Annual Energy Audit (Accounting) Report

Designated Consumer

Meghalaya Energy Corporation Limited

(MeECL)
Lum Jingshai, Short Round Road, East Khasi Hills
Shillong– 793001

(Meghalaya)

FY 2021 -22

Conducted by

A-Z Energy Engineers Private Limited

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ACKNOWLEDGEMENT

A-Z Energy Engineers Pvt. Ltd. is grateful to the MeECL, Shillong for giving us an opportunity to conduct the Energy Audit Accounting of their DISCOM, under the Bureau of Energy efficiency 2021 Scheme.

We also express sincere thanks to the management of MeECL, Shillong, which is a Designated Consumers in the DISCOM sector for extending necessary co-operation and providing relevant information to us for the successful completion of the audit. Our sincere thanks to the entire plant working group comprising of:

- SHRI. P.Sahkhar– Chief Engineer (PMC), MePDCL
- SMTI. S.Rymbai, Executive Engineer (MIS), MePDCL
- SHRI. J.E. Marbaniang, Executive Engineer (MTI), MePDCL
- SHRI. A. Mylliemngap, Account Officer (Audit), MePDCL
- SHRI. S. Mandal - Energy Manager, MeECL

A-Z Energy Engineers Pvt. Ltd. looks forward to their continued support in all future endeavours as well.

(Dr.P.P.Mittal)
Director

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List of Abbreviations

AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
AT & C	Aggregate Technical and Commercial
BEE	Bureau of Energy Efficiency
ckt	Circuit
CT	Current Transformer
DC	Designated Consumer
DEEP	Discovery of Efficient Electricity Price
DISCOM	Electricity Distribution Company
DT	Distribution Transformer
EA	Energy Auditor
EHT	Extra High Tension
EHV	Extra High Voltage
EM	Energy Manager
FY	Financial Year
HT	High Tension
HVDS	High Voltage Distribution System
KVA	Kilo Volt Ampere
LT	Low Tension
MoP	Ministry of Power
MU	Million Units
MW	Mega Watt
NO	Nodal Officer
OA	Open Access
POC	Point of Connection
PT	Potential Transformer
PX	Power Exchange
RE	Renewable Energy
RLDC	Regional Load Dispatch Centre
SDA	State Designated Agency
SLD	Single Line Diagram
SLDC	State Load Dispatch Centre
T & D	Transmission and Distribution

Executive Summary & Critical Analysis

Bureau of Energy efficiency (BEE) notified the Bureau of Energy Efficiency (Manner and intervals for conduct the energy audit (Accounting) in Electricity Distribution Companies) Regulations, 2021 on 6th October 2021. As per regulation, all Electricity Distribution Companies are Mandate to conduct annual energy audit and periodic energy accounting on quarterly basis.

This section presents a brief summary of the results of the Annual Energy Audit carried out during December 2022. This study covers mainly verification process for monitoring of Purchase energy, Input Energy consumption pattern at various voltage levels, identification of area of energy leakage, wastage or inefficient use, identification of high loss-making areas and networks, identification of overloaded segments of the network for necessary capacity additions, highlighting the strengths and weaknesses of the MeECL as DISCOM in the management of energy and energy resources with a focus mainly on proposals and recommendations on Energy Conservation.

It is a well-known and acknowledged fact that distribution is the most risk prone segment and weakest link of the entire value chain of power sector, which has also been recognized in the National Electricity Policy. Apart from meeting high consumer expectations in terms of services provided and universal service obligation, the most challenging task of a distribution licensee is containing the losses in its system. Losses arise due to technical losses and unauthorized consumption by some consumers (commercial losses).

A team of three specialist consultants of Certified & Accredited Energy Auditor, BEE, Ministry of Power, Govt. of India & DISCOM specialist were involved in this annual energy audit. The energy audit was mainly targeted at identifying practical, sustainable and economically viable ENCON measures in all sections of MeECL Licensing areas, resulting from a detailed study and analysis of technical & commercial parameters.

Meghalaya Energy Corporation Limited (MeECL), is a state-owned electric utility company headquartered in Shillong, Meghalaya, India. It engages in Generation, Transmission and Distribution of Hydro-Power.

Meghalaya Energy Corporation Limited, State Electricity Board to distribute electricity from the end point of transmission to the end consumers. While the energy Purchased, Net Input & billed MeECL for the customer is 2460.84MU, 2061.97MU & 1549.63MU. The monthly consumption per customer stands at 212.135KWH/Month. MeECL caters to area spread in 7 circles, 17 Divisions.

➢ Input Energy Purchase from Generation Sources FY 2021-22

The power availability in the state of Meghalaya is primarily from three key sources- (a) from the generating stations of MePGCL, (b) from the allocated share of central power sector generating companies like NEEPCO, NHPC and NTPC etc. and (c) from short term power purchase from IEX/bilateral trade and banking etc. The comparison of actual source wise energy availability and the approved energy availability in FY 2021-22, is provided in the table below:

Sr. No.	Source	FY-2021-22
A	**Within the State**	
	MePGCL	877.78
	Deviation (Intra State)	5.28
B	**Captive Power Plants (within State)**	
C	**Central Generation Station**	
	Kopli HEP	0
	Kopli-II	1.53
	Khangdong HEP	45.15
	Doyang	10.88
	Ranganadi HEP	131.75
	AGBPP	207.74
	AGTCCPP	114.68
	Pare	56.37
	Kamang	83.48
	OTPC Pallantana	434.36
	NTPC-Big TPP	1.95
D	**Outside the State**	
	Swapping (Inter State)	423.89
	Deviation (Inter State)	19.5
	Bilateral & IEX	66.5
	Total Availability	**2460.84**
2	**Energy Sold to**	
	Deviation (Inter State)	30.37
	IEX & Bilateral + RE	189.72
	Swapping	73.83
		293.92

The Month wise energy purchase bill & Unit consumption of the MeECL is Shown Below

Months	Purchase Energy (in MU)
Apr-21	150.15
May-21	169.81
Jun-21	201.31
Jul-21	227.75
Aug-21	264.09
Sep-21	217.05
Oct-21	202.97
Nov-21	192.85
Dec-21	218.46
Jan-22	225.44
Feb-22	192.32
Mar-22	198.63
FY-2021-22	**2460.84**

Note: Details Sheet Attached in Annexure (with sample bills)

➢ Discom Energy Accounting FY-2021-2022

Net Energy Input to the Discom for FY 2021-2022 is estimated and presented in the table:

S. No	Particulars	Values
1	Input Energy purchased (MU)	2460.84
2	Transmission loss (%)	4.27%
3	Transmission loss (MU)	104.95
4	Energy sold outside the periphery (MU)	293.91
5	Net input energy (received at DISCOM periphery or at distribution point)-(MU)	2061.97
6	Billed Units (Mus)	1549.63
7	T& D Losses (Mus)	512.33
8	Billed Amount (Rs Crore)	931.60
9	Collected Amount (Rs Crore)	930.15
10	Collection Efficiency (Rs Crore)	99.84%
11	% T& D Loss	24.85%
12	% AT&C	24.96%

The technical losses and AT&C losses for FY 2021-2022 are estimated and presented below:

Total Losses	T & D Loss		AT & C Loss (%)
	T & D Loss (MU)	T & D Loss (%)	24.96%
	512.33	24.85%	

Audit addresses that distribution loss of MeECL from the FY 2020-21 to FY 2021-22 which is found to be declined gradually from 27.04% to 24.85% by the adoption new technologies, action taken for Technical Loss Management by network up-gradation, installation of power factor controller, network management, condition monitoring, and close surveillance etc.

➢ Categories wise Consumers & Billed Units FY 2021-22

The total sales (metered and assessed) for the various consumer categories are presented in the following table:

S. No	Type of Consumers	Voltage Level	No of Consumers	Total Consumption (In MU)
1	Domestic	HT/LT	576268	528.89
2	Commercial	LT	28639	70.04
3	Water Supply	LT	365	9.06
4	Public Lighting	LT	50	0.45
5	HT Water Supply	HT	52	33.81
6	HT Industrial	HT	152	776.59
7	Industrial (Small)	LT	556	7.61
8	HT Commercial	HT	148	24.27
9	Government offices and department	HT/LT	2508	98.49
10	Agriculture	LT	13	0.31
11	Others-2 (CRM, Crematorium)	HT/LT	1	0.14
		Total	**608752**	**1549.65**

➢ Customer Profile of MeECL for FY 2021-22

Energy consumption with type of customer is given in the table:

Consumer category	Total connections (Nos)	Total Load (MW)	Input energy (MU)	Total energy	Distribution loss (MU)
Residential	576268	616.85	2061.97	528.87	512.33
Agricultural	13	0.22		0.31	
Commercial/Industrial-LT	29161	92.09		77.65	
Commercial/Industrial-HT	300	291.50		800.87	
Others	3010	85.00		141.94	
	608752	**1085.65**	**2061.97**	**1549.63**	**512.33**

Consumer category	Distribution loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT& C loss (%)
Residential	24.85%	292.63	253.00	86.46%	
Agricultural		0.14	0.17	120.16%	
Commercial/Industrial-LT		69.55	61.52	88.46%	
Commercial/Industrial-HT		454.46	447.03	98.37%	
Others		114.83	168.43	146.68%	
	24.85%	**931.60**	**930.15**	**99.84%**	**24.96%**

➢ Goals and Objectives

MeECL is a designated consumer in Discom sector. Being a designated Consumer MeECL need to have Annual energy audit (Accounting) of their facilities as per BEE notification No 18/1/BEE/Discom/2021 dated 6th October 2021.

The Annual Energy Audit (Accounting) at MeECL is conducted with the following Objectives:

- Verification of existing pattern of energy distribution across periphery of electricity Distribution Company.
- Verification of accounted energy flow submitted by electricity Distribution Company at all applicable voltage levels of the distribution network.

- Verification of the accuracy of the data collected and analyses and processes the data with respect to consistency, improvement in accounting and reducing loss of DISCOM.
- Verification of the information submitted by DC to the SDA/BEE about status of energy input, Output and loss for the previous two year.
- Access the past performance of the establishment.
- Quantification of Energy Losses, and Energy Saving Potential.

➢ Energy Input, Output & Losses for FY 2021-22

Meghalaya Energy Corporation Limited (MeECL), is a state-owned electric utility company headquartered in Shillong, Meghalaya, India. It engages in Generation, Transmission and Distribution of Hydro-Power. Meghalaya Energy Corporation Limited (MeECL), State Electricity Board to distribute electricity from the end point of transmission to the end consumers. While the energy Purchased, Net Input & billed MeECL for the customer is 2460.84MU, 2061.97MU & 1549.63MU. The monthly consumption per customer stands at 212.135KWH/Month. MeECL caters to area spread in 7 circles, 17 Division. The AT&C losses for FY2021-2022 are 24.96% & the Distribution losses of the sector are 24.85%.

Technical Details (FY2021-22)		
Energy Input Details	**UoM**	**Value**
Input Energy Purchase (From Generation Source)	Million kwh	2460.84
Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh	2061.97
Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	1549.63
Distribution (D) loss Details	Million kwh	512.33
	%	24.85%
Collection Efficiency	%	99.84%
Aggregate Technical & Commercial Loss	%	24.96%

➢ Details of Input Energy & Infrastructure

The Input energy, consumption & transmission losses of the MeECL are shown in table below:

Parameters	Value
Input Energy purchased (MU)	2460.835
Transmission loss (%)	4%
Transmission loss (MU)	104.96
Energy sold outside the periphery (MU)	293.91
Open access sale (MU)	0
EHT sale	0
Net input energy (received at DISCOM periphery or at distribution point)-(MU)	2061.97
Is 100% metering available at 66/33 kV (Select yes or no from list)	Yes
Is 100% metering available at 11 kV (Select yes or no from list)	
% of metering available at DT	26%
% of metering available at consumer end	97%
No of feeders at 66kV voltage level	0
No of feeders at 33kV voltage level	0
No of feeders at 11kV voltage level	367
No of LT feeders level	0
Line length (ckt. km) at 66kV voltage level	0
Line length (ckt. km) at 33kV voltage level	2630.66
Line length (ckt. km) at 11kV voltage level	19683.13
Line length (km) at LT level	31756.52
Length of Aerial Bunched Cables	0
Length of Underground Cables	1.86
HT/LT ratio	0.703

➢ Energy Conservation Measures Already Taken and Proposed for Future

Following energy conservation Measures (ECMs) is adopted for line loss reduction

1. Installation of Smart AMR Meters.
2. Maintained the accuracy on the billing date.
3. System improvement & automation.
4. Feeder meters AMR to be increased
5. Targeted Work for Distribution loss reduction under proposed RDSS Scheme

- Installation of power transformers in Substations.

- GIS based monitoring in substations
- Smart switching Systems.
- Increases HT Lines Feeders.

6. Replacement of Service wire with armoured wire to reduce the line losses.
7. Agricultural Feeder segregation and solarisation
8. Replacement of existing 33KV lines with mono-block tower lines.
9. SCADA & DMS Implementation for monitoring.
10. Replacing of conventional/non star rated transformer into energy efficient transformers.
11. Laying of AB cable in theft prone area where loss are in higher side.
12. Increase in HT/LT Ratio.
13. Installation of solar generation plant & solar pumps.
14. Strengthening of energy accounting infrastructure-100% consumer metering.

Critical Analysis:-

- Meghalaya Energy Corporation Limited (MeECL), State Electricity Board to distribute electricity from the end point of transmission to the end consumers. While the energy Purchased, Net Input & billed MeECL for the customer is 2460.84MU, 2061.97MU & 1549.63MU. The monthly consumption per customer stands at 212.135KWH/Month. MeECL caters to area spread in 7 circles, 17 Division.
- Verified transmission losses, distribution (T&D) losses, collection efficiency & aggregate technical & commercial losses of MeECL for FY2021-22, i.e., 1st April'2021 to 31st March'2022 is 4.265%, 24.85%, 99.84% & 24.96% respectively.
- The electrical energy which is supplied by various interstate Purchase power agreement at 220 KV, 132KV,33 KV and same is supplied to customers at 220 KV , 132 KV , 33 KV, 11 KV, 400V and 230 V single phase.
- MeECL has metering available at 11/33/66 KV system. However, there is 96.97% metering at consumer end and 27.05% metering available at DT.
- MeECL is a distribution network having 7 numbers of circles, 17 numbers of divisions, 54 numbers of sub-division, 367 numbers of feeders, 13072 number of DTs and 608752 numbers of consumers.

II. Background

2.1 Extent Regulation & Role of BEE

The Objectives of BEE

- To develop policies and programmes on efficient use of energy and its conservation with the involvement of stakeholders.
- To plan, manage and implement energy conservation programmes as envisaged in the EC Act.
- To assume leadership and provide policy framework and direction to national energy efficiency and conservation efforts and programmes.
- To demonstrate energy efficiency delivery mechanisms, as envisaged in the EC Act, through Public-Private Partnership (PPP).
- To establish systems and procedures to measure, monitor and verify energy efficiency results in individual sectors as well as at the national level.
- To leverage multi-lateral, bi-lateral and private sector support in implementation of programmes and projects on efficient use of energy and its conservation.
- To promote awareness of energy savings and energy conservation.

Role of BEE

- BEE coordinates with designated agencies, designated consumers and other organization working in the field of energy conservation/efficiency to recognize and utilize the existing resources and infrastructure in performing the functions assigned to the Bureau under the Energy Conservation Act.
- The Act provides regulatory mandate for: standards &labelling of equipment and appliances; energy conservation building code for commercial buildings; and energy consumption norms for energy intensive industries.
- The EC Act was amended in 2010 to incorporate few additional provisions required to better equip BEE to manage ever evolving sphere of energy efficiency in the country.

The main amendments made to the original Act are given below:

- The Central Government may issue the energy savings certificate to the designated consumer whose energy consumption is less than the prescribed norms and standards in accordance with the procedure as may be prescribed.
- The designated consumer whose energy consumption is more than the prescribed norms and standards shall be entitled to purchase the energy

savings certificate to comply with the prescribed norms and standards

- The Central Government may, in consultation with the Bureau, prescribe the value of per metric ton of oil equivalent of energy consumed
- Commercial buildings which are having a connected load of 100 kW or contract demand of 120 Kva and above brought under the purview under the EC Act.

Promotional Role

The major Promotional Role of BEE includes:

- Create awareness and disseminate information on energy efficiency and conservation.
- Arrange and organize training of personnel and specialists in the techniques for efficient use of energy and its conservation.
- Strengthen consultancy services in the field of Energy Efficiency.
- Promote research and development.
- Develop testing and certification procedures and promote testing facilities.
- Formulate and facilitate implementation of pilot projects and demonstration projects.
- Promote use of energy efficient processes, equipment, devices and systems.
- Take steps to encourage preferential treatment for use of energy efficient equipment or appliances.
- Promote innovative financing of energy efficiency projects.
- Give financial assistance to institutions for promoting efficient use of energy and its conservation.
- Prepare educational curriculum on efficient use of energy and its conservation.
- Implement international co-operation programmes relating to efficient use of energy and its conservation.

2.2 Purpose of Audit & Accounting Report

MeECL is a designated consumer in Discom sector. Being a designated Consumer MeECL need to have Annual energy audit (Accounting) of their facilities as per BEE notification No 18/1/BEE/Discom/2021 dated 6th October 2021.

The energy intensity of India is higher with respect to GDP growth and there is an urgent need to address these issues on priority through integrated and comprehensive approach and by adopting latest techniques and technologies with active participation of all stakeholders.

Sensing the need of the hour Government of India initiated a mechanism for all energy intensive large industries and facilities (designated consumer) known as PAT Scheme which is “A market based mechanism to enhance cost effectiveness of improvements in energy efficiency in designated consumers, through certification of energy savings that could be traded.”

Annual Energy audit (Accounting) will not only help in reducing losses in system but it also helps DISCOM in sustainable growth. The objective of this energy audit is to reduce T&D loss and AT&C loss of the DISCOM through identification of commercially viable and implementable scheme for reduction of technical and commercial loss in the DISCOM thus leading to sustainable energy cost reductions.

The Annual Energy Audit (Accounting) at MeECL is conducted with the following Objectives:

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- Verification of accounted energy flow submitted by electricity Distribution Company at all applicable voltage levels of the distribution network.
- Verification of the accuracy of the data collected and analyses and processes the data with respect to consistency, improvement in accounting and reducing loss of DISCOM.
- Verification of the information submitted by DC to the SDA/BEE about status of energy input, Output and loss for the previous two year.
- Access the past performance of the establishment.
- Quantification of Energy Losses, and Energy Saving Potential.

2.3 Period of Energy Audit & Accounting

Energy audit activity was started with a meeting at Head Office of MeECL in the month of Dec 2022. Based on the requirement visit was made to Division, Subdivision, Grid etc. for data collection and technical discussion. The period of study was from April 2021 to March 2022.

III. Introduction of Designated Consumer

3.1 Sector

Meghalaya Energy Corporation Limited belongs to the DISCOM Sector.

3.2 Name and Address of Designated Consumer

PARTICULARS	DETAILS
Name of DC	Meghalaya Energy Corporation Limited., (MeECL)
Address	Lum Jingshai, Short Round Road, Shillong– 793001 (Meghalya)

3.3 Name and details of energy manager and Authorised signatory of DC

PARTICULARS	DETAILS
Energy Manager	Shri. Santanu Mandal Energy Manager EA-23306 Mobile: 9851628686 Email: cem.meecl@gmail.com
Authorized Signatory	Shri. P.Sahkhar Chief Engineer (PMC) Mobile: 9863074990 Email: cemoneva.meecl@gmail.com

3.4 Summary profile of DC's

The Meghalaya Energy Corporation Ltd. (MeECL) is a Government Company within the meaning of section 45 of the Companies Act, 2013, wholly owned by the Government of Meghalaya, incorporated under the Companies Act, 2013 in the year 2009 and inherited its business from the erstwhile Meghalaya State Electricity Board (MeSEB) in the year 2010. It has wholly owned three subsidiary Companies namely, Meghalaya Power Generation Corporation Ltd. (MePGCL), Meghalaya Power Transmission Corporation Ltd. (MePTCL) and Meghalaya Power Distribution Corporation Ltd. (MePDCL) responsible for Generation, Transmission and Distribution of Electricity respectively throughout the State as State Utilities.

The erstwhile Meghalaya State Electricity Board (MeSEB) was formed in the year 1975 after the formation of new State of Meghalaya from undivided State of Assam. The first Hydro

Electric project in Meghalaya had started its operation in the year 1921, thereafter different Hydro Electric projects are being constructed throughout the State of Meghalaya utilising the natural water resources, efficient and experienced engineering wing and beautiful working environment of the State.

FUNCTIONS OF MeECL

The MeECL is a Government Company within the meaning of section 45 of the Companies Act, 2013. Your Company is 100% owned by the Government of Meghalaya.

The MeECL is comprising of all the assets, liabilities including all rights, obligations, contingences and proceedings belonging/related to the common activities or not specifically associated with the generation, transmission and distribution activities.

Inter-alia, the MeECL is performing the following major activities:

i) HR & Administration of the MeECL and its three subsidiaries.
ii) Maintaining the provident Fund, Pension Fund, Gratuity Fund etc. for employees of MeECL and its three subsidiaries.
iii) Corporate Social Responsibility
iv) Preparation of Accounts and Fund Management
v) Commercial, Material Management and Planning & Design for MeECL and of subsidiary companies.

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Verified transmission losses, distribution losses, collection efficiency & aggregate technical & commercial losses of MeECL for FY2021-22, i.e., 1st April' 2021 to 31st March' 2022 is 4.265%, 24.85%, 99.84% & 24.96% respectively.

- Administration Details

The total number of circles, Divisions, Feeders & DT's of MeECL is given in the below table:

Parameters	Total
Number of circles	7
Number of divisions	17
Number of sub-divisions	54
Number of feeders	367

- Voltage wise Meter Consumers

The voltage wise meter types of meter values given table:

Parameters	66kV and above	33kV	11/22kV	LT
Number of conventional metered consumers	11	19	659	579928
Number of consumers with 'smart' meters				
Number of consumers with 'smart prepaid' meters				
Number of consumers with 'AMR' meters				
Number of consumers with 'non-smart prepaid' meters				9793
Number of unmetered consumers				18342
Number of total consumers	11	19	659	608063

- Numbers of Distribution Transformers

Parameters	66kV and above	33kV	11/22kV	LT
Number of conventionally metered Distribution Transformers				3317
Number of DTs with communicable meters				
Number of unmetered DTs				9536
Number of total Transformers	36	183		12853

- Details of DTs Step Down Transformer in Service

	Step Down Transformer			
Voltage Level	Total No of Substation	Different Voltage level in Use	Capacity in USE (KVA)	No Of Transformer
400 KV	1	400/220 KV	315000	2
220 KV	3	220/132KV	160000	2
		220/132KV	160000	2
132 KV	16	132/33 KV	50000	1
		132/33 KV	25000	3
		132/33 KV	20000	22

	Step Down Transformer			
Voltage Level	**Total No of Substation**	**Different Voltage level in Use**	**Capacity in USE (KVA)**	**No Of Transformer**
		132/33 KV	12500	2
		132/33 KV	5000	2
132/11 KV	2	132/11 KV	10000	3
33 KV	119	33/11 KV	10000	9
		33/11 KV	9000	1
		33/11 KV	7500	9
		33/11 KV	6600	1
		33/11 KV	6300	1
		33/11 KV	5500	1
		33/11 KV	5000	59
		33/11 KV	4000	1
		33/11 KV	3150	6
		33/11 KV	3000	3
		33/11 KV	2500	47
		33/11 KV	1600	32
		33/11 KV	1500	1
		33/11 KV	1200	1
		33/11 KV	1000	2
		33/11 KV	500	4
		33/11 KV	350	1
		33/11 KV	140	1
		33/11 KV	100	1
		33/11 KV	630	1
		33/6.6 KV	500	1
Total	**141**			**222**

- List of Distribution (DTs) in Service

Distribution Circle	Sub-Division	Nos. of Substation	No. of DTs	Total Capacity (kVA)
Shillong	Nongthymmai	185	185	42814
Shillong	New Shillong	105	105	13796
Shillong	Lapalang	208	208	35629
Shillong	Umiew	0	0	0
Shillong	Upper Shillong	170	170	14114
Shillong	Umlyngka	111	111	14136
Shillong	Mawlai	75	75	20802

