LT without CT or with CT, the energy meter box if replaced from Licensee's store: The charge will be as per Licensee's purchase rate.

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/- |

6.12- Charges for Testing of Transformer Oil:

(a) For first sample of oil: Rs.150.00 per sample.

(b) For the next additional sample of oil of the equipment received at the same time of the first sample: Rs.100.00 per sample.

6.13- Service Lines & Service Connection:

(a) Type of Service Connection: Type of service connection and distance for service connection line length will be as per clause 4.2 read with clause 5.10 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. with up to date amendment.

(b) Cost of Service Connection: As stipulated in Clause 4.37 & 4.131 of the JERC for Manipur and Mizoram (Electricity Supply Code) Regulations, 2013. If the consumer desires to arrange service connection materials, the Licensee (not below rank of Junior Engineer concerned) will check all the materials.

6.14 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.

ANNEXURES

**MINUTES OF 26th MEETING OF
THE STATE ADVISORY COMMITTEE OF MIZORAM**

Date: 13th MARCH (Wednesday), 2024 Time :11:00 A.M.

Venue: AIJAL CLUB, CONFERENCE HALL, AIZAWL.

The list of Members and Participants who attended the Committee is appended.

Mr.R.Thanga, Chairperson of the Commission was the Chairman of the Committee and welcomed the members of the Committee and the special invitees. Item wise discussion on the agenda was held as below:

Agenda 1: Confirmation of the minutes of the 25th Meeting of State Advisory Committee held on 20th March, 2023:

The Chairman requested the members whether they have doubts on the minutes of the Meeting and after due affirmation from the members, the minutes was declared confirmed.

Agenda 2: Review of Action taken on the minutes of the 25th Meeting of State Advisory Committee, Mizoram:

a) Public awareness and vigilance report.

Professor H.Lalramnghinglova stated that street lights in Aizawl city are not being taken care properly and suggested that co-ordination should be made between AMC and P&E Department. Er.Lalhmingliani Hmar, Secretary, P&E Department, etc also stated as street lights maintenance in Aizawl has been handed over to AMC, AMC and Local Council co-ordination is very much required as P&E Department has no role to play. Pu Lallunghnema supported the proposal for constituting the co-ordination committee. Er.Benjamin L.Tlumtea, Member of the Commission also stated that AMC should have competent man power to handle street lights.

The Committee, therefore, recommends constituting Co-ordination Committee between P&E Department and AMC and action taken report of the Committee should be submitted to the Commission before the next State Advisory Committee Meeting

(b) Contracted Load and Connected Load:

Er.Lalhmingliani Hmar, Secretary, P&E Department etc. informed the Committee that the Department has undertaken electric safety week and talks on TV shows with print media coverage etc. on informing the public on various areas of electricity including awareness on Contracted Load and Connected Load. Er.H.Zonunsanga, E-in-C, P&E Department also informed the Committee that on the back page of electricity bill there is a clear clarification. Professor H.Lalramnghinglova enquired how outstanding dues of LAD and PHE bills are paid. Er.Benjamin L.Tlumtea, Member, JERC (M&M) replied that bills are paid on end of financial year.

Er.Lalrinzuala Ralte, SE, Aizawl WATSAN Circle representing E-in-C, PHE Department also informed the Committee that the quarterly bills served by the P&E Department were processed but the Finance Department does not release the bills for quarterly payment. Pu Lallunghnema, Member recommends that this is a serious issue as huge surcharges are paid by the Government and proposes representative of Finance Department to be included in the State Advisory Committee Member.

Agenda 3. Prepaid Metering and Smart Metering:

Er.Lalhmingliani Hmar, Secretary, P&E Department etc. informed the meeting that smart metering system is being done in Zarkawt, Aizawl area but configuration of the system could not be done due to technical issues and could not give timeline as to when the system will work and said that the department will look into this matter.

Agenda 4. Meter Testing Facilities

Portable / Mobile Testing Kits for Meters has been installed in various places of Mizoram and so far 7232 Meters has been tested. Mr.R.Thanga, Chairperson, JERC (M&M) requests the P&E Department to submit list of Stationery Meter Testing Units along with Portable Testing Kits to the Commission

Agenda 5. Function Wise Budget and Corporatization.

Er.H.Zonunsanga, E-in-C, P&E Department stated that function wise budget along with proposal for re-structuring of the P&E Department into function wise-3 Business Strategic Unit has been submitted to the Government and so far no information has been received. Professor H.Lalramnghinglova also added that the Government should be requested to quickly take step for Corporatization of the Department. Mr.R.Thanga, Chairperson, JERC (M&M) also stated that this is for the greater benefit of the general public and it has impact in the determination of different tariff. Pu Vanlalruata, Member also suggested that the State Advisory Committee should write to the Government. Pu Thanglura, Member also supplemented on this issue recommending the suggestion.

