MEGHALAYA STATE ELECTRICITY REGULATORY COMMISSION

1st Floor (Front Block Left Wing), New Administrative Building, Lower Lachumiere, Shillong – 793 001,East Khasi Hills District, Meghalaya

CASE No. 22/2023

In the matter of:

Approval of Business Plan for the Control Period from FY 2024-25 to FY 2026-27.

And

Meghalaya Power Distribution Corporation Limited (MePDCL)……**Petitioner**

Coram

P.W.Ingty, IAS (Retd), Chairman

R.K. Soni, District Judge (Retd.), Member

ORDER

Date: 16.11.2023

1. Meghalaya Power Distribution Corporation Limited (herein after referred to as MePDCL)is a deemed licensee in terms of section 14 of the Electricity Act, 2003 (herein after referred to as Electricity Act 2003), engaged in the business of distribution of electricity in the State of Meghalaya.
2. Commission has amended and substituted the sub-Regulation 1.4 of Meghalaya State Electricity Regulatory Commission Multi Year Tariff Regulations, 2014 (MYT Regulations, 2014) as reproduced below:

   "1.4. These Regulations shall be applicable for the determination of Tariff in all cases covered under MYT Regulations effective from 1st April, 2024 onwards to 31st March, 2027".
3. As per provisions of sub-Regulations 1.4 (amended) and Regulations 8 and 78 of MYT Regulations, 2014, MePDCL has filed the Petition for approval of its Business Plan for the 4th Control Period of FY 2024-25 to FY 2026-27 with details for each year of the Control Period.

   The petitioner has submitted the data gaps and additional information in their letters dated 20.10.2023 & 06.11.2023.

4. As per provisions of sub-Regulations 8.1, 8.2 and 8.3, the Business Plan shall comprise of but not limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets.
5. In exercise of powers vested in Clause 8.1, 8.2, 8.3 & 8.4 of MYT Regulations 2014, this order is passed by the Commission, approving the Business Plan for the 4th Control Period of FY 2024-25 to FY 2026-27, based on the information submitted by MePDCL.
6. MePDCL shall submit the MYT Petition for Control Period from FY 2024-25 to FY 2026-27 on or before 30th November, 2023 in accordance with Regulation 18 of MYT Regulations, 2014.
7. This Order shall be placed on the website of the Commission and a copy shall be sent to MePDCL, MePGCL, MePTCL and MeECL.

Sd/-
Shri. R.K. Soni, District Judge (Retd.)
Member

Sd/-
Shri. P.W Ingty, IAS (Retd)
Chairman

1. Introduction

1.1 Meghalaya Power Distribution Corporation Limited (MePDCL)

MePDCL is a distribution licensee within the meaning of section 2(17) of Electricity Act, 2003. MePDCL started functioning as an independent commercial entity from 1st April, 2013 after unbundling of the erstwhile Meghalaya State Electricity Board (MeSEB) as per the State Government Notification; "The Meghalaya Power Sector Reforms Transfer Scheme 2010". As per Meghalaya Power Sector Transfer Scheme, MePDCL has been vested with the function of distributing power by the State Government of Meghalaya and the Business Scope of the Company falls within the legal framework as specified in the Act and can include:

- To supply electricity on an application of the consumer in accordance with the provisions specified in the Electricity Act 2003
- To develop the required distribution infrastructure within the State of Meghalaya to meet the demand of the consumers
- To operate & maintain the existing distribution infrastructure efficiently & effectively
- Merchant Sale of Power in the event of availability of surplus power after meeting the requirement of own consumers with whom the capacity is contracted presently

1.2 Meghalaya State Electricity Regulatory Commission (MSERC)

MSERC is an independent statutory body constituted under the provisions of the Electricity Regulatory Commission Act, 1998 which was superseded by Electricity Act, 2003.

The Commission is vested with the authority of regulating the power sector in the State inter alia, including determination of Tariff of electricity consumers.

1.3 MSERC (Multi Year Tariff) Regulations, 2014

In exercise of the powers conferred by clauses (Ze), (Zd) and (Ze) of sub-section (2) of section 181 of the electricity Act, 2003 and all other powers enabling on that behalf and after pervious publication, MSERC has issued the Meghalaya State electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2014.

Commission has amended Regulation 1.4 of the above Regulations as reproduced below:

"1.4. These Regulations shall be applicable for the determination of Tariff in all cases covered under MYT Regulations effective from 1st April, 2024 onwards to 31st March, 2027".

1.4 Petition for Approval of Business Plan for the Control Period FY 2024-25 to FY 2026-27

As per the above amended Regulation 1.4 and Regulations 8 & 78 of the MYT Regulations, 2014, MePDCL has to file a Business Plan for the third Control Period of FY 2024-25 to FY 2026-27. The relevant Regulations are reproduced below:

"8 Business Plan

8.1 The Generating Company, Transmission licensee, and Distribution Licensee for Distribution Business, shall file a Business Plan for the Control Period of three (3) financial years from 1st April 2015 to 31st March 2018, which shall comprise but not be limited to detailed category-wise sales and demand projections, power procurement plan, capital investment plan, financing plan and physical targets, in accordance with guidelines and formats, as may be prescribed by the Commission from time to time:

Provided that a mid-term review of the Business Plan/Petition may be sought by the Generating Company, Transmission Licensee and Distribution Licensee through an application filed three (3) months prior to the specified date of filing of Petition for truing up for the second year of the Control Period and tariff determination for the third year of the Control Period.

8.2 The capital investment plan shall show separately, on-going projects that will spillover into the Control Period, and new projects (along with justification) that will commence in the Control Period but may be completed within or beyond the Control Period. The Commission shall consider and approve the capital investment plan for which the Generating Company, Transmission Licensee, and Distribution Licensee for the Distribution Business, may be required to provide relevant technical and commercial details.

8.3 The Distribution Licensee shall project the power purchase requirement based on the Merit Order Dispatch principles of all Generating Stations considered for power purchase, the Quantum of Renewable Purchase Obligation (RPO) under Meghalaya State Electricity Regulatory Commission (Renewal Energy Purchase Obligation and Compliance) Regulations, 2010 and the target set, if any, for Energy Efficiency (EE) and Demand Side Management (DSM) schemes.

8.4 The Generating Company, Transmission Licensee, and Distribution Licensee for the Distribution Business, shall get the Business Plan approved by the Commission.

78 Business Plan

78.1The Distribution Licensee shall submit a Business Plan full details as stipulatedby the Commission from time to time and in the manner specified in Cha-p2teorf these Regulations. The business plan shall comprise among other details like capital investment plan, financing plan and fiscal targets in accordance with theguidelines/formats as may be stipulated by the Commission from time to time."

1.5 Approach of the Order

The MSERC Multi-Year Tariff Regulations, 2014 provides for approval of Business Plan of MePDCL for the three years Control Period FY 2024-25 to FY 2026-27. MePDCL has filed the petition before the Commission for approval of Business Plan for MYT Control Period FY 2024-25 to FY 2026-27 on 31.08.2023.

Commission has examined the petition and taken on record as Case No 22/2023. The Commission has undertaken approval of Business Plan for the Control Period FY 2024-25 to FY 2026-27 based on the MYT Regulations, 2014.

1.6 Contents of the Order

This Order is in three Chapters as detailed below:

Chapter 1: Introduction

Chapter 2: Summary of Business Plan submitted by the Petitioner for Control Period FY 2024-25 to FY 2026-27

Chapter 3: Approval of Business Plan for Control Period FY 2024-25 to FY 2026-27

2. Summary of Business Plan Petition for Control Period FY 2024-25 to FY 2026-27

2.1 Business Plan Petition

MePDCL has submitted the petition on 31.08.2023 seeking approval of Business Plan for the Control Period FY 2024-25 to FY 2026-27. The summary of the Business Plan petition is as detailed under.

2.2 Category-wise Energy Sales

MePDCL has projected the category-wise energy sales for FY 2022-23 (Actual) and projections for FY 2023-24 and for the Control Period FY 2024-25 to FY 2026-27 as shown in the Table below:

Table 2.1 : Projected Energy Sales in MU

S No.	Category	Sales 2022-23 (MU)(A)	Growth Rate Considered	Sales 2023-24 (MU)(P)	Sales 2024-25 (MU)(P)	Sales 2025-26 (MU)(P)	Sales 2026-27 (MU)(P)
A. LT Category							
1	Domestic (DLT)	410.10	0.88%	413.72	417.37	421.05	424.76
2	Commercial (CLT)	86.06	6.98%	92.07	98.50	105.38	112.74
3	Industrial (ILT)	5.95	5.50%	6.28	6.62	6.99	7.37
4	Agriculture (Ape)	0.13	5.00%	0.14	0.14	0.15	0.16
5	Public Lighting (PL)	1.03	5.00%	1.08	1.14	1.19	1.25
6	Water Supply (WSLT)	8.97	5.00%	9.42	9.89	10.38	10.90
7	General Purpose	15.32	0.38%	15.38	15.44	15.50	15.55
8	BPL	111.47	4.91%	116.95	122.69	128.72	135.05
9	Crematorium (CRM)	0.18	3.00%	0.19	0.19	0.20	0.20
	Sub-Total (A)	**639.21**		**655.21**	**671.98**	**689.56**	**707.99**
B. HT Category							
1	Domestic HT	21.95	4.77%	23.00	24.09	25.24	26.45
2	Water Supply (WSHT)	35.12	5.00%	36.88	38.72	40.66	42.69
3	Bulk Supply (BS)	77.63	2.38%	79.48	81.37	83.31	85.30
4	Commercial (CHT)	30.81	2.35%	31.53	32.27	33.03	33.81
5	Industrial (IHT)	133.15	10.00%	266.59	293.24	322.57	354.82
	Sub-Total (B)	**407.86**		**437.47**	**469.70**	**504.81**	**543.06**
C. EHT Category							
1	Industrial (EHT)	263.36	10%	738.95	812.84	894.13	983.54
	Sub-Total (C)	**671.77**		**1159.61**	**1246.12**	**1340.41**	**1443.21**
	Grand Total	**1718.84**		**2252.29**	**2387.81**	**2534.78**	**2694.27**

2.3 Category-wise number of consumers and connected load

MePDCL has projected the category-wise number of consumers and connected load for FY 2022-23 (Actual) and projections for FY 2023-24 and the Control Period FY 2024-25 to FY 2026-27 as shown in the Table below:

Table 2.2 : Category Wise number of Consumers and Connected Load

S No.	Category of Consumer	FY 2022-23 (Actual)		Growth Rate Considered		2023-24 (E)		2024-25 (E)		2025-26 (E)		2026-27 (E)	
		Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)
1	Domestic (DLT)	392431	590675.46	2.05%	8.73%	400462.00	642251.43	408658.00	698330.86	417022.0	759306.98	425557.00	825607.34
2	Commercial (CLT)	37267	109559.05	5.29%	3.00%	39238.00	112844.24	41314.00	116227.94	43499.00	119713.10	45800.00	123302.76
3	Industrial (ILT)	784	9895.04	3.00%	3.00%	808.00	10191.89	832.00	10497.65	857.00	10812.58	883.00	11136.95
4	Agriculture (Ape)	22	116.67	0.00%	5.00%	22.00	122.50	22.00	128.63	22.00	135.06	22.00	141.81
5	Public Lighting (PL)	78	1544.25	5.00%	5.00%	82.00	1621.46	86.00	1702.54	90.00	1787.66	95.00	1877.05
6	Water Supply (WSLT)	476	6888.32	3.59%	5.00%	493.00	7232.74	511.00	7594.37	529.00	7974.09	548.00	8372.80
7	General Purpose	2661	18994.99	1.93%	0.89%	2712.00	19164.83	2764.00	19336.18	2817.00	19509.07	2871.00	19683.50
8	BPL	247426	208644.59	3.61%	6.04%	256347.00	221247.57	265590.00	234611.82	275166.00	248783.32	285088.00	263810.84
9	Crematorium (CRM)	1	150.00	3.00%	3.00%	1.00	154.50	1.00	159.14	1.00	163.91	1.00	168.83
	Sub-Total (A)	**681146**	**946468.37**			**700165**	**1014831.16**	**719778**	**1088589.12**	**740003**	**1168185.76**	**760865**	**1254101.87**
1	Domestic HT	131	23107.60	5.98%	0.76%	139.00	23283.22	147.00	23460.18	156.00	23638.48	165.00	23818.13
2	Water Supply (WSHT)	70	14490.72	5.00%	5.00%	74.00	15215.26	78.00	15976.02	82.00	16774.82	86.00	17613.56
3	Bulk Supply (BS)	230	53226.60	3.25%	2.90%	237.00	54771.75	245.00	56361.76	253.00	57997.93	261.00	59681.60
4	Commercial (CHT)	230	27594.51	0.00%	0.00%	230.00	27594.51	230.00	27594.51	230.00	27594.51	230.00	27594.51
5	Industrial (IHT)	206	136429.54	9.46%	10.00%	229.00	170873.49	251.00	187960.84	275.00	206756.93	301.00	227432.62
	Sub-Total (B)	**870**	**273758.97**			**909**	**291738.23**	**951**	**311353.31**	**996**	**332762.66**	**1043**	**356140.42**
1	Industrial (EHT)	10	55240.00	5.00%	10.00%	15.00	132704.00	16.00	145974.40	17.00	160571.84	18.00	176629.02
	Sub-Total (C)	**14**	**120640.00**			**15.00**	**132704.00**	**16.00**	**145974.40**	**17.00**	**160571.84**	**18.00**	**176629.02**
	Grand Total	**682030**	**13,40,867.34**			**701089**	**1439273.39**	**720745**	**1545916.83**	**741016**	**1661520.26**	**761926**	**1786871.31**

2.4 Loss Trajectory

2.4.1 Distribution Loss Trajectory

MePDCL has submitted the Distribution loss trajectory actual for FY 2018-19 to FY 2022-23 and projections for the Control Period FY 2024-25 to FY 2026-27 as shown in the Tables below:

Table 2.3 : Distribution Loss Trajectory over past 5 years

	2018-19	2019-20	2020-21	2021-22	2022-23
T&D losses (%)	31.50	26.50	27.70	25.30	22.75

Table 2.4 : Projected T&D Losses for Control Period 2024-25 to 2026-27

	2023-24	2024-25	2025-26	2026-27
Distribution Losses	18.00%	17.00%	16.50%	16.00%

2.4.2 Collection Efficiency

MePDCL has submitted the Collection Efficiency projections for FY 2023-24 and for the Control Period FY 2024-25 to FY 2026-27 as shown in the Table below.

Table 2.5 : Projection of Collection Efficiency

Particulars	2023-24	2024-25	2025-26	2026-27
Collection Efficiency (%)	96.00	99.00	99.00	99.00

2.4.3 AT&C Losses

MePDCL has submitted the Aggregate Technical and Commercial (AT&C loss) trajectory projections for FY 2023-24 and for the control period FY 2024-25 to FY 2026-27 as shown in the Table below:

Table 2.6 : AT&C Loss Trajectory

	2023-24	2024-25	2025-26	2026-27
AT&C Losses	21%	18%	17.50%	17%

2.5 Power Procurement

MePDCL has submitted the Power (in MW) and Energy (in MU) availability from various long term sources for FY 2022-23 (Actual) and projections for FY 2023-24 and for the Control Period FY 2024-25 to FY 2026-27 as shown in the Table below:

Table 2.7 : Revised Energy Availability and Power Procurement Plan (Table 15 of Original Petition)

Share Allocation and Projected Availability of Meghalaya												
Sl No	**Name of Station**	**Capacity (MW)**	**Total Allocation (Mw)**	**Actual Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**
			FY 2022-23		**FY 2023-24**		**FY 2024-25**		**FY 2025-26**		**FY 2026-27**	
A	**MePGCL**											
1	Umiam –I	36.0	36.0	117.7	36.0	114.6	36.0	114.6	36.0	114.6	36.0	114.6
2	Umiam –II	20.0	20.0	62.1	20.0	45.4	20.0	45.4	20.0	45.4	20.0	45.4
3	Umiam –III	60.0	60.0	129.6	60.0	137.3	60.0	137.3	60.0	0.0	60.0	127.2
4	Umiam -IV	60.0	60.0	176.0	60.0	203.9	60.0	203.9	60.0	203.9	60.0	203.9
5	MLHEP	126.0	126.0	359.7	126.0	478.7	126.0	478.7	126.0	478.7	126.0	478.7
6	Umtru	11.2	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0
7	Sonapani	1.5	1.5	6.5	1.5	4.9	1.5	4.9	1.5	4.9	1.5	4.9
8	New Umtru	40.0	40.0	196.2	40.0	231.5	40.0	231.5	40.0	231.5	40.0	231.5
9	Ganol	22.5	22.5	0.0	22.5	0.0	22.5	66.2	22.5	66.2	22.5	66.2
10	Lakroh	1.5	1.5	3.4	1.5	10.9	1.5	10.9	1.5	10.9	1.5	10.9
11	Riangdo	3.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	8.0	3.0	17.0
12	MLHEP-II	210.0	210.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
	Sub-Total MePGCL	**591.70**	**591.70**	**1051.20**	**381.70**	**1227.28**	**381.70**	**1293.47**	**381.70**	**1164.14**	**378.70**	**1300.30**
B	**NEEPCO**											
1	Kopili	200	35.05	0.0	35.1	17.0	35.1	106.8	35.1	106.8	35.1	106.8
2	Kopili-Ext	25	3.45	0.0	3.5	7.2	3.5	10.1	3.5	10.1	3.5	10.1
3	Khandong	50	8.51	0.0	8.5	0.0	8.5	26.8	8.5	26.8	8.5	26.8
4	Ranganadi	405	47.10	152.3	47.1	162.9	47.1	162.9	47.1	162.9	47.1	162.9
5	Doyang	75	8.69	18.9	8.7	19.8	8.7	19.8	8.7	19.8	8.7	19.8
6	AGBPP	291	34.74	204.1	34.7	209.9	34.7	209.9	34.7	209.9	34.7	209.9
7	AGTPP CC	130	16.57	112.0	16.6	122.5	16.6	122.5	16.6	122.5	16.6	122.5
8	Pare	110	14.0	67.2	14.0	71.0	14.0	71.0	14.0	71.0	14.0	71.0
9	Kameng	600	15.0	69.5	15.0	58.9	15.0	58.9	15.0	58.9	15.0	58.9
	Sub-Total NEEPCO		**183.11**	**623.9**	**183.11**	**669.16**	**183.11**	**788.72**	**183.11**	**788.72**	**183.11**	**788.72**
C	**NHPC-Loktak**	105	13.007	35.59		4.0		0.00		0.00		0.00
D	**NHPC- Subansiri**	2000	12.35	10.19	49.41	183.36	49.41	183.36	49.41	183.36	49.41	183.36

Share Allocation and Projected Availability of Meghalaya												
Sl No	**Name of Station**	**Capacity (MW)**	**Total Allocation (Mw)**	**Actual Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**
E	**OTPC-Palatana**	726	78.99	498.73	78.99	492.00	78.99	500.54	78.99	500.54	78.99	500.54
F	**NTPC**											
1	BTPS	750	0.0	0.00	53.0	350.00	88.0	578.16	88.0	578.16	88.0	578.16
2	FSTPS	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	KHSTPS-I	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	KHSTPS-II	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	TSTPS-II	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total NTPC		0.00	0.00	53.00	350.00	88.00	578.16	88.00	578.16	88.00	578.16
	Total			**2209.42**		**2752.63**		**3344.25**		**3214.92**		**3351.07**

2.6 Energy Balance

Based on the energy sales projected, the energy availability projected, MePDCL has projected the energy balance for FY 2023-24 and for the Control Period FY 2024-25 to FY 2026-27 as shown in the Table below:

Table 2.8 : Energy Balance

Sr. No.	Particulars	Calculation	FY 2023-24	2024-25	2025-26	2026-27
1	Power purchased from the Eastern Region (ER)	A	0	0	0	0
2	Inter-state transmission loss for ER	B	1.80%	1.80%	1.80%	1.80%
3	Net power purchased from the ER	C=A*(1-B)	0	0	0	0
4	Power purchased from the North -Eastern Region (NER)	D	1525.36	2023.96	2023.96	2023.96
5	Inter-state transmission loss for NER	E	3.00%	3.00%	3.00%	3.00%
6	Net power available at state bus from external sources on long term	F=(C+D)*(1-E)	1479.60	1963.24	1963.24	1963.24
7	Power purchased from generating stations within the state	G	1227.28	1320.29	1190.96	1327.12
8	Power purchased from other sources	H				
	Intra-State Transmission Losses		3.18%	3.18%	3.18%	3.18%
	Total Availability at MePDCL Periphery	**I=F+G+H**	**2,620.79**	**3,179.12**	**3,053.90**	**3,185.72**
9	Power to be sold to consumers within the state (including ASEB)	J	1831.63	1954.53	2088.49	2234.60
10	Transmission & Distribution Losses (%)	K	18.00%	17.00%	16.50%	16.00%
11	Net power requirement at state bus for sale of power within the state	L=J/(1-K)	2233.70	2354.85	2501.19	2660.23
12	Surplus Power (for sale outside state)	M = I - L	**387.10**	**824.26**	**552.71**	**525.49**

2.7 Capital Investment

MePDCL submitted that only targets under RDSS schemes are proposed to be completed in the next control period. As on now MePDCL is not projecting any other capital expenditures as works under all other schemes are proposed to be completed in 2023-24. The tenders under the RDSS scheme are finalized and the contracts will be awarded soon. The discovered cost of the both the component shown in Table 27 below is based on the quotations of L1 bidderd.