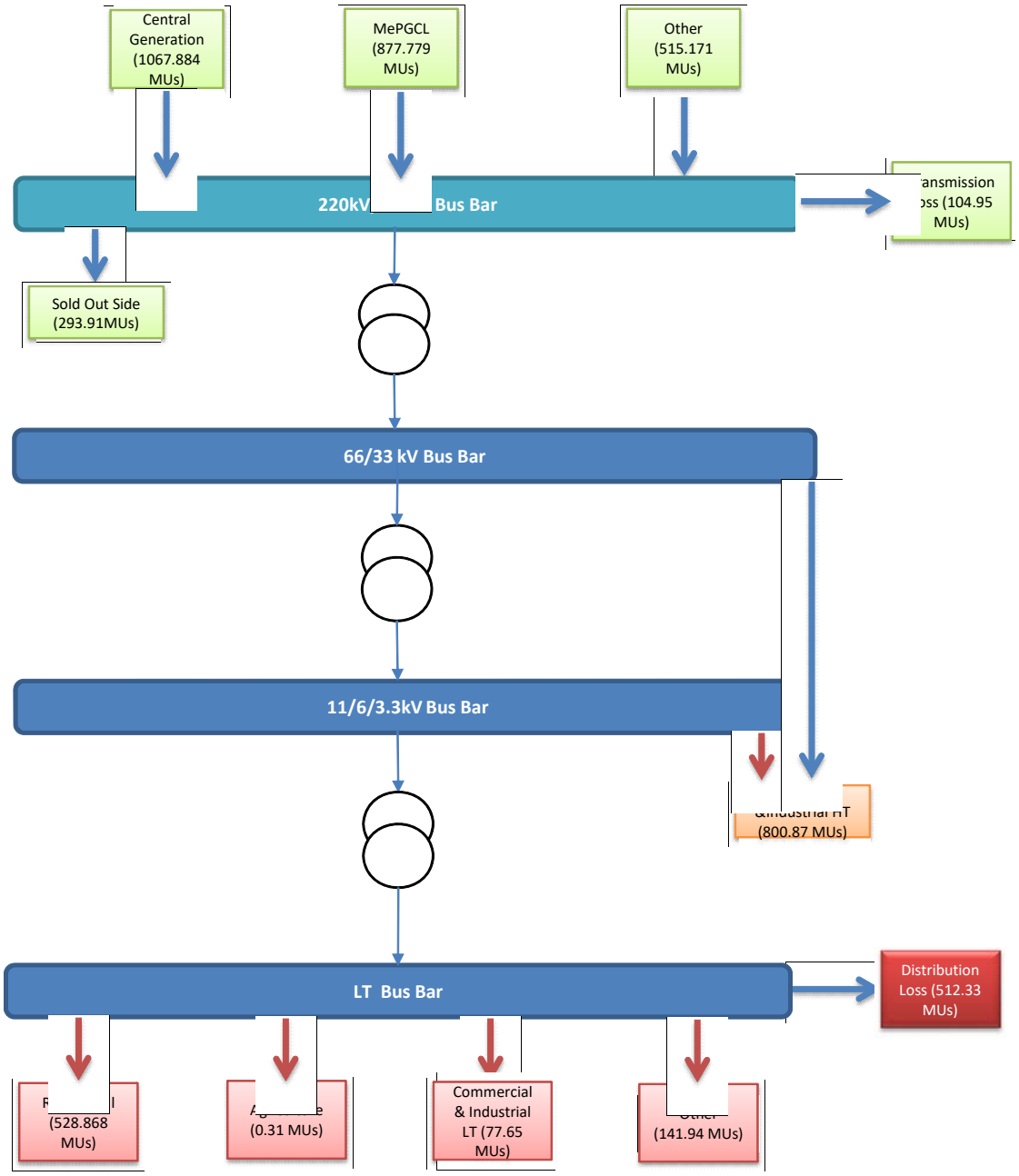
Distribution Circle	Sub-Division	Nos. of Substation	No. of DTs	Total Capacity (kVA)
Shillong	Shillong Central	210	210	58193
Shillong	Umjarain	78	78	15391
Shillong	Polo	126	126	35283
Shillong	Mawprem	113	113	28477
Khasi Hills	Sohra	234	234	15726
Khasi Hills	Sohiong	251	251	12644
Khasi Hills	Pynursla	240	240	11495
Khasi Hills	Mawryngkneng	301	301	17990
Khasi Hills	Riangdo	396	396	11866
Khasi Hills	Nongstoin	477	477	26656
Khasi Hills	Mairang	352	352	20559
Khasi Hills	Mawkyrwat	315	315	15825
Khasi Hills	Mawsynram	382	382	20728
Ri-Bhoi	Umiam	156	156	22591
Ri-Bhoi	Umiam Rural	369	369	21537
Ri-Bhoi	Umsning	257	257	23286
Ri-Bhoi	Nongpoh Urban	130	130	11140
Ri-Bhoi	Nongpoh Rural	237	237	12260
Ri-Bhoi	Patharkhmah	132	132	4990
Ri-Bhoi	Byrnihat –I	83	83	11464
Ri-Bhoi	Byrnihat –II	42	42	6317
Ri-Bhoi	Killing	117	117	12354
Jaintia	Jowai	152	153	18636
Jaintia	Amlarem	171	171	9200
Jaintia	Shangpung	203	203	9658
Jaintia	Khliehtyrshi	333	333	16149
Jaintia	Khliehriat	332	332	22700
Jaintia	Sutnga	310	310	20287
East Garo Hills	Chockpot	121	121	2763
East Garo Hills	Baghmara	374	374	13578
East Garo Hills	Nangalbibra	147	147	6217
East Garo Hills	Songsak	288	288	8507
East Garo Hills	Williamnagar	365	365	20846

Distribution Circle	Sub-Division	Nos. of Substation	No. of DTs	Total Capacity (kVA)
East Garo Hills	Mendipathar	409	409	18992
East Garo Hills	Kharkutta	301	301	10017
East Garo Hills	Bajengdoba	568	568	19149
West Garo Hills	Raksamgre	242	274	8566
West Garo Hills	Phulbari (DFA)	215	227	11141
West Garo Hills	Dalu (DFA)	590	590	16136
West Garo Hills	Dadengre	146	146	4126
West Garo Hills	Selsela	260	260	10159
West Garo Hills	Mahendraganj	255	257	12135
West Garo Hills	Garobadha	346	347	12723
West Garo Hills	Ampati	279	280	11410
Tura	Tura West	244	244	28098
Tura	Tura East	151	151	14797
Tura	Tura North	150	150	5182
Total		**12804.00**	**12853.00**	**889235.00**

- Numbers of Feeders

Parameters	66kV	33kV	11/22kV	LT
Number of metered feeders			255	
Number of feeders with communicable meters				
Number of unmetered feeders			112	
Number of total feeders			367	

- Energy Flow Diagram


Central Generation (1067.884 MUs)
MePGCL (877.779 MUs)
Other (515.171 MUs)
220kV Bus Bar
ansmission oss (104.95 MUs)
Sold Out Side (293.91MUs)
66/33 kV Bus Bar
11/6/3.3kV Bus Bar
(800.87 MUs)
LT Bus Bar
Distribution Loss (512.33 MUs)
(528.868 MUs)
(0.31 MUs)
Commercial & Industrial LT (77.65 MUs)
(141.94 MUs)

IV. Discussions & Analysis

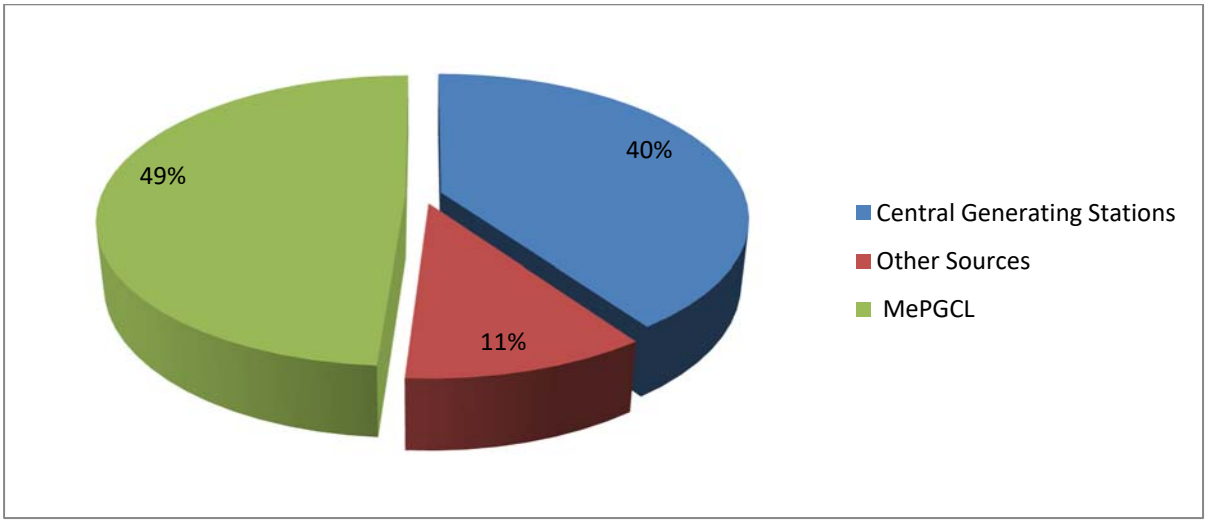
4.1 Energy Accounts for Previous Year

Previous Year Energy Consumption Pattern is shown as per accounting base on the notification no. No. 18/1/BEE/DISCOM/2021 from **BUREAU OF ENERGY EFFICIENCY** dated 6th October, 2021.

- Input Purchase Power for FY -2020-21

The power availability in the state of Meghalaya is primarily from three key sources- (a) from the generating stations of MePGCL, (b) from the allocated share of central power sector generating companies like NEEPCO, NHPC and NTPC etc. and (c) from short term power purchase from IEX/bilateral trade and banking etc. The comparison of actual source wise energy availability and the approved energy availability in FY 2020-21, is provided in the table below

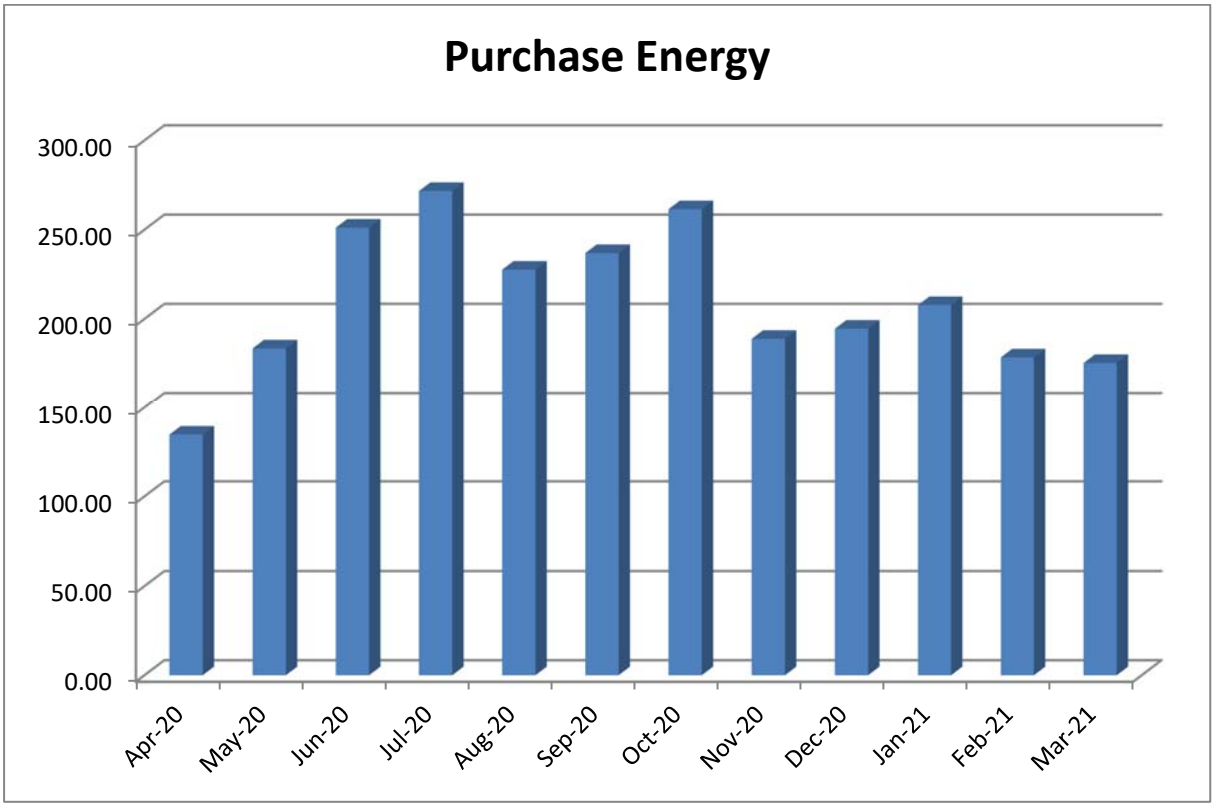
Sources	Units
Central Generating Stations	1011.290
Other Sources	271.168
MePGCL	1229.056



The Month wise energy purchase bill & Unit consumption of the MeECL

Months	Purchase Energy (in MU)
Apr-20	134.64
May-20	183.49
Jun-20	251.11

Months	Purchase Energy (in MU)
Jul-20	271.61
Aug-20	227.55
Sep-20	236.88
Oct-20	261.44
Nov-20	188.84
Dec-20	194.50
Jan-21	207.72
Feb-21	178.43
Mar-21	175.32
2020-21	**2511.51**



- Energy Sold Outside the Periphery

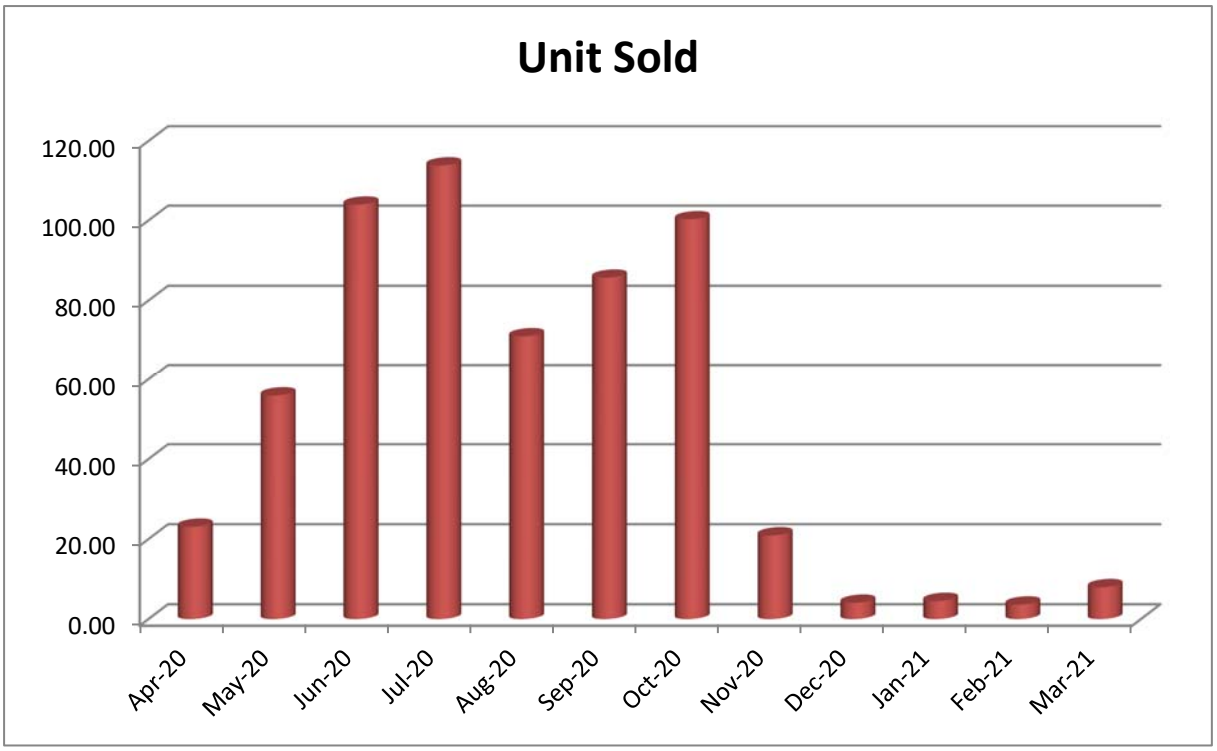
The Energy sale to others both inside and outside the State in FY 2020-21 is shown below:

	Sale at NER/ NER_ER periphery	MePDCL
1	Kreate Energy (I) Pvt Ltd – IEX	238.357
2	Kreate Energy (I) Pvt Ltd –Swapping	118.001
3	Kreate Energy (I) Pvt Ltd -RE power (Non solar)	0.967

	Sale at NER/ NER_ER periphery	MePDCL
4	APPCPL – IEX	0.288
5	APPCPL – Swapping	116.053
6	APPCPL - RE power (Non solar)	20.076
7	DSM Inter	60.981
	Sub Total	**554.723**
	Sale at State periphery	
8	MPL – Swapping	26.785
9	Dalmia (P) Ltd- Swapping	13.434
10	DSM Intra	
	Sub Total	**40.219**
	Total	**594.942**

The Month wise energy Sold Outside the Periphery of the MeECL

Months	Sold Outside
Apr-20	23.06
May-20	55.91
Jun-20	103.99
Jul-20	113.85
Aug-20	71.00
Sep-20	85.76
Oct-20	100.29
Nov-20	20.91
Dec-20	4.07
Jan-21	4.52
Feb-21	3.62
Mar-21	7.97
2020-21	594.94



- Distribution Losses (FY 2020-21)

The actual Distribution losses in FY 2020-21 is shown in the table below

Sl. No.	Particulars	Calculation	Amount
1	Energy purchase from Eastern Region (ER)	A	0
2	Inter-State Transmission Loss in ER	B	1.80%
3	Net Power purchased from ER	C=A(1-B%)	0
4	Power purchase from CGS including Pallatana North Eastern Region (NER)	D	1011.29
5	Total Power at NER	E=C+D	1011.29
6	Inter-State Transmission Loss in NER	F	3%
7	Net Power available at state bus from external sources on long term	G=E*(1-F%)	980.9513
8	Power purchase from State generating stations within the state	H	1229.06
9	Power purchase from other sources (both from outside & within the State)	I	271.17
10	Net power available **at State Bus** for sale of power within the state	J=G+H+I	2481.1813
11	Power sold to consumers within the state	K	1326.44

Sl. No.	Particulars	Calculation	Amount
12	**Distribution Losses (%)**	L	27.04%
13	**Distribution Losses** MU	M = N - K	491.60
14	Energy Requirement for sale by Discom **within state**	N = K/(1-L)	1818.04
15	Energy Requirement for sale within state **at State Bus**	O=N/(1-3.616%)	1886.24
16	Surplus Energy **at State Bus**	P = J-O	594.94
17	Power sold to others (both outside & inside the State) (incl.swap/UI/bilateral)**at State Bus**	Q	594.94
18	Unaccounted Energy (MU)	R = P - Q	0.00

- % Losses – Circle wise

The Range of T&D Losses, collection efficiency and AT &C losses among the circle is tabulated below:

Description	Data
T & D Losses	27.04%
T & D Losses Range	12.42% to 69.93%
Circle with highest losses	East Garo
Circle with lowest losses	Western
Collection efficiency	100.44%
Collection efficiency range	82.01% to 116.94%
AT & C Loss (%)	26.72%
AT & C Range	9.88% to 75.34%
Circle with highest AT&C Losses	East Garo
Circle with lowest AT&C Losses	Shillong

- Summary Sheet of AT& C losses

The energy input, billed & AT&C Losses of the MeECL is given below:

Particulars	East Garo Hills	Jaintia Hills	Khasi Hills	Ri-Bhoi	Shillong	West Garo Hills	FY-2020-2021
Billed Input (Mus)	44.07	155.94	106.27	610.22	332.05	77.90	1326.45
Input Energy (Mus)	146.59	240.90	155.03	696.75	382.54	196.35	1818.15

Particulars	East Garo Hills	Jaintia Hills	Khasi Hills	Ri-Bhoi	Shillong	West Garo Hills	FY-2020-2021
D Loss (Mus)	102.51	84.96	48.76	86.53	50.49	118.44	491.69
% D Loss	69.93%	35.27%	31.45%	12.42%	13.20%	60.32%	27.04%
Billed Amount (Rs Crore)	27.50	94.50	65.75	326.95	231.53	47.71	793.95
Collected Amount (Rs Crore)	22.55	110.51	70.08	273.30	240.39	47.48	797.44
% Collection Efficiency	82.01%	116.94%	106.59%	83.59%	103.82%	99.50%	100.44%
% AT&C	75.34%	24.30%	26.94%	26.79%	9.88%	60.52%	**26.72%**

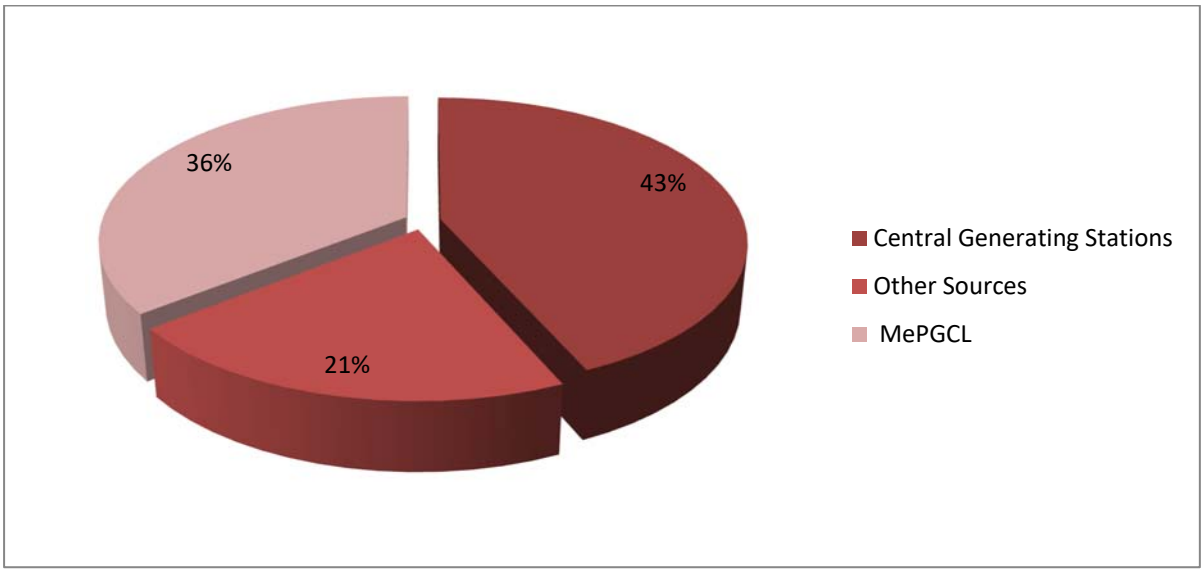
Technical Details (FY2020-21)		
Energy Input Details	**UoM**	**Value**
Input Energy Purchase (From Generation Source)	Million kwh	2511.51
Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh	1818.14
Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	1326.46
Transmission and Distribution (T&D) loss Details	Million kwh	491.69
	%	27.04%
Collection Efficiency	%	100.44%
Aggregate Technical & Commercial Loss	%	26.72%

4.2 Energy Accounts & Performance in current year

- Input Purchase Power for FY -2021-22

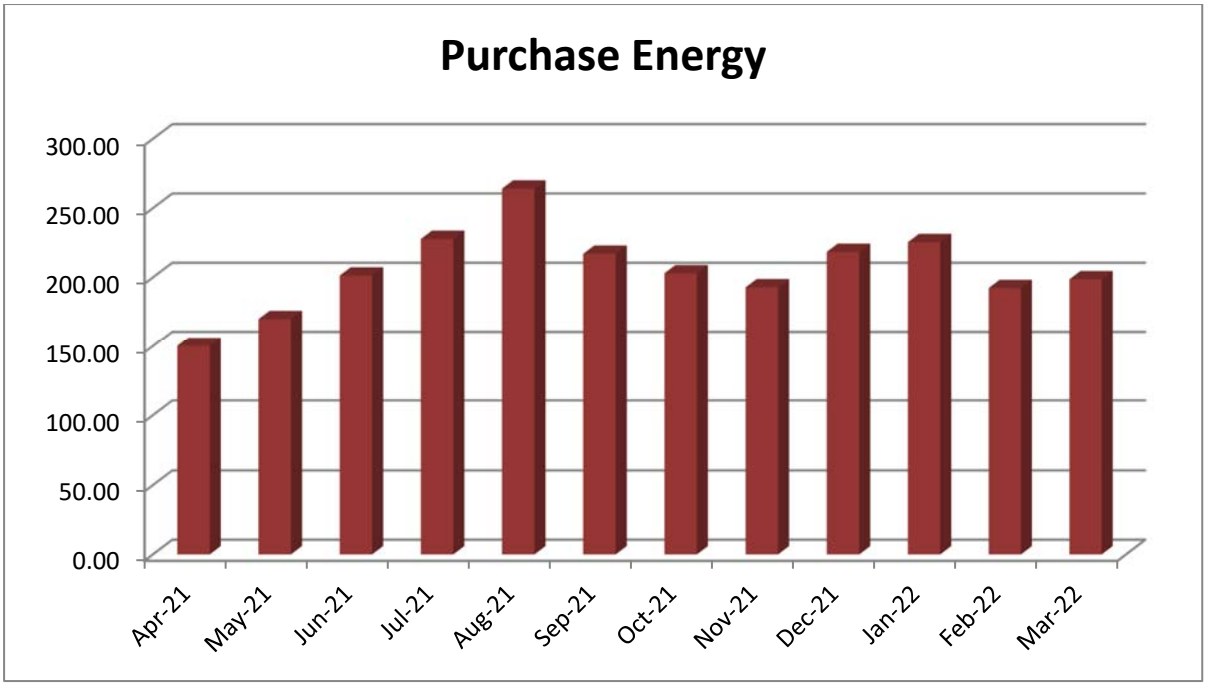
The power availability in the state of Meghalaya is primarily from three key sources- (a) from the generating stations of MePGCL, (b) from the allocated share of central power sector generating companies like NEEPCO, NHPC and NTPC etc. and (c) from short term power purchase from IEX/bilateral trade and banking etc. The comparison of actual source wise energy availability and the approved energy availability in FY 2021-22, is provided in the table below

Sources	Units
Central Generating Stations	1067.884
Other Sources	515.171
MePGCL	877.779



The Month wise energy purchase bill & Unit consumption of the MeECL

Months	Purchase Energy (in MU)
Apr-21	150.15
May-21	169.81
Jun-21	201.31
Jul-21	227.75
Aug-21	264.09
Sep-21	217.05
Oct-21	202.97
Nov-21	192.85
Dec-21	218.46
Jan-22	225.44
Feb-22	192.32
Mar-22	198.63
2021-22	**2460.83**



Note: Detailed sheet attached in Annexure (Bills Attached)

- Summary of Energy Consumption

The consumer wise input energy consumptions & no of consumers is given in the table:

DLN. DLG & DHT	Domestic
CLT	Commercial LT
GP	General Purpose, Govt Consumers
ILT	Industrial LT
WSLT	Public water Supply LT
KJ	Kutir Jyoti
PLG	Public Lighting
AP	Agriculture
CRM	Crematorium
CTV	Cable TV
BS	Bulk Supply
FAHT	Ferro Alloy High Tension

Category	Units	Consumers
Domestic	**528.888**	**576268**
DLN	403.118	351825
KJ	104.394	224331