Agenda-6: Consumer Grievance Redressal System:

Er.H.Zonunsanga, E-in-C, P&E Department informed the Committee that the constitution of Consumer Grievances Redressal Forum has been published in Vanglaini for awareness to the public. Er.Benjamin L.Tlumtea, Member, JERC (M&M) also supplemented that Consumer Grievances Redressal Forum has been constituted at Aizawl and Consumer Grievances

Redressal Forums have been constituted in all district headquarters and Internal Grievances Redressal Cell in all sub-divisional level. Pu R.Thanglura, Member stated that the grievances of the electricity consumers are not being redressed properly due to several bottleneck in the procedure. Er.H.Thanthianga, Chief (Engineering), JERC (M&M) informed that proper procedure has been laid out in the Regulation and that redressal of the grievances is not a difficult process. The Committee recommends that more awareness should be made to the public on this issue.

Agenda-7: Determination of Retail Tariff of P&E Department for FY 2024-25:

Power point presentation on the ARR & Tariff Petition was given by Er.Lalramnghaka, EE (Commercial), P&E Department. Er.Benjamin L.Tlumtea, Member, JERC (M&M) also highlighted important points of the petition. Er.H.Thanthianga, Chief (Engineering), JERC (M&M) mentioned that in case if the budgetary support of the Government are not paid quarterly in advance, it shall be required to implement Full Cost Tariff. Pu R.Thanga, Chairperson, JERC (M&M) also mentioned that Ministry of Power, Forum of Regulators etc. are very vigilant on this issue. Pu Thanglura, Member commented that lots of improvement has taken place in the Department. Pu Vanlalruata, Member stated that cost of employees is too high and this should be reduced as it effects the tariff. Pu Lallunghnema, Member enquired who has the final authority on fixing of tariff. Er.H.Thanthianga, Chief (Engineering), JERC (M&M) informed the Committee that the Commission has the final authority on fixing of Tariff. He further stated that there is no proposal for hiking the present Tariff in the Tariff Petition and the additional fund requirement amounting to Rs. 211.23 Crore or 27.01% of the final ARR whichever is less for meeting the ARR over and above revenue collection from sale of power with existing tariff is to be given as Tariff Subsidy by the State Government.

The Committee ended at 4:00 p.m. with a vote of thanks from the Chair.

Sd/-
(R. THANGA)
Chairperson

Memo No. H. 11019/27/21-JERC, Dated Aizawl, the 15th March, 2024.

Copy to:

1. P.S to Hon'ble Chief Minister, Gov't of Mizoram for kind information to the Hon'ble Chief Minister.
2. P.S to Hon'ble Minister, i/c P&E Department Gov't of Mizoram for kind information to Hon'ble Minister, i.c P&E Department.

3. PS to Secretary, P&E Department, Gov't of Mizoram for kind information to the Secretary and for taking necessary action on the Minutes of the Meeting.
4. All Members / Invitees of the State Advisory Committee for kind information and for taking necessary action on the Minutes of the Meeting.
5. Guard/stock File.

(Contd.....)

List of Members and Participants attended
26th Meeting of the State Advisory Committee of Mizoram

Date & Time: 13th March, 2024 (Wednesday) 11:00 a.m.