Based on the above the Proposed scheme with funding pattern for the Capital investment proposed for control period 2024-25 to 2026-27 are as under:

Table 2.9 : Physical Targets under RDSS Scheme for Control Period 2024-25 to 2026-27

A. Smart Metering Works	**UOM**	**Target Quantity**	**2023-24 (Estimated)**	**2024-25**	**2025-26**	**2026-27**
Consumer Metering	Nos.	460000	0.00	460000	0.00	0.00
1 Ph. Smart Consumer Meters	Nos.	385138	0.00	385138	0.00	0.00
3 Ph. Whole Current Smart Consumer Meter	Nos.	74862	0.00	74862	0.00	0.00
Smart DT Metering	Nos.	11419	0.00	11419	0.00	0.00
Smart Feeder Metering	Nos.	904	0.00	904	0.00	0.00
Smart Boundary Meeting	Nos.	420	0.00	420	0.00	0.00
B. Distribution Infrastructure Works	**UOM**	**Target Quantity**	**2023-24 (Estimated)**	**2024-25**	**2025-26**	**2026-27**
33 KV Re-conductoring of lines	Ckm	244.85	0.00	244.85	0.00	0.00
11 KV Re-conductoring of lines	Ckm	1137.19	0.00	1137.19	0.00	0.00
LTABC Re conductoring	Ckm	2373.03	0.00	2373.03	0.00	0.00
New 11 KV Lines	Ckm	1091.12	0.00	1091.12	0.00	0.00
LT to HT Conversion	Ckm	1926.03	0.00	1926.03	0.00	0.00
New LT AB Cable	Ckm	1249.81	0.00	1249.81	0.00	0.00
63 KVA Distribution Transformer	Nos	1234	0.00	1234	0.00	0.00
100 KVA Distribution Transformer	Nos	1354	0.00	1354	0.00	0.00
250 KVA Distribution Transformer	Nos	7	0.00	7	0.00	0.00
Implementation of Billing System/ Other Related Software	LS	1	0.00	1	0.00	0.00
Other Operating License	LS	1	0.00	1	0.00	0.00

Based on the above physical targets the fund requirements (as per the Ministry of Power Sanction and guidelines) and proposed capital expenditure and capitalization is as under:

Table 2.10 : Capex and Capitalization for the Control Period

	Sanction Cost	Discovered Cost	Funding Pattern			FY 2023-24		FY 2024-25		FY 2025-26		FY 2026-27		Total	
						Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization
A. Smart Metering Works			Grant	Equity	Loan										
Consumer Metering	276.00	473.86	106.62	0.00	0.00	0.00	0.00	74.63	0.00	31.99	106.62	0.00	0.00	106.62	106.62
1 Ph Smart Consumer Meters	231.08	377.94	85.04	0.00	0.00	0.00	0.00	59.53	0.00	25.51	85.04	0.00	0.00	85.04	85.04
3 Ph Whole Current Smart Consumer Meter	44.92	95.92	21.58	0.00	0.00	0.00	0.00	15.11	0.00	6.47	21.58	0.00	0.00	21.58	21.58
Smart DT Metering	26.26	42.63	9.59	0.00	0.00	0.00	0.00	6.71	0.00	2.88	9.59	0.00	0.00	9.59	9.59
Smart Feeder Metering	3.80	11.55	2.60	0.00	0.00	0.00	0.00	1.82	0.00	0.78	2.60	0.00	0.00	2.60	2.60
Smart Boundary Meeting	1.76	5.36	1.21	0.00	0.00	0.00	0.00	0.84	0.00	0.36	1.21	0.00	0.00	1.21	1.21
Change Requirement		3.55	0.80	0.00	0.00	0.00	0.00	0.56		0.24	0.80	0.00	0.00	0.80	0.80
Sub-Total (A)	307.82	536.95	120.81	0.00	0.00	0.00	0.00	84.57	0.00	36.24	120.81	0.00	0.00	120.81	120.81
PMA	1.73	1.73	1.56	0.00	0.17	0.00	0.00	1.09	0.00	0.47	1.56	0.00	0.00	1.56	1.56
Grand Total	309.55	538.68	122.37	0.00	0.17	0.00	0.00	85.66	0.00	36.71	122.37	0.00	0.00	122.37	122.37
A. Distribution Infrastructure Works															
33 KV Re-conductoring of lines	38.75			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 KV Re-conductoring of lines	101.35			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTABC Re conductoring	146			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New 11 KV Lines	97.87			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT to HT Conversion	134.44			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New LT AB Cable	109.98			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63 KVA Distribution Transformer	59.97			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100 KVA Distribution Transformer	75.55			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250 KVA Distribution Transformer	0.46			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Implementation of Billing System/ Other Related Software	17.46	19.69	17.72	0.00	1.97	0.00	0.00	13.78	0.00	5.91	19.69	0.00	0.00	19.69	19.69
Other Operating License	2.89			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMA	11.78	11.78		0.00	1.18	0.00	0.00	8.25	0.00	3.53	11.78	0.00	0.00	11.78	11.78
Total	**796.5**	**923.74**	**831.37**	**0**	**92.37**	**0**	**0**	**646.618**	**0**	**277.12**	**923.74**	**0**	**0.00**	**923.74**	**923.74**

MePDCL submitted that the above targets and funding patterns are tentative and any changes in the targets or funding pattern as a result of statutory approvals or any other reasons shall be submitted before the Hon'ble Commission in the mid-term review.

Further, since the GBS for the Metering Scheme under RDSS is 22.5% and balance has to be recovered in 10 installments as operation and maintenance expenses hence capital expenditure and capex under this scheme has been shown equal to the GBS only.

MePDCL further submitted that the capital investment in distribution sector is governed by several factors such as mandates from the central or state government, provisions of the Electricity Supply Code and any urgent capital investment to avoid threat to life or property. Hence, MePDCL craves leaves of the Hon'ble Commission to allow it to approach the Hon'ble Commission in case of capital expenditure of any of the aforesaid nature.

2.8 Prayer to the Commission

MePDCL has requested the Commission to pass appropriate order on the following:

a) Admit the Petition for Business Plant of MePDCL for 4th Control Period FY 2024-25 to FY 2026-27.
b) To approve the business plan and the principles and methodology adopted by MePDCL for various parameters.
c) Allow addition/ modification of the business plan during the course of the proceedings of the Petition.
d) To condone any inadvertent omissions, errors and shortcomings and permit the rectification of the same during the course of proceedings of the Petition.
e) To pass such order, as the Hon'ble Commission may deem fit and proper and necessary in view of the facts and circumstances of the case.

3. Business Plan Petition for Control Period FY 2024-25 to FY 2026-27

3.0 Back Ground

3.1 Profile of MePDCL

The Company is a Distribution Licensee within the meaning of Section 2 (17) of Electricity Act 2003. Further, Section 42 and 43 of the Electricity Act 2003 prescribes the following major duties of the Distribution Licensee:

- To develop and maintain an efficient, co-ordinated and economical distribution system;
- To supply electricity on an application of the consumer in accordance with the provisions specified in the Electricity Act 2003;
- To provide non-discriminatory open access to the consumers;
- To establish a forum for Redressal of grievances of the consumers.

Since, as per Meghalaya Power Sector Transfer Scheme MePDCL has been vested with the function of distributing power by the State Government of Meghalaya, the Business Scope of the Company falls within the legal framework as specified in the Act and can include:

- To supply electricity on an application of the consumer in accordance with the provisions specified in the Electricity Act 2003;
- To develop the required distribution infrastructure within the State of Meghalaya to meet the demand of the consumers;
- To operate & maintain the existing distribution infrastructure efficiently & effectively;
- Merchant Sale of Power in the event of availability of surplus power after meeting the requirement of own consumers with whom the capacity is contracted presently.

Meghalaya Power Distribution Corporation Limited is functioning as an independent entity since 1st April, 2013. It serves more than 6 lakh consumers with a connected loan of 9,46,468.27 Kva at LT level and 874 consumers with a connected load of 3,94,398.97 Kva at HT level across the state of Meghalaya. The sales in FY 2022-23 stands more than 1700 Mus'.

3.2 Infrastructure Growth

Petitioner's Submission

MePDCL has achieved a substantial growth in last few years in respect to infrastructure. The details of the growth in the infrastructure of MePDCL is tabulated below:

Table 3.1 : Infrastructure Growth of MePDCL

S No	Particulars	UOM	2018-19	2019-20	2020-21	2021-22	2022-23
1	Number of 33/11 KV Sub-Stations	Nos.	98	101	107	114	115
2	Transformation Capacity of 33/11 KV Sub-Stations	MVA	486.58	600.33	641.88	634.45	625.75
3	Length of 33 KV Lines	CKM.	2217.03	2332.93	2519.41	2630.655	2794.05
4	Number of 11/0.4 KV Sub-Stations	Nos.	10381	11563	12436	12798	12951
5	Transformation Capacity of 11/0.4 KV Sub-Stations	MVA	540815.27	773490.75	834374.54	889235	922714.50
6	Length of 11 KV Lines	CKM.	15601.68	16810.05	17886.16	19687.60	19361.24
7	Number of Distribution Transformers	Nos.	10381	11577	12495	12847	13173
8	Length of LT lines	CKM.	20019.21	24928.55	27762.23	31758.38	32196.44

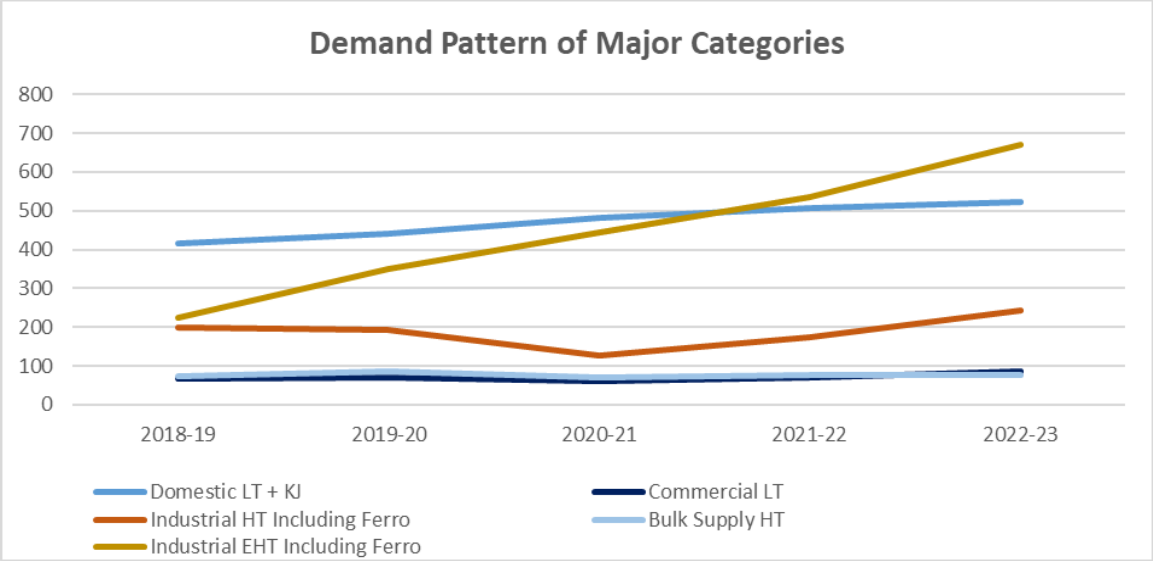
3.3 Demand Growth in the State

Petitioner's Submission

The demand within the state of Meghalaya has grown at a CAGR of around 9% in last 5 years i.e., 2018-19 to 2022-23. The variation in the demand in the state in terms of MU is tabulated below:

Table 3.2 : Demand Growth within the State

Year	State Demand (MU)	YoY Growth
2018-19	1105.02	
2019-20	1259.48	14%
2020-21	1326.45	5%
2021-22	1549.65	17%
2022-23	1718.84	11%



It can be inferred from the graph above that the consumption of the domestic LT and BPL consumers which contribute to approximately 34% of the sales on an average have been almost stagnant and there has been slight variation in their consumption over the past 5 years. However, the EHT industrial consumers which contribute to almost 31% of the sales on an average, have shown a substantial variation in the demand. Further, the HT industries which contribute approximately 14% of the total sales have also shown substantial variation in demand.

3.4 Supply Position

Petitioner's Submission

To cater the demand of its consumers MePDCL has been procuring power various sources including power procured from MePGCL. MePDCL has long term tie ups for power purchase from NTPC, NEEPCO, NHPC and OTPC. The power procured from various sources is tabulated below:

Table 3.3 : Power Procurement for FY 2019-20 to FY 2022-23

Source	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
NTPC	0.00	0.00	1.95	0.00
NHPC	0.00	0.00	0.00	36.87
NEEPCO	597.82	573.86	631.58	646.50
OTPC	400.63	437.44	434.36	517.23
Sub-Total	**998.45**	**1011.30**	**1067.89**	**1200.60**
MePGCL	1070.22	1229.11	877.82	1043.43
Total	**2068.67**	**2240.41**	**1945.71**	**2244.03**

From the above table it is evident that the power sourcing of MePDCL is heavily dependent on hydro power stations. It is pertinent to note that the generation from

hydro power stations is dependent on uncontrollable factors such as rainfall. Thus in order to meet the demand MePDCL has to procure power from exchange and other sources to ensure continuous supply and avoid any adversities. MePDCL has also made arrangements through swapping out and swapping in of power in optimized way. The details of the power purchase from exchange/other sources and swapping is tabulated as under:

Table 3.4 : Details of Short-term power purchase and Swapping

Particulars	2020-21	2021-22	2022-23
UI/ Bilateral/Exchange	160.36	91.29	84.39
Swapping	110.81	423.89	576.34
Total	**271.17**	**515.18**	**660.73**

During the period of lean demand and excess availability, MePDCL has been selling surplus power outside the state and returning the power procured under swapping arrangements. The details of the surplus sales and swapping return are tabulated below:

Table 3.5 : Details of Sale of Surplus Power

Particulars	2020-21	2021-22	2022-23
UI/ Bilateral/Exchange	320.67	220.08	146.00
Swapping	274.27	73.83	501.66
Total	**594.94**	**293.91**	**647.66**

Commission's Views

Commission shall validate the profile of the utility on filing of the True up petition from FY 2021-22 onwards.

3.5 Human Resource

Petitioner's Submission

Currently MePDCL has 1643 Regular employees on Regular payroll (including the employees on MeECL Common services payroll) and 1601 Casual employees (including employees of MeECL Common services) as on 31.03.2023. The class-wise number of Regular & Casual employees is highlighted in the tabulated below:

MePDCL				
	Class I	**Class II**	**Class III**	**Class IV**
Regular	67	205	420	849
Casual	1176			
MePDCL (Common Service)				
	Class I	**Class II**	**Class III**	**Class IV**
Regular	27	34	24	17
Casual	425			

Standard/ Normative Manpower Required for the 33/11 KV Substations

MePDCL would like to submit that based on the past experience it has developed a standardized requirement of manpower at 33/11 KV substations of MePDCL. The standardized manpower details are tabulated below:

Table 3.6 : Standard Manpower Requirement for 33/11 KV Sub Station

S No.	Description	No. Per Shift	No of Shifts	Nos.
1	Electrician	1	4	4
2	Line Man	1	4	4
3	Security Guard	1	2	2
4	Cleaner/ Peon	1	2	2

MePDCL requests Hon'ble Commission to approve the above standardized manpower for 33/11 KV Sub-Stations.

Revision of Pay for MeECL and its subsidiaries

Before corporatization, Meghalaya State Electricity Board (MeSEB) had a policy for considering revision of pay scale of employees every 5 years. This policy of revision of pay has continued till date even for the successor entities of MeSEB as per the decision taken by Employees Associations and Management in the year 2010.

As per this policy, MeECL and its subsidiary companies plan to implement a revised pay scale of employees effective from January 2025 with the following impact.

Table 3.7 : Impact of Pay Revision of MeECL and Its Subsidiaries

Period 2024-2025	**Amount in crore**	**Remarks**
Basic Pay w.e.f. 1.4.2024 upto 31.12.2024	126.66	
Dearness Allowance w.e.f 01.04.2024 upto 31.12.2024	35.46	
Basic Pay w.e.f 01.01.2025 upto 31.3.2025	50.35	**Taking 1.59 as multiplying factor**
Dearness Allowance w.e.f 01.01.2025 upto 31.3.2025	0	
Period 2025-2026		
Basic Pay	207.43	
Dearness Allowance	6.22	
Period 2026-2027		
Basic Pay	213.65	
Dearness Allowance	12.82	

Capacity Building

Human Resource Development Centre (HRDC) has been set up to ensure availability of adequate number of employees with desired skill sets are available across various verticals of MeECL. The prime function of HRDC is to identify the gaps in terms of skills, frame occupational

As mentioned above Human Resource Development Centre established by MeECL in Umiam, is entrusted with the responsibility of training of the officers and staff of the three subsidiaries Meghalaya Power Distribution Corporation Limited, Meghalaya Power Generation Corporation Limited and Meghalaya Power Transmission Corporation Limited. The details of the training conducted during FY 2022-23 are tabulated in Annexure-A.