Category	Units	Consumers
DHT	21.375	112
Commercial	**70.044**	**28639**
CLT	70.041	28605
CTV	0.002	34
Water Supply	**9.063**	**365**
WSLT	9.063	365
Public Lighting	**0.446**	**50**
PLN	0.446	50
PLG		0
HT Water Supply	**33.807**	**52**
WSHT	33.807	52
HT Industrial	**776.594**	**152**
IHTB	124.123	137
EHTS	402.464	4
EHT	64.371	5
FAEHT	101.161	3
SP. Tariff	84.475	3
Industrial (Small)	**7.606**	**556**
ILT	7.606	556
HT Commercial	**24.267**	**148**
CHT	24.267	148
CP	0.000	0
BSCP		0
Government offices and department	**98.487**	**2508**
GP	16.582	2283
BS	81.905	225
Agriculture	0.314	**13**
AP	0.314	13
Others-2	0.135	
CRM	0.135	1

Month	DLT	CLT	GP	ILT	WSLT	KJ	PL	AP	CRM	CHT
APRIL_21	31.91	4.79	1.12	0.42	0.62	8.17	0.03	0.01	0.01	1.65
MAY_21	24.48	3.91	0.99	0.35	0.59	6.55	0.03	0.01	0.01	1.49
JUNE_21	28.88	3.60	1.10	0.37	0.66	6.62	0.03	0.01	0.01	1.89
JULY_21	31.96	5.38	1.25	1.71	0.70	8.23	0.03	0.01	0.01	1.64
AUG_21	32.96	5.14	1.23	0.56	0.68	8.98	0.03	0.01	0.01	1.75
SEPT_21	32.13	6.99	1.95	0.57	0.85	8.96	0.03	0.01	0.00	1.97
OCT_21	31.29	6.06	1.18	0.62	1.15	10.41	0.04	0.02	0.01	2.01
NOV_21	33.58	6.22	1.79	0.74	0.62	9.21	0.03	0.02	0.01	2.32
DEC_21	34.04	6.34	1.45	0.71	0.63	8.35	0.03	0.02	0.02	2.50
JAN_22	40.84	7.33	1.43	0.61	0.75	8.55	0.03	0.04	0.02	2.45
FEB_22	38.18	6.68	1.54	0.49	0.93	8.94	0.06	0.16	0.01	2.39
MAR_22	42.88	7.60	1.55	0.46	0.88	11.40	0.10	0.01	0.02	2.21
Grand Total	**403.12**	**70.04**	**16.58**	**7.61**	**9.06**	**104.39**	**0.45**	**0.31**	**0.14**	**24.27**

Month	DHT	IHT	WSHT	BS	EHT	EHTS	FERO	Sp.Tariff	FERRO	Total
APRIL_21	1.24	7.89	2.63	8.02	11.86	33.40	0.00	3.90	0.00	117.65
MAY_21	2.17	6.63	3.07	4.86	12.75	25.95	3.50	3.67	0.00	100.99
JUNE_21	2.19	3.61	2.60	5.09	5.18	32.89	0.47	6.73	0.00	101.94
JULY_21	1.52	12.44	2.49	4.71	4.54	33.76	6.91	7.62	0.00	124.92
AUG_21	1.66	13.46	2.72	5.46	4.00	33.64	7.04	7.21	0.00	126.53
SEPT_21	1.69	13.49	2.67	5.25	4.88	37.21	8.81	5.00	0.00	132.47
OCT_21	1.51	12.76	2.55	6.06	1.57	33.01	9.19	6.87	0.00	126.29
NOV_21	1.79	4.88	2.75	7.13	3.33	36.47	14.90	8.39	0.00	134.16
DEC_21	2.02	5.25	2.78	7.11	7.28	36.47	19.49	9.35	0.00	143.83
JAN_22	1.46	3.80	3.25	8.83	1.81	33.57	17.38	8.38	0.00	140.53
FEB_22	2.27	19.85	3.05	13.08	3.01	33.54	9.16	9.47	0.00	152.82
MAR_22	1.84	20.07	3.27	6.31	4.15	32.56	4.31	7.89	0.00	147.52
Grand Total	**21.38**	**124.12**	**33.81**	**81.91**	**64.37**	**402.46**	**101.16**	**84.47**	**0.00**	**1549.65**

- % Losses – Circle wise

The Range of T&D Losses, collection efficiency and AT &C losses among the circle is tabulated below:

Description	Data
T & D Losses	24.85%
T & D Losses Range	10.56% to 60.78%
Circle with highest losses	East Garo
Circle with lowest losses	Western
Collection efficiency	99.84%
Collection efficiency range	54.45% to 116.44%
AT & C Loss (%)	24.96%
AT & C Range	1.73 % to 78.64%
Circle with highest AT&C Losses	East Garo
Circle with lowest AT&C Losses	Shillong

- Summary Sheet of AT& C losses

The energy input, billed & AT&C Losses of the MeECL is given below:

Particulars	East Garo	Jaintia Hills	Khasi Hills	Ri-Bhoi	Shillong	West Garo	Tura Circle	FY 2021-22
Billed Input (Mus)	60.25	212.12	108.11	711.67	354.17	69.93	33.40	1549.65
Input Energy (Mus)	153.91	327.42	159.11	796.48	420.05	143.03	61.96	2061.96
D Loss (Mus)	93.67	115.30	50.99	84.82	65.88	73.10	28.56	512.31
% D Loss	60.86%	35.21%	32.05%	10.65%	15.68%	51.11%	46.09%	24.85%
Billed Amount (Cr)	34.11	126.36	68.21	392.19	252.09	38.46	20.19	931.60
Collected Amount(Cr)	18.57	129.59	70.37	371.88	293.53	32.39	13.82	930.15
% Collection Efficiency	54.44%	102.55%	103.17%	94.82%	116.44%	84.23%	68.47%	99.84%
% AT&C	78.69%	33.56%	29.89%	15.28%	1.82%	58.82%	63.09%	24.96%

Technical Details (FY2021-22)		
Energy Input Details	**UoM**	**Value**
Input Energy Purchase (From Generation Source)	Million kwh	2460.84
Net input energy (at DISCOM Periphery after adjusting the transmission losses& traded)	Million kwh	2061.97
Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	1549.63

Technical Details (FY2021-22)		
Energy Input Details	**UoM**	**Value**
Transmission and Distribution (T&D) loss Details	Million kwh	512.33
	%	24.85%
Collection Efficiency	%	99.84%
Aggregate Technical & Commercial Loss	%	24.96%

- Circle wise Connections & Input Energy

MeECL, Shillong having 7 circles and 17 numbers of division & 54 numbers of sub division, the circle wise total numbers of connections, connected load (MW), Total input energy (MU) is given in the table:

Circle	No of connection metered (Nos)	Un-metered (Nos)	Total Consumers	Total Connected Load (MW)	Input energy (MU)	Metered energy	Un Meter Energy	Total energy
Shillong	122431	0	122431	318.80	419.66	354.16	0.00	354.16
Ri-Bhoi	58602	0	58602	240.44	795.72	711.67	0.00	711.67
West Garo	91460	4584	96044	52.69	142.98	67.29	2.65	69.94
East Garo	71478	12610	84088	88.03	153.58	57.46	2.78	60.24
Jaintia Hills	76267	0	76267	163.28	327.11	212.10	0.00	212.10
Khasi Hills	146998	708	147706	183.61	158.95	107.70	0.42	108.12
Tura	23174	440	23614	38.80	63.97	33.40	0.00	33.40
Total	590410	18342	608752	1085.65	2061.97	1543.78	5.85	1549.63

- Circle wise T & D & AT & C Losses

The circle wise connected load & input energy & metered energy with transmission & distribution losses is given in following table:

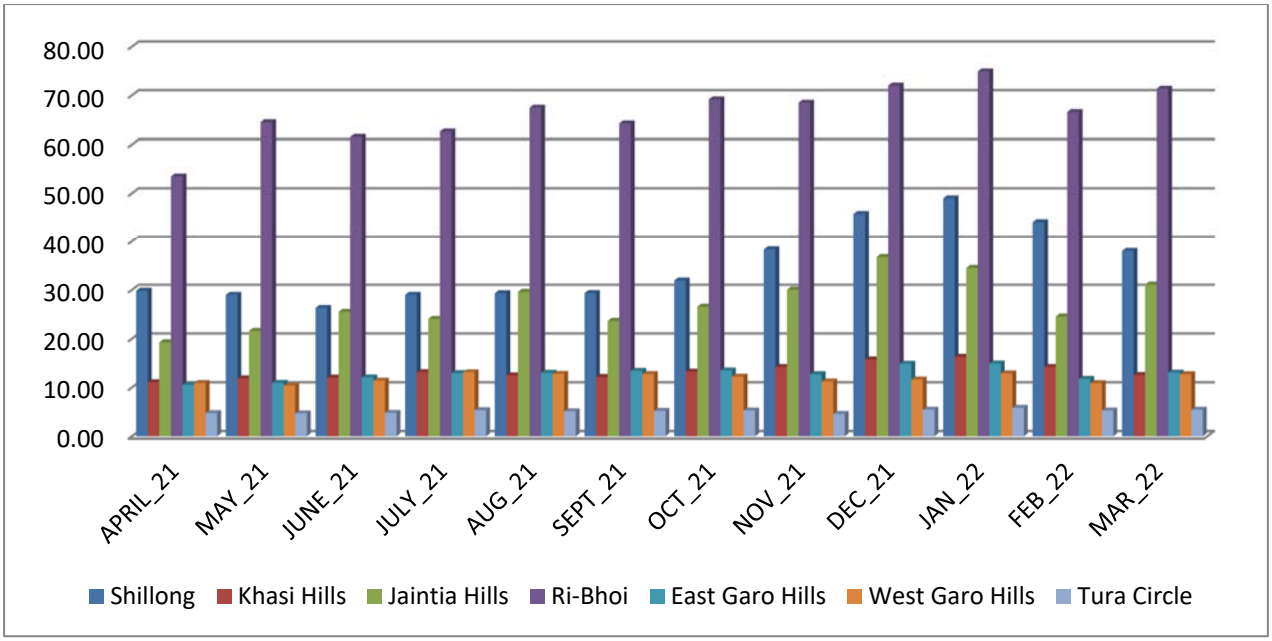
Circle Name	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
Shillong	65.50	15.61%	252.09	293.53	116.44%	1.73%
Ri-Bhoi Circle	84.05	10.56%	392.19	371.88	94.82%	15.19%
West Garo	73.04	51.08%	38.46	32.39	84.23%	58.80%
East Garo Hills	93.34	60.78%	34.11	18.57	54.45%	78.64%
Jaintia Hills	115.01	35.16%	126.36	129.58	102.55%	33.51%

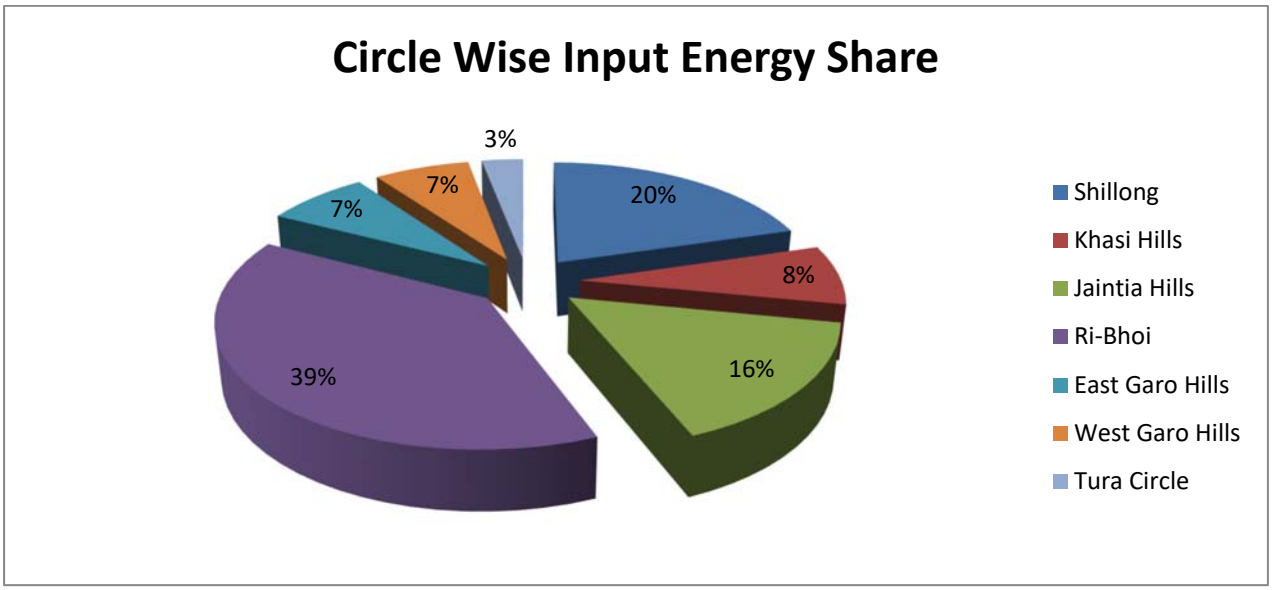
Circle Name	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
Khasi Hills	50.83	31.98%	68.21	70.38	103.18%	29.82%
Tura	30.57	47.79%	20.19	13.82	68.45%	64.26%
Total	512.33	24.85%	931.602	930.153	99.84%	24.96%

- Circle Wise Monthly Input Energy for FY -2021-22

The Month wise Input Energy Unit consumption of the MeECL

Months	Shillong	Khasi Hills	Jaintia Hills	Ri-Bhoi	East Garo	West Garo	Tura Circle
APRIL_21	29.85	11.08	19.27	53.48	10.56	10.92	4.76
MAY_21	29.01	11.87	21.63	64.52	10.96	10.37	4.71
JUNE_21	26.32	12.04	25.53	61.51	12.09	11.42	4.81
JULY_21	29.01	13.15	24.08	62.61	12.97	13.14	5.36
AUG_21	29.34	12.50	29.63	67.48	13.04	12.81	5.13
SEPT_21	29.36	12.18	23.66	64.25	13.44	12.76	5.21
OCT_21	31.92	13.27	26.58	69.20	13.49	12.24	5.30
NOV_21	38.35	14.20	30.06	68.51	12.72	11.24	4.60
DEC_21	45.79	15.75	36.78	72.01	14.86	11.63	5.46
JAN_22	48.99	16.28	34.53	74.94	14.93	12.91	5.86
FEB_22	44.08	14.22	24.56	66.60	11.78	10.88	5.29
MAR_22	38.02	12.56	31.10	71.38	13.08	12.73	5.45
Total MU	**420.05**	**159.11**	**327.42**	**796.48**	**153.91**	**143.03**	**61.96**
Net Input	**2061.97**						



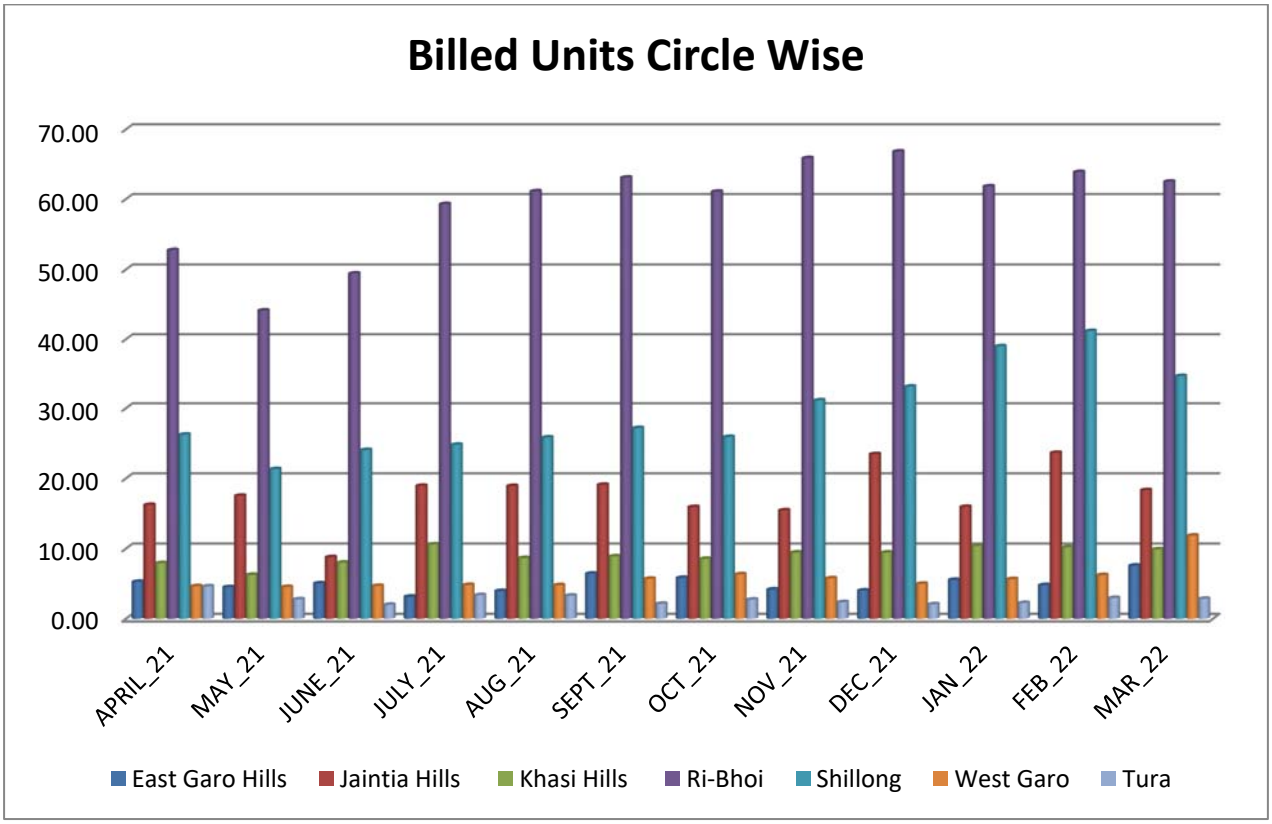


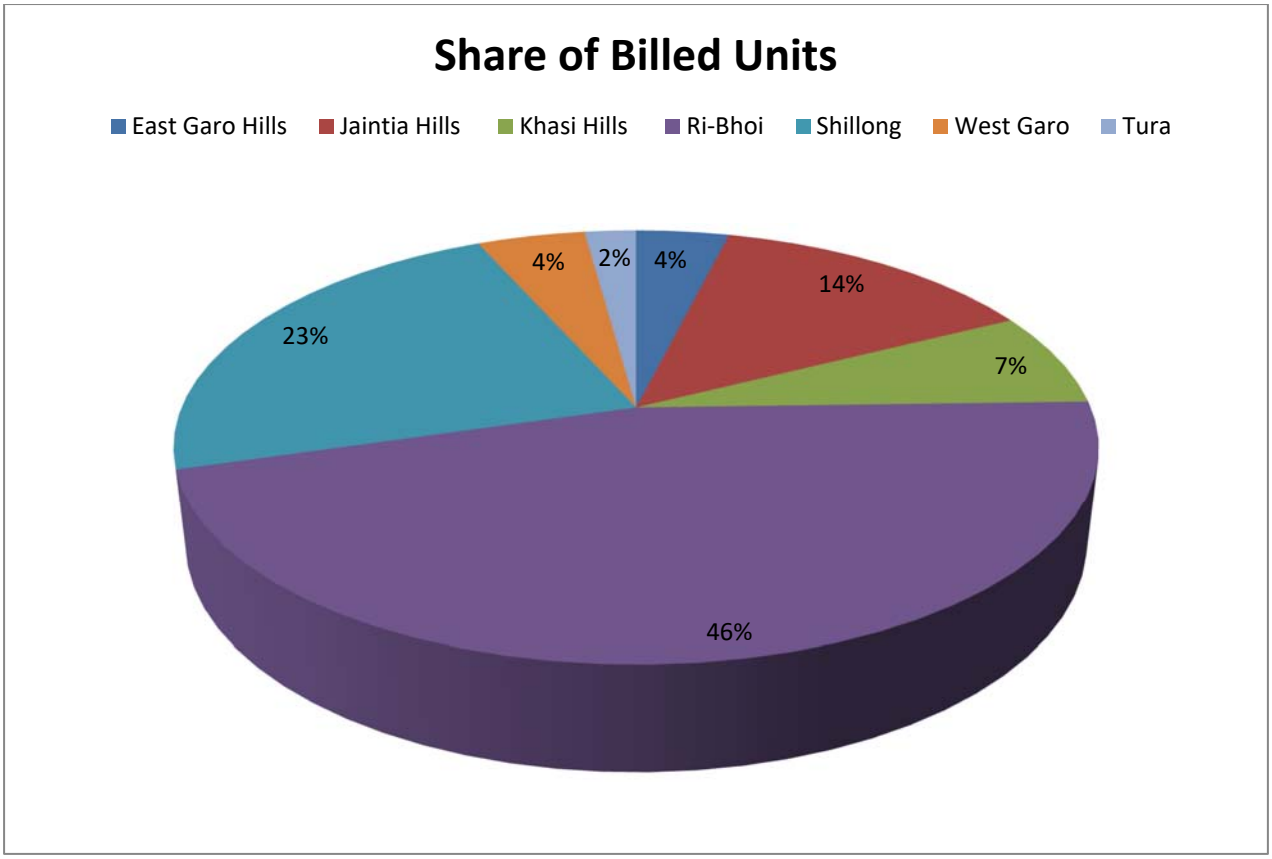
- Circle Wise Monthly Billed Energy for FY -2021-22

The Month wise Billed Energy Unit consumption of the MeECL

Month	East Garo	Jaintia Hills	Khasi Hills	Ri-Bhoi	Shillong	West Garo	Tura
APRIL_21	5.27	16.22	7.93	52.76	26.22	4.64	4.62
MAY_21	4.50	17.51	6.26	44.11	21.31	4.53	2.77
JUNE_21	5.04	8.77	7.99	49.42	24.04	4.68	2.00
JULY_21	3.15	18.93	10.58	59.28	24.79	4.82	3.36

Month	East Garo	Jaintia Hills	Khasi Hills	Ri-Bhoi	Shillong	West Garo	Tura
AUG_21	3.95	18.91	8.65	61.11	25.82	4.79	3.29
SEPT_21	6.43	19.09	8.88	63.08	27.17	5.69	2.14
OCT_21	5.83	15.91	8.53	61.06	25.90	6.33	2.73
NOV_21	4.17	15.45	9.44	65.86	31.12	5.76	2.37
DEC_21	4.03	23.45	9.43	66.81	33.08	4.98	2.06
JAN_22	5.54	15.94	10.36	61.82	38.99	5.65	2.25
FEB_22	4.79	23.63	10.18	63.87	41.17	6.22	2.96
MAR_22	7.57	18.32	9.89	62.49	34.57	11.84	2.85
Grand Total	**60.25**	**212.12**	**108.11**	**711.67**	**354.17**	**69.93**	**33.40**