Venue: Aijal Club, Conference Hall, Aizawl

Sl. No.	Name	Designation
1.	Pu. R.THANGA	CHAIRPERSON, JERC(M&M)
2.	Er.BENJAMIN L.TLUMTEA	MEMBER, JERC(M&M)
3.	Pu. RICHARD ZOTHANKIMA	SECRETARY, JERC (M&M)
4.	Er. H.THANTHIANGA	CHIEF (ENGG.) JERC (M&M)
5.	Pu.LALREMRUATA SAILO	ASST. CHIEF (ENGG.), JERC (M&M)
6.	Pi. LALCHANCHINMAWII	ASSISTANT SECRETARY, JERC (M&M)
7.	Pu. H. LALNUNFELA	PAO, JERC (M&M)
8.	Pi. K. LALREMSANGI	PPS, JERC(M&M)
9.	Pi. LALREMRUATI	STENO, JERC (M&M)
10.	Pi.LALHMINGLIANI HMAR	SECRETARY, P&E
11.	Er. H. ZONUNSANGA	ENGINEER-IN-CHIEF, P&ED
12.	Er. J.H. MALSAWMA	S.E. (P), P&ED
13.	Er. LALRINZUALA RALTE	S.E. AIZAWL WATSAN CIRCLE
14.	Er. NGURSAILOVA SAILO	DIRECTOR, ZEDA
15.	Er. LALTLANTHANGI	S.E., SLDC, P&ED
16.	Er. THANGLURA SAILO	J.S., P&ED
17.	Er. LALRAMNGHAKA	EE (COMMERCIAL) ,P&ED
18.	Er. P.C. LALREMRUATA	A.E., (Commercial), P&ED
19.	Er. C.LALRAMCHULLOVA	A.E., (Commercial), P&ED
20.	Pi. LALSAWMLIANI	JE., (COMMERCIAL), P&ED
21.	Pu. DAVID LALNUNPUIA	J.E., (COMMERCIAL), P&ED
22.	Pu. B.C. LALREMRUATA	COMPUTER OPERATOR, P&ED
23.	Pu. SANJIB MAJHI	CONSULTANT, P&ED
24.	PROF.H. RAMNGHINGLOVA	DEPT. OF ENV.SCIENCES, MZU
25.	PROF. MALSAWMLIANA	G.S. CYMA
26.	Pu. LALREMRUATA KULLAI	Jt. COMMISSIONER, AMC
27.	Pu. R. LALTANZUALA	Joint Director, COMMERCE & INDUSTRIES
28.	Pu. H. LALDIKLIANA	PRESIDENT, M.C.U
29.	Pu. C.N. THANGA	PRESIDENT, M.C.C.
30.	Pu. LALHMUAKLIANA	G.S, AMFU
31.	Pu. K. THANMAWIA,	G.S, MUP
32.	Pu. LALLUNGHNEMA	REPUBLIC VENG, AIZAWL
33.	Pu. VANLALRUATA	TUIKUAL, AIZAWL
34.	Pu.THANGLURA	VICE-PRESIDENT, MCU
35.	Pu. MALSAWMDAWNGLIANA	DY. DIRECTOR, LAD
36.	Pu. LALBUATSAIHA	ASST. SECRETARY, AMFU

ANNEXURE-II

LIST OF PARTICIPANTS ATTENDED
THE PUBLIC HEARING ON ARR & TARIFF PROPOSAL PETITION FOR FY 2024-25
SUBMITTED BY POWER & ELECTRICITY DEPARTMENT, GOVT. OF MIZORAM

Venue: Aijal Club, Conference Hall, Aizawl, Mizoram.
Date & Time: 14th March, 2024 (Thursday) at 11.00 a.m. to 1.00 pm

Sl. No.	Name	Designation
1.	Pu R. THANGA	CHAIRPERSON, JERC (M&M)
2.	Er. BENJAMIN L.TLUMTEA	MEMBER, JERC(M&M)
3.	Er.H. ZONUNSANGA	ENGINEER-IN-CHIEF, P&E
4.	Pu RICHARD ZOTHANKIMA	SECRETARY, JERC (M&M)
5.	Er. H. THANTHIANGA	CHIEF (ENGINEERING), JERC (M&M)
6.	Pu LALREMRUATA SAILO	ASST. CHIEF (ENGG.), JERC (M&M)
7.	Pi LALCHANCHINMAWII	ASSISTANT SECRETARY, JERC (M&M)
8.	Pu H.LALNUNFELA	PAO, JERC(M&M)
9.	Pu LALRAMHLUN PURUOLTE	PPS, JERC(M&M)
10.	Pi. K.LALREMSANGI	PPS, JERC(M&M)
11.	Pu K. HARI PRASAD	CONSULTANT, JERC (M&M)
12.	Pu G.R.S. GOWTHAM	CONSULTANT, JERC(M&M)
13.	Er. LALNITHANGA	C.E., P&ED
14.	Er. J.H.MALSAWMA	S.E. (P), P&ED
15.	Er.LALRINMAWIA	S.E., P&ED
16.	Er LALTLANTHANGI	S.E., SLDC, P&ED
17.	Er H.LALRUATKIMA	Sr. E.E., SLDC, P&ED
18.	Er LALRAMNGHAKA	EE (COMMERCIAL) ,P&ED
19.	Er ZOTHANSANGA	E.E., P&ED
20.	Er LALHMINGLIANA HMAR	E.E., P&ED
21.	Pi LALSAWMLIANI	JE (COMMERCIAL) , P&ED
22.	Er C.LALRAMCHULLOVA	A.E., P&ED
23.	Er P.C. LALREMRUATA	A.E., P&ED
24.	Pu B.C.LALREMRUATA	COMPUTER OPERATOR, P&ED
25.	Pu SANJIB MAJHI	CONSULTANT, P&ED
26.	Pu C.N. TLUANGA	M.C.C.
27.	Pu VANLALRUATA	MEMBER, SAC
28.	Pu C. LALHMACHHUANA	PRESS
29.	Pu LALDIKLIANA	TREASURER, M.C.U
30.	Pu THANGLURA	VICE-PRESIDENT, MCU
31.	Pu LALRAMZAUVA	E.M, M.C.U (HQRS.)