Commission's Analysis

The capacity building is part of the operational efficiency of the utility to be achieved. MePDCL shall ensure improve the performance of the utility by providing training to the existing personnel in the advanced technologies within the available resources and attain the performance parameters laid down by CEA.

The Projection of impact of Revision of Pay for 01.01.2025 to 31.03.2027 is part of the O&M expenses to be regulated as per the MYT Regulations 2014, no specific approval in the business plan shall be considered.

3.6 Category Wise Number of Consumers and Connected Load

Petitioner's Submission

As on 31st March 2023 the total number of consumers served by MePDCL are 6,82,030 with a connected load of 13,40,867.34 Kva including both consumers at LT level and HT level. The major contributor to the number of consumers are LT Domestic and Kutir Jyoti Consumers which together constitute around 94% of the total consumers. In terms of connected load also LT Domestic and Kutir Jyoti consumers contribute to around 60% of the total connected load, whereas industrial consumers both at HT and EHT level contribute to approximately 19% of the total connected load. In terms of sales the Industrial consumers at HT and EHT level contribute to around 47% of the sales of FY 2022-23.

The projections for connected load and number of consumers is based on the following assumptions:

Step 1: The CAGR has been calculated for each category for 5 years, 4 years and 3 years.

Step 2: Based on the above CAGR trends for various periods the appropriate CAGR chosen.

Step 3: In cases where CAGR is negative growth rate has been considered as zero.

Step 4: In case of new categories or categories with abnormal growth rate growth rate of 3% or 5% has been assumed.

Once the growth rate has been finalized the projections have been made my multiplying the growth rate with the figures of FY 2022-23 and subsequent years of the 4^{th} control period.

Department of drinking water, Ministry of Jalshakti has launched a scheme Jal Jeevan Mission with a vision to provide safe and adequate drinking water through individual household tab connections. Keeping in view the targets under this mission the growth rate of Water Supply (LT) and Water Supply (HT) category has been considered as 5%.

Table 3.8 : CAGR Calculations and Selected Methodology for Projection of Connected Load

S No.	Category	5 Year CAGR	4 Year CAGR	3 Year CAGR	Selected Methodology	Growth Rate Considered for Projection
1.	Domestic (DLT)	8.73%	7.19%	2.37%	5 Year CAGR	8.73%
2.	Commercial (CLT)	8.76%	8.58%	3.00%	3 Year CAGR	3.00%
3.	Industrial (ILT)	-3.80%	-2.71%	-2.45%	Manual Input	3.00%
4.	Agriculture (Ape)	-15.10%	-16.11%	-13.67%	Manual Input	5.00%
5.	Public Lighting (PL)	26.00%	29.00%	-1.55%	Manual Input	5.00%
6.	Water Supply (WSLT)	-0.54%	0.09%	-6.81%	Manual Input	5.00%
7.	General Purpose	6.07%	4.46%	0.89%	3 Year CAGR	0.89%
8.	BPL	50.20%	32.86%	6.04%	3 Year CAGR	6.04%
9.	Crematorium (CRM)	2.13%	0.00%	0.00%	Manual Input	3.00%
10.	Domestic HT	3.84%	4.58%	0.76%	3 Year CAGR	0.76%
11.	Water Supply (WSHT)	9.62%	11.59%	11.39%	Manual Input	5.00%
12.	Bulk Supply (BS)	-0.64%	3.01%	2.90%	3 Year CAGR	2.90%
13.	Commercial (CHT)	-0.76%	-1.24%	6.19%	Manual Input	0.00%
14.	Industrial (IHT)	-1.12%	3.48%	27.35%	Manual Input	10.00%
15.	Industrial (EHT)	-6.03%	16.54%	16.54%	Manual Input	10.00%

Table 3.9 : CAGR Calculations and Selected Methodology for Projection of Number of Consumers

S No.	Category	5 Year CAGR	4 Year CAGR	3 Year CAGR	Selected Methodology	Growth Rate Considered for Projection
1.	Domestic (DLT)	2.05%	3.67%	1.98%	5 Year CAGR	2.05%
2.	Commercial (CLT)	8.23%	5.28%	5.29%	3 Year CAGR	5.29%
3.	Industrial (ILT)	1.69%	2.44%	2.29%	Manual Input	3.00%
4.	Agriculture (Ape)	4.10%	-27.78%	-4.71%	Manual Input	0.00%
5.	Public Lighting (PL)	6.47%	6.47%	5.39%	Manual Input	5.00%
6.	Water Supply (WSLT)	3.59%	1.77%	2.68%	5 Year CAGR	3.59%
7.	General Purpose	2.65%	1.91%	1.93%	3 Year CAGR	1.93%
8.	BPL	27.27%	11.80%	3.61%	3 Year CAGR	3.61%
9.	Crematorium (CRM)	0.00%	0.00%	0.00%	Manual Input	3.00%
10.	Domestic HT	8.78%	8.78%	5.98%	3 Year CAGR	5.98%
11.	Water Supply (WSHT)	17.69%	20.99%	14.22%	Manual Input	5.00%
12.	Bulk Supply (BS)	4.34%	2.03%	3.25%	3 Year CAGR	3.25%

S No.	Category	5 Year CAGR	4 Year CAGR	3 Year CAGR	Selected Methodology	Growth Rate Considered for Projection
13.	Commercial (CHT)	12.97%	11.58%	11.92%	Manual Input	0.00%
14.	Industrial (IHT)	9.14%	9.64%	11.98%	5 Year CAGR	9.46%
15.	Industrial (EHT)	7.39%	20.11%	14.87%	Manual Input	5%

Based on the above methodology the projected number of consumers and connected load for the control period are tabulated below:

Table 3.10 : Projected Number of Consumers and Connected Load for Control Period

S No.	Category of Consumer	FY 2022-23 (Actual)		Growth Rate Considered		2023-24 (E)		2024-25 (E)		2025-26 (E)		2026-27 (E)	
		Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)
1	Domestic (DLT)	392431	590675.46	2.05%	8.73%	400462.00	642251.43	408658.00	698330.86	417022.00	759306.98	425557.00	825607.34
2	Commercial (CLT)	37267	109559.05	5.29%	3.00%	39238.00	112844.24	41314.00	116227.94	43499.00	119713.10	45800.00	123302.76
3	Industrial (ILT)	784	9895.04	3.00%	3.00%	808.00	10191.89	832.00	10497.65	857.00	10812.58	883.00	11136.95
4	Agriculture (Ape)	22	116.67	0.00%	5.00%	22.00	122.50	22.00	128.63	22.00	135.06	22.00	141.81
5	Public Lighting (PL)	78	1544.25	5.00%	5.00%	82.00	1621.46	86.00	1702.54	90.00	1787.66	95.00	1877.05
6	Water Supply (WSLT)	476	6888.32	3.59%	5.00%	493.00	7232.74	511.00	7594.37	529.00	7974.09	548.00	8372.80
7	General Purpose	2661	18994.99	1.93%	0.89%	2712.00	19164.83	2764.00	19336.18	2817.00	19509.07	2871.00	19683.50
8	BPL	247426	208644.59	3.61%	6.04%	256347.00	221247.57	265590.00	234611.82	275166.00	248783.32	285088.00	263810.84
9	Crematorium (CRM)	1	150.00	3.00%	3.00%	1.00	154.50	1.00	159.14	1.00	163.91	1.00	168.83
	Sub-Total (A)	**681146**	**946468.37**			**700165**	**1014831.16**	**719778**	**1088589.12**	**740003**	**1168185.76**	**760865**	**1254101.87**
1	Domestic HT	131	23107.60	5.98%	0.76%	139.00	23283.22	147.00	23460.18	156.00	23638.48	165.00	23818.13
2	Water Supply (WSHT)	70	14490.72	5.00%	5.00%	74.00	15215.26	78.00	15976.02	82.00	16774.82	86.00	17613.56
3	Bulk Supply (BS)	230	53226.60	3.25%	2.90%	237.00	54771.75	245.00	56361.76	253.00	57997.93	261.00	59681.60
4	Commercial (CHT)	230	27594.51	0.00%	0.00%	230.00	27594.51	230.00	27594.51	230.00	27594.51	230.00	27594.51
5	Industrial (IHT)	206	136429.54	9.46%	10.00%	229.00	170873.49	251.00	187960.84	275.00	206756.93	301.00	227432.62
	Sub-Total (B)	**870**	**273758.97**			**909**	**291738.23**	**951**	**311353.31**	**996**	**332762.66**	**1043**	**356140.42**
1	Industrial (EHT)	14	120640.00	5.00%	10.00%	15.00	132704.00	16.00	145974.40	17.00	160571.84	18.00	176629.02
	Sub-Total (C)	**14**	**120640.00**			**15.00**	**132704.00**	**16.00**	**145974.40**	**17.00**	**160571.84**	**18.00**	**176629.02**
	Grand Total	**682030**	**1340867**			**701089**	**1439273.39**	**720745**	**1545916.83**	**741016**	**1661520.26**	**761926**	**1786871.31**

Commission's Analysis

Petitioner has projected growth rate of connected load and no. of consumers, partly on CAGR methodology, and partly manual input growth.

The petitioner has yet to file the actual performance for previous control period FY 2021-22 to FY 2023-24, the projections filed for Growth rate shall not be validated. However the petitioner may compute actual Growth rate as on the date of filing of the Tariff petition for the first year of the control period considering the actual performance in the previous control period.

The petitioner was asked to submit the data gaps in respect of table no.12 of the petition vide commission's letter dated 17.10.2023 for the no. of consumers and connected load.

MePDCL has submitted data gaps vide letter no. MePDCL/SE (RA)/BP/FY2024-27/2023/46 dated 06.11.2023.

Commission approves the no. of consumers and connected load as submitted in the data gaps in their letter dated 06.11.2023 for the control period FY 2024-25 to FY 2026-27 as depicted in the table below.

Table 3.11 : Approved Number of Consumers and Connected Load for Control Period

S No.	Category of Consumer	FY 2022-23 (Actual)		Growth Rate Considered		2023-24 (E)		2024-25 (E)		2025-26 (E)		2026-27 (E)	
		Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)	Nos. of Cons.	Conn. Load (Kva)
1	Domestic (DLT)	392431	590675.46	2.05%	8.73%	400462.00	642251.43	408658.00	698330.86	417022.00	759306.98	425557.00	825607.34
2	Commercial (CLT)	37267	109559.05	5.29%	3.00%	39238.00	112844.24	41314.00	116227.94	43499.00	119713.10	45800.00	123302.76
3	Industrial (ILT)	784	9895.04	3.00%	3.00%	808.00	10191.89	832.00	10497.65	857.00	10812.58	883.00	11136.95
4	Agriculture (Ape)	22	116.67	0.00%	5.00%	22.00	122.50	22.00	128.63	22.00	135.06	22.00	141.81
5	Public Lighting (PL)	78	1544.25	5.00%	5.00%	82.00	1621.46	86.00	1702.54	90.00	1787.66	95.00	1877.05
6	Water Supply (WSLT)	476	6888.32	3.59%	5.00%	493.00	7232.74	511.00	7594.37	529.00	7974.09	548.00	8372.80
7	General Purpose	2661	18994.99	1.93%	0.89%	2712.00	19164.83	2764.00	19336.18	2817.00	19509.07	2871.00	19683.50
8	BPL	247426	208644.59	3.61%	6.04%	256347.00	221247.57	265590.00	234611.82	275166.00	248783.32	285088.00	263810.84
9	Crematorium (CRM)	1	150.00	3.00%	3.00%	1.00	154.50	1.00	159.14	1.00	163.91	1.00	168.83
	Sub-Total (A)	**681146**	**946468.37**			**700165**	**1014831.16**	**719778**	**1088589.12**	**740003**	**1168185.76**	**760865**	**1254101.87**
1	Domestic HT	131	23107.60	5.98%	0.76%	139.00	23283.22	147.00	23460.18	156.00	23638.48	165.00	23818.13
2	Water Supply (WSHT)	70	14490.72	5.00%	5.00%	74.00	15215.26	78.00	15976.02	82.00	16774.82	86.00	17613.56
3	Bulk Supply (BS)	230	53226.60	3.25%	2.90%	237.00	54771.75	245.00	56361.76	253.00	57997.93	261.00	59681.60
4	Commercial (CHT)	230	27594.51	0.00%	0.00%	230.00	27594.51	230.00	27594.51	230.00	27594.51	230.00	27594.51
5	Industrial (IHT)	206	136429.54	9.46%	10.00%	229.00	170873.49	251.00	187960.84	275.00	206756.93	301.00	227432.62
	Sub-Total (B)	**870**	**273758.97**			**909**	**291738.23**	**951**	**311353.31**	**996**	**332762.66**	**1043**	**356140.42**
1	Industrial (EHT)	14	120640.00	5.00%	10.00%	15.00	132704.00	16.00	145974.40	17.00	160571.84	18.00	176629.02
	Sub-Total (C)	**14**	**120640.00**			**15.00**	**132704.00**	**16.00**	**145974.40**	**17.00**	**160571.84**	**18.00**	**176629.02**
	Grand Total	**682030**	**1340867**			**701089**	**1439273.39**	**720745**	**1545916.83**	**741016**	**1661520.26**	**761926**	**1786871.31**

3.7 Category Wise Energy Sales

Petitioner's Submission

Methodology for Energy Sale Projection for the control period

For the purpose of energy sales projection for the fourth control period for FY 2024-25 to 2026-27, MePDCL has analysed the past trend of energy sale for last five years and projected demand for different categories.

The total energy sold across various categories of consumers of MePDCL was 1718.84 Mus. The major contributors to sales have been the EHT Industries and Ferro Alloy category which together contribute to around 35% of the total sales followed by the Domestic LT and BPL consumers which contribute to approximately 30% of the total sales in FY 2022-23. The HT Industries also contribute to around 14% to the total energy sold by MePDCL.

The projections for sales in 4th control period i.e., FY 2024-25 to FY 2026-27 is broadly based on the following assumptions:

Step 1: The CAGR has been calculated for each category for 5 years, 4 years and 3 years.

Step 2: Based on the CAGR trends for various periods above the appropriate CAGR is chosen for projections.

Step 3: In cases where CAGR is negative, growth rate has been considered as zero.

Step 4: In case of new categories or categories with abnormal growth rate growth rate of 3% or 5% has been assumed.

Step5: Once the growth rate has been finalized the projections have been made my multiplying the growth rate with the figures of FY 2022-23 and subsequent years of the 4th control period.

Table 3.12 : CAGR Calculations and Selected Methodology for Projection of Sales

S No.	Category	5 Year CAGR	4 Year CAGR	3 Year CAGR	Selected Methodology	Growth Rate Considered for Projection
1.	Domestic (DLT)	0.88%	0.88%	0.76%	5 Year CAGR	0.88%
2.	Commercial (CLT)	5.30%	3.70%	6.98%	3 Year CAGR	6.98%
3.	Industrial (ILT)	-8.80%	0.37%	5.50%	3 Year CAGR	5.50%
4.	Agriculture (Ape)	0.00%	-16.20%	-1.78%	Manual Input	5.00%
5.	Public Lighting (PL)	38.79%	53.99%	13.30%	Manual Input	5.00%
6.	Water Supply (WSLT)	-4.76%	-2.19%	-3.70%	Manual Input	5.00%
7.	General Purpose	-5.92%	-2.65%	0.38%	3 Year CAGR	0.38%
8.	BPL	35.10%	18.11%	4.91%	3 Year CAGR	4.91%
9.	Crematorium (CRM)	-2.09%	-0.78%	3.07%	Manual Input	3.00%

S No.	Category	5 Year CAGR	4 Year CAGR	3 Year CAGR	Selected Methodology	Growth Rate Considered for Projection
10.	Domestic HT	-2.89%	-1.87%	4.77%	3 Year CAGR	4.77%
11.	Water Supply (WSHT)	3.65%	1.98%	4.56%	Manual Input	5.00%
12.	Bulk Supply (BS)	1.06%	-1.76%	2.38%	3 Year CAGR	2.38%
13.	Commercial (CHT)	2.80%	2.35%	9.00%	4 Year CAGR	2.35%
14.	Industrial (IHT)	-7.65%	-3.70%	15.13%	Manual Input	10.00%
17.	Industrial (EHT)	3.14%	38.50%	43.26%	Manual Input	10%

Based on the above methodology the projected sales for the control period is projected as below:

Table 3.13 : Projected Energy Sales in MU

S No.	Category	Sales 2022-23 (MU)(A)	Growth Rate Considered	Sales 2023-24 (MU)(P)	Sales 2024-25 (MU)(P)	Sales 2025-26 (MU)(P)	Sales 2026-27 (MU)(P)
A. LT Category							
1	Domestic (DLT)	410.10	0.88%	413.72	417.37	421.05	424.76
2	Commercial (CLT)	86.06	6.98%	92.07	98.50	105.38	112.74
3	Industrial (ILT)	5.95	5.50%	6.28	6.62	6.99	7.37
4	Agriculture (Ape)	0.13	5.00%	0.14	0.14	0.15	0.16
5	Public Lighting (PL)	1.03	5.00%	1.08	1.14	1.19	1.25
6	Water Supply (WSLT)	8.97	5.00%	9.42	9.89	10.38	10.90
7	General Purpose	15.32	0.38%	15.38	15.44	15.50	15.55
8	BPL	111.47	4.91%	116.95	122.69	128.72	135.05
9	Crematorium (CRM)	0.18	3.00%	0.19	0.19	0.20	0.20
	Sub-Total (A)	**639.21**		**655.21**	**671.98**	**689.56**	**707.99**
B. HT Category							
1	Domestic HT	21.95	4.77%	23.00	24.09	25.24	26.45
2	Water Supply (WSHT)	35.12	5.00%	36.88	38.72	40.66	42.69
3	Bulk Supply (BS)	77.63	2.38%	79.48	81.37	83.31	85.30
4	Commercial (CHT)	30.81	2.35%	31.53	32.27	33.03	33.81
5	Industrial (IHT)	133.15	10.00%	266.59	293.24	322.57	354.82
	Sub-Total (B)	**407.86**		**437.47**	**469.70**	**504.81**	**543.06**
C. EHT Category							
1	Industrial (EHT)	263.36	10%	738.95	812.84	894.13	983.54
	Sub-Total (C)	**671.77**		**1159.61**	**1246.12**	**1340.41**	**1443.21**
	Grand Total	**1718.84**		**2252.29**	**2387.81**	**2534.78**	**2694.27**

Commission's Analysis

The Energy sales projected vide table no.14 of the petition as actual for FY 2022-23 is found to be erroneous. It is projected as 1718.84 MU instead of correct numerics of 1201.23 MU. The actual sum total of breakup in A, B & C for FY 2022-23 of the table no.14 amounts to 1201.23 MU.