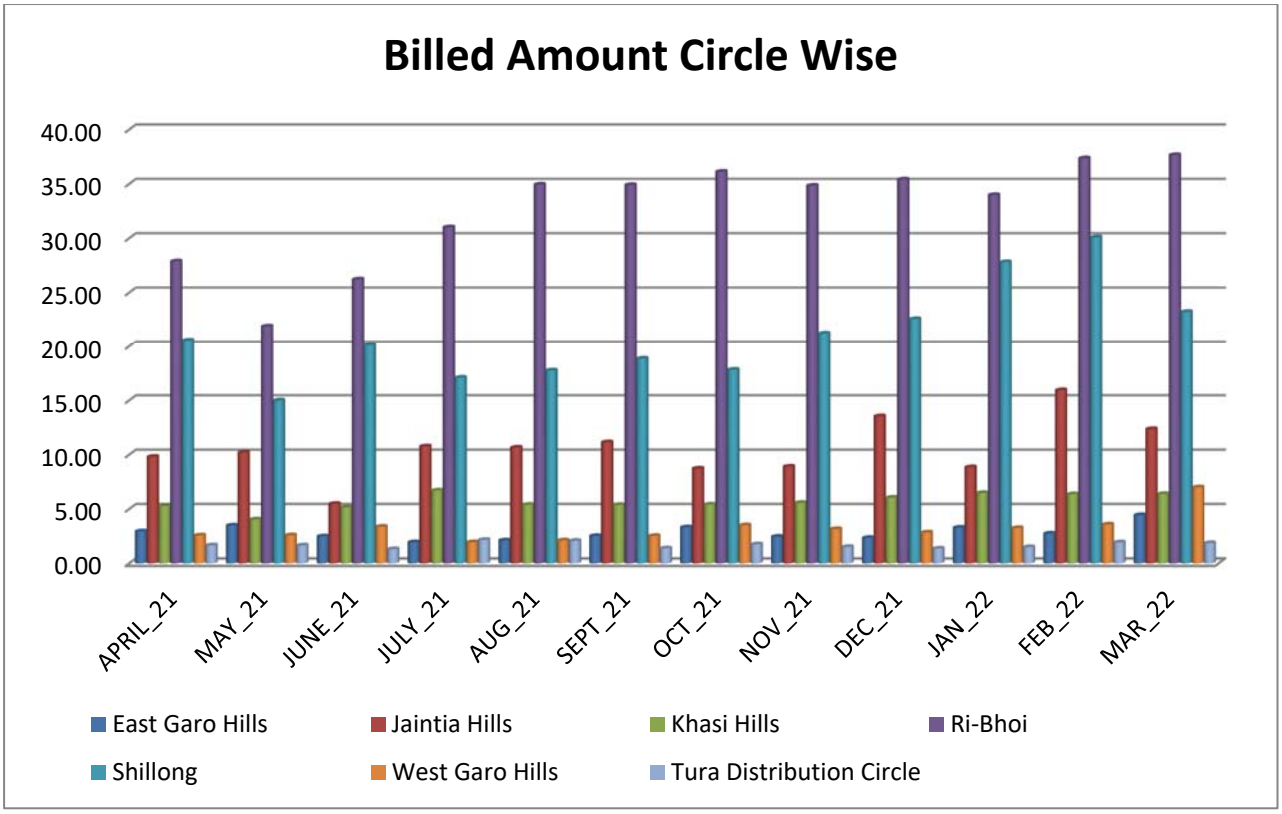




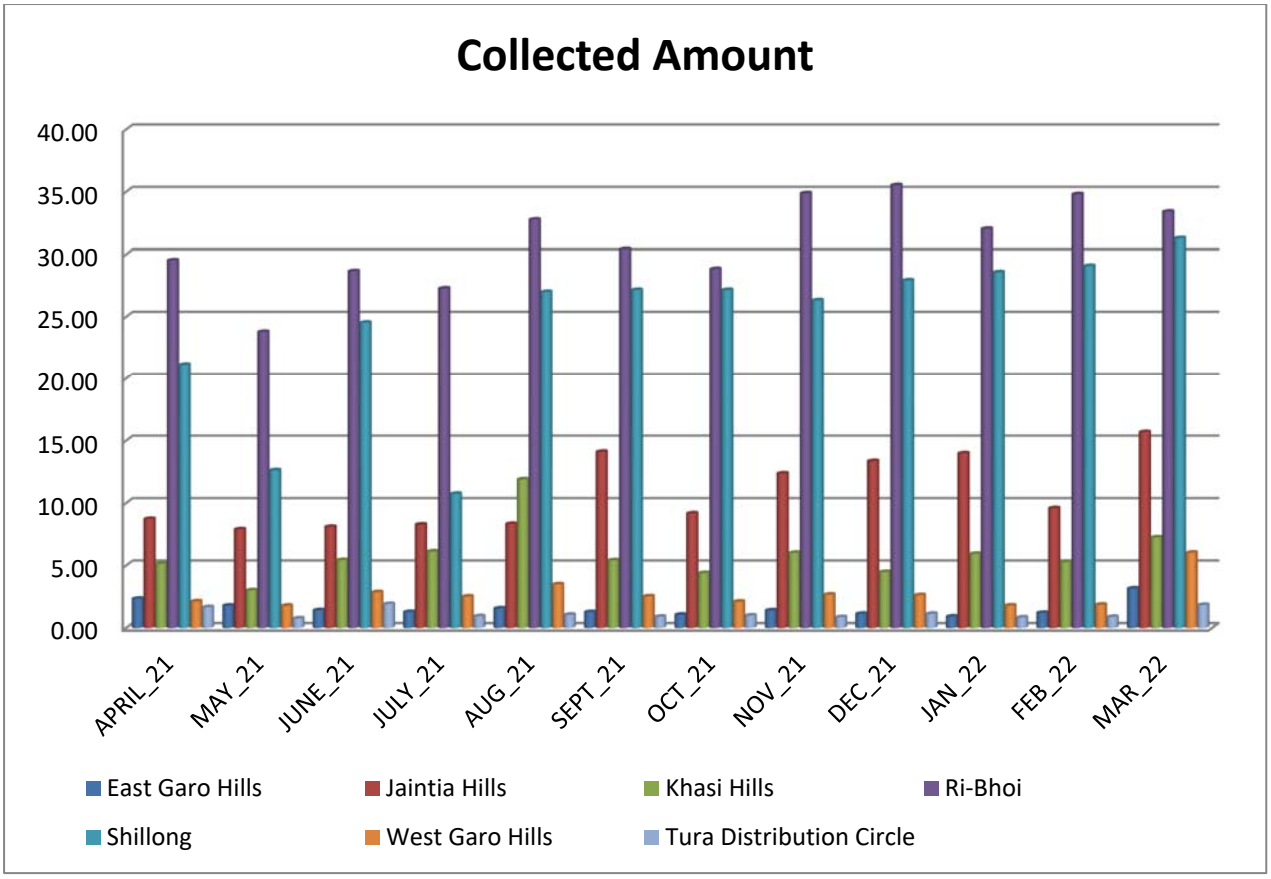
- Circle wise Monthly Billed Amount & Collected Amount

The circle wise Billed Amount & Collected Amount is given in following table:

Month	East Garo	Jaintia Hills	Khasi Hills	Ri-Bhoi	Shillong	West Garo	Tura Circle	FY 2021-22
APRIL_21	2.95	9.81	5.28	27.88	20.57	2.57	1.66	70.72
MAY_21	3.49	10.20	4.04	21.88	14.99	2.59	1.65	58.84
JUNE_21	2.49	5.48	5.15	26.22	20.10	3.38	1.31	64.13
JULY_21	1.95	10.77	6.71	31.01	17.09	1.95	2.16	71.63
AUG_21	2.11	10.66	5.39	34.94	17.75	2.11	2.08	75.05
SEPT_21	2.53	11.14	5.38	34.90	18.85	2.53	1.38	76.71
OCT_21	3.32	8.73	5.42	36.12	17.82	3.51	1.75	76.66
NOV_21	2.45	8.90	5.57	34.84	21.23	3.16	1.51	77.67
DEC_21	2.35	13.54	6.04	35.41	22.56	2.84	1.36	84.10
JAN_22	3.29	8.85	6.48	33.98	27.81	3.25	1.50	85.14
FEB_22	2.75	15.94	6.36	37.36	30.09	3.58	1.93	98.00
MAR_22	4.44	12.36	6.39	37.66	23.23	7.00	1.87	92.94
Rs Crore	**34.11**	**126.36**	**68.21**	**392.19**	**252.09**	**38.46**	**20.19**	**931.60**



Month	East Garo	Jaintia Hills	Khasi Hills	Ri-Bhoi	Shillong	West Garo	Tura
APRIL_21	2.35	8.73	5.13	29.53	21.14	2.13	1.67
MAY_21	1.78	7.89	3.02	23.79	12.62	1.78	0.76
JUNE_21	1.42	8.10	5.43	28.66	24.53	2.86	1.92
JULY_21	1.28	8.28	6.13	27.28	10.74	2.51	0.94
AUG_21	1.57	8.33	11.90	32.76	27.00	3.49	1.06
SEPT_21	1.27	14.10	5.42	30.39	27.16	2.53	0.90
OCT_21	1.06	9.17	4.39	28.83	27.16	2.11	0.99
NOV_21	1.41	12.37	6.01	34.88	26.33	2.67	0.87
DEC_21	1.13	13.36	4.48	35.52	27.93	2.63	1.14
JAN_22	0.92	13.98	5.94	32.03	28.57	1.80	0.84
FEB_22	1.21	9.59	5.28	34.80	29.08	1.86	0.89
MAR_22	3.16	15.68	7.25	33.40	31.28	6.02	1.84
Collection (Cr.)	**18.57**	**129.59**	**70.37**	**371.88**	**293.53**	**32.39**	**13.82**



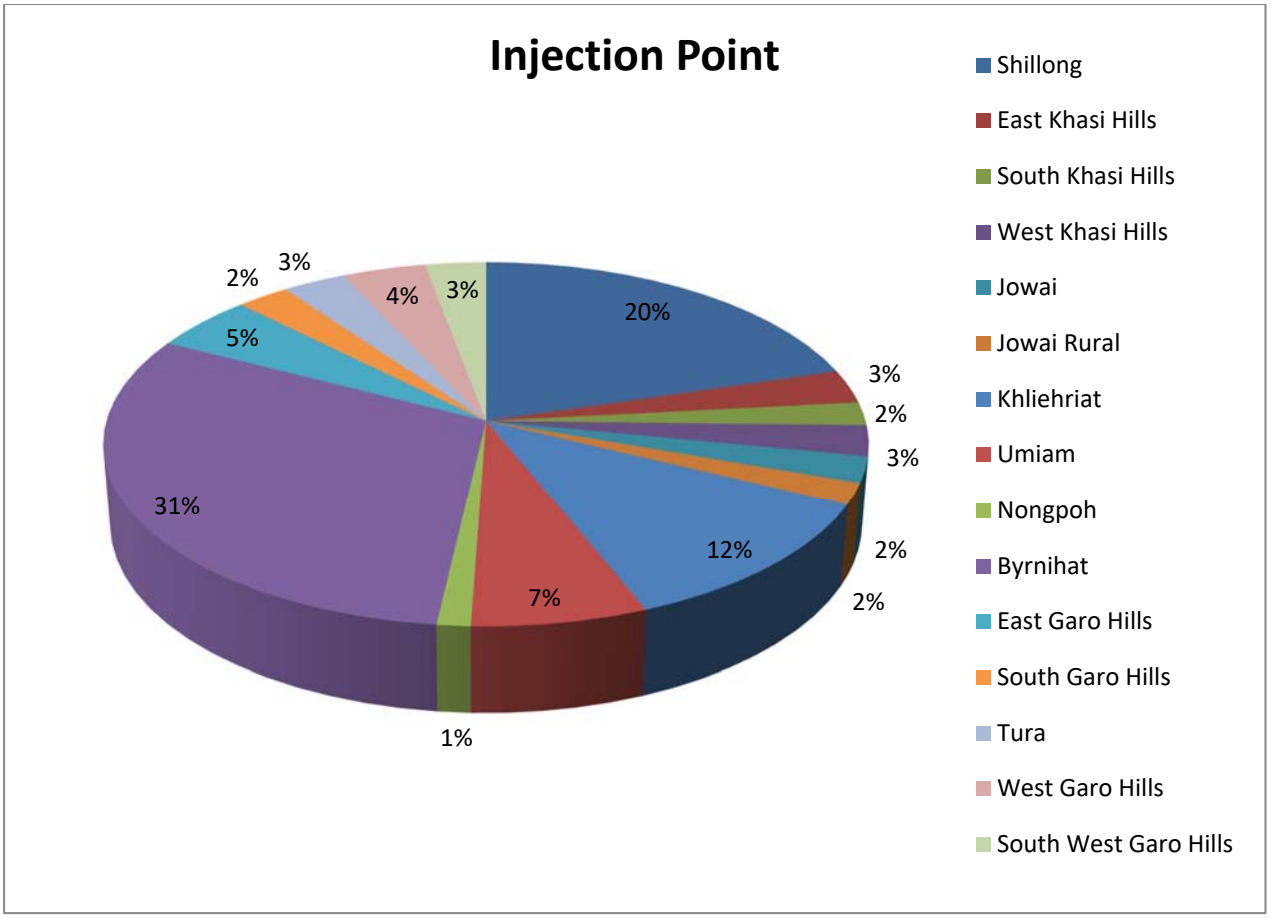
- Injection Point (Import & Export Energy)

The division wise energy parameter input energy, wise is shown in below table:

Months	Shillong	East Khasi	South Khasi	West Khasi	Jowai	Jowai Rural
APRIL_21	29854.39	4030.98	2935.460	4113.83	3426.38	2817.68
MAY_21	29013.16	4666.07	3104.072	4102.41	3427.33	2868.72
JUNE_21	26318.83	4697.30	3264.393	4075.54	3265.09	3219.95
JULY_21	29005.00	5123.75	3619.465	4410.86	3819.80	3140.79
AUG_21	29341.60	4671.79	3478.028	4350.31	4075.47	2909.28
SEPT_21	29360.44	4676.19	3342.802	4161.49	4090.21	2664.17
OCT_21	31924.70	5201.01	3470.468	4596.01	3669.05	3206.60
NOV_21	38345.68	5515.31	3662.896	5026.41	3987.18	3275.12
DEC_21	45786.45	6058.88	3988.781	5701.47	4773.37	3812.60
JAN_22	48990.51	6331.79	4115.754	5835.72	4952.16	3896.36
FEB_22	44083.78	5653.69	3697.125	4869.89	4552.55	3493.41
MAR_22	38023.62	4290.77	3550.523	4714.50	3898.33	3282.58
Total (MWh)	420048.16	60917.52	42229.767	55958.45	47936.92	38587.27
Total (Mus)	**420.05**	**60.92**	**42.23**	**55.96**	**47.94**	**38.59**

Months	Jowai	Jowai Rural	Khliehriat	Umiam	Nongpoh	Byrnihat
APRIL_21	3426.38	2817.68	13030.72	9915.77	1972.14	41590.30
MAY_21	3427.33	2868.72	15329.13	10593.74	1804.56	52119.44
JUNE_21	3265.09	3219.95	19043.36	9631.34	1974.53	49905.42
JULY_21	3819.80	3140.79	17116.05	11440.47	2010.48	49155.10
AUG_21	4075.47	2909.28	22646.40	11201.02	2190.93	54092.71
SEPT_21	4090.21	2664.17	16909.02	10232.65	1933.73	52086.15
OCT_21	3669.05	3206.60	19709.00	11274.67	1931.87	55989.61
NOV_21	3987.18	3275.12	22802.35	11608.43	2359.89	54542.27
DEC_21	4773.37	3812.60	28195.52	12349.52	2617.33	57045.31
JAN_22	4952.16	3896.36	25677.55	13492.25	2619.44	58825.06
FEB_22	4552.55	3493.41	16516.44	11911.85	2222.09	52465.39
MAR_22	3898.33	3282.58	23923.65	12378.10	2297.98	56702.30
Total (MWh)	47936.92	38587.27	240899.19	136029.80	25934.99	634519.06
Total (Mus)	**47.94**	**38.59**	**240.90**	**136.03**	**25.93**	**634.52**

Months	East Garo	South Garo	Tura	West Garo	South West Garo
APRIL_21	6995.34	3568.18	4763.90	6386.76	4529.54
MAY_21	7113.84	3844.04	4710.20	5823.38	4547.61
JUNE_21	7693.56	4397.59	4810.13	6584.51	4835.49
JULY_21	8425.66	4541.03	5357.07	7598.43	5540.54
AUG_21	8768.52	4268.40	5131.47	7501.50	5308.23
SEPT_21	9043.18	4397.15	5213.24	7425.23	5329.90
OCT_21	8416.58	5070.72	5303.53	7177.18	5059.13
NOV_21	8605.61	4118.82	4602.64	6543.35	4693.47
DEC_21	9966.42	4897.61	5463.12	6688.30	4946.34
JAN_22	9989.49	4936.52	5855.67	7387.49	5519.48
FEB_22	7906.47	3870.47	5290.24	6416.21	4464.96
MAR_22	8761.14	4317.82	5454.89	7462.71	5263.90
Total (MWh)	101685.81	52228.35	61956.12	82995.05	60038.58
Total (Mus)	**101.69**	**52.23**	**61.96**	**83.00**	**60.04**

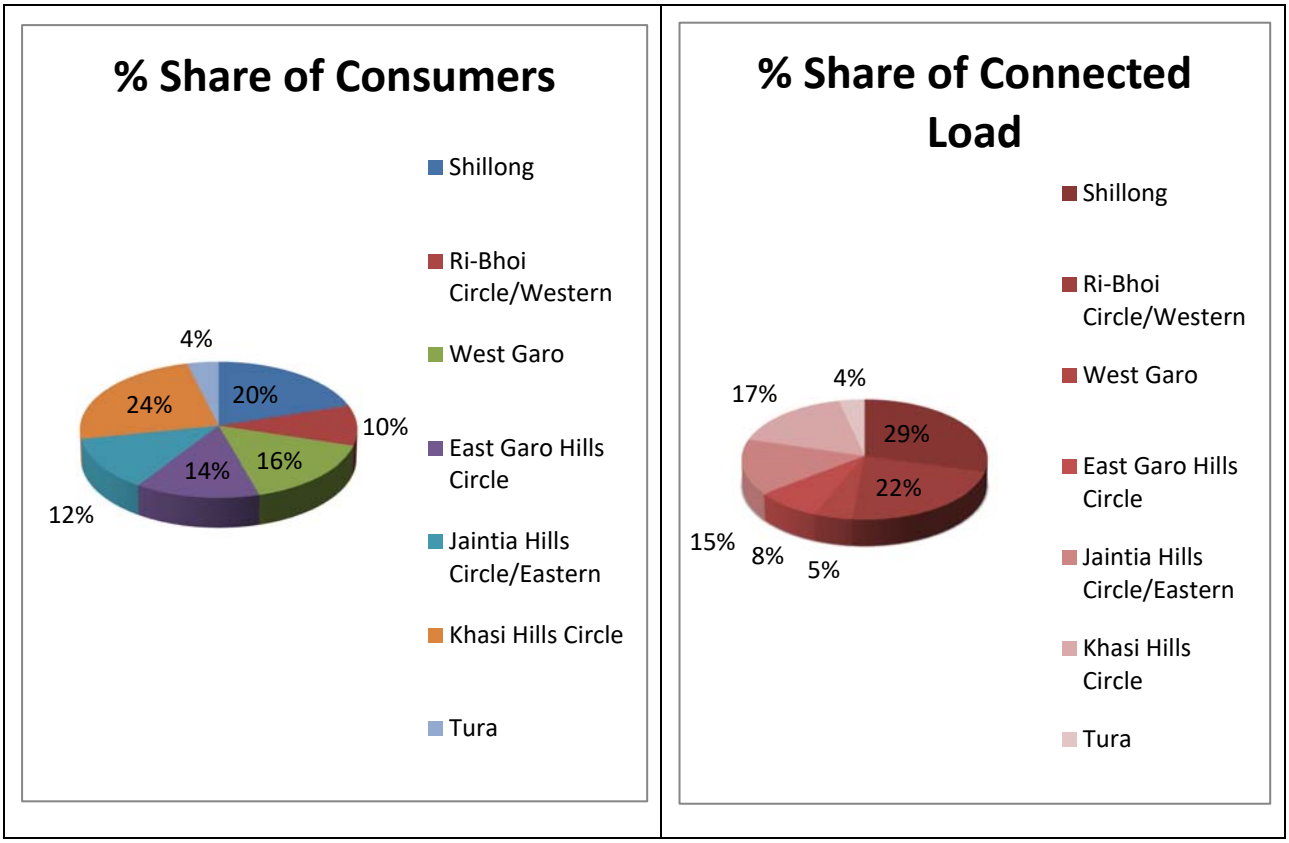


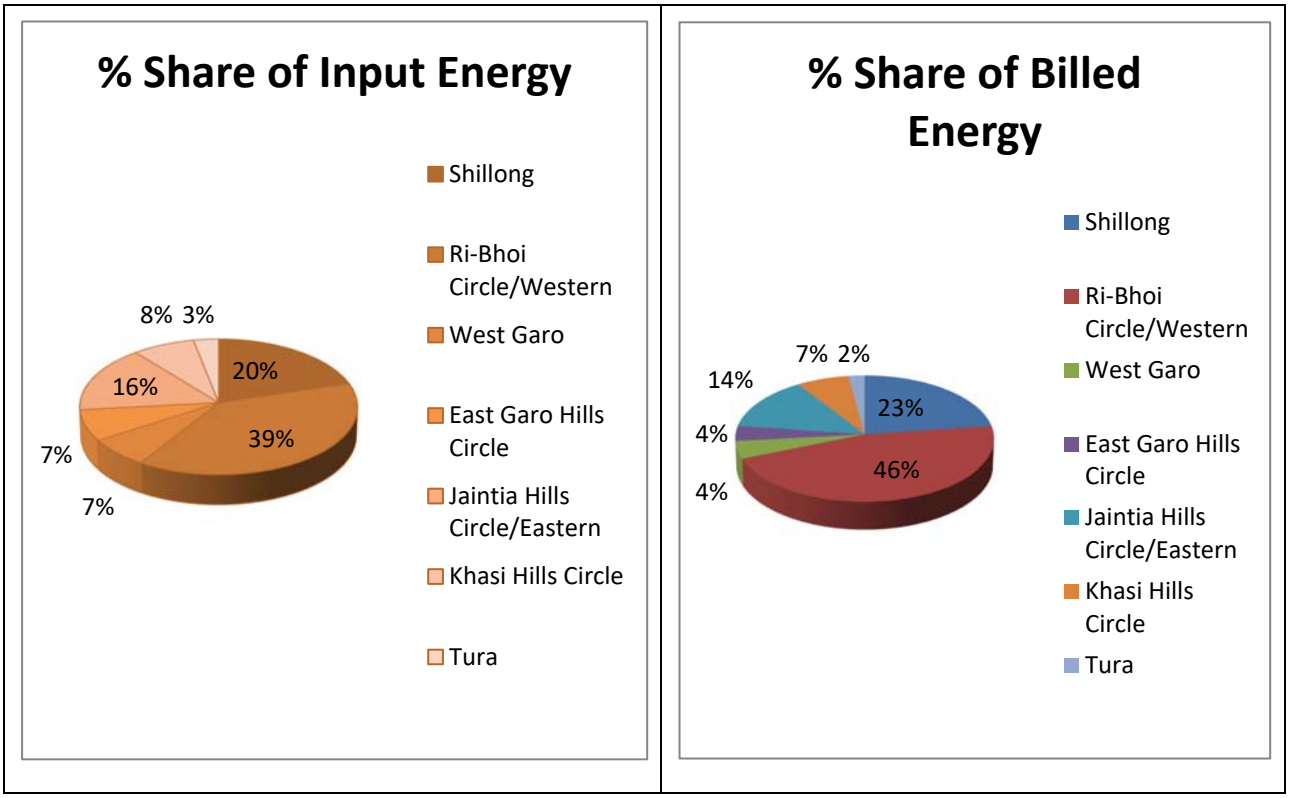
- Category wise Energy Parameter

Category wise consumers, connected load, input energy, Billed energy, Revenue & Losses are given in below table:

Consumer category	Total Number of connections (Nos)	Total Connected Load (MW)	Input energy (MU)	Total energy	D loss (MU)
Residential	562991	610.69	1818.14	482.62	491.69
Agricultural	28	0.23		0.14	
Commercial/Industrial-LT	29500	95.15		65.96	
Commercial/Industrial-HT	268	186.50		636.81	
Others	3227	98.07		140.93	
	596014	**990.64**	**1818.14**	**1326.46**	**491.69**

Consumer category	D loss (MU)	D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT& C loss (%)
Residential	491.69	27.04%	260.25	252.72	97.11%	
Agricultural			0.08	0.03	41.87%	
Commercial/Industrial-LT			60.50	62.66	103.57%	
Commercial/Industrial-HT			356.38	320.44	89.91%	
Others			116.74	161.59	138.42%	
	491.69	**27.04%**	**793.95**	**797.44**	**100.44%**	**26.72%**




% Share of Input Energy
Shillong
Ri-Bhoi Circle/Western
West Garo
East Garo Hills Circle
Jaintia Hills Circle/Eastern
Khasi Hills Circle
Tura
8%
3%
20%
16%
39%
7%
7%
% Share of Billed Energy
Shillong
Ri-Bhoi Circle/Western
West Garo
East Garo Hills Circle
Jaintia Hills Circle/Eastern
Khasi Hills Circle
Tura
7%
2%
14%
23%
4%
46%
4%

- Division Wise Import & Export Energy

Division wise Import & Export Units are shown below:

Areas	Shillong		Mawryngkneng		Sohiong		Mawsynram		Umiam+EHT	
Month	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export
APRIL_21	31588.12	1733.73	1564.59	310.72	1076.62	157.20	2949.38	1581.28	9443.41	488.10
MAY_21	30876.24	1863.09	2173.96	409.06	1085.95	161.55	3118.43	1577.37	10148.31	438.24
JUNE_21	28318.80	1999.97	1954.81	323.14	1182.44	210.00	3278.85	1757.03	9185.75	330.24
JULY_21	31388.66	2383.66	2265.96	479.54	1528.51	538.80	3634.82	1908.09	10849.23	277.05
AUG_21	31507.58	2165.98	2307.04	743.45	1367.99	379.57	3493.29	1859.71	10685.04	362.70
SEPT_21	31502.25	2141.82	2287.30	727.06	1347.16	367.87	3357.60	1714.60	9636.93	297.90
OCT_21	34257.08	2332.39	2428.98	789.46	1488.39	369.75	3486.67	1765.48	10985.96	667.44
NOV_21	40498.72	2153.05	2782.62	978.66	1256.23	159.90	3678.90	1938.33	11015.46	508.29
DEC_21	48012.35	2225.90	3257.73	1215.40	1201.80	13.20	4006.06	2090.75	11713.57	629.10
JAN_22	51186.24	2195.73	3443.80	1324.22	1269.39	21.00	4133.28	2160.31	12897.95	803.70
FEB_22	46170.73	2086.95	3128.77	1229.60	1117.55	59.25	3713.48	1953.10	11360.95	597.03
MAR_22	40186.67	2163.06	2731.37	962.56	1318.44	294.30	3567.52	2079.15	11952.97	619.38
TOTAL	445493.47	25445.32	30326.93	9492.87	15240.47	2732.39	42418.30	22385.19	129875.53	6019.17
Net		420048.16		20834.06		12508.08		20033.10		123856
(MUs)	**445.49**	**25.45**	**30.33**	**9.49**	**15.24**	**2.73**	**42.42**	**22.39**	**129.88**	**6.02**

Areas	Umsning		Tura		Williamnagar		Garobadha		Dalu	
Month	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export
APRIL_21	2932.60	1972.14	6602.06	1838.16	1212.33	0.00	6651.03	5154.39	1584.42	119.37
MAY_21	2688.23	1804.56	6326.74	1616.54	1293.40	0.00	6148.34	4775.19	1568.83	216.75
JUNE_21	2750.37	1974.53	6462.62	1652.49	1431.31	258.00	7124.02	5592.05	1626.57	308.46
JULY_21	2878.77	2010.48	7232.32	1875.25	1831.65	381.50	8186.12	6473.78	2027.64	521.33
AUG_21	3069.62	2190.93	7176.11	2044.64	1915.75	314.10	7973.09	6299.14	1974.32	408.96
SEPT_21	2827.35	1933.73	7206.82	1993.57	1965.45	283.80	7817.69	6172.87	2084.02	466.01
OCT_21	2888.02	1931.87	7197.65	1894.12	1973.72	332.60	7457.22	5868.29	2205.84	590.78
NOV_21	3461.16	2359.89	6642.15	2039.51	2338.15	432.60	6727.00	5389.03	1946.97	389.82
DEC_21	3882.38	2617.33	7493.50	2030.38	2673.68	406.30	6831.31	5383.30	2228.88	524.60
JAN_22	4017.43	2619.44	8061.70	2206.03	2762.34	468.80	6970.74	5961.46	2285.81	452.56
FEB_22	3370.02	2222.09	7131.67	1841.43	2322.41	344.50	6438.13	5208.20	1826.47	302.72
MAR_22	3342.49	2297.98	7545.54	2090.65	2319.30	0.00	7890.75	6152.81	2131.10	470.13
TOTAL	38108.43	25934.99	85078.89	23122.77	24039.48	3222.20	86215.43	68430.52	23490.86	4771.48
Net		12173.45		61956.12		20817.28		17784.92		18719.38
(MUs)	**38.11**	**25.93**	**85.08**	**23.12**	**24.04**	**3.22**	**86.22**	**68.43**	**23.49**	**4.77**