Annexure-III

P&ED Expected Revenue from Approved Tariffs w.e.f 1.04.2024 in FY 2024-25 (subsidised)												
Sl. No.	Consumer Category (FY 2024-25)	Consumers	Connected Load (in kW)	Annual energy Sales (in MU)	Sales/Consumer /Month (in kWh)	Fixed Charge (₹ /kW)	Energy Charge (₹ /kWh)	Annual Revenue		Annual Revenue (₹ Crs)	Avg. per unit (₹ /kWh)	
								Fixed Charges (₹ Crs)	Energy Charge/ (₹ C rs)			
1	2	3	4	5	6	7	8	9	10	11=(9+10)	12=11/5	
1	Kutir Jyothi (Dom)					Conc/kW	(₹ /kWh)	(₹ /kWh)				
i)	First 20 kWh	10023		2.01	16.73		2.55	0.30	0.51	0.814		
ii)	Above 20 kWh	9206		3.37	30.48		3.55	0.28	0.97	1.251		
	Sub Total	19229	4944.71	5.38		25		0.58	1.49	2.064	3.84	
2	Domestic					₹ /CL/kW	(₹ /kWh)					
i)	First 100 kWh	156055	202330	108.96	58.18		4.90	12.14	53.39	65.530		
ii)	101 - 200 kWh	65603	85056	97.99	124.47		7.10	5.10	52.25	57.357		
iii)	Above 200 kWh	47335	61371	115.04	202.53		8.20	3.68	69.34	73.022		
	Sub Total	268993	348757.66	321.99		50		20.93	174.98	195.909	6.08	
3	Domestic HT	12	2315.25	2.46		50	8.65	0.15	2.36	2.519	10.24	
	Total Domestic	288234	356017.62	329.83				21.66	178.84	200.493	6.08	
4	Non-Profit Public - LT											
i)	First 150 kWh	6746	76007	5.38	66.46		7.60	5.47	4.09	9.561		
ii)	Above 150 kWh	2493	28089	7.62	254.71		8.30	2.02	6.01	8.033		
	Sub Total	9239	104095.85	13.00		60		7.49	10.10	17.594	13.53	
5	Non-Profit PP HT	61	11023.90	4.38		60	8.75	0.88	4.26	5.140	11.74	
	Total Non-Profit PP	9300	115119.75	17.38				8.38	14.36	22.734	13.08	
6	Commercial											
i)	First 150 kWh	9995	30661	17.79	148.32		8.20	2.94	14.59	17.53		
ii)	Above 150 kWh	4737	14531	26.25	461.79		8.45	1.40	21.97	23.36		
	Sub Total	14732	45192.46	44.04		80		4.34	36.56	40.894	9.29	
7	Commercial HT	548	17508.80	13.88		80	8.90	1.87	13.73	15.593	11.23	
	Total Commercial	15280	62701.26	57.92				6.21	50.28	56.488	9.75	
8	Public Lighting	573	1066.05	2.77		80	11.35	0.10	3.14	3.246	11.72	
9	Public Water Sys - LT	195	1328.51	6.97		90	11.10	0.14	7.74	7.880	11.31	
10	Public Water Syst - HT	56	49033.69	98.40		90	9.85	5.88	107.69	113.577	11.54	
11	Irrgn & Agrcl - LT	57	75.30	0.05		50	3.80	0.005	0.019	0.024	4.70	
12	Irrgn & Agrcl - HT	25	5003.15	1.12		50	3.85	0.334	0.479	0.813	7.26	
13	Industrial LT											
i)	First 400 kWh	961	5138	1.98	172.09		7.10	0.49	1.41	1.902		
ii)	Above 400 kWh	87	465	0.71	681.48		8.05	0.04	0.53	0.578		
	Total LT Industrial	1048	5602.91	2.70		80		0.54	1.94	2.480	9.20	
14	Industrial HT (Opt-1)	27	9523.81	10.00		80	9.05	1.02	10.06	11.071	11.07	
	Industrial HT (ToD)	2	745.12	2.10		80	10.52	0.08	2.45	2.534	12.07	
15	EV Charging Stns (LT)	4	403.00	1.00		75	8.20	0.04	0.82	0.856	8.56	
16	EV Charging Stns (HT)	2	245.00	1.00		75	8.65	0.02	0.96	0.986	9.86	
17	Bulk Supply HT	175	19968.08	15.55		90	6.85	2.40	11.84	14.231	9.15	
	Grand Total	334207	631778	546.79				46.80	390.62	437.41	8.00	