The Energy sales for FY 2022-23 against HT/EHT Ferro Alloys and HT/EHT special Tariff categories are not factored.

Commission considers that the Energy Sales for FY 2022-23 does not matter for approval of the business plan for 4th Control period FY 2024-25 to FY 2026-27. The petitioner may file actual Energy sales for True up of FY 2022-23 along with audited accounts.

The Petitioner has projected 100% and 180% Energy sales against industrial HT and EHT respectively for the FY 2023-24 over the actual performance for FY 2022-23 which may not be possible and hence not validated for the business plan. The Growth rate for other category consumers however found to be considerable.

The petitioner has yet to obtain the True up approvals for the previous control period, therefore Growth projections considering the actual performance shall be filed in the Tariff petition for the 4th control period FY 2024-25 to FY 2026-27.

The petitioner was asked to submit correct projections of Energy sales for the control period in the commission's letter dated 17.10.2023.

MePDCL submitted a revised Energy sales projections for the control period in their letter dated 06.11.2023.

Commission considers Energy sales growth against the HT & EHT industrial consumers at 10% as projected year on year starting from FY 2022-23 (audited) and accordingly Energy sales are approved provisionally as depicted in the table below. However, MePDCL is directed to submit category wise sales figure in their MYT for FY 2024-27.

Table 3.14 : Approved Energy Sales for the control period FY 2024-25 to FY 2026-27

(in MU's)

S No.	Category	Sales 2021-22 (A)	Sales 2022-23 (A)	Sales 2023-24 (P)	Sales 2024-25 (P)	Sales 2025-26 (P)	Sales 2026-27 (P)
A. LT Category							
1	Domestic (DLT)	395.99	410.10	413.72	417.37	421.05	424.76
2	Commercial (CLT)	62.20	86.06	92.07	98.50	105.38	112.74
3	Industrial (ILT)	5.61	5.95	6.28	6.62	6.99	7.37
4	Agriculture (Ape)	0.15	0.13	0.14	0.14	0.15	0.16
5	Public Lighting (PL)	0.56	1.03	1.08	1.14	1.19	1.25
6	Water Supply (WSLT)	11.20	8.97	9.42	9.89	10.38	10.90
7	General Purpose	15.20	15.32	15.38	15.44	15.50	15.55
8	BPL	104.39	111.47	116.95	122.69	128.72	135.05
9	Crematorium (CRM)	0.12	0.18	0.19	0.19	0.20	0.20
	Sub-Total (A)	**595.42**	**639.21**	**655.23**	**671.98**	**689.56**	**707.98**
B. HT Category							
1	Domestic HT	15.68	21.95	23.00	24.09	25.24	26.45
2	Water Supply (WSHT)	29.41	35.12	36.88	38.72	40.66	42.69
3	Bulk Supply (BS)	70.40	77.63	79.48	81.37	83.31	85.30
4	Commercial (CHT)	20.88	30.81	31.53	32.27	33.03	33.81
5	Industrial (IHT)	69.11	242.35	266.59	293.24	322.57	354.82
6	Ferro Alloy	106.48					
7	Special Tariff	93.31					
	Sub-Total (B)	**405.27**	**407.86**	**437.47**	**469.70**	**504.81**	**543.06**
C. EHT Category							
1	Industrial (EHT)	45.94	671.77	738.95	812.84	894.13	983.54
2	Ferro Alloy	426.32					
3	Special Tariff	130.65					
	Sub-Total (C)	**602.91**	**671.77**	**738.95**	**812.84**	**894.13**	**983.54**
	Grand Total	**1603.60**	**1718.84**	**1831.63**	**1954.53**	**2088.49**	**2234.60**

3.8 Loss Trajectory

3.8.1 Distribution Loss Trajectory

Petitioner's Submission

MePDCL has been striving hard to reduce the distribution losses in the state. All the efforts are being made to bring down the distribution losses to a level of below 15%. It is further submitted that Ministry of Power (MoP) vide letter No. REC/RDSS/Meghalaya/2022-23/09 dated 14/07/2022 has approved the action plan and DPR of MePDCL for Meghalaya under Revamped Distribution Sector Scheme (RDSS) for providing smart metering and strengthening of the distribution infrastructure under loss reduction programme. This will help MePDCL in improvement of operational efficiency. It is pertinent to mention that the AT&C loss under the aforesaid programme are to be reduced to 18% by 2024-25.

There has been a substantial improvement in the Distribution losses. The loss trajectory of MePDCL for the past 5 years is tabulate below:

Table 3.15 : Trend of T&D Losses of MePDCL Over Past 5 Years

Past Trend For Losses and efficiency					
Particulars	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
T&D losses (%)	31.50	26.50	27.70	25.30	22.75

It can be seen from the above table that MePDCL with concentrated efforts has been able to reduce its technical losses from 31.50% in 2018-19 to an estimated level of 22.75% in 2022-23. With the smart metering and distribution infrastructure works under RDSS programme the technical losses will undergo further reduction.

Based on the commitments under the RDSS scheme the distribution losses of MePDCL for the control period 2024-25 to 2025-26 are projected as under:

Table 3.16 : Projected T&D Losses for Control Period 2024-25 to 2026-27

Particulars	2023-24	2024-25	2025-26	2026-27
Distribution Losses	18.00%	17.00%	16.50%	16.00%

Commission's Analysis

Commission considers T&D loss trajectory projected in the table no.19 of the petition keeping in view of the capital investment allowed for FY 2023-24 to FY 2025-26 under RDSS smart metering and infra structure project implementation.

3.8.2 Collection Efficiency:

Petitioner's Submission

The AT & C loss is a combination of Technical and Commercial Loss. Over and above the improvement in Distribution loss it is estimated that with various measures such as smart metering, pre-paid metering, online bill payment etc. Under the RDSS programme there will be improvement in Collection Efficiency as well. The average collection efficiency of MePDCL in last 5 years has been 95%. The collection efficiency for FY 2022-23 is estimated to be 89.10%.

The trajectory of the collection efficiency of MePDCL in past 5 years is tabulated below:

Table 3.17 : Past Tends of Collection Efficiency of MePDCL

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Collection efficiency (%)	99.59	90.90	96.27	100.23	89.10

Based on the targets/ commitments under RDSS Scheme the collection efficiency for the control period from FY 2024-25 to FY 2026-27 is shown as under:

Table 3.18 : Projections for Collection Efficiency

Particulars	2023-24	2024-25	2025-26	2026-27
Collection Efficiency (%)	96.00	99.00	99.00	99.00

Aggregate Technical and Commercial Losses

Based on the targets for distribution losses and collection efficiencies as projected in above paragraphs MePDCL projects AT&C losses for the control period as given below:

Table 3.19: Projection of AT&C Losses

	2023-24	2024-25	2025-26	2026-27
AT&C Losses	21%	18%	17.50%	17%

Commission's Analysis

Commission considers the AT&C loss trajectory projected by the petitioner keeping in view of the action plan for smart metering and prepaid metering under RDSS scheme and improvement in the collection efficiency.

3.9 Energy availability and power procurement plan during 4th control period

Petitioner's Submission

MePDCL procures power from majorly two sources viz. Generating plants of MePGCL and power plants of Central generating stations of NTPC, NHPC, NEEPCO as per the allocations made by Ministry of Power.

MePDCL further submits that to cater the seasonal variation and emergency requirements and ensure continuous reliable power, it has to procure short term power from exchanges and other sources.

MePDCL would like to further submit that the PPA for 7 of the power projects are expiring in the current Financial year. However, the corporation is yet to make a decision on whether the aforesaid PPA's will be renewed or surrendered. Hence, MePDCL craves leave of the Hon'ble Commission that once the decision on the renewal of PPA is taken it will approach the Hon'ble Commission with the updated energy availability.

MePDCL would like to further submit that the allocation from NTPC Bongaigaon is expected to increase from current level of 53 MW to 88 MW and hence the projections for power purchase from this station has been considered at an allocation of 88 MW.

The estimated energy availability from various power projects of MePGCL and Central generating stations based on the past trends is tabulated below:

Table 3.20 : Energy Availability and Power Procurement Plan

Share Allocation and Projected Availability of Meghalaya												
Sl No	**Name of Station**	**Capacity (MW)**	**Total Allocation (Mw)**	**Actual Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**
			FY 2022-23		**FY 2023-24**		**FY 2024-25**		**FY 2025-26**		**FY 2026-27**	
A	**MePGCL**											
1	Umiam –I	36.0	36.0	117.7	36.0	114.6	36.0	114.6	36.0	114.6	36.0	114.6
2	Umiam –II	20.0	20.0	62.1	20.0	45.4	20.0	45.4	20.0	45.4	20.0	45.4
3	Umiam –III	60.0	60.0	129.6	60.0	137.3	60.0	137.3	60.0	0.0	60.0	127.2
4	Umiam -IV	60.0	60.0	176.0	60.0	203.9	60.0	203.9	60.0	203.9	60.0	203.9
5	MLHEP	126.0	126.0	359.7	126.0	478.7	126.0	478.7	126.0	478.7	126.0	478.7
6	Umtru	11.2	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0
7	Sonapani	1.5	1.5	6.5	1.5	4.9	1.5	4.9	1.5	4.9	1.5	4.9
8	New Umtru	40.0	40.0	196.2	40.0	231.5	40.0	231.5	40.0	231.5	40.0	231.5
9	Ganol	22.5	22.5	0.0	22.5	0.0	22.5	66.2	22.5	66.2	22.5	66.2
10	Lakroh	1.5	1.5	3.4	1.5	10.9	1.5	10.9	1.5	10.9	1.5	10.9
11	Riangdo	3.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	8.0	3.0	17.0
12	MLHEP-II	210.0	210.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
	Sub-Total MePGCL	**591.70**	**591.70**	**1051.20**	**381.70**	**1227.28**	**381.70**	**1293.47**	**381.70**	**1164.14**	**378.70**	**1300.30**
B	**NEEPCO**											
1	Kopili	200	35.05	0.0	35.1	17.0	35.1	106.8	35.1	106.8	35.1	106.8
2	Kopili-Ext	25	3.45	0.0	3.5	7.2	3.5	10.1	3.5	10.1	3.5	10.1
3	Khandong	50	8.51	0.0	8.5	0.0	8.5	26.8	8.5	26.8	8.5	26.8
4	Ranganadi	405	47.10	152.3	47.1	162.9	47.1	162.9	47.1	162.9	47.1	162.9
5	Doyang	75	8.69	18.9	8.7	19.8	8.7	19.8	8.7	19.8	8.7	19.8
6	AGBPP	291	34.74	204.1	34.7	209.9	34.7	209.9	34.7	209.9	34.7	209.9
7	AGTPP CC	130	16.57	112.0	16.6	122.5	16.6	122.5	16.6	122.5	16.6	122.5
8	Pare	110	14.0	67.2	14.0	71.0	14.0	71.0	14.0	71.0	14.0	71.0
9	Kameng	600	15.0	69.5	15.0	58.9	15.0	58.9	15.0	58.9	15.0	58.9
	Sub-Total NEEPCO		**183.11**	**623.9**	**183.11**	**669.16**	**183.11**	**788.72**	**183.11**	**788.72**	**183.11**	**788.72**
C	**NHPC-Loktak**	105	13.007	35.59		4.0		0.00		0.00		0.00
D	**OTPC-Palatana**	726	78.99	498.73	78.99	492.00	78.99	500.54	78.99	500.54	78.99	500.54
E	**NTPC**											
1	BTPS	750	0.0	0.00	53.0	350.00	88.0	578.16	88.0	578.16	88.0	578.16
2	FSTPS	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
3	KHSTPS-I	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
4	KHSTPS-II	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
5	TSTPS-II	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	Sub-Total NTPC		0.00	0.00	53.00	350.00	88.00	578.16	88.00	578.16	88.00	578.16
	Total			**2209.42**		**2742.44**		**3160.89**		**3031.56**		**3167.71**

MePDCL has filed additional submission vide petition no.22 of 2023 as detailed below.

1. MePDCL has projected the energy availability and power procurement plan for the 4th control period under Para 3.2 (Page No. 29 to 31) of the Original Petition. MePDCL has projected an availability of 3160.89 MU in 2024-25, 3031.56 MU in 2025-26 and 3167.71 MU in FY 2026-27. This included availability of power from various sources including MePGCL, NTPC, NHPC, OTPC and NEEPCO.
2. MePDCL would like to humbly submit that due consideration was given to include all the available sources in the projections for the energy availability for the 4th Control Period i.e., 2024-25 to 2025-26.
3. However, MePDCL would like to submit that Ministry of Power GOI vide letter dated 14.07.2009 as allocated 49.41 MW of power from upcoming Subansiri HEP of NHPC having total capacity of 2000 MW comprising of 6 units of 250 MW each. The design energy of the project is 7421.59 MU. The share of the North Eastern States in the project is 440 MW whereas rest of the of the power is allocated to northern and western states. Accordingly, the share of the Meghalaya comes to 11.23% i.e., 49.41 MW out of 440 MW.
4. In the 24th NERPC meeting held on 27th and 28th June 2023 at Tawang, Arunachal Pradesh it was intimated by NHPC that the first two units of the project would be commissioned by February 2024 and the balance 6 units would be commissioned in 2024-25. Thus the power available from the project should also be a part of projections for 4th Control Period 2024-25 to 2026-27.
5. However, MePDCL would like to humbly submit that due to inadvertent oversight this was missed out in the petition filed for approval of business plan.
6. As stated above the share of the Meghalaya is 11.23% of the power allocated to the North Eastern states and as such the energy available to Meghalaya would be 183.36 MU per year. Further, MePDCL would like to humble submit that the tariff for the aforesaid station would be decided by the Central Electricity Regulatory Commission and the same will be used for the projection of power purchase expenses at the time of filing of ARR Petitions.
7. In the 2023-24 the availability of power from this station shall be for two months only and hence the energy available from the station in 2023-24 would be 30.56 MU.
8. Accordingly, the Table 15 of the Petition for Approval of Business Plan would be changed as under:

Table 3.21 : Revised Energy Availability and Power Procurement Plan (Table 15 of Original Petition)

Share Allocation and Projected Availability of Meghalaya												
Sl No	**Name of Station**	**Capacity (MW)**	**Total Allocation (Mw)**	**Actual Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**	**Total Allocation (Mw)**	**Projected Availability (Mu)**
			FY 2022-23		**FY 2023-24**		**FY 2024-25**		**FY 2025-26**		**FY 2026-27**	
A	**MePGCL**											
1	Umiam –I	36.0	36.0	117.7	36.0	114.6	36.0	114.6	36.0	114.6	36.0	114.6
2	Umiam –II	20.0	20.0	62.1	20.0	45.4	20.0	45.4	20.0	45.4	20.0	45.4
3	Umiam –III	60.0	60.0	129.6	60.0	137.3	60.0	137.3	60.0	0.0	60.0	127.2
4	Umiam -IV	60.0	60.0	176.0	60.0	203.9	60.0	203.9	60.0	203.9	60.0	203.9
5	MLHEP	126.0	126.0	359.7	126.0	478.7	126.0	478.7	126.0	478.7	126.0	478.7
6	Umtru	11.2	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0
7	Sonapani	1.5	1.5	6.5	1.5	4.9	1.5	4.9	1.5	4.9	1.5	4.9
8	New Umtru	40.0	40.0	196.2	40.0	231.5	40.0	231.5	40.0	231.5	40.0	231.5
9	Ganol	22.5	22.5	0.0	22.5	0.0	22.5	66.2	22.5	66.2	22.5	66.2
10	Lakroh	1.5	1.5	3.4	1.5	10.9	1.5	10.9	1.5	10.9	1.5	10.9
11	Riangdo	3.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	8.0	3.0	17.0
12	MLHEP-II	210.0	210.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
	Sub-Total MePGCL	**591.70**	**591.70**	**1051.20**	**381.70**	**1227.28**	**381.70**	**1293.47**	**381.70**	**1164.14**	**378.70**	**1300.30**
B	**NEEPCO**											
1	Kopili	200	35.05	0.0	35.1	17.0	35.1	106.8	35.1	106.8	35.1	106.8
2	Kopili-Ext	25	3.45	0.0	3.5	7.2	3.5	10.1	3.5	10.1	3.5	10.1
3	Khandong	50	8.51	0.0	8.5	0.0	8.5	26.8	8.5	26.8	8.5	26.8
4	Ranganadi	405	47.10	152.3	47.1	162.9	47.1	162.9	47.1	162.9	47.1	162.9
5	Doyang	75	8.69	18.9	8.7	19.8	8.7	19.8	8.7	19.8	8.7	19.8
6	AGBPP	291	34.74	204.1	34.7	209.9	34.7	209.9	34.7	209.9	34.7	209.9
7	AGTPP CC	130	16.57	112.0	16.6	122.5	16.6	122.5	16.6	122.5	16.6	122.5
8	Pare	110	14.0	67.2	14.0	71.0	14.0	71.0	14.0	71.0	14.0	71.0
9	Kameng	600	15.0	69.5	15.0	58.9	15.0	58.9	15.0	58.9	15.0	58.9
	Sub-Total NEEPCO		**183.11**	**623.9**	**183.11**	**669.16**	**183.11**	**788.72**	**183.11**	**788.72**	**183.11**	**788.72**
C	**NHPC-Loktak**	105	13.007	35.59		4.0		0.00		0.00		0.00
D	**NHPC- Subansiri**	2000	12.35	10.19	49.41	183.36	49.41	183.36	49.41	183.36	49.41	183.36
E	**OTPC-Palatana**	726	78.99	498.73	78.99	492.00	78.99	500.54	78.99	500.54	78.99	500.54
F	**NTPC**											
1	BTPS	750	0.0	0.00	53.0	350.00	88.0	578.16	88.0	578.16	88.0	578.16
2	FSTPS	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	KHSTPS-I	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	KHSTPS-II	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	TSTPS-II	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total NTPC		0.00	0.00	53.00	350.00	88.00	578.16	88.00	578.16	88.00	578.16

Commission's Analysis

Petitioner has projected additional capacity of 35 MW over existing availability of 53 MW and Energy of 578.16 MU expected from NTPC Bongaigoan project for the control period FY 2024-25 to FY 2026-27.

In this connection, it is pertinent to mention that the petitioner has been paying capacity charges/fixed charges amounted to Rs.739.51 Crore for FY 2017-18 to FY 2021-22 without Energy being drawn for the 53 MW availability from NTPC Bongaigoan project.

The proposed additional capacity of 35 MW would certainly add up further capacity charges burden on the consumers of state of Meghalaya without Energy drawl.

The petitioner shall examine necessity/Requirement and ensure surrender of the additional capacity.

The licensee shall submit revised PPA along with Tariff Petition for commission's consideration.

Licensee shall also review the necessity/requirement of high cost power availability from Doyang HEP and AGBPP of NEEPCO whose power purchase cost is ranging from Rs.5.54Ps/unit to Rs.7.93Ps/unit, after expiry of the validity of the present PPA.