- Division wise energy parameters& Losses

The division wise energy parameter input energy, metered energy, Billed Energy and T& D losses of division wise is shown in below table:

The collection efficiency of the MeECL Discom as per the data provided is given in the following table:

Collection efficiency = Collected Amount/ (Billed Amount*100)

Zone	Circle	Division (KVA)	Sub-Division. (KVA)	Import (MU)	Export (MU)	Sales (MU)	Net Input	T&D Losses	% T&D Loss
Eastern	Shillong	Shillong	Shillong	445.49	25.45	354.17	420.05	65.88	15.7%
	Khasi Hills	East khasi hills	Mawryngkneng	30.33	9.49	13.52	20.83	7.32	35.1%
			Sohiong	15.24	2.73	7.85	12.51	4.66	37.2%
			Cherra	18.43	0.00	16.57	18.43	1.86	10.1%
			Pynursla	9.15	0.00	7.96	9.15	1.19	13.0%
		South Khasi Hills	Mawsynram	42.42	22.39	11.31	20.03	8.72	43.5%
			Mawkyrwat	22.20	0.00	14.77	22.20	7.43	33.5%
		West Khasi Hills	Nongstoin	24.96	0.00	17.90	24.96	7.06	28.3%
			Riangdo	14.67	0.00	5.97	14.67	8.70	59.3%
			Mairang	16.33	0.00	12.27	16.33	4.06	24.9%
	Jaintia Hills	Jowai+Jowai Rural	Jowai,Khliehtyrshi,Amlarem	86.52	0.00	54.21	86.52	32.31	37.3%
		Khliehriat	Khliehriat+Sutnga	240.90	0.00	157.89	240.90	83.01	34.5%
	Ri-Bhoi	Umiam	Umiam	129.88	6.02	99.03	123.86	24.82	20.0%
			Umsning	38.11	25.93	11.16	12.17	1.01	8.3%
		Nongpoh	Nongpoh	25.93	0.00	18.78	25.93	7.16	27.6%
		Byrnihat	Byrnihat	634.52	0.00	582.70	634.52	51.82	8.2%
Western	East Garo Hills	East Garo Hills	Bajengdoba	40.10	0.00	11.08	40.10	29.02	72.4%
			Mendipathar	40.77	0.00	15.91	40.77	24.85	61.0%
			Williamnagar	24.04	3.22	11.99	20.82	8.83	42.4%
		South Garo Hills	Baghmara	18.24	0.00	10.06	18.24	8.17	44.8%
			Nangalbibra	29.22	0.00	11.21	29.22	18.01	61.6%
	West Garo Hills	Tura	Tura+Chockpot	89.85	23.12	33.40	66.73	33.33	49.9%
		West Garo Hills	Dalu	23.49	4.77	19.33	18.72	-0.61	-3.3%
			Phulbari	64.28	0.00	26.79	64.28	37.48	58.3%

Zone	Circle	Division (KVA)	Sub-Division. (KVA)	Import (MU)	Export (MU)	Sales (MU)	Net Input	T&D Losses	% T&D Loss
		South West Garo Hills	Garobadha	86.22	68.43	7.39	17.78	10.40	58.5%
			Ampati+Mahendraganj	38.10	0.00	14.75	38.10	23.35	61.3%
			Selsella	4.15	0.00	1.67	4.15	2.48	59.8%
				2253.52	191.56	1549.63	2061.97	512.33	

- Details of Receiving Sources

Purchase energy from the different sources the detailed type of fuel-based energy source data with connected load is shown in below table:

Voltage Level	Name of Generation Station	Generation Capacity (MW)	Type of Station Generation	Type of Contract	Type of Grid	Point of Connection (POC) Loss
132	Umiam I	4X9	Hydro	PPA (25)	Intra-state	
132	Umiam II	2X10	Hydro	PPA (25)	Intra-state	
132	Umiam III	2X30	Hydro	PPA (25)	Intra-state	
132	Umiam IV	2X30	Hydro	PPA (25)	Intra-state	
132	MLHEP	3X42	Hydro	PPA (25)	Intra-state	
132	Umtru	4X2.8	Hydro	PPA (25)	Intra-state	
132	Sunapani	1X1.5	Hydro	PPA (25)	Intra-state	
132	New Umtru	2X20	Hydro	PPA	Intra-state	
132	Lakroh	1X1.5	Hydro	PPA	Intra-state	14.19045
132	KOPILI	4X50	Hydro	PPA (5)	Inter-state	
132	KOPILI-Ext	1X25	Hydro	PPA (5)	Inter-state	
132	KHANDONG	2X25	Hydro	PPA (5)	Inter-state	0.12
132	RANGANADI	3X135	Hydro	PPA (5)	Inter-state	
132	DOYANG	3X25	Hydro	PPA (5)	Inter-state	0.25

Voltage Level	Name of Generation Station	Generation Capacity (MW)	Type of Station Generation	Type of Contract	Type of Grid	Point of Connection (POC) Loss
132	AGBPP	6X33.5 +3X30	Gas-Steam	PPA (5)	Inter-state	1.96
132	AGTPP	4X21+2x25.5	Gas	PPA (5)	Inter-state	1.26
132	FSTPS	3X200+2X500	Coal	PPA (NA)	Inter-state	
132	KHSTPS-I	4X210	Coal	PPA (NA)	Inter-state	
132	KHSTPS-II	3X500	Coal	PPA (25)	Inter-state	
132	TSTPS-I	2X500	Coal	PPA (NA)	Inter-state	
132	OTPC	2X363.3	Gas-Steam	PPA (25)	Inter-state	
132	Loktak	3X35	Hydro	PPA (15)	Inter-state	
132	AGTPP-CS	41	Gas-Steam	PPA	Inter-state	
132	Tipaimukh	1500	Hydro	PPA (5)	Inter-state	
132	BTPS	3X250	Coal	PPA (25)	Inter-state	
132	Loktak-DS	3X30	Hydro	PPA (5)	Inter-state	
132	Subansiri	8X250	Hydro	PPA (5)	Inter-state	
132	Pare	2X55	Hydro	PPA (5)	Inter-state	0.79
132	Kameng	4X150	Hydro	PPA (5)	Inter-state	0.4
132	Pallatana		Hydro	PPA	Inter-state	8.75
132	BGTPP		Hydro	PPA	Inter-state	0.03

4.3 Unit wise Performance

The MeECL Discom have total having 7 numbers of circles, 17 numbers of divisions& there are following category in which the energy consumption is divided Residential, agriculture, Commercial / Industrial LT, Commercial/ Industrial HT& others is shown in below table:

S. No	Circle Name	Consumer category	Total connections (Nos)	Total Load (MW)	Input energy (MU)	Total energy	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
1	Shillong	Residential	109103	220.80	419.66	202.46	65.50	16%	122.24	116.89	95.63%	
		Agricultural	0	0.00		0.04			0.02	0.02	115.69%	
		Commercial/Industrial-LT	12361	35.53		30.55			30.83	28.54	92.57%	
		Commercial/Industrial-HT	106	17.57		21.68			19.70	19.83	100.63%	
		Others	861	44.90		99.43			79.30	128.25	161.74%	
Sub-total			**122431**	**318.80**	**419.66**	**354.16**	**65.50**	**16%**	**252.09**	**293.53**	**116.44%**	**2%**
2	Ri-Bhoi Circle/Western	Residential	55592	32.22	795.72	48.93	84.05	11%	24.99	14.91	59.67%	
		Agricultural	2	0.02		0.02			0.01	0.01	109.60%	
		Commercial/Industrial-LT	2612	8.11		9.36			7.65	6.43	84.04%	
		Commercial/Industrial-HT	120	192.00		641.70			349.24	342.39	98.04%	
		Others	276	8.10		11.66			10.31	8.14	78.98%	
Sub-total			**58602**	**240.44**	**795.72**	**711.67**	**84.05**	**11%**	**392.19**	**371.88**	**94.82%**	**15%**
3	West Garo	Residential	93306	40.53	142.98	55.19	73.04	51%	27.67	19.24	69.53%	
		Agricultural	2	0.02		0.04			0.01	0.05	357.14%	
		Commercial/Industrial-LT	2343	6.49		7.64			5.50	4.73	86.03%	
		Commercial/Industrial-HT	3	0.59		0.18			0.43	0.25	58.69%	
		Others	390	5.07		6.89			4.84	8.12	167.66%	
Sub-total			**96044**	**52.69**	**142.98**	**69.94**	**73.04**	**51%**	**38.46**	**32.39**	**84.23%**	**59%**
4	East Garo Hills Circle	Residential	80944	69.95	153.58	50.91	93.34	61%	26.44	12.99	49.15%	
		Agricultural	2	0.06		0.02			0.01	0.00	0.00%	
		Commercial/Industrial-LT	2744	6.30		5.21			4.08	2.85	69.87%	
		Commercial/Industrial-HT	5	5.28		0.40			0.83	0.12	14.48%	

S. No	Circle Name	Consumer category	Total connections (Nos)	Total Load (MW)	Input energy (MU)	Total energy	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
		Others	393	6.44		3.70			2.76	2.61	94.46%	
Sub-total			**84088**	**88.03**	**153.58**	**60.24**	**93.34**	**61%**	**34.11**	**18.57**	**54.45%**	**79%**
5	Jaintia Hills Circle/Eastern	Residential	72932	82.96	327.11	63.11	115.01	35%	32.29	32.47	100.55%	
		Agricultural	0	0.00		0.00			0.00	0.00	0.00%	
		Commercial/Industrial-LT	3011	11.61		10.08			8.73	7.39	84.70%	
		Commercial/Industrial-HT	27	62.51		132.51			79.90	82.89	103.74%	
		Others	297	6.20		6.40			5.44	6.83	125.51%	
Sub-total			**76267**	**163.28**	**327.11**	**212.10**	**115.01**	**35%**	**126.36**	**129.58**	**102.55%**	**34%**
6	Khasi Hills Circle/Central	Residential	142034	142.35	158.95	82.84	50.83	32%	46.46	48.17	103.67%	
		Agricultural	1	0.10		0.17			0.08	0.08	95.24%	
		Commercial/Industrial-LT	5091	20.39		12.25			10.69	10.61	99.26%	
		Commercial/Industrial-HT	31	12.58		3.93			3.83	1.31	34.17%	
		Others	549	8.18		8.93			7.14	10.21	143.00%	
Sub-total			**147706**	**183.61**	**158.95**	**108.12**	**50.83**	**32%**	**68.21**	**70.38**	**103.18%**	**30%**
7	Tura	Residential	22357	28.04	63.97	25.42	30.57	48%	12.53	8.33	66.44%	
		Agricultural	6	0.02		0.02			0.01	0.01	90.91%	
		Commercial/Industrial-LT	999	3.66		2.56			2.07	0.97	46.81%	
		Commercial/Industrial-HT	8	0.97		0.47			0.53	0.24	45.03%	
		Others	244	6.10		4.93			5.04	4.27	84.81%	
Sub-total			**23614**	**38.80**	**63.97**	**33.40**	**30.57**	**48%**	**20.19**	**13.82**	**68.45%**	**64%**
	Total	Residential	576268	616.85	2061.97	528.87	512.33	25%	292.63	253.00	86.46%	
		Agricultural	13	0.22		0.31			0.14	0.17	120.16%	
		Commercial/Industrial-LT	29161	92.09		77.65			69.55	61.52	88.46%	
		Commercial/Industrial-HT	300	291.50		800.87			454.46	447.03	98.37%	
		Others	3010	85.00		141.94			114.83	168.43	146.68%	
			608752	**1085.65**	**2061.97**	**1549.63**	**512.33**	**24.85%**	**931.60**	**930.15**	**99.84%**	**24.96%**

M/s A-Z Energy Engineers Pvt. Ltd. Dr. P. P. MITTAL Accredited Energy Auditor AEA-011 Faridabad

4.4 Energy Conservation measures already taken & proposed for Future

Following energy conservation Measures (ECMs) is adopted for line loss reduction

1. Installation of Smart AMR Meters.
2. Maintained the accuracy on the billing date.
3. System improvement & automation.
4. Feeder meters AMR to be increased
5. Targeted Work for Distribution loss reduction under proposed RDSS Scheme
   - Installation of power transformers in Substations.
   - GIS based monitoring in substations
   - Smart switching Systems.
   - Increases HT Lines Feeders.
6. Replacement of Service wire with armoured wire to reduce the line losses.
7. Agricultural Feeder segregation and solarisation
8. SCADA & DMS Implementation for monitoring.
9. Replacing of conventional/non star rated transformer into energy efficient transformers.
10. Laying of AB cable in theft prone area where loss are in higher side.
11. Increase in HT/LT Ratio.
12. Strengthening of energy accounting infrastructure-100% consumer metering.

4.5 Critical Analysis

During field interaction & on-site visit auditor wanted to know the status of identification and mapping status of all of the electrical network assets, status of identification and mapping of high tension and low-tension consumers, status of the development and implementation of information technology status enabled energy accounting and audit system, including associated software, installation status of functional meters for consumers, transformers and feeders, status of adoption of an information technology enabled system to create energy accounting report reports without any manual interference and status of formation of cell for centralized energy accounting etc.

During field interaction & on-site visit auditor observed that MeECL possessed communicable meters connected with feeders & DTRs of MeECL for capturing loss data, having system for identification and mapping of all high-tension consumers, but not having for low tension consumers. Still, during verification processes with their officials in their

Meeting Hall, MeECL was unable to show the loss figures in details for feeders/DTRs in their records.

Management response for action plan of MeECL was found to be very positive and MeECL was agreed upon to implement it with top priority within the target stipulated in pre-requisites of BEE's regulation.

A critical analysis is carried out by deputed Accredited Energy Auditor with several interactions with MeECL's Energy Manager & others to know the facts of efficient managing of Aggregate Technical & Commercial losses.

I. Discom Parameter for evaluation of performance

- Ideally, reduction of technical losses should be the parameter for evaluation of performance of Discoms sector.
- However, the technical losses of the Discoms are not available and also it involves a cumbersome process to calculate the technical losses, which varies based on various factors like loading pattern etc.
- Now, only the T&D losses and AT&C losses are available as the performance parameter for achieving energy efficiency by DISCOMs.
- It was decided that out of the two parameters, T&D loss parameter seems to be appropriate parameter which reflects energy savings to a greater extent as compared to AT&C losses.
- The MeECL is not maintaining the Division wise data they provide the circle wise details.
- There is a gap in circle wise collected amount to the book of amount sheets.

Transmission & Distribution losses (T&D losses)

T& D Losses = {1- (Total energy Billed/ Total energy Input in the system)} x 100

Aggregate technical and commercial losses (AT&C losses)

AT&C Losses = {1- (Billing Efficiency x Collection Efficiency) } x 100

Where,

Billing efficiency= Total unit Billed/ Total unit Inputs

Collection efficiency = Revenue collected / Amount Billed

The overall averaged T & D Losses & AT & C Losses of the MeECL Discom, Meghalaya is 24.85% & 24.96%.

4.6 Inclusion & Exclusions

Not Applicable

4.7 Detailed Formats to be annexed

An annual energy audit checklist is used to assess the energy efficiency of MeECL based on equipment, appliances, design, and usage. Accredited Energy Audi tor develops this checklist to identify opportunities for energy cost reduction and recommend solutions.

Documentary evidence for T & D system related data voltage-wise energy input data, sale data, feeder-wise loss data, collection efficiency etc.

► List of Measures adopted for energy conservation and quantity of energy saved with proper document support.

► Checking & verification of over loading of feeders at Substation level either by the study of SCADA system or by the log book

- Month wise input and billed energy.
- T&D losses computation approach.
- Un-metered energy consumption approach.
- Internal field audit report of input and billed energy.
- Performance of discom on distribution losses.
- Outcome of internal filed audit.
- Measures taken to reduce losses and improve losses.
- Zone/circle/Division/Sub-division wise loss computation.
- Reduction achieved, measures adopted for energy conservation and quantity of energy saved.
- Report on distribution losses.
- Write up on energy scenario.
- Net Input Energy Computation Details.
- Category wise consumer's details.
- Category wise consumers connected load and % load
- Bifurcation of Billed Energy (metered billed energy and unmetered billed energy).

V. Note of the EA/EM along with queries & replies to data gaps

MeECL has T&D losses 24.85% which is slightly higher side. AT&C losses 24.96% which is slightly higher side for Discom sector. Various schemes have been implemented by MeECLto reduce losses.

Feeder-wise/unit-wise losses are not available due to:

I. The entire EHT/HT/LT system is in Ring Main. For ring-main connectivity, the electrical connection keeps changing in fault conditions, maintenance purpose and optimization of asset. Thus, feeder-wise energy accounting will not be correct; it is calculated as a whole.

II. 100% consumer indexing is not in place; thus, feeder wise /DTR wise energy accounting or loss calculation is not possible.

III. MeECL operates in small area comprising of single unit. Thus, loss of entire unit is given. However, from FY 21-22 onwards, unit wise loss can be provided by dividing the licensed area in units/divisions by proper arrangement at our end.

IV. MeECL is having the following documents for purchase power, Input/Billed energy i.e. Internal Departmental Report, SAP &MIS Department Data Base& Book of Account. Also supporting documents for the same has been provided which is attached in annexure of report

(Dr.P.P.Mittal)
Director

VI. Annexures

I. Introduction to verification firm

We A-Z Energy Engineers Pvt. Ltd. provides consultancy services in the areas of energy management while conducting Energy Audits in all segments of energy input. For conducting Detailed Energy Audits, Energy Audits under PAT (Mandatory and M&V), we have a pool of experienced BEE Accredited & Certified Energy Auditors, Electrical Engineers, Mechanical Engineers and Technicians having experience of more than 30 years. The Energy Audits is being carried out with sophisticated instruments namely Power-Analyzer, Flue Gas Analyzer, Ultra-sonic flow meter, Techo-meter, Anemometer, Hego-Meter, Digital Thermometer, Thermographic Camera's, Lux Meter, Leak detectors. Laser gun etc. etc.

Objective

- To carry out and take ahead the business of Energy Efficiency and climate change including promotion and dissemination of energy efficient product and services.
- To disseminate the culture of safe manufacturing and Services through safety audits and trainings.
- To facilitate implementation of energy efficiency projects for Demand Side Measures including optimization of energy mix for industries, railways, building sector, lighting, HVAC etc.
- To facilitate implementation of schemes, programs and policies of central and state governments or its agencies applicable for enhancing energy efficiency.
- To provide consultancy services in the field of Clean Development Mechanism and Renewable Energy Certificate projects, Carbon Markets, Demand Side Management, Energy Efficiency, Climate change and other related areas.
- To identify and impart training to build the capacity of stakeholders in the field of Energy Efficiency and safe practices in Industry.
- To act as a resource center in the field of Energy Efficiency and take up the activities of Capacity Building Training and other related activities.

Vision

- To make use of energy sustainable.
- To create and sustain markets for energy efficiency in India
- To facilitate energy efficiency improvement through private sector investments in energy efficiency.

Mission

- ❖ To assist all stakeholders in implementing energy efficiency and realizing savings.
- ❖ To create awareness regarding merits of improvement of energy efficiency and safety practices in private and public sector.

We are Accredited Energy Auditor from BEE, also empaneled by BEE for PAT M & V Audits and Mandatory Energy Audit Projects. A-Z Energy Engineers Pvt. Ltd. has been short listed by Bureau of Energy Efficiency as an Energy Service Company (ESCO), it is an ISO 9001:2015 certified company. We have completed more than 1260 nos. projects, including 52 PAT projects

Dr. P.P. Mittal the Founder Director of A-Z Energy Engineers Pvt. Ltd. was awarded by Govt. of India in National Energy Conservation Award 2013, 2015 & 2016. MSME Ministry Govt. of India awarded "Best Services Providing Company" it was awarded by Hon'ble Prime Minister of India. Dr. P.P. Mittal, also received the "Energy Engineer" of South-East Asia Sub-continent award 2016 & 2018 at Washington DC & Charlotte USA respectively. Haryana Govt. also recognized the services of Dr. P.P. Mittal, Ph.D, MBA, Post Graduate Diploma in Power Districution, Chartered Engineer, Leed Auditor - Indian Green Building Council Hyderabad, Accrediated Energy Auditor (AEA-011).

Accolades

- Stand first in MSME Micro Services Award 2013 and award received from **Hon;ble Prime Minister of India on 18/10/2016 at Ludhaiana.** This award consist Trophy, Certifiate & cash prize of Rs. 3 lacs.
- Reveived prestigious "**Legend in Energy**" Award for Asian Sub-contitnet from AEE, Atlanta at Wahington, DC on 20/09/2016.
- Received Award from AEE Atlanta at Washington citing as "Energy Engineer–2016 & 2018" of South-East Aisa sub-continent
- Received Letter of appreciateion from **Chief Minister of Haryana**
- Winner Haryana State Energy Conservation Award 2012 with Certificate & Rs. 50,000/-
- National Energy Conservation Award 2013
- National Energy Conservation Award 2015
- National Energy Conservation Award 2016
- Appreciation from Sh. Kalraj Misra, Hon'ble Minister of State for MSME.
- Recevied Appreciation from Sh. Haribahi Parathibhai Chaudhary, Minister of State for MSME, Govt. of India

- Recevied Appreciation from Sh. K.K. Jalan, IAS Seecretary, MSME
- Received appcreciation from Sh. Devender Singh, IAS, Secretary Power, Haryana
- Recevied Appreciation from Institute of Engineers on Energy Day
- Received Appreciation from HAREDA, Chandigarh

Received feedback & appreciation from 400 units including CERC, UNDP & CAG

II. Name of the Firm

Name of Accredited Firm	Accredited Energy Auditor
A-Z Energy Engineers Pvt. Ltd. Darya Ganj New Delhi-110002	Dr. P PMittal :– AEA 0011 Registration Number:– EmAEA-0024

III. Composition of Team

Sr. No.	Name	Qualification	EM/EA/AEA/EmAEA Registration No	Experience (In Years)/ Sector
Team Head				
1	Dr. P.P Mittal	Ph.D, MBA	AEA-011	+45 Years
Sector Expert				
2	Mr. ViponChanda	DISCOM Sector	-	30
Team Members				
3	Mr. V.P Sharma	B. Tech	EA- 10061	32 Years
4	Mr. Alok Kumar Tiwari	Team Member	EM-300137	6 Years
5	Mr. Pankaj Chauhan	Team Member	-	8 Years

IV. Registration No.

EmAEA – 0024

V. Undertaking from EmAEA

We A-Z Energy Engineers Pvt. Ltd. hereby confirm that our AEA and any of the audit team member mentioned in this report has conduct mandatory annual energy audit (Accounting) for MeECL, Meghalaya (hereafter called as MeECL).

We also confirm that none of our team member was in the employment of the MeECL within the previous four years, and was not involved in undertaking energy audit of the MeECL within the previous four years.

Authorised Signatory

(Dr. P.P. MITTAL)

Director

II. Minutes of Meeting with the Discom Firm.

Minutes of Meeting with Meghalaya Energy Corporation Limited (MeECL)., Shillong & A-Z Energy Engineers Pvt. Ltd., New Delhi

Meghalaya Energy Corporation Limited. **AZ Energy Engineers Pvt. Ltd.**

A-Z Energy Engineers audit team visited the site on 18th to 22nd Dec'22 and conduct the energy audit accounting with reference to the MeECL work order dated 7th Dec 2022 and notification from the Bureau of Energy Efficiency dated 6th October 2021 for Conduct of Energy Audit (Accounting) in Electricity Distribution Companies).

Following are the key observations during audit.

- Filled in proforma (Circle Wise) for FY 2021-22 was filled with MeECL available & Audit team.
- Client has provided the following documents for purchase power (Month wise), Input Energy (Month wise) ,Billed energy (Month wise), No. of consumers, Nos. of DT's Nos. of Circle i.e. MIS Data Base & Internal Department sheet.
- Client has provided the category wise consumers (HT/LT) Billed energy & No's of Consumers.
- Monthly Breakup of Input/Billed, Power Purchase & Energy Sold to other is provided for the FY 2021-2022.
- Verified T&D losses, AT&C losses & Collection Efficiency is 24.85%, 24.96% & 99.84% respectively based on the filled in proforma and verified source documents.
- Client has not provided the feeder wise input/billed energy, export energy, T & D Losses & AT& C losses.
- Client has provided the Book of Account as a source document to verify the Energy sold & Purchase.

Meghalaya Energy Corporation Limited. **AZ Energy Engineers Pvt. Ltd.**

Chief Engineer,
Planning Monitoring & Commercial
MePDCL,Shillong

Energy Manager,
MeECL, Meghalaya
CE Reg. No: EA-23306

M/s A-Z Energy Engineers Pvt. Ltd. Dr. P. P. MITTAL Accredited Energy Auditor AEA-011 Faridabad

III. Check List prepared by EmAEA

An annual energy audit checklist is used to assess the energy efficiency of MeECL based on equipment, appliances, design, and usage. Accredited Energy Audi tor develops this checklist to identify opportunities for energy cost reduction and recommend solutions.

Documentary evidence for T & D system related data voltage-wise energy input data, sale data, feeder-wise loss data, collection efficiency etc.

► List of Measures adopted for energy conservation and quantity of energy saved with proper document support.