Annexure-IV

P&ED, Mizoram - Full Cost (without Subsidy) Tariff based Revenue for FY 2024-25											
Sl. No.	Consumer Category (FY 2024-25)	Consumers	Connected Load (in kW)	Annual energy Sales (in MU)	Sales/ Consumer /Month (in kWh)	Fixed Charge (₹ /kW)	Energy Charge (₹ /kWh)	Annual Revenue		Annual Revenue (₹ Crs)	Avg. per unit (₹ /kWh)
								Fixed Charges (₹ Crs)	Energy Charge/ (₹ Crs)		
1	2	3	4	5	6	7	8	9	10	11=(9+10)	12=11/5
1	Kutir Jyothi (Dom)					Conc/kW	₹ /kWh	₹ /kWh			
i)	First 20 kWh	10023		2.01	16.73		7.77	0.30	1.56	1.864	
ii)	Above 20 kWh	9206		3.37	30.48		10.81	0.28	2.97	3.244	
	Sub Total	19229	4944.71	5.38		25		0.58	4.53	5.108	9.49
2	Domestic					₹ /CL/kW	₹ /kWh				
i)	First 100 kWh	156055	202330	108.96	58.18		9.53	12.14	103.81	115.951	
ii)	101 - 200 kWh	65603	85056	97.99	124.47		13.81	5.10	101.60	106.705	
iii)	Above 200 kWh	47335	61371	115.04	202.53		15.94	3.68	134.82	138.506	
	Sub Total	268993	348758	321.99		50		20.93	340.24	361.161	11.22
3	Domestic HT	12	2315	2.46		50	10.60	0.15	2.90	3.052	12.41
	Total Domestic	288234	356018	329.83				21.66	347.66	369.321	11.20
4	Non-Profit PP LT										
i)	First 150 kWh	6746	76007	5.38	66.46		7.74	5.47	4.16	9.637	
ii)	Above 150 kWh	2493	28089	7.62	254.71		8.45	2.02	6.12	8.145	
	Sub Total	9239	104095.85	13.00		60		7.49	10.29	17.782	13.68
5	Non-Profit PP HT	61	11023.90	4.38		60	9.23	0.88	4.49	5.372	12.26
	Total Non-Profit PP	9300	115119.75	17.38				8.38	14.78	23.154	13.32
6	Commercial										
i)	First 150 kWh	9995	30661.05	17.79	148.32		11.56	2.94	20.57	23.518	
ii)	Above 150 kWh	4737	14531.41	26.25	461.79		11.92	1.40	30.98	32.378	
	Sub Total	14732	45192.46	44.04		80		4.34	51.56	55.895	12.69
7	Commercial HT	548	17508.80	13.88		80	9.83	1.87	15.15	17.020	12.26
	Total Commercial	15280	62701.26	57.92				6.21	66.71	72.916	12.59
8	Public Lighting	573	1066.05	2.77		80	12.14	0.10	3.36	3.464	12.51
9	Public Water Sys - LT	195	1328.51	6.97		90	12.30	0.14	8.57	8.717	12.51
10	Public Water Syst - HT	56	49033.69	98.40		90	10.03	5.88	109.64	115.524	11.74
11	Irrgn & Agrcl - LT	57	75.30	0.05		50	11.30	0.005	0.056	0.061	12.20
12	Irrgn & Agrcl - HT	25	5003.15	1.12		50	8.21	0.334	1.022	1.355	12.10
13	Industrial LT										
i)	First 400 kWh	961	5137.78	1.98	172.09		10.21	0.49	2.03	2.520	
ii)	Above 400 kWh	87	465.13	0.71	681.48		11.58	0.04	0.77	0.811	
	Total Industrial LT	1048	5602.91	2.70		80		0.54	2.79	3.331	12.36
14	Industrial HT (Opt-1)	27	9523.81	10.00	0.00	80	10.09	1.02	11.21	12.222	12.22
	Industrial HT (ToD)	2	745.12	2.10	0.00	80	10.71	0.08	2.50	2.579	12.28
15	EV Charging Stns (LT)	4	403.00	1.00		75	12.10	0.04	1.21	1.246	12.46
16	EV Charging Stns (HT)	2	245.00	1.00		75	10.70	0.02	1.19	1.214	12.14
17	Bulk Supply HT	175	19968.08	15.55		90	9.92	2.40	17.14	19.537	12.56
	Grand Total	334207	631778	546.79				46.80	587.84	634.64	11.61