Further petitioner has submitted that during the NERPC meeting held on 27.06.2023 & 28.06.2023 it was intimated by NHPC that first two units of Subansiri HEP would be commissioned by February 2024 and the share of Meghalaya state stands allocated for 49 MW (11.23%). This was omitted in the original petition inadvertently and requested to consider for availability. It is submitted that the Tariff of this station would be decided by CERC. Further submitted that Energy from this project would be available for 183.36 MU is proposed for drawl during the 4th MYT control period FY 2024-25 to FY 2026-27.

The licensee shall submit the revised PPA along with the Tariff Petition for commission's consideration.

Commission considering the submission of the petitioner, approves the power availability and power procurement plan for Meghalaya state for control period FY 2024-25 to FY 2026-27 as projected in the table no.1 of the additional submission as depicted below.

Table 3.22 : Approved Energy Availability for control period FY 2024-25 to FY 2026-27.

Sl No	Name of Station	Capacity (MW)	Total Allocation (Mw)	Actual Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)
			FY 2022-23		**FY 2023-24**		**FY 2024-25**		**FY 2025-26**		**FY 2026-27**	
A	**MePGCL**											
1	Umiam –I	36.0	36.0	117.7	36.0	114.6	36.0	114.6	36.0	114.6	36.0	114.6
2	Umiam –II	20.0	20.0	62.1	20.0	45.4	20.0	45.4	20.0	45.4	20.0	45.4
3	Umiam –III	60.0	60.0	129.6	60.0	137.3	60.0	137.3	60.0	0.0	60.0	127.2
4	Umiam -IV	60.0	60.0	176.0	60.0	203.9	60.0	203.9	60.0	203.9	60.0	203.9
5	MLHEP	126.0	126.0	359.7	126.0	478.7	126.0	478.7	126.0	478.7	126.0	478.7
6	Umtru	11.2	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0	11.2	0.0
7	Sonapani	1.5	1.5	6.5	1.5	4.9	1.5	4.9	1.5	4.9	1.5	4.9
8	New Umtru	40.0	40.0	196.2	40.0	231.5	40.0	231.5	40.0	231.5	40.0	231.5
9	Ganol	22.5	22.5	0.0	22.5	0.0	22.5	66.2	22.5	66.2	22.5	66.2
10	Lakroh	1.5	1.5	3.4	1.5	10.9	1.5	10.9	1.5	10.9	1.5	10.9
11	Riangdo	3.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	8.0	3.0	17.0
12	MLHEP-II	210.0	210.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0
	Sub-Total MePGCL	**591.70**	**591.70**	**1051.20**	**381.70**	**1227.28**	**381.70**	**1293.47**	**381.70**	**1164.14**	**378.70**	**1300.30**
B	**NEEPCO**											
1	Kopili	200	35.05	0.0	35.1	17.0	35.1	106.8	35.1	106.8	35.1	106.8
2	Kopili-Ext	25	3.45	0.0	3.5	7.2	3.5	10.1	3.5	10.1	3.5	10.1
3	Khandong	50	8.51	0.0	8.5	0.0	8.5	26.8	8.5	26.8	8.5	26.8
4	Ranganadi	405	47.10	152.3	47.1	162.9	47.1	162.9	47.1	162.9	47.1	162.9
5	Doyang	75	8.69	18.9	8.7	19.8	8.7	19.8	8.7	19.8	8.7	19.8
6	AGBPP	291	34.74	204.1	34.7	209.9	34.7	209.9	34.7	209.9	34.7	209.9
7	AGTPP CC	130	16.57	112.0	16.6	122.5	16.6	122.5	16.6	122.5	16.6	122.5
8	Pare	110	14.0	67.2	14.0	71.0	14.0	71.0	14.0	71.0	14.0	71.0
9	Kameng	600	15.0	69.5	15.0	58.9	15.0	58.9	15.0	58.9	15.0	58.9
	Sub-Total NEEPCO		**183.11**	**623.9**	**183.11**	**669.16**	**183.11**	**788.72**	**183.11**	**788.72**	**183.11**	**788.72**
C	**NHPC-Loktak**	105	13.007	35.59		4.0		0.00		0.00		0.00
D	**NHPC- Subansiri**	2000	12.35	10.19	49.41	183.36	49.41	183.36	49.41	183.36	49.41	183.36
E	**OTPC-Palatana**	726	78.99	498.73	78.99	492.00	78.99	500.54	78.99	500.54	78.99	500.54

Sl No	Name of Station	Capacity (MW)	Total Allocation (Mw)	Actual Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)	Total Allocation (Mw)	Approved Availability (Mu)
F	**NTPC**											
1	BTPS	750	0.0	0.00	53.0	350.00	88.0	578.16	88.0	578.16	88.0	578.16
2	FSTPS	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	KHSTPS-I	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	KHSTPS-II	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	TSTPS-II	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total NTPC		0.00	0.00	53.00	350.00	88.00	578.16	88.00	578.16	88.00	578.16
	Total			**2209.42**		**2752.63**		**3344.25**		**3214.92**		**3351.07**

3.10 ENERGY BALANCE

Petitioner's Submission

Based on the projected power procurement plant, projections of sales and T&D losses the projected energy balance for the control period 2024-25 to 2026-27 is as under:

Sr. No.	Particulars	Calculation	FY 2023-24	2024-25	2025-26	2026-27
1	Power purchased from the Eastern Region (ER)	A	0	0	0	0
2	Inter-state transmission loss for ER	B	1.80%	1.80%	1.80%	1.80%
3	Net power purchased from the ER	C=A*(1-B)	0	0	0	0
4	Power purchased from the North -Eastern Region (NER)	D	1515.17	1840.60	1840.60	1840.60
5	Inter-state transmission loss for NER	E	3.00%	3.00%	3.00%	3.00%
6	Net power available at state bus from external sources on long term	F=(C+D)*(1-E)	1,469.71	1,785.38	1,785.38	1,785.38
7	Power purchased from generating stations within the state	G	1227.28	1320.29	1190.96	1327.12
8	Power purchased from other sources	H				
	Intra-State Transmission Losses		3.18%	3.18%	3.18%	3.18%
	Total Availability at MePDCL Periphery	**I=F+G+H**	**2,611.22**	**3,006.91**	**2,881.69**	**3013.52**
9	Power to be sold to consumers within the state (including ASEB)	J	1831.63	1954.53	2088.49	2234.60
10	Transmission & Distribution Losses (%)	K	18.00%	17.00%	16.50%	16.00%
11	Net power requirement at state bus for sale of power within the state	L=J/(1-K)	2233.70	2354.85	2501.19	2660.23
12	Surplus Power (for sale outside state)	M = I - L	**377.53**	**652.06**	**380.50**	**353.29**

* *Intra-State Transmission losses have been projected in line with the Projections of MePTCL*

MePDCL has filed additional submission vide petition no.22 of 2023 as detailed below.

MePDCL has submitted data gaps vide letter no. MePDCL/SE(RA)/BP/FY2024-27/2023/46 dated 06.11.2023.

MePDCL would like to submit that the change in

the availability would also have the bearing on the Energy Balance of the state. Accordingly, the Energy balance submitted in the original petition at page no. 36 would stand changed as under:

Table 3.23 : Energy Balance for the 4th Control Period (Projected)

Sr. No.	Particulars	Calculation	FY 2023-24	2024-25	2025-26	2026-27
1	Power purchased from the Eastern Region (ER)	A	0	0	0	0
2	Inter-state transmission loss for ER	B	1.80%	1.80%	1.80%	1.80%
3	Net power purchased from the ER	C=A*(1-B)	0	0	0	0
4	Power purchased from the North -Eastern Region (NER)	D	1525.36	2050.78	2050.78	2050.78
5	Inter-state transmission loss for NER	E	3.00%	3.00%	3.00%	3.00%
6	Net power available at state bus from external sources on long term	F=(C+D)*(1-E)	1479.60	1989.26	1989.26	1989.26
7	Power purchased from generating stations within the state	G	1227.28	1293.47	1164.14	1300.30
8	Power purchased from other sources	H				
	Intra-State Transmission Losses		3.18%	3.18%	3.18%	3.18%
	Total Availability at MePDCL Periphery	**I=F+G+H**	**2,620.79**	**3,178.34**	**3,053.12**	**3,184.94**
9	Power to be sold to consumers within the state (including ASEB)	J	1831.63	1954.53	2088.49	2234.60
10	Transmission & Distribution Losses (%)	K	18.00%	17.00%	16.50%	16.00%
11	Net power requirement at state bus for sale of power within the state	L=J/(1-K)	2233.70	2354.85	2501.19	2660.23
12	Surplus Power (for sale outside state)	M = I - L	**387.10**	**823.49**	**551.93**	**524.71**

In view of the submission above MePDCL would like to request the Commission to consider the revised energy availability and the revised energy balance of the state as projected above.

In addition to the above submission MePDCL would like to submit that at para 3.1.2-page no. 21 of the original petition MePDCL has submitted that:

"As on 31st March 2023 the total number of consumers served by MePDCL are 6,82,030 with a connected load of 1,34,067.34 Kva including both consumers at LT level and HT level. The major contributor to the number of consumers are LT Domestic and Kutir Jyoti Consumers which together constitute around 94% of the total consumers. In

terms of connected load also LT Domestic and Kutir Jyoti consumers contribute to around 60% of the total connected load, whereas industrial consumers both at HT and EHT level contribute to approximately 19% of the total connected load. In terms of sales the Industrial consumers at HT and EHT level contribute to around 47% of the sales of FY 2022-23."

It is submitted that total connected load of MePDCL has been shown as 1,34,067.34 Kva due inadvertent typographical error. The total connected load of MePDCL as on 31.03.2023 is 13,40,867.34 MU. MePDCL regrets the inadvertent typographical error. However, this does not have any bearing on the calculations and projections made for the 4th Control Period.

In view of the above submissions MePDCL requests the Commission to accept the additional submissions made by MePDCL herein and take the same into consideration for deciding the business plan for MePDCL for 4th Control period.

Commission's Analysis

Petitioner has projected Energy Balance without considering the additional submission filed vide petition no.22 of 2023 for the additional capacity available from NHPC Subhansiri project for 49 MW and Energy at 183.36 MU for computation of Energy balance for the control period FY 2024-25 to FY 2026-27.

Commission also considers the additional capacity of 53 MW and Energy available for 578.16 MU from NTPC Bongaigoan project for computation of Energy balance.

The petitioner was asked to submit the data gaps in respect of para 9 of the additional submission (petition no.22 of 2023) vide commission's letter dated 17.10.2023 for Energy balance.

MePDCL has submitted data gaps vide letter no. MePDCL/SE(RA)/BP/FY2024-27/2023/46 dated 06.11.2023.

The Energy balance computation has been revised considering additional capacity and Energy available from NHPC Subhansiri project and NTPC Bongaigoan project as depicted in the table below for the 4th control period FY 2024-25 to FY 2026-27.

Table 3.24 : Approved Energy Balance for control period FY 2024-25 to FY 2026-27.

Sr. No.	Particulars	Calculation	2024-25	2025-26	2026-27
1	Power purchased from the Eastern Region (ER)	A	578.16	578.16	578.16
2	Inter-state transmission loss for ER	B	1.80%	1.80%	1.80%
3	Net power purchased from the ER	C=A*(1-B)	567.75	567.75	567.75
4	Power purchased from the North -Eastern Region (NER)	D	1472.62	1472.62	1472.62
5	Inter-state transmission loss for NER	E	3.00%	3.00%	3.00%
6	Net power available at state bus from external sources on long term	F=(C+D)* (1-E)	1979.16	1979.16	1979.16
7	Power purchased from generating stations within the state	G	1293.47	1164.14	1300.30
8	Power purchased from other sources	H			
	Intra-State Transmission Losses		3.18%	3.18%	3.18%
	Total Availability at MePDCL Periphery	**I=**(F+G)* (1-3.18%)	**3168.56**	**3043.34**	**3175.17**
9	Power to be sold to consumers within the state (including ASEB)	J	1954.53	2088.49	2234.60
10	Transmission & Distribution Losses (%)	K	17.00%	16.50%	16.00%
11	Net power requirement at state bus for sale of power within the state	L=J/(1-K)	2354.85	2501.19	2660.24
12	Surplus Power (for sale outside state)	M = I – L	**813.71**	**542.15**	**514.93**

Commission approves Energy balance provisionally for the 4th Control period FY 2024-25 to FY 2026-27.

3.11 Renewable Purchase Obligation

Petitioner's Submission

MePDCL would like to submit that as per the provisions of MSERC (Renewable Energy Purchase Obligation & its Compliance) Regulations, 2018, MePDCL is obligated to buy power from solar and non-solar RE sources as per the % specified by the Hon'ble Commission in the aforesaid Regulations.

Hon'ble Commission vide 2nd amendment to the aforesaid Regulations has prescribed the percentage of RPO that MePDCL needs to comply. The percentage specified in the 2nd amendment to the MSERC (RPO) Regulations, 2018 are as below:

Table 3.25 : RPO Targets as MSERC RPO Regulations 2018

Year	Minimum Quantum of Purchase in (%) from Renewable Energy Sources (In terms of energy in kWh)		
	Solar	Non-Solar	Total
2018-19	0.75	3.25	4.00
2019-20	1.00	4.00	5.00
2020-21	1.25	4.75	6,00
2021-22	1.50	5.00	6.50
2022-23	1.75	5.25	7.00
2023-24	2.00	5.50	7.50

Further the MSERC (RPO) Regulations, 2018, second amendment the RPO % specified in the table above shall be applicable on the total consumption of electricity by the obligated entity, excluding consumption from Hydro power sources.

Accordingly, the RPO compliance of MePDCL in past 3 years is tabulated below:

Table 3.26 : Compliance of RPO by MePDCL in Past Three Years

				Target as Per Commission		Total		Actual Achievement		Total	
Year	Energy Consumed	Hydro Consumption	Consumption for RPO Targets	Solar	Non-Solar	(%)	MU	Solar	Non-Solar	(%)	MU
2020-21	1887.57	1524.70	362.87	1.25%	4.75%	6.00%	21.77	0	64.30	17.72%	64.30
2021-22	1744.62	1155.16	589.46	1.50%	5.00%	6.50%	38.32	0	11.38	1.93%	11.38
2022-23	2169.89		2169.89	1.75%	5.25%	7.00%	151.89	0	158.129	7.29%	158.13

Commission's Analysis

The Petitioner has yet to report actual power procurement from Renewable Energy sources from FY 2021-22 onwards. The licensee shall comply with the obligation of Renewable Energy procurement as per the RPO Regulations 2021 as notified below.

FY	Minimum quantum of purchase in (%) from renewable energy sources (in terms of energy in kWh)		
	Solar (%)	Non Solar (%)	Total (%)
2018-19	0.75	3.25	4.00
2019-20	1.00	4.00	5.00
2020-21	1.25	4.75	6.00
2021-22	1.50	5.00	6.50
2022-23	1.75	5.25	7.00
2023-24	2.00	5.50	7.50

Commission will notify the RPO obligation in due course for the control period FY 2024-25 to FY 2026-27.

3.12 Capital Investment Plan for 3rd Control Period FY 2021-22 to 2023-24

Petitioner's Submission

3.12.1 Capital Investment Plan

MePDCL has earlier filed the business plan along with the proposed capital investment plan for the third control period i.e., 2021-22 to 2023-24 vide petition bearing no. Case 16/2020 and additional business plan vide petition bearing no. Case 23/2022.

The Commission vide order dated 09.10.2020 in Case no. 16/2020 approved the initial capital investment for control period 2021-22 to 2023-24 as under:

Table 3.27: Approved Capital Investment Plan for Period FY 2021-22 to FY 2023-24

S No	Name of Scheme	Total Outlay	Funding Pattern		
			Grant	Equity	Loan
A	**Old Scheme**				
	Saubhagya works	657.06	657.06		
	IPDS Phase-I (Pkg-Vi & VII)	20.89	19.85		1.04
	Additional Special Plan Assistance (ASPA)	5.79	5.79	0	0
	NEC	5.7	5.7		
	DDUGJY- I Village Electrification	276.54	276.54	0	0
	IBBFL Deposit Works	147.63	147.63		
	Sub-Total A	**1113.61**	**1112.57**	**0**	**1.04**
B	**New Schemes**				
	ADB funded schemes	1143	1143	0	0
	IPDS	44.59	42.36		2.23
	Rooftop Solar Programme	1.63	0.98		0.65
	State Govt. Funded Schemes	119.95	119.95	0	0
	Sub-Total B	**1309.17**	**1306.29**	**0**	**2.88**
	Grand Total	**2422.78**	**2418.86**	**0**	**3.92**

The approved year wise capital expenditure and capitalization in each year of the control period in the order dated 09/10/2020 in case 16/2020 was as under:

Table 3.28 : Approved Capital Expenditure and Capitalization

S No	Name of Scheme	2020-21		2021-22		2022-23		2023-24		Total	
		Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization
A	**Ongoing Schemes**										
	Saubhagya works	173	657.06	0	0	0	0	0	0	173	657.06
	IPDS Phase-I (Pkg-Vi & VII)	0	0	0	0	0	0	0	0	0	0
	Additional Special Plan Assistance (ASPA)	2.9	5.79	0	0	0	0	2.9	5.79	5.8	11.58
	NEC	0	0	0	0	0	0	0	0	0	0
	DDUGJY- I Village Electrification	0	0	0	0	0	0	0	0	0	0
	IBBFL Deposit Works	0	147.63	0	0	0	0	0	147.63	0	295.26
	Sub-Total A	175.9	810.48	0	0	0	0	2.9	153.42	178.8	963.9
B	**New Schemes**										
	ADB funded schemes	0	0	378	0	377	0	387	1143	1142	1143
	IPDS	0	0	14.86	0	14.86	0	14.87	44.59	44.59	44.59
	Rooftop Solar Programme	0.82	1.63	0	0	0	0	0	0	0.82	1.63
	State Govt. Funded Schemes	0	0	28.89	0	49.78	52.23	27.73	45.14	106.4	97.37
	Sub-Total B	0.82	1.63	421.75	0	441.64	52.23	429.6	1232.73	1293.81	1286.59

Further subsequent to approval of action plan and DPR of MePDCL for Meghalaya under Revamped Distribution Sector Scheme (RDSS) by Ministry of Power vide letter No.REC/RDSS/Meghalaya/2022-23/09, MePDCL approached the Commission with Petition, Case No. 23/2022, for additional capital investment plan as the same was not included in the case no. 16/2020. The Commission provisionally approved the additional business plan vide order dated 06.02.2023 as under:

Table 3.29 : Approved Additional Capital Investment Plan

S No	Description	Physical Targets	Estimated Cost
A	**Smart Metering Works**		
1	Consumer Metering	460000	276
2	1 Ph. Smart Consumer Meters	385138	231.08
3	3 Ph. Whole Current Smart Consumer Meter	74862	44.92
4	Smart DT Metering	11419	26.26
5	Smart Feeder Metering	904	3.8
6	Smart Boundary Meeting	420	1.76
	Sub-Total	472743	307.82
7	PMA Charges		1.73
	Grand Total (A)		**309.55**
B	**Distribution Infrastructure Works**		
1	LTABC	1249.81	146.00
2	Reconditioning of lines	3755.07	482.39
3	HVDS Coverage in DT	2595.00	135.98
4	SCADA Coverage	3.00	20.35
	Sub-Total		784.72
5	PMA Charges		11.78
	Grand Total (B)		**796.50**

3.12.2 Status of the Ongoing Schemes

3.12.2.1 SAUBHAGYA & DDUGJY (Addl. Infra) Scheme in Meghalaya

Meghalaya Power Distribution Corporation Limited (MePDCL) is implementing SAUBHAGYA scheme in all districts under the jurisdiction of MePDCL in Meghalaya State to energize the left out houses across the State by providing the Saubhagya Kits & creating adequate Infrastructure for which Govt. of India sanctioned an amount of Rs.275.73 Cr. vide letter No. REC/DDUGJY-Saubhagya/2018-19/303/7170 Dated 24/07/2018 However, the amount of Rs.275.73Cr was not enough to create the Additional infrastructure for the last-mile Household connectivity under the Saubhagya. On the request of MePDCL/Govt. of Meghalaya, the Govt. of India sanctioned an amount of Rs.381.33 Cr. (207.96+173.37) Cr. vide letter No.REC/DDUGJY/Addl. Infra. /Meghalaya/ 2018-19/613 Dated 05/10/2018 & letter No. REC/DDUGJY/Addl. Infra. /Meghalaya/ 2018-19/1445 Dated 29/03/2019 for additional infrastructure.