► Checking & verification of over loading of feeders at Substation level either by the study of SCADA system or by the log book

- Month wise input and billed energy.
- T&D losses computation approach.
- Un-metered energy consumption approach.
- Internal field audit report of input and billed energy.
- Performance of discom on distribution losses.
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- Zone/circle/Division/Sub-division wise loss computation.
- Reduction achieved, measures adopted for energy conservation and quantity of energy saved.
- Report on distribution losses.
- Write up on energy scenario.
- Net Input Energy Computation Details.
- Category wise consumer’s details.
- Category wise consumers connected load and % load
- Bifurcation of Billed Energy (metered billed energy and unmetered billed energy

IV. Brief Approach, Scope & Methodology for audit

Scope of annual energy accounting is as per guidelines and notification from BUREAU OF ENERGY EFFICIENCY, New Delhi dated 6th October, 2021

V. Infrastructure Details

Form-Details of Input Infrastructure					
1	**Parameters**	**Total**	**Covered during in audit**	**Verified by Auditor in Sample Check**	**Remarks (Source of data)**
i	Number of circles	7	7		
ii	Number of divisions	17	17		
iii	Number of sub-divisions	54	54		
iv	Number of feeders	367	367		
v	Number of DTs	12853	12853		
vi	Number of consumers	608752	608752		
2	**Parameters**	**66kV and above**	**33kV**	**11/22kV**	**LT**
a. i.	Number of conventional metered consumers	11	19	659	579928
ii	Number of consumers with 'smart' meters				
iii	Number of consumers with 'smart prepaid' meters				
iv	Number of consumers with 'AMR' meters				
v	Number of consumers with 'non-smart prepaid' meters				9793
vi	Number of unmetered consumers				18342

Form-Details of Input Infrastructure					
1	**Parameters**	**Total**	**Covered during in audit**	**Verified by Auditor in Sample Check**	**Remarks (Source of data)**
vii	**Number of total consumers**	11	19	659	608063
b.i.	Number of conventionally metered Distribution Transformers				3317
ii	Number of DTs with communicable meters				
iii	Number of unmetered DTs				9536
iv	**Number of total Transformers**	36	183		12853
c.i.	Number of metered feeders			255	
ii	Number of feeders with communicable meters				
iii	Number of unmetered feeders			112	
iv	**Number of total feeders**			367	
d.	Line length (ct km)	31756.52 (LT line)+ 19683.13 (11 kV line)+ 2630.66 (33kV line)			
e.	Length of Aerial Bunched Cables	0			
f.	Length of Underground Cables	1.86			

VI. Power Purchase details

MeECL, Meghalaya purchase the power from the various type of generation station the details of month wise purchase power is given in the following table:

Month	POWER IMPORTED BY MePDCL																			
	Central Generating Stations												MePGCL	Other Sources						Total
	Kopili	Kopili-2	Khan-dong	RHEP	Doyang	AGBPP	AGTPP	Pare	Kameng	Pallatana	BGTPP	Sub-Total		Power Banking Import (Inter-state)	Bilateral Purchase	IEX	DSM		Sub-Total	
																	Inter- state	Intra- state		
Apr-21	0.00	0.00	5.46	5.01	0.47	15.34	10.18	1.92	1.84	9.72	0.00	49.93	51.33	0.0	41.5	2.83	4.34	0.25	48.89	150.15
May-21	0.00	0.00	4.22	13.02	0.31	19.40	10.39	5.24	4.81	26.19	0.00	83.58	52.62	26.0	2.1	3.74	0.69	1.12	33.61	169.81
Jun-21	0.00	0.00	5.73	17.77	0.63	18.72	10.13	7.95	7.06	26.13	0.00	94.11	105.52	1.2	0.0	0.00	0.28	0.22	1.67	201.31
Jul-21	0.00	0.00	6.05	18.96	1.91	18.17	10.49	8.17	10.28	32.53	0.00	106.57	120.75	0.0	0.0	0.00	0.43	0.00	0.43	227.75
Aug-21	0.00	0.00	6.01	21.78	2.60	16.70	9.67	9.17	7.18	44.94	0.00	118.04	145.48	0.0	0.0	0.00	0.55	0.03	0.58	264.09
Sep-21	0.00	0.00	5.86	20.25	1.71	16.58	9.36	8.82	6.99	44.38	0.00	113.95	102.59	0.0	0.0	0.00	0.50	0.00	0.51	217.05
Oct-21	0.00	0.28	5.95	10.64	0.82	16.46	9.61	4.96	6.99	43.93	0.00	99.65	100.98	0.0	0.0	0.00	2.18	0.16	2.33	202.97
Nov-21	0.00	0.60	3.66	5.85	0.67	17.04	9.60	2.68	5.16	39.78	1.23	86.27	49.38	55.5	0.0	0.00	1.11	0.62	57.20	192.85
Dec-21	0.00	0.55	1.54	4.49	0.59	18.11	9.73	1.97	3.81	42.60	0.01	83.40	41.35	89.2	0.0	0.00	3.71	0.82	93.71	218.46
Jan-22	0.00	0.09	0.66	3.86	0.42	17.29	9.71	1.68	3.04	42.80	0.70	80.25	39.34	101.7	0.0	0.41	2.94	0.82	105.84	225.44
Feb-22	0.00	0.00	0.00	4.26	0.41	16.05	8.56	1.79	2.56	35.84	0.00	69.47	31.78	79.3	0.0	9.09	1.94	0.69	91.07	192.32
Mar-22	0.00	0.00	0.00	5.86	0.33	17.88	7.25	2.04	3.76	45.52	0.01	82.64	36.65	71.0	0.0	6.89	0.84	0.57	79.33	198.63
2021-22	**0.00**	**1.53**	**45.15**	**131.75**	**10.88**	**207.74**	**114.68**	**56.37**	**63.48**	**434.36**	**1.95**	**1067.88**	**877.78**	**423.8858**	**43.5473**	**22.95**	**19.50**	**5.28**	**515.17**	**2460.83**

VII. Category of service details

Type of consumers with different type of voltage & number of consumers are shown in below table:

S. No	Type of Consumers	Category of Consumers (EHT/HT/LT/ Others)	No of Consumers	Total Consumption (In MU)	kWH/Consumer/ year
1	Domestic	HT/LT	576268	528.89	917.78
2	Commercial	LT	28639	70.04	2445.75
3	Water Supply	LT	365	9.06	24829.21
4	Public Lighting	LT	50	0.45	8927.89
5	HT Water Supply	HT	52	33.81	650142.09
6	HT Industrial	HT	152	776.59	5109171.80
7	Industrial (Small)	LT	556	7.61	13679.83
8	HT Commercial	HT	148	24.27	163966.69
9	Government offices and department	HT/LT	2508	98.49	39268.99
10	Agriculture	LT	13	0.31	24154.69
11	Others-2 (CRM))		1	0.14	135114.00
	Total		**608752**	**1549.65**	**2545.62**

VIII. Calibration Report (Meter)

MEGHALAYA POWER DISTRIBUTION CORPORATION LIMITED
OFFICE OF THE EXECUTIVE ENGINEER
METER TESTING INSPECTION DIVISION
CIN:U40101ML2009SGC008394 LUMJINGSHAI, SHILLONG :eemti2014@gmail.com

METER TESTING & INSPECTION REPORT

Name of Feeder : 11kV Tyrsad Location : 33/11kV Mawlai S/S

Date of Testing : 15-12-2022

Standard Testing Set Specification:-		
Model : Accucheck HT+	Sl. No.: MEG 93017	Class : 0.2s
Type : Portable	Make : Secure Meters Ltd	
Meter Specification:-		
Sl. No : X09524436	Rating : 11kV/√3/110V/√3 -/5A	Class: 0.5s
Type : 3P4W	Make : Secure Meters Ltd	Meter Constant : 0.5s
Testing Results : -		
No. of Pulse Count : 50		
% Error = -0.02 % within limits/ ~~less~~/ ~~more consumption~~		
Meter status : OK ~~or needs replacement~~.		
Meter reading after testing : MWh/~~KWh~~: 163.05	MVAh/~~MVAh~~ : 166.50	
MVA/~~KVA~~: 0.016		
Voltage : 5.88kV, 5.95kV, 5.90kV	Current : 0.56A, 0.53A, 0.52A.	
Phase Sequence : Forward	OMF : 40,000	
Line CT Ratio : 100-200/5A, 100-200/5A, 200-400/5A Make: Pragati Electricals Pvt. Ltd Accuracy Class: 0.5s CT connect at 200/5A	Line PT Ratio: 11KV/110V Make: Pragati Electricals Pvt Ltd Accuracy Class: 0.5s	
Seals :- Old Seal TTB : M002156 New Seal TTB : M002329	Meter Terminal Cover : M002157	
Remarks, if any:-		

For IBDF,
15/12/22
Name : Sanjaya Ku Nayak
Signature : AGM- FEDCo.
Senior Executive

For MePDCL,
15/12/22
Executive Engineer
MTI Division
MePDCL, Shillong

MEGHALAYA ENERGY CORPORATION LIMITED

METER TESTING, INSPECTION DIVISION
METER TESTING LABORATORY
LUM JINGSHAI, SHORT ROUND ROAD, SHILLONG - 793001

3. PHASE ENERGY METER TEST REPORT NO. CR-23/0101

METER TYPE NO.	: R3T055	DATE :	30/04/2023
METER NO.	: NBBD8127	METER CONSTANT :	8000
CLASS	: 0.5	CURRENT RATING :	-/5
SUB-STANDARD METER : TYPE :		ACCUCHEK-LT+	

A. ACCURACY

SL.NO.	LOAD	POWER FACTOR	ACCURACY
1	100%	1.0	- 0.48 %
2.	100%	0.5	- 0.17 %
3.	10%	1.0	- 0.04 %
DIAL TEST 100%		1.0	O.K

B.

SL.NO.	DESCRIPTION OF TEST		STATUS
1	CREEP TEST		OK/~~Not OK~~
2	STARTING TEST		OK/~~Not OK~~
3	BREAKDOWN & INSULATION TEST		OK/~~Not OK~~
4	NO LOAD		OK/~~Not OK~~

Initial Reading Kwh - 006006.2
KvAh - 007046.9

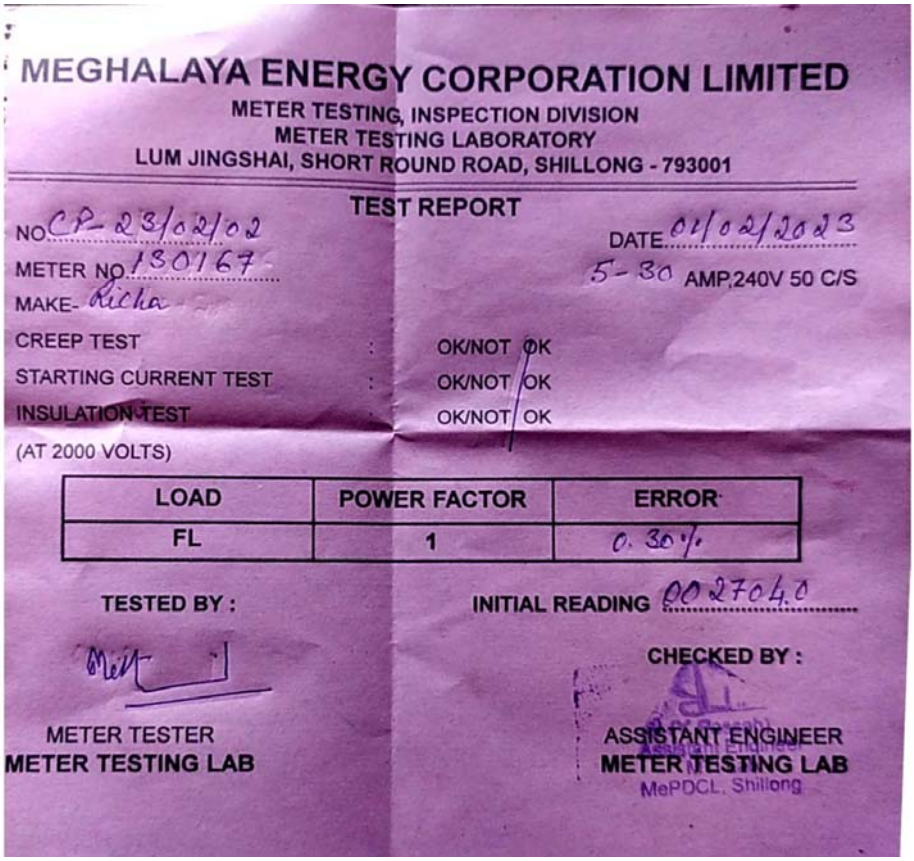
TESTED BY :

METER TESTER
METER TESTING LAB.

CHECKED BY :

(V. Passah)
Assistant Engineer
MTI Lab
MePDCL, Shillong.

ASSISTANT ENGINEER
METER TESTING LAB.



MEGHALAYA ENERGY CORPORATION LIMITED

METER TESTING, INSPECTION DIVISION
METER TESTING LABORATORY
LUM JINGSHAI, SHORT ROUND ROAD, SHILLONG - 793001

TEST REPORT

NO CR-23/02/02 DATE 01/02/2023

METER NO 130167 5-30 AMP,240V 50 C/S

MAKE- Richa

CREEP TEST : OK/NOT OK

STARTING CURRENT TEST : OK/NOT OK

INSULATION TEST : OK/NOT OK

(AT 2000 VOLTS)

LOAD	POWER FACTOR	ERROR
FL	1	0.30%

TESTED BY :

METER TESTER
METER TESTING LAB

INITIAL READING 002704.0

CHECKED BY :

ASSISTANT ENGINEER
METER TESTING LAB
MePDCL, Shillong

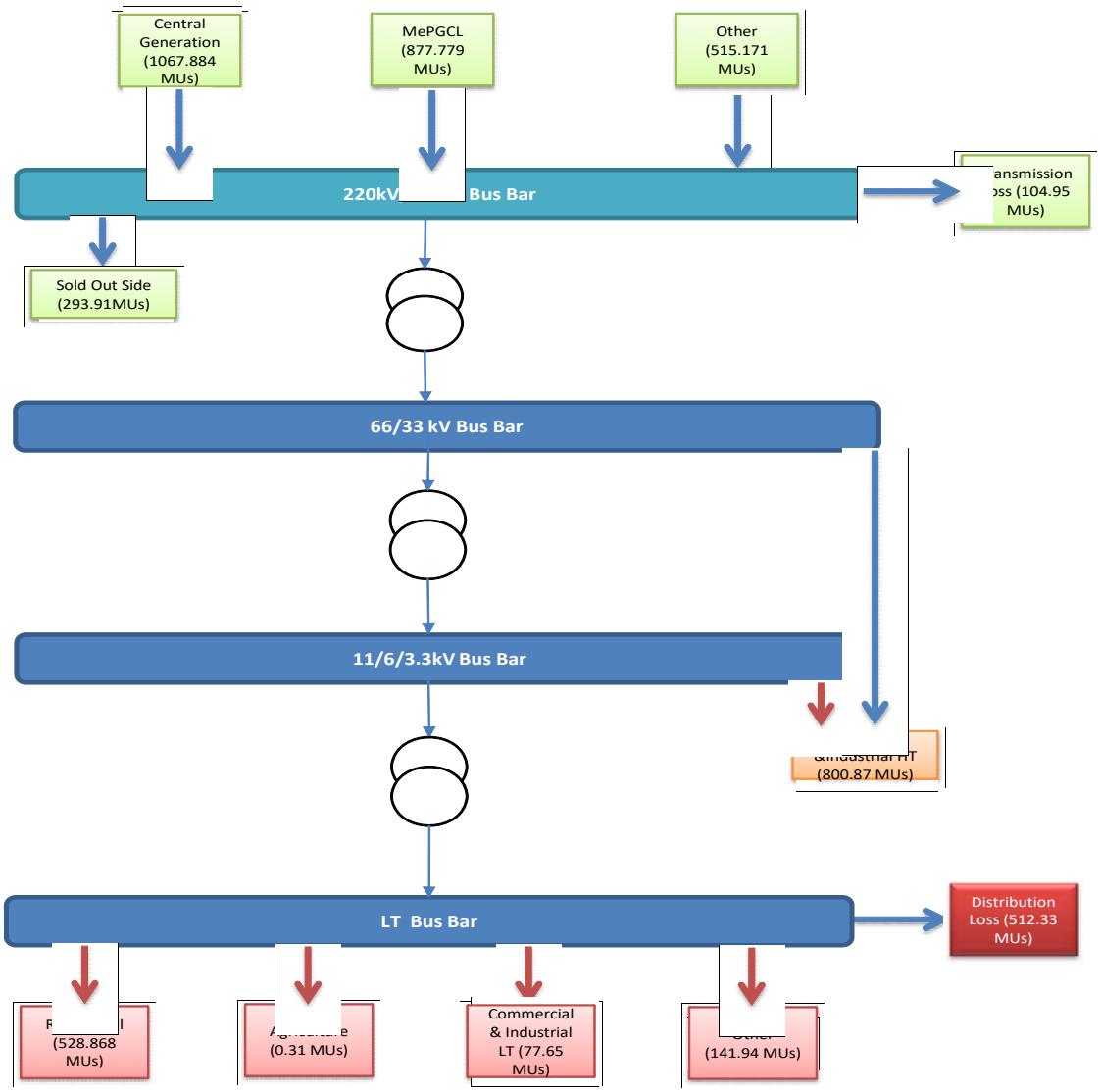
IX. Electrical Distribution System

► Energy flow between transmission and 220kV/132kV/33kV/20 kV/11kV/6.0 kV/3.3 kV incoming distribution feeders

► Energy flow between 132kV/33kV outgoing and 20 kV/11kV/6.6 kV/6.0 kV incoming feeders

► Energy flow between 11kV/6.0 kV/3.3 kV feeders and distribution transformers, or high voltage distribution system

Energy flow between distribution transformer, or high voltage distribution system to end-consumer, including ring main system. Energy flow between Feeder to end-consumer & Energy flow between 132kV/33kV/20 kV/11kV/6.0 kV/3.3 kV directly to consumer



X. List of Document Verified with each parameter

- **Signed Proforma**

General Information					
1	Name of the DISCOM	Meghalaya Energy Corporation Limited (MeECL)			
2	i) Year of Establishment				
	ii) Government/Public/Private				
3	DISCOM's Contact details & Address				
i	City/Town/Village	Lum Jingshai, Short Round Road			
ii	District	East Khasi Hills			
iii	State	Meghalaya	Pin		793001
iv	Telephone		Fax		
4	Registered Office				
i	Company's Chief Executive Name	Shri Sanjay Goyal, IAS			
ii	Designation	Chairman Cum Managing Director			
iii	Address				
iv	City/Town/Village		P.O.		
v	District				
vi	State		Pin		
vii	Telephone		Fax		
5	Nodal Officer Details*				
i	Nodal Officer Name (Designated at DISCOM's)	P.Sahkhar			
ii	Designation	Chief Engineer (PMC)			
iii	Address	Lum Jingshai, Short Round Road			
iv	City/Town/Village	Lum Jingshai, Short Round	P.O.		Shillong
v	District	East Khasi Hills			
vi	State	Meghalaya	Pin		793001
vii	Telephone	9863074990	Fax		
6	Energy Manager Details*				
i	Name	Santanu Mandal			
ii	Designation	Energy Manager	Whether EA or EM		EM
iii	EA/EM Registration No.				
iv	Telephone	9851628686	Fax		
v	Mobile		E-mail ID	cem.meecl@gmail.com	
7	Period of Information				
	Year of (FY) information including Date and Month (Start & End)	1st Apr, 2021 - 30th March, 2022			

Energy Manager,
MeECL, Meghalaya
BEE Reg. No: EA-23306

Performance Summary of Electricity Distribution Companies				
1	Period of Information Year of (FY) information including Date and Month (Start & End)	1st Apr, 2021 - 30th March, 2022		
2	Technical Details			
(a)	Energy Input Details			
(i)	Input Energy Purchase (From Generation Source)	Million kwh		2460.84
(ii)	Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh		2061.97
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh		1549.63
(b)	Transmission and Distribution (T&D) loss Details	Million kwh		512.33
		%		24.85%
	Collection Efficiency	%		100%
(c)	Aggregate Technical & Commercial Loss	%		25%

I/We undertake that the information supplied in this Document and Pro-forma is accurate to the best of my knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss.

Authorised Signatory and Seal

Name of Authorised Signatory
Name of the DISCOM:
Full Address:-

11/2/23
Chief Engineer,
Planning Monitoring & Commercial
MePDCL,Shillong

Signature:-
Name of Energy Manager*:
Registration Number:

Energy Manager,
MeECL, Meghalaya
BEE Reg. No: EA-23

Form-Details of Input Infrastructure

1	Parameters	Total	Covered during in audit	Verified by Auditor in Sample Check	Remarks (Source of data)
i	Number of circles	7			
ii	Number of divisions	17			
iii	Number of sub-divisions	54			
iv	Number of feeders	367			
v	Number of DTs	12853			
vi	Number of consumers	608752			
2	Parameters	66kV and above	33kV	11/22kV	LT
a.i.	Number of conventional metered consumers	11	19	659	579928
ii	Number of consumers with 'smart' meters				
iii	Number of consumers with 'smart prepaid' meters				
iv	Number of consumers with 'AMR' meters				
v	Number of consumers with 'non-smart prepaid' meters				9793
vi	Number of unmetered consumers				18342
vii	**Number of total consumers**	11	19	659	608063
b.i.	Number of conventionally metered Distribution Transformers				3317
ii	Number of DTs with communicable meters				
iii	Number of unmetered DTs				9536
iv	**Number of total Transformers**	36	183		12853
c.i.	Number of metered feeders			255	
ii	Number of feeders with communicable meters				
iii	Number of unmetered feeders			112	
iv	**Number of total feeders**			367	
d.	Line length (ckt km)		31756.52 (LT line)+ 19683.13 (11 kV line)+ 2630.66 (33kV line)		
e.	Length of Aerial Bunched Cables		0		
f.	Length of Underground Cables		1.86		

Details of Division Wise Losses (See note below**)