Annexure-V

Abstract of Full Cost Tariff, Subsidised Tariff and Category wise subsidy allocation for FY2024-25												
P&ED Department (FY 2024-25)		Full Cost Tariff				Subsidised Tariff				Govt. Subsidy		
		Annual Sales (MU)	Fixed Charge	Energy Charge	Annual Revenue (₹ Crs)	Avg. per unit (₹ /kWh)	Fixed Charge	Energy Charge	Annual Revenue (₹ Crs)	Avg. per unit (₹ /kWh)	Subsidy Amount (₹ Crs)	Avg. per unit (₹ /kWh)
1	KJ(Domestic)		Conc/kW	(₹ /kWh)			Conc/kW	(₹ /kWh)				
i)	First 20 kWh	2.01	25	7.77	1.86	9.26	25	2.55	0.814	4.04	1.05	5.22
ii)	Above 20 kWh	3.37	25	10.81	3.24	9.63	25	3.55	1.251	3.71	1.99	5.92
	Sub Total	5.38			5.11	9.49			2.064	3.84	3.04	5.66
2	Domestic		(₹ /CL/kW)	(₹ /kWh)			(₹ /CL/kW)	(₹ /kWh)				
i)	First 100 kWh	108.96	50	9.53	115.95	10.64	50	4.90	65.53	6.01	50.42	4.63
ii)	101 - 200 kWh	97.99	50	13.81	106.70	10.89	50	7.10	57.36	5.85	49.35	5.04
iii)	Above 200 kWh	115.04	50	15.94	138.51	12.04	50	8.20	73.02	6.35	65.48	5.69
	Sub Total	321.99			361.16	11.22			195.91	6.08	165.25	5.13
			(₹ /kVA/BD)	(₹ /kVAh)			(₹ /kVA/BD)	(₹ /kVAh)				
3	Domestic HT	2.46	50	10.60	3.05	12.41	50	8.65	2.52	10.24	0.53	2.17
	Total Domestic	329.83			369.32	11.20			200.49	6.08	168.83	5.12
4	Non-Profit Public Service		(₹ /CL/kW)	(₹ /kWh)			(₹ /CL/kW)	(₹ /kWh)				
i)	First 150 kWh	5.38	60	7.74	9.64	17.91	60	7.60	9.56	17.77	0.08	0.14
ii)	Above 150 kWh	7.62	60	8.45	8.14	10.69	60	8.30	8.03	10.54	0.11	0.15
	Sub Total	13.00			17.78	13.68			17.59	13.53	0.19	0.14
5	Non-Profit PP (HT)	4.38	60	9.23	5.37	12.26	60	8.75	5.14	11.74	0.23	0.53
	Total Non-Domestic	17.38	(₹ /kVA/BD)	(₹ /kVAh)	23.15	13.32	(₹ /kVA/BD)	(₹ /kVAh)	22.73	13.08	0.42	0.24
6	Commercial		(₹ /CL/kW)	(₹ /kWh)			(₹ /CL/kW)	(₹ /kWh)				
i)	First 150 kWh	17.79	80	11.56	23.52	13.22	80	8.20	17.53	9.85	5.99	3.36
ii)	Above 150 kWh	26.25	80	11.92	32.38	12.33	80	8.45	23.36	8.90	9.01	3.43
	Sub Total	44.04			55.90	12.69			40.89	9.29	15.00	3.41
7	Commercial HT	13.88	80	9.83	17.02	12.26	80	8.90	15.59	11.23	1.43	1.03
	Total Commercial	57.92	(₹ /kVA/BD)	(₹ /kVAh)	72.92	12.59	(₹ /kVA/BD)	(₹ /kVAh)	56.49	9.75	16.43	2.84
			(₹ /CL/kW)	(₹ /kWh)			(₹ /CL/kW)	(₹ /kWh)				
8	Public Lighting	2.77	80	12.14	3.46	12.51	80	11.35	3.25	11.72	0.22	0.79
9	PWS LT	6.97	90	12.30	8.72	12.51	90	11.10	7.88	11.31	0.84	1.20
10	Agl LT	0.05	50	11.30	0.06	12.20	50	3.80	0.02	4.70	0.04	7.50
			(₹ /kVA/BD)	(₹ /kVAh)			(₹ /kVA/BD)	(₹ /kVAh)				
11	PWS HT	98.40	90	10.03	115.52	11.74	90	9.85	113.58	11.54	1.95	0.20
12	Agl HT	1.12	50	8.21	1.36	12.10	50	3.85	0.81	7.26	0.54	4.84
13	Industrial LT		(₹ /CL/kW)	(₹ /kWh)			(₹ /CL/kW)	(₹ /kWh)				
i)	First 400 kWh	1.98	80	10.21	2.52	12.70	80	7.10	1.90	9.59	0.62	3.11
ii)	Above 400 kWh	0.71	80	11.58	0.81	11.40	80	8.05	0.58	8.12	0.23	3.28
	Total Industrial LT	2.70			3.33	12.36			2.48	9.20	0.85	3.16
			(₹ /kVA/BD)	(₹ /kVAh)			(₹ /kVA/BD)	(₹ /kVAh)				
14	Industrial HT (Opt-1)	10.00	80	10.09	12.22	12.22	80	9.05	11.07	11.07	1.15	1.15
	Industrial HT (Opt-2)	2.10	80	10.71	2.58	12.28	80	10.52	2.53	12.07	0.04	0.21
	EV charging Stns (LT)	1.00	75	12.10	1.25	12.46	75	8.20	0.86	8.56	0.39	3.90
	EV charging Stns (HT)	1.00	75	10.70	1.21	12.14	75	8.65	0.99	9.86	0.23	2.28
15	Bulk Supply HT	15.55	90	9.92	19.54	12.56	90	6.85	14.23	9.15	5.31	3.41
	Total	546.79			634.64	11.61			437.41	8.00	197.23	3.61