The Sanctioned Details of the project are as follows:

Serial	Particulars	Amount Sanctioned (Rs. in crores)
1	Sanction[letter dated 6th August 2018]	275.73
2	Additional sanction[dated 9th August 2018]	207.96
3	Extra sanction[dated 29th March 2019]	173.37
	Grand Total	**657.06**

The Financial Closure of the project is as under:

Particulars	Sanctioned Cost	Actual executed Cost	Grant Released		Total Grant Released
			GoI Grant	GoM Grant	
HH Electrification & Addl Infra	275.73	283.42	186.89	58.45	245.34
Addl Infra	381.33	389.90	338.40	90.22	428.62
	657.06	**673.32**	**525.30**	**148.67**	**673.96**

Name of Circle	Scope of Work as per Closure							Number of H/Hs
	Parameters			11/.4 KV DTs				
	11 KV Line on Weasel conductor	LT Line						
		3 PH 4 W	1 PH 2 W	25	63	100	250	
	Ckt Km	Ckt Km	Ckt Km	Nos	Nos	Nos	Nos	
EGH	245.33	149.97	1256.13	236	107	6	2	21049
WGH	225.03	132.41	1225.78	184	126	27	4	53358
SGH	32.735	23.07	317.605	38	14	3	0	9537
EKH	100.8	113.4	692.2	96	72	11	4	21016
JH	159.8	138.7	701.7	59	80	40	0	24388
RB	92.00	72.4	602.1	69	98	3	0	16369
WKh	143.3	69	825.6	84	41	5	1	16253
Total	**998.995**	**698.95**	**5621.12**	**766**	**538**	**95**	**11**	**161970**
Off Grid								598
								162568

3.12.2.2 IPDS: System Strengthening

The DPR to Power Finance Corporation Ltd was submitted after consulting public representatives including Members of Parliaments and Resolution of the 1st State Distribution Reform Committee meeting dated 15th October 2015.

Consequently, the PFC Ltd conveyed the sanction of the Monitoring Committee of MOP/GOI on 16.3.2016.The Scheme has been sanctioned in respect of the nine statutory towns namely Shillong, in East Khasi Hills District, Jowai under West Jaintia Hills District, Mairang, Nongstoin under West Khasi Hills District, Nongpoh under Ribhoi District, Williamnagar under East Garo Hills District Tura under West Garo Hills District, Resubelpara under North Garo Hills District and Baghmara in South Garo Hills District. The total sanctioned cost of the project is Rs 62.03 Crores and that the PMA cost is Rs. 0.31 Crores, the details of which is as indicated below:

Sl. No.	Name of Circle	Name of Towns:	Overall Sanctioned Cost (Rs. Cr.)		
			Approved Project Cost	Approved PMA Cost	Approved Project + PMA Cost
1	Eastern Circle	Jowai	6.58	0.03	6.61
2	West Garo Hills Circle	Tura	10.55	0.05	10.61
3	Shillong Circle	Shillong	19.07	0.10	19.17
4	East Garo Hills Circle	Resu, William &Baghmara	12.65	0.06	12.71
5	Western Circle	Nongpoh	4.55	0.02	4.58
6	Central Circle	Mairang &Nongstoin	8.64	0.04	8.68
	Total:		**62.03**	**0.310**	**62.33**

Present Status of the Scheme

Sr. No.	Milestone Name	Unit	Sanctioned Quantity	Awarded Quantity	Completion Status
1	New Sub-station	MVA	41	41	41
2	Nos. of New Sub-station	No	6	6	6
3	33 KV Bay Extension	No	1	1	1
4	Capacity addition 33/11 KV Xr	MVA	5	5	5
5	Nos. of 33/11 KV Additional Xr	No	2 (10 MVA)	2 (10MVA)	2 (10MVA)
6	R&M of 33/11 KV S/S	No	10	10	10
7	33 KV New Feeders	Km	11	11	11
8	11 KV New Feeders	Km	81	81	81
9	11 KV Feeder Re-conductoring	Km	10	10	10
10	Installation of New DT	MVA	5	5	5
11	Nos of Installation of New DT	No	53	53	53
12	Capacity Enhancement of DT	MVA	7	7	7
13	Nos Capacity Enhancement of DT	No	43	43	43
14	New LT Lines	Km	60	60	60
15	LT Line Re-conductoring	Km	36	37	37
16	Pre-Paid Meter	No	6400	6400	6382
17	Solar Panels	Kwp	210	210	210
18	Boundary Meter	No	10	12	12

3.12.2.3 Installation of Roof Top Solar PV Systems at Sub-Stations and Offices under IPDS

In grid-connected solar photo-voltaic (PV) systems, solar energy is fed into the building loads that are connected to the MePDCL grid through service connection with surplus energy being fed into the grid and shortfall being drawn from the grid. Production of surplus energy may happen when solar energy produced exceeds the energy consumption of the building. This surplus is fed into the grid. During the night, or when during the day energy demand in the building exceeds solar energy generation, energy is drawn from the grid. Grid-connected solar PV systems have no battery storage and will not work during grid outage. For buildings with grid-connected solar PV systems, the service connection meter needs to be of the bidirectional type, whereby import kWh and export kWh are separately recorded.

Sl. No.	Circle	Division	Sub Division	Location	Cap (Kw)	Remarks
1	Shillong Distribution Circle	Shillong Central Distribution Division	Polo Distribution S/D	MeECL Complex	60	Completed
2			Polo Distribution S/D	33/11 KV Meter Factory S/S	6	Completed shifted to MeECL Complex
3			Shillong Central Distribution S/D	33/11 KV Kenches Trace S/S	6	Completed
4			Shillong Central Distribution S/D	Main Office BC House, Shillong	36	Completed
5			Shillong Central Distribution S/D	33/11 KV Keating Road S/S	6	Completed shifted to MeECL Complex
6			Shillong Central Distribution S/D	33/11 KV Mawprem S/S	6	Completed
7		Shillong Esat Distribution Division	Nongthymmai Distribution S/D	33/11 KV Nongthymmai S/S	6	Shifted to Umiew
8			Lapalang Distribution S/D	33/11 KV SE Falls S/S	6	Completed
9		Shillong West Distribution Division	Mawlai Distribution Sub Division	33/11 KV Mawlai S/S	6	Completed
10	Jaintia Hills Distribution Circle	Jowai Distribution Division	Jowai Distribution Sub Division	33/11 KV Jowai S/S	6	Completed
11	Ri Bhoi Distribution Circle	Nongpoh Distribution Division	Nongpoh Distribution S/D	33/11 KV Nongpohi S/S, Control room	6	Completed
12	Khasi Distribution Circle	West Khasi Hills Distribution Division	Mairang Distribution S/D	33/11 KV Mawsawa S/S, Control Room	6	Completed
13			Nongstoin Distribution S/D	33/11 KV Nongstoin S/S, Control Room	6	Completed
A				**Sub Total :**	**162**	
B. <u>Under Western Zone</u>						
1	Tura Distribution Circle	Tura Distribution Division	Tura East Distribution S/D	33/11 KV Hawakhana, control room	6	03.10.2020
2		Tura Distribution Division	Tura East Distribution S/D	Main Hawakhana Office Building	6	05.10.2020
3	East Garo Hills Distribution Circle	East Garo Hills Distribution Division	Williamnagar Distribution S/D	33/11 KV Williamnagar S/S, control room	6	22.11.2019
4			Williamnagar Distribution S/D	Williamnagar Main Office	6	09.10.2020
5			Mendipathar Distribution S/D	33/11 KV Mendipathar, control room	6	07.10.2020
6			Mendipathar Distribution S/D	33/11 KV Resubelpara, control room	6	07.10.2020
7		South Garo Hills Distribution Division	Baghmara Distribution S/D	33/11 KV Baghmara S/S, control room	6	24.11.2019
8			Williamnagar Distribution S/D	33/11 KV IPDS Baghmara S/S, control room	6	24.11.2019
B				**Sub Total :**	**48**	
				Grand Total :	**210**	

3.12.2.4 Pre-Paid Metering System under Integrated Power Development Scheme.

The Scope of work under this scheme includes installation and commissioning of pre-paid meters, vending stations including technical support and supervision of pre-payment system, Base Computer System and Meter Reading Instruments in the premises of the consumers and training in the operation including token generation and other system functionality in specified towns of Meghalaya

The status of Installation of Pre-Paid Meters are as follows:

Sl No	Name of Circle	No. of Pre-paid meters installed
	System Strengthening	
1	Eastern Circle	506
2	Western Circle	750
3	Central Circle	342
4	Shillong Circle	2094
5	East Garo Hills Circle	1840
6	West Garo Hills Circle	850
	Total	6382

3.12.2.5 RT-DAS (Real Time Data Acquisition System)

The Power Finance Corporation Limited has, additionally sanctioned the scheme for implementation of Real time data acquisition system for SAIF and SAIDI measurement. The scope under this sanction includes supply installation and commissioning of hardware and software for RT-DAS at 15 No. of 33/11 KV sub-stations involving 49 Nos. of feeders of IPDS Non-SCADA towns in Meghalaya. The main objective of the scheme is to calculate the System Average Interruption Duration Index (SAIDI) & System Average Interruption Frequency Index (SAIFI) for reliable power supply to the consumers.

The details of the sanction under the scheme are as under:

Sl. No.	Name of the Scheme:	Sanctioned Date	Sanctioned Amount (Rs. In Crores)	Executed Amount (Rs. In Crores)
1	RT-DAS-for SAFI SAIDI Measurement	10-12-2018	1.94	1.60

Present Status of works under the Scheme

MePDCL would like to submit that feeder remote terminals have been installed at all the 15 sub-stations across the state of Meghalaya comprising of total 49 feeders. The control area for these remote terminals have been set up at MeECL headquarters. All the works under the scheme has been completed except the integration which is expected to be completed shortly.

The details of the sub-stations where the feeder remote terminal units have been installed are as under:

Sl No	Name of Sub-station	Name of Town
1	Lapalang	Shillong
2	Umjarain	Shillong
3	Mawpat	Shillong
4	Charphalong	Shillong
5	Mawiong Police Batalian	Shillong
6	Williamnagar	Williamnagar
7	Resubelpara	Resubelpara
8	Dobasipara	Dobasipara
9	Tura Rongkong	Tura
10	Jyntru	Nongpoh
11	Smit	Shillong
12	Umiew	Shillong
13	Khyletreshi	Jowai
14	Tura	Tura
15	Chirangre	Tura

The project would help in accurate measurement of the reliability indices and improvement in reliability of power and also ensuring 24X7 supply to consumers in urban areas. The project is also expected to lead to a reduction in AT&C losses, improvement in quality of supply such as voltage level and power factor etc.

3.12.2.6 North Eastern Region System Improvement Project (NERPSIP)

Recognizing the critical need to improve the performance of the transmission and distribution networks, the Government of India (GoI) has developed a comprehensive scheme for NER in consultation with POWERGRID and the State Governments to (i) augment the existing transmission and distribution infrastructure to improve the availability and reliability of service delivery across all the NER states; and (ii) build institutional capacity of the power utilities/ departments in NER. This network expansion scheme is part of GoI's wider efforts to extend last mile electricity connectivity to households and to have 24 x 7 Power for All. Under the proposed scheme, to be financed jointly by the GOI and the World Bank, investments for augmenting transmission and distribution networks (up to 33kV), and technical assistance and capacity building will be provided to key sector stakeholders.

Three number of packages awarded for Meghalaya are as follows:

Sl. No.	Name of the agency	Package Name	Award Cost (Rs. In Cr.)
3	M/s NECCON Power & Infra Ltd.	MEG-DMS-01 – Jaintia Hills	37
4	M/s NECCON Power & Infra Ltd.	MEG-DMS-02- West Garo Hills	33
5	M/s NECCON Power & Infra Ltd.	MEG-DMS-03- East Khasi Hills	48
			118

The Scope of Works are as follows:

Particulars	Total Scope (Nos.)
New 220/132/33kV Substation	4
220/132/33kV Extension / Augmentation Substation	2
New 33/11kV Substation	11
33/11kV Extension / Augmentation Substation	4
220kV & 132kV Transmission Line	3
33kV Transmission Line	17
LIVE LINE 132 kV OPGW	7
Total	**48**

3.12.2.7 IPDS Phase II – IT Schemes

The scheme consists of two parts viz. implementation of Gas Insulated Sub-Stations and ERP implementation.

a) Gas Insulated Sub-Stations under IPDS:

The Power Finance Corporation Limited has accorded financial assistance under IPDS (Integrated Power Development Scheme) scheme for implementation of GIS sub-stations in Meghalaya. This was conveyed vide letter No.02:10: IPDS: MePDCL: Meghalaya:060522 dated, 10.12.2018 that the IPDS Monitoring Committee of MoP/GoI, in its 13th meeting held on the 18.10.2018 has considered the project proposals and has approved Rs 24.64 Crore as project costs for 02 nos of GIS (Gas Insulated Sub-Stations) along with associated lines as follows:

- Approved DPR Costs Rs 24.64 Crore
- Govt. of India Grant Rs 20.94 Crore (85% of Sl. No. 1)
- Govt. of India (GoI) Grant for Project Management Agency Rs.0.12 Crore (0.5% of Sl. No 1) Total GoI Grant = Rs 21.06 Crore.
- Projects to be implemented on Turnkey.

Sub-Stations to be constructed in Shillong and Jowai Towns are as shown in Table below:

Table 3.30 : Details of GIS Substations

Sr. No.	Name of Town.	No. of GIS Approved	Capacity of 33/11 GIS S/S approved	Associated Lines	Award Cost
1	Shillong (Dhankheti)	1	2 x 10 MVA	33 Kv - 1.80Km. 11 Kv - 0.8Km.	Rs 25.58 Cr
2	Jowai (near Woodland Hospital)	1	2 x 5 MVA	33 Kv - 2.83Km. 11 Kv -2.00km.	

The project completion date as per IPDS guidelines is 30 months from the date of Sanction Letter. The project has been completed on 31st December 2021.

b) ERP Implementation under IPDS

The Power Finance Corporation Limited (PFC Ltd, a Government of India Undertaking) has accorded financial assistance under IPDS (Integrated Power Development Scheme) for implementation of Enterprise Resource Planning (ERP) an IT enablement project for Meghalaya Power Distribution Corporation Limited in the State of Meghalaya. This was conveyed vide letter No.02: 18: IPDS: MePDCL: Meghalaya:060520 dated, 10.12.2018 (GoI Grant No. 64457002 and PMA Grant No. 64450001) that the IPDS Monitoring Committee of MoP/GoI, in its 13th meeting held on the 18.10.2018 has considered the project proposals and has approved Rs 19.01 Crore as project costs for ERP implementation in Meghalaya as follows:

a) Approved DPR Cost for implementation of ERP project is Rs.19.01 Crore.
b) Govt. of India (GoI) Grant is Rs. 16.16 Crore (85% of SI. No.1).
c) Govt. of India (GoI) Grant for Project Management Agency is Rs. 0.09 Cr. (0.5 % of SI. No. 1).

Total Grant = Rs. 16.25 Crore

The project completion is envisaged within 30 months from date of issue of Sanction letter. Further, Project completion date as per IPDS guidelines shall be 09.06.2021 (viz. 30 months from date of sanction letter).

The project is at present in the User Acceptance Test (UAT) and shall be completed by March 2024.

3.12.2.8 Indo Bangladesh Border Flood Lighting:

The Scheme is financed by the Ministry of Home Affairs, Government of India.

Execution of the same was awarded by Ministry of Home Affairs, Government of India to the National Project Construction Corporation Limited (NPCC). The NPCC requested the MeECL vide letter No. 70064/IBBFL/2054, dated 5.11.2009 to prepare the estimates to develop the required infrastructure to provide Power Connection to the Flood Lights installed by the NPCC for the Indo Bangladesh Border Flood Lighting project under deposit works.

The Scope of works is to provide last mile service connection at LT Side (upto DTs) which includes:

1. New/Renovation of 33KV Lines, 313.46 Ckm.
2. 9 Nos New 33/11KV, 1.6MVA Substations.
3. 2 Nos Augmentation 33/11KV, 1.6MVA Substations.

4. New 11KV Lines, 459.113 Ckm.
5. 104 Nos of 200/100 KVAs, 33/0.4KVs / 11/0.4KVs DTs.

As the project extends across several districts and corresponding divisions of MePDCL, the work has been split among the various divisions for better execution. The RE (Rural Electrification now Projects) Construction Divisions for Shillong, Jowai and Tura will undertake the work for the portion in East/ West Khasi Hills, Jaintia Hills and West/ South Garo Hills respectively.

The main work (as a deposit work) of the MePDCL is to develop the infrastructure at 33KV, 11KV upto the Distribution Transformer (DT) level to provide (stable) power supply and last mile connectivity to the Flood lights being installed by the NPCC Limited along the Indo Bangladesh Border. The Project has been divided and being executed under the following Sectors:

Table 3.31 : Project Allocation in Meghalaya

Sl. No.	Sectors	Sanction (Rs in Cr)	Approx. Border Length (Km)	Border Post (BP)
1	Tura Sector	30.38	107	1071 to 1130
2	Williamnagar Sector	37.97	103	1130 to 1188/2S
3	Shillong Sector	39.08	149	1188/2S to 1272/9S
4	Jowai Sector	40.20	101.8	1272/9S to 1338/MP

Currently the work in Shillong, Tura & Williamnagar and Jowai Sector has been sanctioned and work is in progress.