Division Wise Losses

Period From 2021 To 2022

S.No	Name of circle	Circle code	Name of Division	Consumer category	No of connection metered (Nos)	No of connection Un-metered (Nos)	Total Number of connections (Nos)	% of number of connections	Connected Load metered (MW)	Connected Load Un-metered (MW)	Total Connected Load (MW)	% of connected load	Input energy (MU)	Metered energy	Unmetered/assessment energy	Total energy	% of energy consumption	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
					Consumer profile								Energy parameters	Billed energy (MU)				Losses		Commercial Parameter			
1	Shillong			Residential	109103	0	109103	89%	220.79984	0	220.79984	69%	419.657	202.46	0	202.4627976	57%	65.49528	16%	122.24	116.89208	95.63%	
				Agricultural	0	0	0	0%	0.00	0	0	0%		0.04	0	0.04	0%			0.019	0.0219804	115.69%	
				Commercial/Industrial-LT	12361	0	12361	10%	35.53	0	35.53384	11%		30.55	0	30.55	9%			30.832	28.54	92.57%	
				Commercial/Industrial-HT	106	0	106	0%	17.57	0	17.56509	6%		21.68	0	21.67892151	6%			19.702	19.8270911	100.63%	
				Others	861	0	861	1%	44.90	0	44.90267	14%		99.43	0	99.43	28%			79.296	128.25	161.74%	
Sub-total					122431	0	122431	100%	318.80144	0	318.80144	100%	419.657	354.1617	0	354.1617191	100%	65.49528	16%	252.089	293.531151	116.44%	2%
2	i Circle/W			Residential	55592	0	55592	95%	32.22	0	32.219	13%	795.721	48.93	0	48.93230518	7%	84.05164	11%	24.9854937	14.9100853	59.67%	
				Agricultural	2	0	2	0%	0.02	0	0.017	0%		0.02	0	0.02	0%			0.009124	0.01	109.60%	
				Commercial/Industrial-LT	2612	0	2612	4%	8.11	0	8.10877	3%		9.36	0	9.36	1%			7.65278677	6.43118986	84.04%	
				Commercial/Industrial-HT	120	0	120	0%	192.00	0	191.9988	80%		641.70	0	641.6970542	90%			349.237848	342.39	98.04%	
				Others	276	0	276	0%	8.10	0	8.101	3%		11.66	0	11.66	2%			10.3061944	8.14	78.98%	
Sub-total					58602	0	58602	100%	240.44457	0	240.44457	100%	795.721	711.6694	0	711.6693594	100%	84.05164	11%	392.191446	371.881275	94.82%	15%
3	West Garo			Residential	88722	4584	93306	97%	40.53	0	40.526	77%	142.976	52.54	2.651	55.18876614	79%	73.03723	51%	27.674	19.2404908	69.53%	
				Agricultural	2	0	2	0%	0.02	0	0.01921	0%		0.04	0	0.04	0%			0.014	0.05	357.14%	
				Commercial/Industrial-LT	2343	0	2343	2%	6.49	0	6.48515	12%		7.64	0	7.64	11%			5.498	4.73	86.03%	
				Commercial/Industrial-HT	3	0	3	0%	0.59	0	0.587	1%		0.18	0	0.18	0%			0.426	0.25	58.69%	
				Others	390	0	390	0%	5.07	0	5.071	10%		6.89	0	6.89	10%			4.843	8.12	167.66%	
Sub-total					91460	4584	96044	100%	52.68836	0	52.68836	100%	142.976	67.28764	2.651129	69.93876614	100%	73.03723	51%	38.455	32.3904908	84.23%	59%
4	East Garo Hills Circle			Residential	68334	12610	80944	96%	69.95	0	69.95	79%	153.576	48.13	2.78	50.9097833	85%	93.33622	61%	26.438	12.9940478	49.15%	
				Agricultural	2	0	2	0%	0.06	0	0.061	0%		0.02	0	0.02	0%			0.006	0	0.00%	
				Commercial/Industrial-LT	2744	0	2744	3%	6.30	0	6.29951	7%		5.21	0	5.21	9%			4.079	2.85	69.87%	
				Commercial/Industrial-HT	5	0	5	0%	5.28	0	5.28	6%		0.40	0	0.4	1%			0.826	0.11962387	14.48%	
				Others	393	0	393	0%	6.44	0	6.44	7%		3.70	0	3.7	6%			2.763	2.61	94.46%	
Sub-total					71478	12610	84088	100%	88.03051	0	88.03051	100%	153.576	57.45728	2.78250197	60.2397833	100%	93.33622	61%	34.112	18.5736717	54.45%	79%
5	Hills Circle/			Residential	72932	0	72932	96%	82.96	0	82.956	51%	327.113	63.11	0	63.11426452	30%	115.0087	35%	32.291	32.4632042	100.55%	
				Agricultural	0	0	0	0%	0.00	0	0	0%		0.00	0	0	0%			0	0	0.00%	
				Commercial/Industrial-LT	3011	0	3011	4%	11.61	0	11.60994	7%		10.08	0	10.08	5%			8.725	7.39	84.70%	
				Commercial/Industrial-HT	27	0	27	0%	62.51	0	62.50898	38%		132.51	0	132.51	62%			79.902	82.8939572	103.74%	
				Others	297	0	297	0%	6.20	0	6.204	4%		6.40	0	6.4	3%			5.442	6.83	125.51%	
Sub-total					76267	0	76267	100%	163.27892	0	163.27892	100%	327.113	212.1043	0	212.1042645	100%	115.0087	35%	126.36	129.582161	102.55%	34%
6	Hills Circle/			Residential	141326	708	142034	96%	142.35	0	142.3532	78%	158.953	82.42	0.42	82.84010247	77%	50.8329	32%	46.463	48.1665363	103.67%	
				Agricultural	1	0	1	0%	0.10	0	0.10121	0%		0	0	0.17	0%			0.084	0.08	95.24%	
				Commercial/Industrial-LT	5091	0	5091	3%	20.39	0	20.3932	11%		12	0	12.25	11%			10.689	10.61	99.26%	
				Commercial/Industrial-HT	31	0	31	0%	12.58	0	12.58199	7%		4	0	3.93	4%			3.834	1.31	34.17%	
				Others	549	0	549	0%	8.18	0	8.182	4%		9	0	8.93	8%			7.14	10.21	143.00%	
Sub-total					146998	708	147706	100%	183.6116	0	183.6116	100%	158.953	107.7022	0.417915	108.1203025	100%	50.8329	32%	68.21	70.3765363	103.18%	30%
7	Tura			Residential	21917	440	22357	95%	28.04466	0	28.04466	72%	63.97	25.42	0	25.42	76%	30.57	48%	12.534	8.32733222	66.44%	
				Agricultural	6	0	6	0%	0.01667	0	0.01667	0%		0.02	0	0.02	0%			0.011	0.01	90.91%	
				Commercial/Industrial-LT	999	0	999	4%	3.65694	0	3.65694	9%		2.56	0	2.56	8%			2.072	0.97	46.81%	
				Commercial/Industrial-HT	8	0	8	0%	0.97457	0	0.97457	3%		0.47	0	0.47	1%			0.533	0.24	45.03%	
				Others	244	0	244	1%	6.103	0	6.103	16%		4.93	0	4.93	15%			5.035	4.27	84.81%	
Sub-total					23174	440	23614	100%	38.79584	0	38.79584	100%	63.97	33.4	0	33.4	100%	30.57	48%	20.185	13.8173322	68.45%	64%
8				Residential	0	0	0	0%	0	0	0	0%	0	0	0	0	0%	0	0%	0	0	0.00%	
				Agricultural	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-LT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-HT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Others	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
Sub-total					0	0	0	100%	0	0	0	100%	0	0	0	0	100%	0	0%	0	0	0.00%	100%
9				Residential	0	0	0	0%	0	0	0	0%	0	0	0	0	0%	0	0%	0	0	0.00%	
				Agricultural	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-LT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-HT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Others	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
Sub-total					0	0	0	100%	0	0	0	100%	0	0	0	0	100%	0	0%	0	0	0.00%	100%
10				Residential	0	0	0	0%	0	0	0	0%	0	0	0	0	0%	0	0%	0	0	0.00%	
				Agricultural	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-LT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-HT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Others	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
Sub-total					0	0	0	100%	0	0	0	100%	0	0	0	0	100%	0	0%	0	0	0.00%	100%
11				Residential	0	0	0	0%	0	0	0	0%	0	0	0	0	0%	0	0%	0	0	0.00%	
				Agricultural	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-LT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-HT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Others	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
Sub-total					0	0	0	100%	0	0	0	100%	0	0	0	0	100%	0	0%	0	0	0.00%	100%

Chief Engineer,
Planning, Monitoring & Commercial
MePDCL,Shillong

Energy Manager,
MeECL, Meghalaya
BEE Reg. No: EA-23306

Energy Manager,
MeECL, Meghalaya
BEE Reg. No.

29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
			Total	608752	1549.65	

Energy Manager,
MeECL, Meghal[illegible]
BEE Reg. No: [illegible]

Details of Input Energy Sources								
Period From 2021 To 2022								
A. Generation at Transmission Periphery (Details)								
S.No.	Name of Generation Station	Generation Capacity (In MW)	Type of Station Generation (Based- Solid (Coal /Lignite)/Liquid/Gas/Renewable (biomass-bagasse)/Others)	Type of Contract (in years/months/days)	Type of Grid (Intra-state/Inter-state)	Point of Connection (POC) Loss MU	Voltage Level (At input)	Remarks (Source of data)
1	Umiam I	4X9	Hydro	PPA (25)	Intra-state		132	Management
2	Umiam II	2X10	Hydro	PPA (25)	Intra-state		132	Management
3	Umiam III	2X30	Hydro	PPA (25)	Intra-state		132	Management
4	Umiam IV	2X30	Hydro	PPA (25)	Intra-state		132	Management
5	MLHEP	3X42	Hydro	PPA (25)	Intra-state		132	Management
6	Umtru	4X2.8	Hydro	PPA (25)	Intra-state		132	Management
7	Sunapani	1X1.5	Hydro	PPA (25)	Intra-state		132	Management
8	New Umtru	2X20	Hydro	PPA	Intra-state		132	Management
9	Lakroh	1X1.5	Hydro	PPA	Intra-state	17.68983235	132	Management
10	KOPILI	4X50	Hydro	PPA (5)	Inter-state		132	Management
11	KOPILI-Ext	1X25	Hydro	PPA (5)	Inter-state	0.030750341	132	Management
12	KHANDONG	2X25	Hydro	PPA (5)	Inter-state	0.909853986	132	Management
13	RANGANADI	3X135	Hydro	PPA (5)	Inter-state	2.655226289	132	Management
14	DOYANG	3X25	Hydro	PPA (5)	Inter-state	0.219221155	132	Management
15	AGBPP	6X33.5 +3X30	Gas-Steam	PPA (5)	Inter-state	4.186556231	132	Management
16	AGTPP	4X21+2x25.5	Gas	PPA (5)	Inter-state	2.311142771	132	Management
17	FSTPS	3X200+2X500	Coal	PPA (NA)	Inter-state		132	Management
18	KHSTPS-I	4X210	Coal	PPA (NA)	Inter-state		132	Management
19	KHSTPS-II	3X500	Coal	PPA (25)	Inter-state		132	Management
20	TSTPS-I	2X500	Coal	PPA (NA)	Inter-state		132	Management
21	OTPC	2X363.3	Gas-Steam	PPA (25)	Inter-state		132	Management
22	Loktak	3X35	Hydro	PPA (15)	Inter-state		132	Management
23	AGTPP-CS	41	Gas-Steam	PPA	Inter-state		132	Management
24	Tipaimukh	1500	Hydro	PPA (5)	Inter-state		132	Management

25	BTPS	3X250	Coal	PPA (25)	inter-state		132	Management
26	Leitkai-DS	3X30	Hydro	PPA (5)	inter-state		132	Management
27	Subansiri	8X250	Hydro	PPA (5)	inter-state		132	Management
28	Pare	2X55	Hydro	PPA (5)	inter-state	1.136102212	132	Management
29	Kameng	4X150	Hydro	PPA (5)	inter-state	1.27925987	132	Management
30	Pallatana		Hydro	PPA	inter-state	8.75367656	132	Management
31	BgTPP		Hydro	PPA	inter-state	0.03921397	132	Management

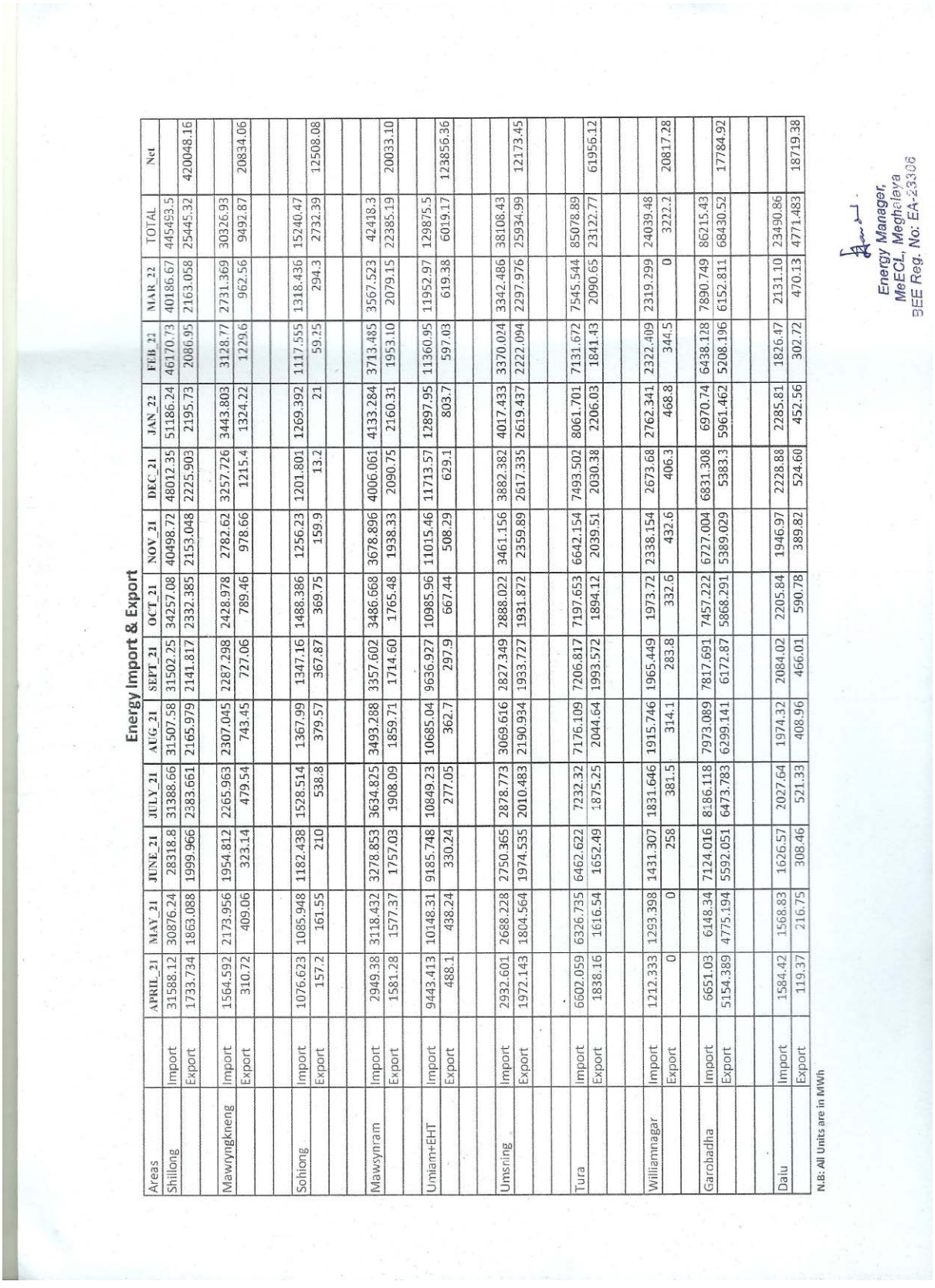
(Details of Consumers)

Summary of Energy

Period From April 21 to March 22

S.No	Type of Consumers	Category of Consumers (EHT/HT/LT/Others)	Voltage Level (In Voltage)	No of Consumers	Total Consumption (In MU)	Remarks (Source of data)
1	Domestic	HT/LT		576268	528.89	
2	Commercial	LT		28639	70.04	
3	IP Sets					
4	Hor. & Nur. & Coffee/Tea & Rubber (Metered)					
5	Hor. & Nur. & Coffee/Tea & Rubber (Flat)					
6	Heating and Motive Power					
7	Water Supply	LT		365	9.06266344	
8	Public Lighting	LT		50	0.44639455	
9	HT Water Supply	HT		52	33.80738852	
10	HT Industrial	HT		152	776.5941138	
11	Industrial (Small)	LT		556	7.605984776	
12	Industrial (Medium)				0	
13	HT Commercial	HT		148	24.26706983	
14	Applicable to Government Hospitals & Hospitals					
15	Lift Irrigation Schemes/Lift Irrigation Societies					
16	HT Res. Apartments Applicable to all areas					
17	Mixed Load					
18	Government offices and department	HT/LT		2508	98.48662355	
19	AP Agriculture	LT		13	0.31401099	
20	Others-2 (if any, specify in remarks)			1	0.135114	Crematorium (CRM)
21	Others-3 (if any, specify in remarks)					
22	Others-4 (if any, specify in remarks)					
23	Others-5 (if any, specify in remarks)					
24						
25						
26						
27						
28						

- **Import Export at Injection Point**



Energy Import & Export

Areas		APRIL_21	MAY_21	JUNE_21	JULY_21	AUG_21	SEPT_21	OCT_21	NOV_21	DEC_21	JAN_22	FEB_22	MAR_22	TOTAL	Net
Shillong	Import	31588.12	30876.24	28318.8	31388.66	31507.58	31502.25	34257.08	40498.72	48012.35	51186.24	46170.73	40186.67	445493.5	
	Export	1733.734	1863.088	1999.966	2383.661	2165.979	2141.817	2332.385	2153.048	2225.903	2195.73	2086.95	2163.058	25445.32	420048.16
Mawryngkneng	Import	1564.592	2173.956	1954.812	2265.963	2307.045	2287.298	2428.978	2782.62	3257.726	3443.803	3128.77	2731.369	30326.93	
	Export	310.72	409.06	323.14	479.54	743.45	727.06	789.46	978.66	1215.4	1324.22	1229.6	962.56	9492.87	20834.06
Sohiong	Import	1076.623	1085.948	1182.438	1528.514	1367.99	1347.16	1488.386	1256.23	1201.801	1269.392	1117.555	1318.436	15240.47	
	Export	157.2	161.55	210	538.8	379.57	367.87	369.75	159.9	13.2	21	59.25	294.3	2732.39	12508.08
Mawsynram	Import	2949.38	3118.432	3278.853	3634.825	3493.288	3357.602	3486.668	3678.896	4006.061	4133.284	3713.485	3567.523	42418.3	
	Export	1581.28	1577.37	1757.03	1908.09	1859.71	1714.60	1765.48	1938.33	2090.75	2160.31	1953.10	2079.15	22385.19	20033.10
Umiam+EHT	Import	9443.413	10148.31	9185.748	10849.23	10685.04	9636.927	10985.96	11015.46	11713.57	12897.95	11360.95	11952.97	129875.5	
	Export	488.1	438.24	330.24	277.05	362.7	297.9	667.44	508.29	629.1	803.7	597.03	619.38	6019.17	123856.36
Umsning	Import	2932.601	2688.228	2750.365	2878.773	3069.616	2827.349	2888.022	3461.156	3882.382	4017.433	3370.024	3342.486	38108.43	
	Export	1972.143	1804.564	1974.535	2010.483	2190.934	1933.727	1931.872	2359.89	2617.335	2619.437	2222.094	2297.976	25934.99	12173.45
Tura	Import	6602.059	6326.735	6462.622	7232.32	7176.109	7206.817	7197.653	6642.154	7493.502	8061.701	7131.672	7545.544	85078.89	
	Export	1838.16	1616.54	1652.49	1875.25	2044.64	1993.572	1894.12	2039.51	2030.38	2206.03	1841.43	2090.65	23122.77	61956.12
Williamnagar	Import	1212.333	1293.398	1431.307	1831.646	1915.746	1965.449	1973.72	2338.154	2673.68	2762.341	2322.409	2319.299	24039.48	
	Export	0	0	258	381.5	314.1	283.8	332.6	432.6	406.3	468.8	344.5	0	3222.2	20817.28
Garobadha	Import	6651.03	6148.34	7124.016	8186.118	7973.089	7817.691	7457.222	6727.004	6831.308	6970.74	6438.128	7890.749	86215.43	
	Export	5154.389	4775.194	5592.051	6473.783	6299.141	6172.87	5868.291	5389.029	5383.3	5961.462	5208.196	6152.811	68430.52	17784.92
Dalu	Import	1584.42	1568.83	1626.57	2027.64	1974.32	2084.02	2205.84	1946.97	2228.88	2285.81	1826.47	2131.10	23490.86	
	Export	119.37	216.75	308.46	521.33	408.96	466.01	590.78	389.82	524.60	452.56	302.72	470.13	4771.483	18719.38

N.B: All Units are in MWh

Energy Manager,
MeECL, Meghalaya
BEE Reg. No: EA-23306

- **Injection Point Breakup Month wise**

Energy Injection (MWh) for 2021-22

Circle/Division	Areas	APRIL_21	MAY_21	JUNE_21	JULY_21	AUG_21	SEPT_21	OCT_21	NOV_21	DEC_21	JAN_22	FEB_22	MAR_22	TOTAL
Shillong	Shillong	**29854.39**	**29013.16**	**26318.83**	**29005.00**	**29341.60**	**29360.44**	**31924.70**	**38345.68**	**45786.45**	**48990.51**	**44083.78**	**38023.62**	**420048.16**
East Khasi Hills	Mawryngkneng	1253.87	1764.90	1631.67	1786.42	1563.59	1560.24	1639.52	1803.96	2042.33	2119.58	1899.17	1768.81	20834.06
	Cherra	1255.00	1263.58	1342.36	1548.74	1427.81	1425.93	1693.75	1804.75	1890.87	2124.74	1849.55	798.09	18426.22
	Pynursla	601.68	713.20	750.84	798.87	691.97	710.68	749.11	810.27	937.08	839.07	846.67	699.73	9149.16
	Sohiong	919.42	924.40	972.44	983.71	988.42	979.29	1118.64	1096.33	1188.60	1248.39	1058.30	1024.14	12508.08
	Total	**4030.98**	**4666.07**	**4697.30**	**5123.75**	**4671.79**	**4676.19**	**5201.01**	**5515.31**	**6058.88**	**6331.79**	**5653.69**	**4290.77**	**60917.52**
South Khasi Hills	Mawsynram	1368.10	1541.06	1521.83	1726.74	1633.58	1643.00	1721.18	1740.57	1915.31	1972.98	1760.39	1488.38	20033.10
	Mawkyrwat	1567.36	1563.01	1742.57	1892.73	1844.45	1699.80	1749.28	1922.33	2073.47	2142.78	1936.74	2062.15	22196.66
	Total	**2935.46**	**3104.07**	**3264.39**	**3619.46**	**3478.03**	**3342.80**	**3470.47**	**3662.90**	**3988.78**	**4115.75**	**3697.12**	**3550.52**	**42229.77**
West Khasi Hills	Nongstoin	1913.21	1907.90	1778.92	1732.34	1833.34	1774.95	1952.18	2262.26	2657.24	2711.86	2354.07	2077.78	24956.05
	Riangdo	975.01	972.30	1116.12	1227.45	1158.07	1084.48	1233.09	1371.85	1554.12	1591.28	1166.47	1217.48	14667.70
	Mairang	1225.61	1222.21	1180.50	1451.07	1358.91	1302.07	1410.73	1392.30	1490.11	1532.59	1349.35	1419.24	16334.70
	Total	**4113.83**	**4102.41**	**4075.54**	**4410.86**	**4350.31**	**4161.49**	**4596.01**	**5026.41**	**5701.47**	**5835.72**	**4869.89**	**4714.50**	**55958.45**
Khasi Hills Circle	**Total**	**11080.26**	**11872.56**	**12037.23**	**13154.08**	**12500.13**	**12180.48**	**13267.49**	**14204.61**	**15749.13**	**16283.27**	**14220.71**	**12555.79**	**159105.74**
Jowai	Jowai	2063.62	1939.74	1580.05	1931.63	2171.43	2191.37	2033.12	2309.70	2831.51	2956.28	2775.97	2273.66	27058.11
	Jaiong	643.76	638.82	696.50	741.93	742.62	711.53	736.16	804.91	927.46	958.30	865.89	780.65	9248.52
	Amlarem	719.00	848.77	988.53	1146.23	1161.42	1187.31	899.77	872.56	1014.39	1037.58	910.69	844.02	11630.29
	Total	**3426.38**	**3427.33**	**3265.09**	**3819.80**	**4075.47**	**4090.21**	**3669.05**	**3987.18**	**4773.37**	**4952.16**	**4552.55**	**3898.33**	**47936.92**
Jowai Rural	Khliehtyrshi+Wahiajer,etc	1632.96	1570.41	1897.08	1752.54	1516.91	1410.02	1876.89	1790.29	2107.01	2144.86	1921.58	1888.10	21508.67
	Shangpung+Priang	1184.71	1298.30	1322.87	1388.25	1392.37	1254.15	1329.71	1484.83	1705.58	1751.50	1571.83	1394.48	17078.60
	Total	**2817.68**	**2868.72**	**3219.95**	**3140.79**	**2909.28**	**2664.17**	**3206.60**	**3275.12**	**3812.60**	**3896.36**	**3493.41**	**3282.58**	**38587.27**
Khliehriat	EHT Consumers	7818.50	10492.75	13373.41	10845.97	16203.88	11456.28	13870.74	15963.44	20257.86	17589.93	9214.34	17624.77	164716.86
	Khliehriat	1425.67	1400.26	1504.19	1622.12	1663.38	1442.70	1564.99	1810.46	2141.08	2263.74	2053.69	1670.09	20562.37
	East Jaintia(ex Khliehriat, EHT consumer)	3766.56	3436.13	4165.76	4647.96	4779.14	4010.05	4273.27	5023.45	5796.58	5823.88	5248.41	4628.78	55619.97
	Total	**13030.72**	**15329.13**	**19043.36**	**17116.05**	**22646.40**	**16909.02**	**19709.00**	**22802.35**	**28195.52**	**25677.55**	**16516.44**	**23923.65**	**240899.19**
Jaintia Hills Circle	**Total**	**19274.78**	**21625.18**	**25528.41**	**24076.64**	**29631.15**	**23663.40**	**26584.66**	**30064.65**	**36781.48**	**34526.07**	**24562.41**	**31104.56**	**327423.38**
Umiam	Umiam	8185.58	8690.88	8426.94	9158.57	9321.91	8132.09	9180.23	9364.54	10283.96	10440.57	9337.88	9851.11	110374.26
	EHT Consumer	769.73	1019.20	428.57	1413.61	1000.43	1206.93	1138.28	1142.62	800.51	1653.69	1426.04	1482.47	13482.10
	Umsning	960.46	883.66	775.83	868.29	878.68	893.62	956.15	1101.27	1265.05	1398.00	1147.93	1044.51	12173.45
	Total	**9915.77**	**10593.74**	**9631.34**	**11440.47**	**11201.02**	**10232.65**	**11274.67**	**11608.43**	**12349.52**	**13492.25**	**11911.85**	**12378.10**	**136029.80**
Nongpoh	Total	1972.14	1804.56	1974.53	2010.48	2190.93	1933.73	1931.87	2359.89	2617.33	2619.44	2222.09	2297.98	25934.99
Byrnihat	Byrnihat	15185.86	17068.60	14542.85	14703.17	16296.12	16748.53	18871.04	19528.76	19437.75	21195.49	18484.84	19720.07	211783.08
	EHT Consumers	26404.44	35050.84	35362.57	34451.93	37796.59	35337.62	37118.57	35013.51	37607.56	37629.57	33980.54	36982.23	422735.98
	Total	**41590.30**	**52119.44**	**49905.42**	**49155.10**	**54092.71**	**52086.15**	**55989.61**	**54542.27**	**57045.31**	**58825.06**	**52465.39**	**56702.30**	**634519.06**
Ri-Bhoi Circle	**Total**	**53478.21**	**64517.74**	**61511.29**	**62606.05**	**67484.67**	**64252.52**	**69196.15**	**68510.59**	**72012.17**	**74936.74**	**66599.34**	**71378.37**	**796483.86**
East Garo Hills	Bajengdoba	2445.80	2493.94	3127.76	3408.91	3528.18	3958.31	3413.58	3420.96	3938.25	3972.50	3069.46	3323.59	40101.25
	Mendipathar	3337.21	3326.50	3392.49	3566.60	3638.70	3403.22	3361.88	3279.10	3760.78	3723.45	2859.10	3118.25	40767.28
	Williamnagar	1212.33	1293.40	1173.31	1450.15	1601.65	1681.65	1641.12	1965.55	2267.38	2293.54	1977.91	2319.30	20817.28