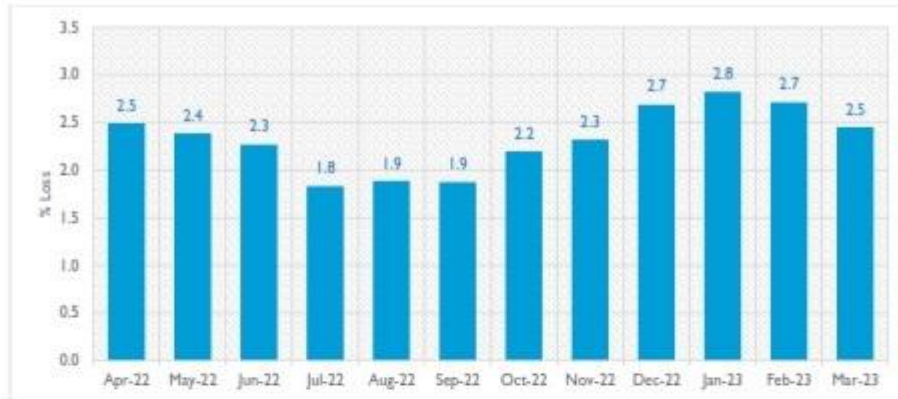
CL- denotes Contracted Load BD- denotes Billing Demand

NER Losses indicated in their Compendium for FY 2022-23

CH-5: MARKET OPERATIONS

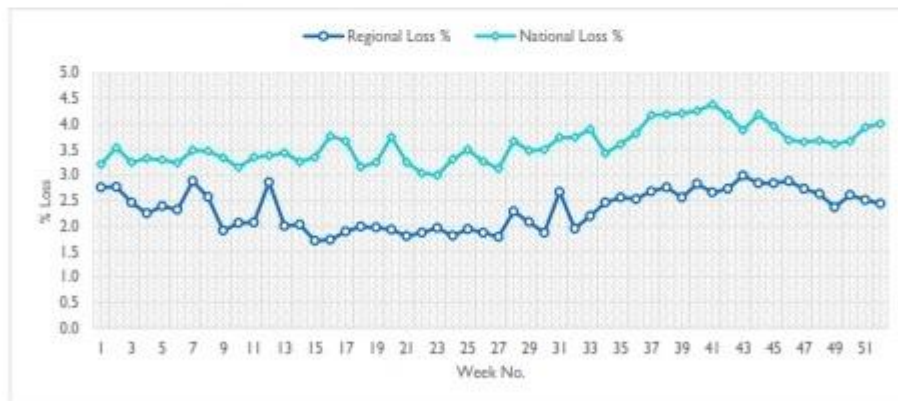
REGIONAL TRANSMISSION LOSS OF NER DURING FY 2022-23

Monthly Average Regional Transmission Loss in %:



Average Regional Transmission Loss for FY 2022-23 is 2.33%

Week-wise National vs. Regional Transmission Loss in %:



Note

I. Regional Loss Calculation Method = $\frac{[Injection + Import] - (Drawal + Export)}{[Injection + Import]} \times 100$

II. National Loss Calculation Method = $\frac{(In - Dr)}{Ir} \times 100$

Here, In = sum of injection into the ISTS at regional nodes

Dr = sum of drawal from the ISTS at regional nodes

Ir = sum of injection into the ISTS at regional nodes by projects covered under Clause 13(i)

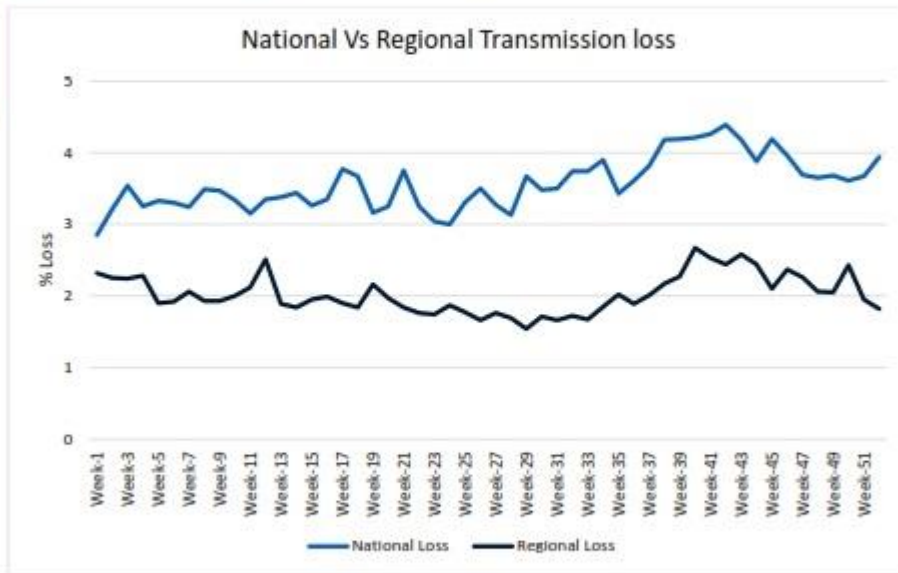
उ.पु.के.आ.के. वार्षिक संग्रह 2022-23
NERLDC ANNUAL COMPENDIUM FY 2022-23

Market Operation

ANNUAL COMPENDIUM



6.10 National vs Regional Transmission loss



	National Loss (%)	Regional Loss (%)
Maximum	4.4	2.7
Minimum	2.9	1.5
Average	3.6	2.0

IMMEDIATE

**GOVERNMENT OF MIZORAM
POWER & ELECTRICITY DEPARTMENT**

No.B.19018/9/2022-P&E : **Dated Aizawl, the 16th Jan, 2024**

To ✓
The Engineer-in-Chief,
Power & Electricity Department,
Mizoram : Aizawl.


Subj : **Filing of Tariff Petition for FY 2024-2025, True up petition of FY 2022-2023 and APR for FY 2023-2024.**

Ref : **No. T.23012/03/2023-EC(P)/Com/30 dt.20.12.2023**

Sir,
With reference to above, I am directed to convey concurrence of Finance Department, Govt. of Mizoram vide their I.D. No. FIN(EA) :458/2023-24 dt. 16.01.2024 as reproduced below, for your information and immediate necessary action:
"Concurrence of Finance Department(EA) is hereby conveyed for the Draft Tariff Petition for the FY 2024-25, True up Petition of FY 2022-23 and APR for the FY 2023-2024 with a condition that the State Government may give subsidy amounting to ₹ 211.23 crore or 27.01% of the final ARR whichever is less. This issues with the approval of the Hon'ble Chief Minister on 10.01.2024".
One copy of the above Petitions is returned herewith.

Encls : As above

S. K. (Comm) RA

Yours faithfully,

(ZORAMDINA RALTE)
Under Secretary (Tech) to the Govt. of Mizoram
Power & Electricity Department

Office of the Engineer-in-Chief
Power & Electricity Dept.
Receipt No. 2565
Date 16/1/24



**JOINT ELECTRICITY REGULATORY COMMISSION
FOR MANIPUR AND MIZORAM**

TBL Bhawan, 2nd to 5th Floor,
Peter Street, E-18, Khatla, Aizawl, Mizoram, 796001

Website: www.jerc.mizoram.gov.in

e-mail: jerc.mm@gmail.com

Ph: 0389 2336555/2335625 Fax: 0389-2336299/2335523