Table 3.32 : Current Progress of Works

Sl. No.	SECTORS	BP Nos	Border Lengths (Km)	Overall Progress	Target of Completion
1	TURA	1071 to 1130	107	100%	Completed
2	WILLIAMNAGAR	1130 to 1188/2S	103	92%	March 2025
3	SHILLONG	1188/2S to 1272/9S	149	92%	March 2025
4	JOWAI	1272/9S to 1338 MP	101.8	45%	March 2025
	TOTAL		460.8	75%	

3.12.2.9 Meghalaya Power Distribution Sector Improvement Project (MPDSIP) under ADB Funding

To improve the power scenario in the state, the Licensee sought financial assistance from Asian Development Bank (ADB). ADB is a multilateral development partner in the power sector in India and has supported several states in India including North Eastern State such as Assam. ADB has supported project loans for generation, transmission, and distribution projects in India and worked with state governments and utilities on

various reform measures and supported the regulatory commission in the neighbouring state of Assam

The project proposal from the Govt. of Meghalaya for financial assistance of USD 132.8 Million from ADB for Meghalaya Power Sector Improvement Project was accorded "in principle" approval by the Dept. of Economic Affairs (Fund Bank & ADB Division), Ministry of Finance during the 90th Screening Committee held on 19th December 2018, subject to concurrence from Ministry of Home Affairs, Ministry of External Affairs, Ministry of Power, DONER and NITI Aayog. The NOCs/concurrence were received from Ministry of Home Affairs, Ministry of External Affairs, Ministry of Power, CEA and NITI Aayog. The CEA approved the project cost of Rs 1,17,210.89 Lakh only on 18th March 2019 for the following works:

a. Installation of new 33/11KV sub-stations and augmentation and renovation of existing 33/11KV sub-stations.
b. Installation of new 33KV & 11KV Lines and re-conductoring, augmentation & replacement of existing 33KV & 11KV Lines.
c. Installation of new DTs and capacity enhancement and augmentation of existing DTs.
d. Metering Infrastructure Improvement – installation of 2.05 lakh smart metering system.
e. IT enablement in Metering, Billing & Collection and Customer Service Benefits.
f. Preparation of Distribution Master Plan.

Financial details for the project:

a. Total Project Cost: USD 166.00 Million.
b. Funding pattern:
   - USD 132.80 Million (80% from External Assistance sought from ADB in 90:10 ratio of grants (90%) and loan (10%).
   - USD 33.20 Million (20% from Counterpart funding by State).

The proposed project will strengthen the State's rural distribution network, reduce AT&C losses, improve the power quality and reduce the outages in Central Circles, West Garo Circle and East Garo Circle of the State. The proposed investments will improve the access to electricity and quality of power in the poor and backward rural areas. This will enable a conducive atmosphere for local economic activities and attract industries, thereby improving job creation in rural areas which will boost the State's economy. The duration of the projects should be 36 months for project execution and 12 months for planning and contracting. The project implementing agency is Meghalaya Power Distribution Corporation Limited.

Present status of work:

a. Installation of 24 nos. of new 33/11KV sub-stations and augmentation, renovation, bay extension of 45 nos. of existing 33/11KV sub-stations.

   Work is being taken up in 4 packages in the Districts of Meghalaya. Total awarded cost is Rs 334.38 Crore inclusive of Taxes. Overall progress is 64.09%.

b. Installation of new 33KV & 11KV Lines and re-conductoring, augmentation & replacement of existing 33KV & 11KV Lines.

   Work is being taken up in 2 packages in the Districts of Meghalaya. Total awarded cost is Rs 596.56 Crore inclusive of Taxes. Overall progress is 30%.

c. Replacement of 1,80,000 nos. of existing consumer meters with Smart Meters alongwith Advance Metering Infrastructure.

   Work is being taken up in selected areas (rural & semi-urban) in Meghalaya. Total awarded cost is Rs 232.96 Crore inclusive of Taxes. Overall progress is 73.22%.

d. Consultancy Services for Project Implementation and Management Support. Awarded cost is Rs 3.58 Crore.

e. Preparation of Distribution Master Plan.

The Meghalaya Power Distribution Corporation Limited is currently seeking to engage the services of an experienced consulting firm for carrying out a roadmap study for developing a comprehensive power distribution master plan for Meghalaya. The roadmap shall lay down the baseline for the existing distribution network, forecast future demand and formulate proposals for system improvement and development including timeline and scope of recommended projects. The roadmap shall also indicate expected outcomes upon implementation of the proposed projects. This document shall become the key reference document for future planning of distribution system development in Meghalaya.

Scope of Works will include but not necessarily be limited to Survey of Distribution Networks & Assets (including GIS Mapping), Design & Proposal for Under Ground Cabling in Shillong, Distribution Network Development Roadmap which include planning, modelling, demand forecasting, future system performance, suggestions for commercial loss reduction measures, project formulation, financial & economic analysis, commercial strategy, Training & Capacity Building, Distribution Construction Standards, etc. Work is in progress. Estimated amount is Rs 8.80 Crore.

Loan Agreement was signed on 1st December 2020.

Date of commencement of the project: 29th May 2021.

Scheduled date for completion of project: August 2025.

As on 31.07.2023, the progress of the 33/11KV Sub-Stations is as follows:

Circle	New 33/11KV S/S	Completed as on 31.07.2023	Augmentation of 33/11KV S/S	Completed as on 31.07.2023	Upgradation/ Bay Extension in 33/11KV S/S	Completed as on 31.07.2023	33/11KV Mobile S/S	Completed as on 31.07.2023	Oil Filtration Plant	Completed as on 31.07.2023
East Khasi, Pkg-1	7	0	7	0	4	0	1	0	1	1
West Khasi, Pkg-2	5	1	9	3	1	1	0	0	0	0
East Garo, Pkg-3	8	0	7	0	3	0	0	0	1	0
West Garo, Pkg-4	4	1	12	4	2	0	0	0	1	1
Total	24	2	35	7	10	1	1	0	3	2

As on 31.07.2023, the progress of the 33KV & 11KV Lines are:

Sl. No.	Particulars	Scope Qty.	Completed as on 30.06.2023	Remarks
1	New 33KV Single Ckt (S/C) line (Km)	771.2	28.8	Using wolf/raccoon conductor, pole/ lattice structure 33KV New Line-Dalu to Phurakhasia, 2KM completed out of 29km 33KV New Line-Babadam Testing commissioning completed (0.8km)
2	Conversion of existing 33KV S/C line to 100 Sqmm Covered conductor (Km)	52	0	
3	Re-conductoring of 33KV S/C Line (Km)	444	25	Wolf conductor 33KV Re-conductoring Chokpot to Baghmara 25km completed out of 46km
4	New 11KV Single Ckt (S/C) line (Km)	669	0	Raccoon conductor
5	Re-conductoring of 11KV S/C Line (Km)	278	0	Raccoon
6	Replacement of 11KV poles (No)	6310	0	
7	Installation of Auto-Re-closers (No)	136	0	
8	Installation of FPIs (No)	597	326	
9	Supply of Maintenance Vehicles (No)	8	0	

The progress of Smart Metering under ADB assistance as on 31.07.2023 is as follows:

Sl.	Type of Smart Meters	Qty. installed (Nos)	Areas installed
1	1Ph & 3Ph Consumer Smart Meter	92901	WGH – 43541 Nos, SGH – 7314 Nos, EGH – 34418 Nos, JH – 6438, EKH – 999 Nos, RB – 151 Nos & WKH – 40 Nos.
2	HT & LT Bulk Consumer Smart Meter	176	Byrnihat, Nongpoh, Umiam, Ribhoi & Williamnagar.
3	LT-CT Smart Meters for DTs	85	Williamnagar

3.12.2.10 Revamped Distribution Sector Scheme (RDSS):

The Revamped Distribution Sector Scheme was launched by the Honourable Minister of Power & Renewable Energy on 30th July 2021 through virtual platform.

The Ministry of Power, Government of India vide Office Memorandum F. No. 20/9/2019-IPDS dated 20.07.2021 has conveyed the sanction of the President for implementation of the Revamped Distribution Sector Scheme: A Reforms based and

Results linked Scheme with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution sector. The primary objective of this scheme is to reduce Aggregated Technical and Commercial losses which occur in the process of supplying electricity to consumers due to technical and commercial origin. The technical losses are due to energy dissipated in the conductors and equipment used for transmission, transformation, sub-transmission and distribution of power. These technical losses are inherent in a system and can be reduce to an optimum level. On the other side Commercial losses occur on count of non-performing meters, lack of adequate metering, non-realization of billed amount, pilferage etc. This Scheme will improve the quality, reliability and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector.

The scheme aims to reduce the AT&C losses to pan-India levels of 12-15% and ACS-ARR gap to zero by 2024-25.

The scope of works of the scheme:

a) Smart Prepaid Metering

Under this part, Prepaid Smart metering for consumers, and System Metering at Feeder and Distribution Transformer level with communicating feature along with associated Advanced Metering Infrastructure (AMI) will be done in TOTEX mode through PPP, to facilitate reduction of Distribution losses and enable automatic measurement of energy flows and energy accounting as well as auditing.

Implementation of this part shall be in TOTEX mode. Under this mode, a single agency will be contracted for supplying, maintaining and operating the metering infrastructure for the purpose of meter related data and services to the DISCOM. It will make both capital and operational expenditure under DBFOOT (Design Build Fund Own Operate & Transfer) or similar modes and will be paid for a portion of its capital expenditure initially and the remaining payment over the O&M period.

b) Distribution Infrastructure Works (Loss Reduction).

Under this component, DISCOM can take up works related to loss reduction and system strengthening. 66 kV level and below will be eligible under this component. In areas, where 33 kV system does not exist, 110 kV shall be permitted subject to suitable justification to be provided by the concerned DISCOM(s) in the DPR, for inclusion of

such works clearly indicating its benefits including improvement in quality and reliability of power supply to the consumers.

The RDSS scheme for Meghalaya was approved on 14-07-2022 amounting to Rs 307.82 Cr for Smart Prepaid Metering and Rs 784.72 Cr for Loss Reduction works. Ensuring that there is no duplication / overlapping of works with any other Government of India and State scheme, the tentative works to be taken up through this scheme are as follows:-

Sl No	Particular	Unit	Quantity
	Smart Metering		
1	Smart Prepaid Consumer Metering	No	4,60,000
2	Smart DT Metering	No	11,419
3	Smart Feeder Metering	No	904
4	Smart Boundary Metering	No	420
	Loss Reduction		
1	LT AB Cable	Ckm	2373
2	Re-Conductoring 11 KV MVCC/HT Bare to Bare	Ckm	1137
3	Re-Conductoring 33 KV MVCC/HT Bare to Bare	Ckm	245
4	HT Line New	Ckm	1091
5	HT Lines (incl. LT-HT Conversion)	Ckm	1926
6	LT Lines with AB Cable	Ckm	1250
7	Installation of Distribution Transformer	No	2595
8	Unified Billing Solution	LS	1

c) AT&C Loss Target for Meghalaya under the Scheme

Parameter	Unit	FY 2022	FY 2023	FY 2024	FY 2025
AT&C Loss	%	30%	25%	21%	18%

d) Funding Pattern

Sl. No.	Item Description	Gross Budgetary Support (GBS) % (Max)
1	Prepaid Smart metering solution including at consumer, DT, and feeder level including integration of existing infrastructure	22.5% as the case may be (limited up to Rs.1350 respectively per meter for Consumer metering)#
2	Distribution Infrastructure works including SCADA, DMS, AB cables, feeder segregation etc.	90% as the case may be

All North Eastern States including Sikkim and States/Union Territories of Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands, and Lakshadweep are categorized as Special Category States and will be eligible for grant of 90% the approved cost of Distribution infrastructure works and approved cost of PMA and 22.5% of the approved cost of metering including the operational cost, provided that it is not more than Rs. 1350 per meter for consumer metering only.

(All other States will be eligible for grant of 60% of the approved cost of Distribution infrastructure works and approved cost of PMA and 15% of the approved cost of the

metering works including the operational cost, provided that it is not more than Rs. 900 per meter for consumer metering only.

e) Duration

The Duration of scheme is 5 years (FY-21-22 to FY 2025-26). The sunset date for the scheme will be 31.03.2026.

f) Present Status

The status at present is in the advanced tendering stage.

Commission's Analysis

The petitioner has projected the Capital Investment plan approved in the 3rd MYT Control period FY 2021-22 to FY 2023-24 which were scheduled for completion during the 3rd control period except 4 no's infrastructural works undertaken with state government funds. These works were scheduled to be completed in FY 2024-25.

Since the petitioner has yet to file the True up petitions for FY 2021-22 to FY 2023-24, it cannot be ascertained as to the extent of completion of works with monetary value approved in the previous control period and capex to be spill over to next FY 2024-25.

The petitioner has accounted Rs. 1142.00 Crore (note no.17 of SoA) capital grants and contributions as of 31.03.2022, the Capital works in progress remain to the extent of Rs.1208 Crore (note no.03 of SoA) due for capitalization.

The petitioner shall prioritize the works contemplated with 100% grant and shall complete the projects as scheduled.

The capital investment plan under NERESIP being executed by Power Grid with 100% grant and has been covered in the Meghalaya Transmission Business plan (MePTCL).

Commission had already approved the additional capital investment proposed for undertaking installation of smart metering of consumers, DTR metering, feeder metering and boundary metering along with distribution infrastructure works as loss reduction measure, contemplated in the RDSS scheme in FY 2023-24. These works are supposed to be completed before 31.03.2026.

The petitioner has submitted the status of RDSS works is in the advanced tendering stage.

Commission would like to mention that the utility may not be entitled to avail the Govt. grant provided in the RDSS scheme, if the works are not executed before the sunset date fixed as 31.03.2026.

3.13 Proposed Capex and capitalization and funding pattern in control period from FY 2024-25 to FY 2026-27.

Petitioner's Submission

MePDCL submitted that only targets under RDSS schemes are proposed to be completed in the next control period. As on now MePDCL is not projecting any other capital expenditures as works under all other schemes are proposed to be completed in 2023-24. The tenders under the RDSS scheme are finalized and the contracts will be awarded soon. The discovered cost of the both the component shown in Table 27 below is based on the quotations of L1 bidderd.

Based on the above the proposed scheme with funding pattern for the Capital investment proposed for control period 2024-25 to 2026-27 are as under:

Table 3.33 : Physical Targets under RDSS Scheme for Control Period 2024-25 to 2026-27

A. Smart Metering Works	UOM	Target Quantity	2023-24 (Estimated)	2024-25	2025-26	2026-27
Consumer Metering	Nos.	460000	0.00	460000	0.00	0.00
1 Ph. Smart Consumer Meters	Nos.	385138	0.00	385138	0.00	0.00
3 Ph. Whole Current Smart Consumer Meter	Nos.	74862	0.00	74862	0.00	0.00
Smart DT Metering	Nos.	11419	0.00	11419	0.00	0.00
Smart Feeder Metering	Nos.	904	0.00	904	0.00	0.00
Smart Boundary Meeting	Nos.	420	0.00	420	0.00	0.00
B. Distribution Infrastructure Works	**UOM**	**Target Quantity**	**2023-24 (Estimated)**	**2024-25**	**2025-26**	**2026-27**
33 KV Re-conductoring of lines	Ckm	244.85	0.00	244.85	0.00	0.00
11 KV Re-conductoring of lines	Ckm	1137.19	0.00	1137.19	0.00	0.00
LTABC Re conductoring	Ckm	2373.03	0.00	2373.03	0.00	0.00
New 11 KV Lines	Ckm	1091.12	0.00	1091.12	0.00	0.00
LT to HT Conversion	Ckm	1926.03	0.00	1926.03	0.00	0.00
New LT AB Cable	Ckm	1249.81	0.00	1249.81	0.00	0.00
63 KVA Distribution Transformer	Nos	1234	0.00	1234	0.00	0.00
100 KVA Distribution Transformer	Nos	1354	0.00	1354	0.00	0.00
250 KVA Distribution Transformer	Nos	7	0.00	7	0.00	0.00
Implementation of Billing System/ Other Related Software	LS	1	0.00	1	0.00	0.00
Other Operating License	LS	1	0.00	1	0.00	0.00

Based on the above physical targets the fund requirements (as per the Ministry of Power Sanction and guidelines) and proposed capital expenditure and capitalization is as under:

Table 3.34 : Capex and Capitalization for the Control Period

	Sanction Cost	Discovered Cost	Funding Pattern			FY 2023-24		FY 2024-25		FY 2025-26		FY 2026-27		Total	
						Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization
A. Smart Metering Works			Grant	Equity	Loan										
Consumer Metering	276.00	473.86	106.62	0.00	0.00	0.00	0.00	74.63	0.00	31.99	106.62	0.00	0.00	106.62	106.62
1 Ph Smart Consumer Meters	231.08	377.94	85.04	0.00	0.00	0.00	0.00	59.53	0.00	25.51	85.04	0.00	0.00	85.04	85.04
3 Ph Whole Current Smart Consumer Meter	44.92	95.92	21.58	0.00	0.00	0.00	0.00	15.11	0.00	6.47	21.58	0.00	0.00	21.58	21.58
Smart DT Metering	26.26	42.63	9.59	0.00	0.00	0.00	0.00	6.71	0.00	2.88	9.59	0.00	0.00	9.59	9.59
Smart Feeder Metering	3.80	11.55	2.60	0.00	0.00	0.00	0.00	1.82	0.00	0.78	2.60	0.00	0.00	2.60	2.60
Smart Boundary Meeting	1.76	5.36	1.21	0.00	0.00	0.00	0.00	0.84	0.00	0.36	1.21	0.00	0.00	1.21	1.21
Change Requirement		3.55	0.80	0.00	0.00	0.00	0.00	0.56		0.24	0.80	0.00	0.00	0.80	0.80
Sub-Total (A)	307.82	536.95	120.81	0.00	0.00	0.00	0.00	84.57	0.00	36.24	120.81	0.00	0.00	120.81	120.81
PMA	1.73	1.73	1.56	0.00	0.17	0.00	0.00	1.09	0.00	0.47	1.56	0.00	0.00	1.56	1.56
Grand Total	309.55	538.68	122.37	0.00	0.17	0.00	0.00	85.66	0.00	36.71	122.37	0.00	0.00	122.37	122.37
A. Distribution Infrastructure Works															
33 KV Re-conductoring of lines	38.75			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 KV Re-conductoring of lines	101.35			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTABC Re conductoring	146			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New 11 KV Lines	97.87			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT to HT Conversion	134.44			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New LT AB Cable	109.98			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63 KVA Distribution Transformer	59.97			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100 KVA Distribution Transformer	75.55			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250 KVA Distribution Transformer	0.46			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Implementation of Billing System/ Other Related Software	17.46	19.69	17.72	0.00	1.97	0.00	0.00	13.78	0.00	5.91	19.69	0.00	0.00	19.69	19.69
Other Operating License	2.89			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMA	11.78	11.78		0.00	1.18	0.00	0.00	8.25	0.00	3.53	11.78	0.00	0.00	11.78	11.78
Total	**796.5**	**923.74**	**831.37**	**0**	**92.37**	**0**	**0**	**646.618**	**0**	**277.12**	**923.74**	**0**	**0.00**	**923.74**	**923.74**

MePDCL submitted that the above targets and funding patterns are tentative and any changes in the targets or funding pattern as a result of statutory approvals or any other reasons shall be submitted before the Commission in the mid-term review.

Further, since the GBS for the Metering Scheme under RDSS is 22.5% and balance has to be recovered in 10 installments as operation and maintenance expenses hence capital expenditure and capex under this scheme has been shown equal to the GBS only.

MePDCL further submitted that the capital investment in distribution sector is governed by several factors such as mandates from the central or state government, provisions of the Electricity Supply Code and any urgent capital investment to avoid threat to life or property. Hence, MePDCL craves leaves of the Hon'ble Commission to allow it to approach the Hon'ble Commission in case of capital expenditure of any of the aforesaid nature.

Commission's Analysis

The petitioner has submitted the capital investment plan for the fourth control period FY 2024-25 to FY 2026-27 in respect of smart metering and distribution infrastructural works contemplated in the RDSS project.

The cost of the smart metering is stated to be discovered in the Tenders at Rs.538.68 Crore as against the sanctioned cost of Rs.309.55 crore, which is 74% excess over the sanctioned cost.

MePDCL shall be entitled for Govt. Grant of 22.5% of the discovered cost of Rs.538.68 Crore (Rs.121.20 Cr) for the smart metering as per the scheme sanctioned in the RDSS project. Whereas MePDCL has projected loan component at Rs.92.37 Crore which is 10% of the Gross project cost of Rs.923.74 Crore.

MePDCL shall ensure the possibility of state govt. grant for Rs.417.48 Crore to meet the excess over cost than the approved cost in the RDSS scheme tendering, while ensuring completion of the RDSS project before sunset date 31.03.2026 to avail the Central Govt. grants provided in the project sanctions.

Commission had not considered recovery of smart meter cost under R&M expenditure for Rs.23.87 Crore in the Tariff Order for FY 2023-24 since the tenders process was not finalized.

Now it is submitted that, the smart metering cost in the tenders discovered at Rs.538.68 Crore as against Rs. 309.55 Crore sanctioned in the RDSS scheme. MePDCL shall infuse capital expenditure for Rs.417.48 Crore being the 77.5 % of the discovered cost.

Licensee was asked to ensure possibility of the state govt. grant for the balance of Rs.417.48 Crore to achieve the anticipated reduction in the loss levels while improving the Revenue realization.

The funding of balance Capex through the banks/financial institutions would cost the licensee Rs.37.60 Crore per annum towards interest at 9% and proposed recovery from the consumers as O&M expenditure as claimed for Rs.23.87 Crore may not be meeting the fund requirement. As a result it will be a burden on the consumers substantially over and above the normal tariff. Alternatively licensee may ensure to repay the bank loan along with interest out of the Revenue generated by installing prepaid smart metering.

Section 62 (6) of Electricity Act 2003 specifies that – "*If any licensee or a generating company recovers a price or charge exceeding the tariff determined under this section, the excess amount shall be recoverable by the person who has paid such price or charge along with the interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee.*"

The RDSS Scheme provides for recovery of above capital expenditure in 10 years as O&M expenditure from the consumers for which Commission had notified in the Tariff Order for FY 2023-24 (page no.96) to hold a public hearing from the stake holders before commencement of recovery of cost of smart metering.

Petitioner submitted that "MePDCL would like to submit that the above targets and funding pattern are tentative and any changes in the targets or funding pattern as a result of statutory approvals or any other reasons shall be submitted before the Hon'ble Commission in the mid-term review.

Further, since the GBS for the Metering Scheme under RDSS is 22.5% and balance has to be recovered in 10 instalments as operation and maintenance expenses, hence capital expenditure and capex under this scheme has been shown equal to the GBS only."

Commission considers 22.5% of the discovered cost of Rs.538.68 Crore amounts to Rs.121.20 Crore to be provided as central govt grant and the balance expenditure to be met from Tariff as O&M expenditure for a period of 10 years subject to other conditions prescribed by the ministry of power.

Commission provisionally approves capital investment plan as proposed by MePDCL for 4th MYT Control period FY 2024-25 to FY 2026-27 keeping in view the requirement of strengthening distribution system network to meet the demand growth while ensuring loss reduction and achieving operational efficiency.

Commission approves the business plan provisionally with funding pattern as projected by the petitioner for the 4th Control period FY 2024-25 to FY 2026-27 in the table below.

Sd/-
Shri. R.K. Soni, District Judge (Retd.)
Member

Sd/-
Shri. P.W Ingty, IAS (Retd)
Chairman

Table 3.35 : Approved Capex and Capitalization for 4th Control period FY 2024-25 to FY 2026-27

	Sanction Cost	Discovered Cost	Funding Pattern			FY 2023-24		FY 2024-25		FY 2025-26		FY 2026-27		Total	
						Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization	Capex	Capitalization
A. Smart Metering Works			Grant	Equity	Loan										
Consumer Metering	276.00	473.86	106.62	0.00	0.00	0.00	0.00	74.63	0.00	31.99	106.62	0.00	0.00	106.62	106.62
1 Ph Smart Consumer Meters	231.08	377.94	85.04	0.00	0.00	0.00	0.00	59.53	0.00	25.51	85.04	0.00	0.00	85.04	85.04
3 Ph Whole Current Smart Consumer Meter	44.92	95.92	21.58	0.00	0.00	0.00	0.00	15.11	0.00	6.47	21.58	0.00	0.00	21.58	21.58
Smart DT Metering	26.26	42.63	9.59	0.00	0.00	0.00	0.00	6.71	0.00	2.88	9.59	0.00	0.00	9.59	9.59
Smart Feeder Metering	3.80	11.55	2.60	0.00	0.00	0.00	0.00	1.82	0.00	0.78	2.60	0.00	0.00	2.60	2.60
Smart Boundary Meeting	1.76	5.36	1.21	0.00	0.00	0.00	0.00	0.84	0.00	0.36	1.21	0.00	0.00	1.21	1.21
Change Requirement		3.55	0.80	0.00	0.00	0.00	0.00	0.56		0.24	0.80	0.00	0.00	0.80	0.80
Sub-Total (A)	307.82	536.95	120.81	0.00	0.00	0.00	0.00	84.57	0.00	36.24	120.81	0.00	0.00	120.81	120.81
PMA	1.73	1.73	1.56	0.00	0.17	0.00	0.00	1.09	0.00	0.47	1.56	0.00	0.00	1.56	1.56
Grand Total	309.55	538.68	122.37	0.00	0.17	0.00	0.00	85.66	0.00	36.71	122.37	0.00	0.00	122.37	122.37
A. Distribution Infrastructure Works															
33 KV Re-conductoring of lines	38.75			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 KV Re-conductoring of lines	101.35			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTABC Re conductoring	146			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New 11 KV Lines	97.87			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT to HT Conversion	134.44			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New LT AB Cable	109.98			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63 KVA Distribution Transformer	59.97			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100 KVA Distribution Transformer	75.55			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250 KVA Distribution Transformer	0.46			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Implementation of Billing System/ Other Related Software	17.46	19.69	17.72	0.00	1.97	0.00	0.00	13.78	0.00	5.91	19.69	0.00	0.00	19.69	19.69
Other Operating License	2.89			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMA	11.78	11.78		0.00	1.18	0.00	0.00	8.25	0.00	3.53	11.78	0.00	0.00	11.78	11.78
Total	**796.5**	**923.74**	**831.37**	**0**	**92.37**	**0**	**0**	**646.618**	**0**	**277.12**	**923.74**	**0**	**0.00**	**923.74**	**923.74**

Annexure-A

Details of In House Training in FY 2022-23

Name of The Training Institute	Field of Training	Level of Training	Management Training (Man days)
Human Resource Development Centre	Management	Induction	560

Details of External Training Conducted During FY 2022-23

Sl. No	Name of Institute	Field of Training (Thermal/ Hydro /Transmission/ Distribution/ Management)	Total Training (Days/Man)
1	Webinar on "***Frequently Asked** Questions (FAQ) on procurement* o/ *works and **Goods and Consultancy Services" organised*** by the Capacity Development Resource Centre, ADB held on the 20 th April, 2022 at 11: 00 - 13:00 hrs. Total Personnel-**16 (Sixteen)** [Technical]. CE-1, ACE-2, SE-3, Sr. AO 2, EE -7, SO-1.	DISTRIBUTION/ MANAGEMENT	1 x 16 = 16
2	Webinar on **" ADB Financial Management Reporting Requirement"** organized and initiative by ADB held on the 28th April, 2022 Total **Personnel-15 (fifteen)** [Technical] / [Accounts]. Dy CA0-1, Sr AO-3, EE-1, AO-6, AAO-1, **50/DA0** -3.(O. O from CAO/CE(P)	MANAGEMENT	1 x 15 = 15
3	Webinar on " ADB Gender Policy and Practices — GESI/ Gender Action Plan Implementation, Monitoring and Reporting" organized and initiative by ADB held on the 29" April, 2022 from 11 :00 a.m to 1 : 00 p.m Total Personnel-IS (fifteen) [Technical]. SE-2, EE-6, AEE-6, JE-1. (O.O from CE(P)	MANAGEMENT	1 x 15 = 15
4	Webinar on "ADB Safeguards Procedures" under ADB initiative held from 9th to 12th May, 2022 from 11 :00 to 13:00 hrs. **Total Personnel- 15 (fifteen) [Technical]. SE-3, EE-6, AEE-6, (O.O from CE (P).**	MANAGEMENT	4 x 15 = 60
5	Webminar on **Introduction of Web Based project platform SPEED "** undet ADB initiative held on 24th May 2022 FROM 11:00 TO 13:00 HRS. **Total personnel -14 (Fifteen) [Technical]]. SE-3, EE-6, AEE-5,{O.O from CE(P)]**	MANAGEMENT	1 x 14 = 14
6	Online training on **"Grievance Redress Mechanism for ADB- Assistant Project"** organized jointly by Office of the Special Project Facilitator(OSPF) and India Resident Mission(INRM) held from 20th to 24th June, 2022. **Total Personnel-9 (nine) [Technical]. ACE-1, SE-3, EE-5, (0.0 from CE(P]**	MANAGEMENT	5 X 9 = 45

Sl. No	Name of Institute	Field of Training (Thermal/ Hydro /Transmission/ Distribution/ Management)	Total Training (Days/Man)
7	Training Programme on the Topic " **Introduction of AMI and Role of AM1 in reducing AT&C Losses"** organized by National Power Training Institute(N PTI) held from 8* to 10* June, 2022 at Seminar Hall, Department of Energy Engineering, NEHU from 11: 00 hrs to 17:30 hrs. **Total Personnel-44 (forty four) {Technical]. SE-1, EE-14, AEE-29,(0.0 from CE(P)**	DISTRIBUTION	3 X 44 = 132
8	Training programme on **"Introduction of AMI and Role of AMI in reducing AT&C losses"** under RDSS, conducted by Power Training Institute-NER on 28th June, 2022 to 30th June, 2022 at Conference Hall, Department of Management, NEHU, Tura. **Total Personnel-26 (twenty six) [Technical]. SE-I, EE-7, EE-18, (0.0 from CE(P)**	DISTRIBUTION	3 X 26 = 78
9	Webminar on Transitioning from the FIDIC Pink Book (2010) to FIDIC Red Book (2017) held on 28th June, 2022 from 11:00 Hrs to 13:00 hrs under ADB initiative. **Total Personnel-15 (fifteen) [Technical]. ACE-1, SE-3, EE-6, AEE-5. (0.0 from CE(P)**	**MANAGEMENT**	1 x 15 =15
10	S(five) days training programme on ***"Long Term Recovery and Reconstruction Strategies"*** held from 30th• May, 2022 to 3rd June, 2022 at the Lecture Hall, Meghalaya Administrative Training Institute (MATI), Mawdiangdiang, Shillong. **Total Personnel-2(two) [Technical]. ACE-1, EE-1.**	**MANAGEMENT**	**5X2 = 10**
11	Online training programme on **"Basic Level Training and Certification Program on Cyber Security"** organised by National Power Training Institution (NPTI) Faridabad held from 27.6.2022 to 28.7.2022. **Total Personnel-2(two) [Technical]. AEE-2.**	**Transmission (SLDC)**	**12X 2 = 24**
12	l(one) day State Level workshop on **"E-Mobility and Charging Infrastructure"** organized by the Meghalaya State Designated Agency (MSDA) on Energy Conservation under electric mobility awareness campaign of Bureau Energy Efficiency (BEE), New Delhi held on the 22°d July, 2022 at the State Convention Centre, Shillong **Total Personnel-2(two)** [Technical]. EE-2.	**DISTRIBUTION**	**1X2=2**

Sl. No	Name of Institute	Field of Training (Thermal/ Hydro /Transmission/ Distribution/ Management)	Total Training (Days/Man)
13	Training Programme on "Hands on training programme on various operational functionalities of the Unified Web Portal (UWP) of MNRE Phase-11 Rooftop Solar Scheme" organised by Ernst & Young limited liability Partnership, Haryana held 28th July, 2022 at 11:00 hrs — 13:30 hrs at Conference Hall, Lumjingshai, Shillong. Total Personnel-42 (forty two) [Technical]. EE-13, AEE-29,	**DISTRIBUTION**	**1X42= 42**
14	Training program on "Hands - on training program on various operational **functionalities of** the Unified Web Portal (UWP) of MNRE Phase-11 Rooftop Solar Scheme" organised by Ernst & Young limited liability Partnership, Haryana held 29* July, 2022 at 14:30 hrs — 16:30 hrs at Conference Hall, Lumjingshai, Shillong. **Total Personnel- 28(twenty Eight) [Technical]. EE-7,AEE-21,**	DISTRIBUTION	1 X 28 = 28
15	Webinar on "FIDIC Contract Management" organized by Capacity Development Resource Centre, ADB w.e.f 29.08.202 2 to 06.09.202 2 from 11:00 to 13:00 hrs Total Personnel-10(ten) [Technical]. ACE-1, SE-3, EE-6. (O.O from CE(P)	MANAGEMENT	8 X 10= 80
16	Online meeting of the "42nd Commercial Coordination Committee Meeting " organised by North Eastern Regional Power Committee (NERPC), Lapalang, Shillong held on the 5* August, 2021 from 11 :00 A.M onwards.	MANAGEMENT	1 X 1= 1
17	Webinar on "ADB **Gender** Policy and Practices-Capturing Gender Equality Results and Documentation for Project Completion Report" held on 2.09.2022 from 14:30 to 16:30 hrs Total Personnel-15(fifteen) [Technical]. AC£-1, **SE-3, EE-6, AEE**-S. (O.O from CE(P)	**MANAGEMENT**	1 X 15 = 15
18	Training programme on **"Best Practices in O&M of Hydro** Power **Plants"** organised by Engineering Staff College of India(ESCI), Hyderabad held w.e.f 08.11.2022 to 11.11.2022 at Engineering Staff College of India(ESCI), Hyderabad Total Personnel-3(three) [Technical]. **EE-1, AEE-1,** RE-1,	Hydro	4 X 3 = 12

Sl. No	Name of Institute	Field of Training (Thermal/ Hydro /Transmission/ Distribution/ Management)	Total Training (Days/Man)
19	Training programme on **"Distribution Automation &** SCADA(Classroom **Course)"** organised by Engineering Staff College of India(ESCI), Hyderabad held w.e.f 15.11.2022 to 17.11.202 2 at Engineering Staff College of India(ESCI), Hyderabad **Total Personnel-3(three) [Technical]. AEE-3,**	DISTRIBUTION	3X3=9
20	Training programme on **"Electrical Safety Procedures & Accident Prevention"** organised by Engineering Staff College of India(ESCI), Hyderabad held w.e.f 22.11.2022 to 25.11.2022 at Engineering Staff College of India (ESCI), Hyderabad **Total Personne1-2(two) [Technical]. EE-1. RE-1**	DISTRIBUTION	4X2=8
21	Training Programme on Power Cables Selection Testing Laying and Commissioning Commissioning" organised by Engineering Staff College of India(ESCI), Hyderabad held w.e.f 28.11.2022 to 30.11.2022 at Engineering Staff College of India(ESCI), Hyderabad **Total Personne1-2(two) [Technical]. AEE-2.**	Transmission	3 x 2=6
22	Training programme on **"basic Preparatory Course on "Power System Operation"** organised by National Power Training Institution - North Eastern Region (NPTI-NER) Guwahati w.e.f 5.12.2022 to 24.12.2023 **Total Personnel- 2 (two)** [Technical]. AEE-1, JE-1.	Transmission	20 X 2 = 40
23	Participating in "ELECRAMA- 2023 Exhibition" organised by Indian Electrical & Electronics Manufacturers Association (IEEMA), New Delhi to be held on the 21th & 22th February, 2023 at India Expo Mart Ltd, Greater Noida, Delhi NCR **Total Personnel- 3(three) [Technical/Management]. CMD-1, CE-1, SE-1.**	MANAGEMENT	2 X 3 = 4
24	E-Mobility workshop on **"Electrification of** Public Transport in Meghalaya" organized by Barefoot Trust (AEEE) held on 17.02.2023 at Taj Vivanta, Shillong from 10:00 to 15:00 hrs with registration at 9.30 hrs. **Total Personnel-2(two){Technical). ACE-1, SE-1.**	DISTRIBUTION	1 X 2 = 2
25	Hands on workshop on "the revised procedure for the flow of Funds through TSA wittt RBI" organized by REC held on 3rd March 2023 Guwahati. Total Personel - 3 (three)[Accounts]. Sr. AO-1, AO-1, SO-1. (O.0 from CAO)	MANAGEMENT	1 X *3 = 3*

Sl. No	Name of Institute	Field of Training (Thermal/ Hydro /Transmission/ Distribution/ Management)	Total Training (Days/Man)
26	Online training programme- on 4(four) days Online & VTE Hands i on Practical Approach on **'Fundamentals of OT/ICS/SCADA Security"** organised by C-DAC, Hyderabad held from 13th December, 2022 to 16th December, 2022. Total **Personnel-2(two)[Technica** I- EE- **1,AEE-1.**	Transmission	4 X 2 = 8
27	A 1(one) week Capacity Building Programme on **"Operation and Maintenance of Transmission System"** organised by National Power Training Institute (NPTI)-NER held from 6th — 10th February, 2023 at NPTI- NER Guwahati. **Total Personnel- 10(ten)[Technical]. EE-4,RE-6**	Transmission	5 X 10 = 50
28	A 3(three) days Training Programme on "Technological Innovation in Weather forecasting, Early warning and last Mile Connectivity" scheduled from 14th — 16th March, 2023. **Total Personnel-2 (two)[Technical]. ACE-1, CE-1.**	MANAGEMENT	3 X 2 =6
29	A 3(three) days non - residential training course on " **Digital Utility Manager"** designed under UK-India bilateral programme held with effect from 15th to 17th March, 2023 in New Delhi. **Total Personnel- 2(two)[Technical]. ACE-1,SE-I**	MANAGEMENT	3 X 2 = 6