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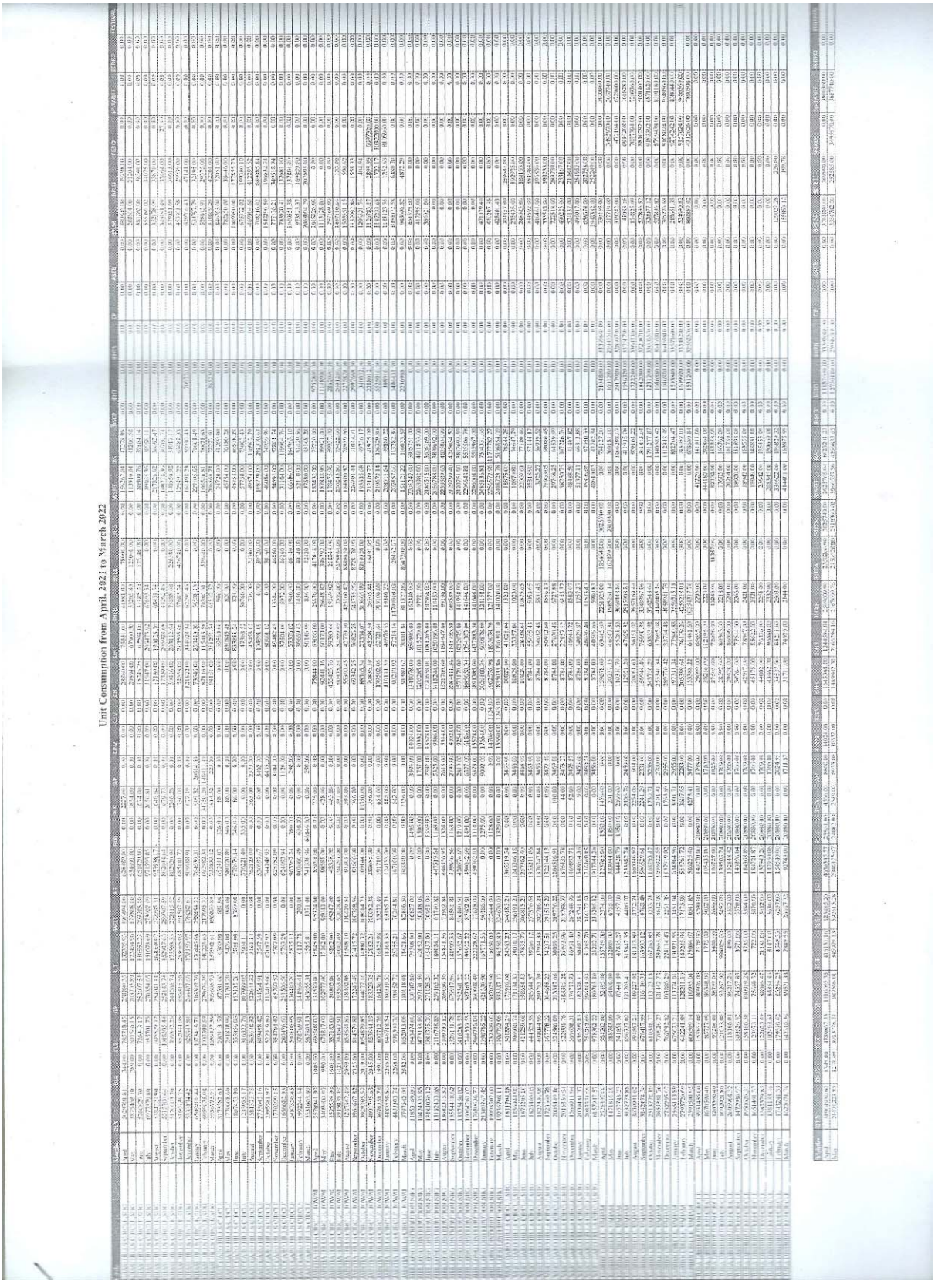
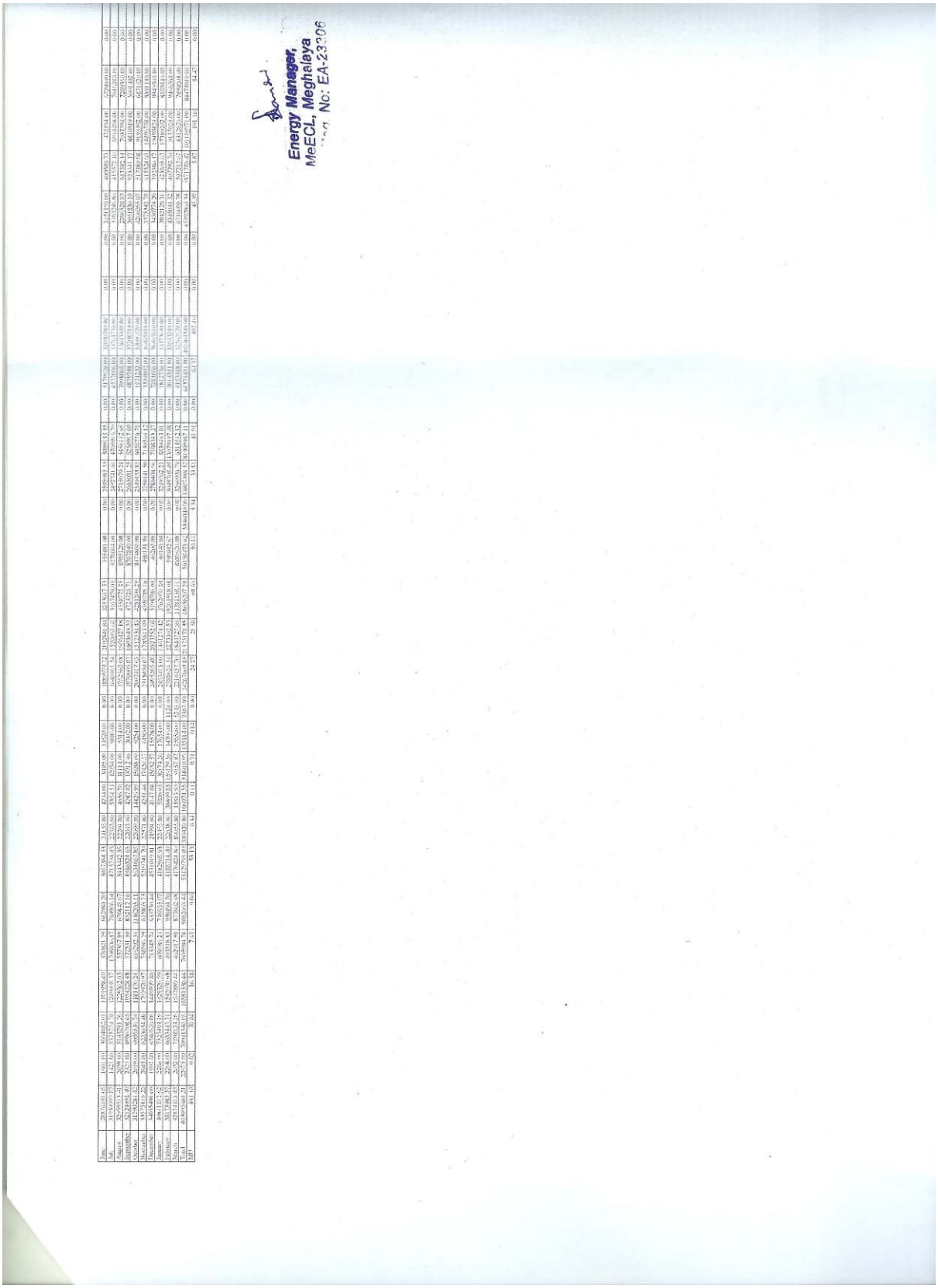
	Total	**6995.34**	**7113.84**	**7693.56**	**8425.66**	**8768.52**	**9043.18**	**8416.58**	**8605.61**	**9966.42**	**9989.49**	7906.47	8761.14	**101685.81**
South Garo Hills	Baghmara	1168.68	1171.48	1435.93	1474.35	1492.82	1566.74	1491.79	1536.37	1825.43	1842.95	1503.63	1725.61	18235.78
	Nangalbibra	2280.12	2455.81	2653.20	2545.35	2366.63	2364.40	2988.16	2192.62	2547.57	2641.02	2064.12	2122.08	29221.09
	Chockpot	119.37	216.75	308.45	521.33	408.96	466.01	590.78	389.82	524.60	452.56	302.72	470.13	4771.48
	Total	**3568.18**	**3844.04**	**4397.59**	**4541.03**	**4268.40**	**4397.15**	**5070.72**	**4118.82**	**4897.61**	**4936.52**	3870.47	**4317.82**	**52228.35**
East Garo Hills Circle	**Total**	**10563.51**	**10957.88**	**12091.15**	**12966.69**	**13036.93**	**13440.32**	**13487.30**	**12724.43**	**14864.03**	**14926.01**	11776.94	**13078.96**	**153914.15**
Tura	**Tura**	**4763.90**	**4710.20**	**4810.13**	**5357.07**	**5131.47**	**5213.24**	**5303.53**	**4602.64**	**5463.12**	**5855.67**	**5290.24**	**5454.89**	61956.12
West Garo Hills	Dalu	1465.05	1352.08	1318.11	1506.31	1565.36	1618.01	1615.06	1557.15	1704.28	1833.25	1523.75	1660.97	18719.38
	Phulbari	4921.71	4471.30	5266.40	6092.12	5936.14	5807.22	5562.12	4986.20	4984.02	5554.24	4892.46	5801.74	64275.67
	Total	**6386.76**	**5823.38**	**6584.51**	**7598.43**	**7501.50**	**7425.23**	**7177.18**	**6543.35**	**6688.30**	**7387.49**	6416.21	**7462.71**	**82995.05**
South West Garo Hills	Garobadha	1496.64	1373.15	1531.97	1712.33	1673.95	1644.82	1588.93	1337.98	1448.01	1009.28	1229.93	1737.94	17784.92
	Mahendraganj	2800.22	2870.57	2977.87	3446.54	3271.28	3319.42	3164.03	2952.67	3099.05	4102.98	2919.29	3174.89	38098.81
	Ampati													
	Selsella	232.68	303.89	325.65	381.66	363.00	365.65	306.17	402.83	399.28	407.22	315.74	351.07	4154.85
	Total	**4529.54**	**4547.61**	**4835.49**	**5540.54**	**5308.23**	**5329.90**	**5059.13**	**4693.47**	**4946.34**	**5519.48**	4464.96	**5263.90**	**60038.58**
West Garo Hills Circle	**Total**	**15680.20**	**15081.19**	**16230.13**	**18496.04**	**17941.20**	**17968.37**	**17539.84**	**15839.47**	**17097.76**	**18762.64**	16171.41	**18181.50**	**204989.74**
Grand Total		**139931.36**	**153067.70**	**153717.05**	**160304.49**	**169935.68**	**160865.53**	**172000.14**	**179689.43**	**202291.02**	**208425.25**	177414.58	**184322.79**	**2061965.03**

Energy Manager,
MeECL, Meghalaya
EE Reg. No: EA-23006

- **Billed Units**





Energy Manager,
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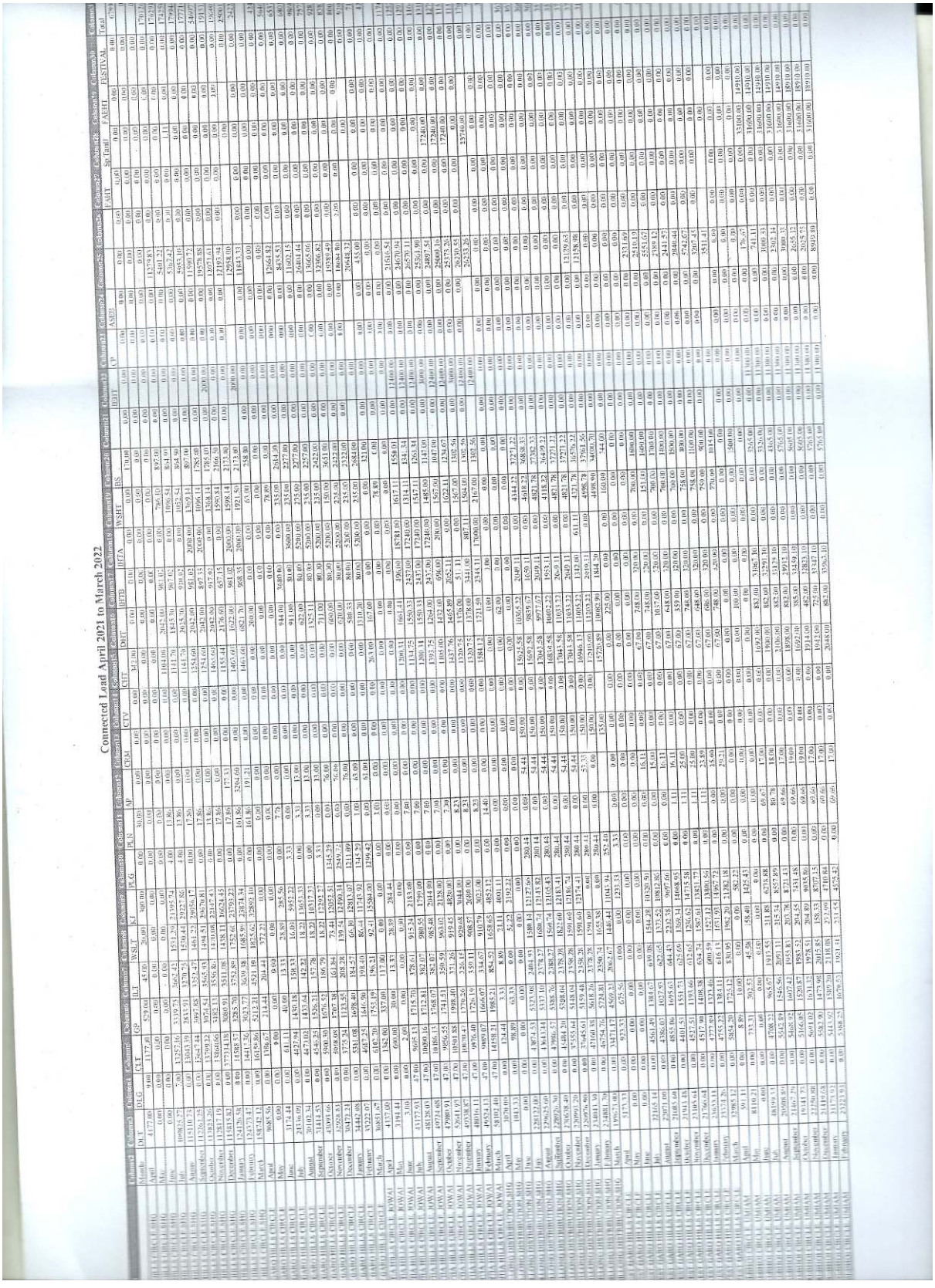
- **Connected Load**



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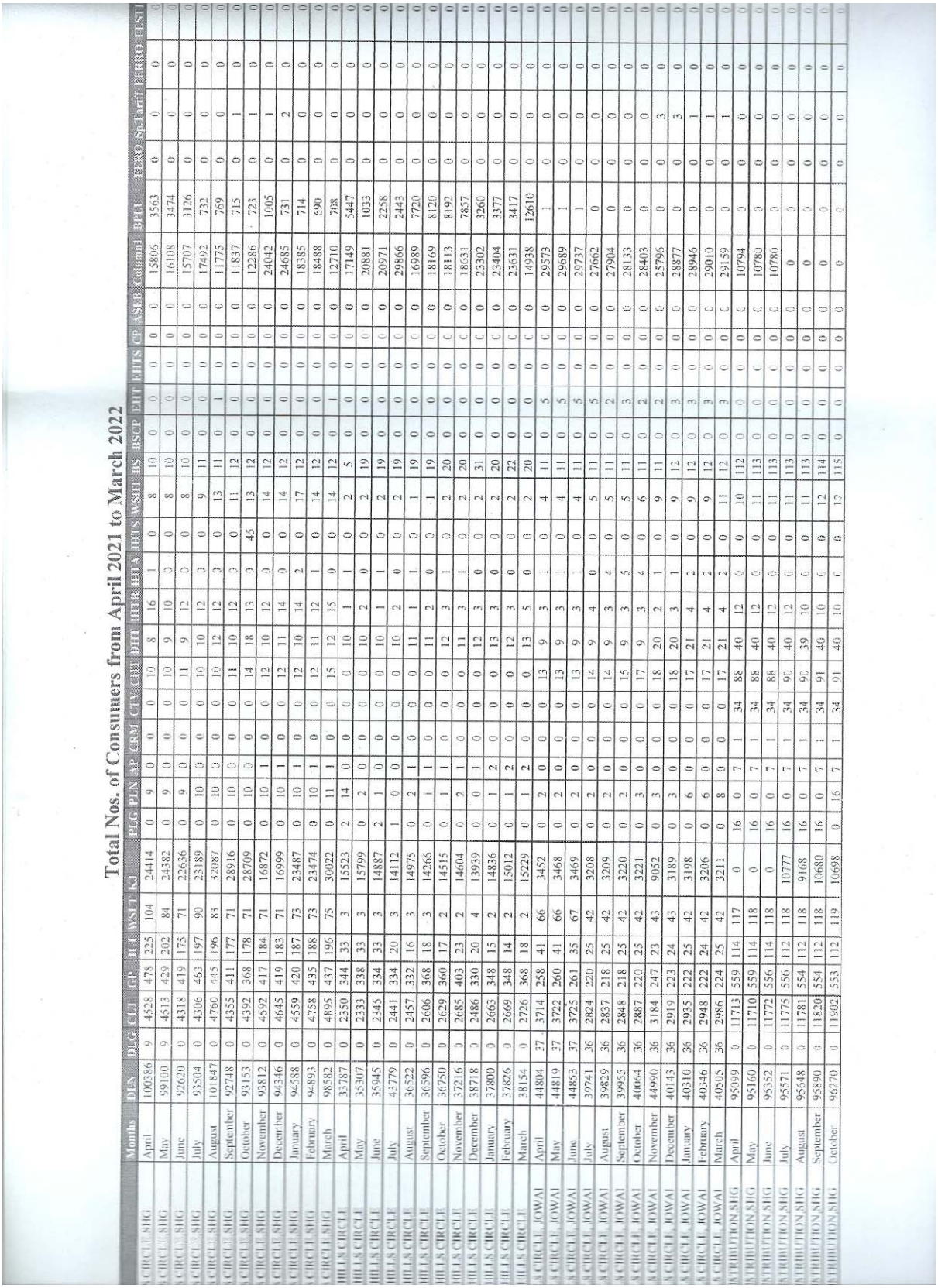
EA Regn. No: EA-23306

- **No of Consumers**



Total Nos. of Consumers from April 2021 to March 2022

	Months	DES	DLG	CLI	CP	HT	WSET	KJ	PLG	PLN	AP	CRM	CIA	CHT	DTI	HTB	HTA	HTS	WSH	BS	BSCP	DIT	HHS	CP	ASLB	Column1	BPLU	TERO	SpTariff	TERRO	FEST
S CIRCLE, SHG	April	100386	9	4528	478	225	104	24414	0	9	0	0	0	10	8	16	1	0	8	10	0	0	0	0	0	15806	3563	0	0	0	0
S CIRCLE, SHG	May	99100	9	4513	429	202	84	24382	0	9	0	0	0	10	9	10	0	0	8	10	0	0	0	0	0	16108	3474	0	0	0	0
S CIRCLE, SHG	June	92620	0	4318	419	175	71	22636	0	9	0	0	0	11	9	12	0	0	8	10	0	0	0	0	0	15707	3126	0	0	0	0
S CIRCLE, SHG	July	93504	0	4306	463	197	90	23189	0	10	0	0	0	10	10	12	12	0	9	11	0	1	0	0	0	17492	732	0	0	0	0
S CIRCLE, SHG	August	101847	0	4760	445	196	83	32087	0	10	0	0	0	10	12	12	3	0	13	11	0	1	0	0	0	11775	769	0	0	0	0
S CIRCLE, SHG	September	92748	0	4355	411	177	71	28916	0	10	0	0	0	11	10	12	3	0	11	12	0	0	0	0	0	11837	715	0	1	0	0
S CIRCLE, SHG	October	93153	0	4392	368	178	71	28709	0	10	0	0	0	14	18	13	3	45	13	12	0	0	0	0	0	12286	723	0	1	0	0
S CIRCLE, SHG	November	93812	0	4592	417	184	71	16872	0	10	1	0	0	12	10	12	3	0	14	12	0	0	0	0	0	24042	1005	0	1	0	0
S CIRCLE, SHG	December	94346	0	4645	419	183	71	16999	0	10	1	0	0	12	11	14	3	0	14	12	0	0	0	0	0	24685	731	0	2	0	0
S CIRCLE, SHG	January	94588	0	4559	420	187	73	23487	0	10	1	0	0	12	10	14	2	0	17	12	0	0	0	0	0	18385	714	0	0	0	0
S CIRCLE, SHG	February	94893	0	4758	435	188	73	23474	0	10	1	0	0	12	11	12	1	0	14	12	0	0	0	0	0	18488	690	0	0	0	0
S CIRCLE, SHG	March	98582	0	4895	437	196	75	30022	0	11	1	0	0	15	12	15	3	0	14	12	0	1	0	0	0	12710	708	0	0	0	0
HILLS CIRCLE	April	33787	0	2350	344	33	3	15523	2	14	0	0	0	0	10	1	1	0	2	5	0	0	0	0	0	17149	5447	0	0	0	0
HILLS CIRCLE	May	35307	0	2333	338	33	3	15799	0	2	0	0	0	0	10	2	0	0	2	19	0	0	0	0	0	20881	1033	0	0	0	0
HILLS CIRCLE	June	35945	0	2345	334	33	3	14887	2	1	0	0	0	0	10	1	1	0	2	19	0	0	0	0	0	20971	2258	0	0	0	0
HILLS CIRCLE	July	43779	0	2441	334	20	3	14112	1	0	0	0	0	12	11	12	1	0	14	12	0	0	0	0	0	29866	2443	0	0	0	0
HILLS CIRCLE	August	36522	0	2457	332	16	3	14975	0	2	1	0	0	0	11	1	1	0	1	19	0	0	0	0	0	16989	7720	0	0	0	0
HILLS CIRCLE	September	36596	0	2606	368	18	3	14266	0	1	1	0	0	0	11	2	0	0	1	19	0	0	0	0	0	18169	8120	0	0	0	0
HILLS CIRCLE	October	36750	0	2629	360	17	2	14515	0	1	1	0	0	0	12	3	1	0	2	20	0	0	0	0	0	18113	8192	0	0	0	0
HILLS CIRCLE	November	37216	0	2685	403	23	2	14604	0	2	1	0	0	0	11	3	1	0	2	20	0	0	0	0	0	18631	7857	0	0	0	0
HILLS CIRCLE	December	38718	0	2486	330	20	4	13939	0	0	1	0	0	0	12	3	0	0	2	31	0	0	0	0	0	23302	3260	0	0	0	0
HILLS CIRCLE	January	37800	0	2663	348	15	2	14836	0	1	2	0	0	0	13	3	0	0	2	20	0	0	0	0	0	23404	3377	0	0	0	0
HILLS CIRCLE	February	37826	0	2669	348	14	2	15012	0	1	2	0	0	0	12	3	0	0	2	22	0	0	0	0	0	23631	3417	0	0	0	0
HILLS CIRCLE	March	38154	0	2726	368	18	2	15229	0	1	2	0	0	0	13	5	0	0	2	20	0	0	0	0	0	14938	12610	0	0	0	0
S CIRCLE, JOWAI	April	44804	37	3714	258	41	66	3452	0	2	0	0	0	13	9	3	1	0	4	11	0	5	0	0	0	29573	1	0	0	0	0
S CIRCLE, JOWAI	May	44819	37	3722	260	41	66	3468	0	2	0	0	0	13	9	3	1	0	4	11	0	5	0	0	0	29689	1	0	0	0	0
S CIRCLE, JOWAI	June	44853	37	3725	261	35	67	3469	0	2	0	0	0	13	9	3	1	0	4	11	0	5	0	0	0	29737	1	0	0	0	0
S CIRCLE, JOWAI	July	39741	36	2824	220	25	42	3208	0	2	0	0	0	14	9	4	0	0	5	11	0	5	0	0	0	27662	0	0	0	0	0
S CIRCLE, JOWAI	August	39829	36	2837	218	25	42	3209	0	2	0	0	0	14	9	3	4	0	5	11	0	2	0	0	0	27904	0	0	0	0	0
S CIRCLE, JOWAI	September	39955	36	2848	218	25	42	3220	0	2	0	0	0	15	9	3	5	0	5	11	0	3	0	0	0	28133	0	0	0	0	0
S CIRCLE, JOWAI	October	40064	36	2887	220	25	42	3221	0	3	0	0	0	17	9	3	4	0	6	11	0	2	0	0	0	28403	0	0	0	0	0
S CIRCLE, JOWAI	November	44960	36	3184	247	23	43	9052	0	3	0	0	0	18	20	2	1	0	9	11	0	2	0	0	0	25796	0	0	3	0	0
S CIRCLE, JOWAI	December	40143	36	2919	223	24	43	3189	0	3	0	0	0	18	20	3	1	0	9	12	0	3	0	0	0	28877	0	0	3	0	0
S CIRCLE, JOWAI	January	40310	36	2935	222	25	42	3198	0	6	0	0	0	17	21	4	2	0	9	12	0	3	0	0	0	28946	0	0	1	0	0
S CIRCLE, JOWAI	February	40346	36	2948	222	24	42	3206	0	6	0	0	0	17	21	4	2	0	9	12	0	3	0	0	0	29010	0	0	1	0	0
S CIRCLE, JOWAI	March	40505	36	2986	224	25	42	3211	0	8	0	0	0	17	21	4	2	0	11	12	0	3	0	0	0	29159	0	0	1	0	0
S DISTRIBUTION, SHG	April	95099	0	11713	559	114	117	0	16	0	7	1	34	88	40	12	0	0	10	112	0	0	0	0	0	10794	0	0	0	0	0
S DISTRIBUTION, SHG	May	95160	0	11710	559	114	118	0	16	0	7	1	34	88	40	12	0	0	11	113	0	0	0	0	0	10780	0	0	0	0	0
S DISTRIBUTION, SHG	June	95352	0	11772	556	114	118	0	16	0	7	1	34	88	40	12	0	0	11	113	0	0	0	0	0	10780	0	0	0	0	0
S DISTRIBUTION, SHG	July	95571	0	11775	556	112	118	10777	16	0	7	1	34	90	40	12	0	0	11	113	0	0	0	0	0	0	0	0	0	0	0
S DISTRIBUTION, SHG	August	95648	0	11781	554	112	118	9168	16	0	7	1	34	90	39	10	0	0	11	113	0	0	0	0	0	0	0	0	0	0	0
S DISTRIBUTION, SHG	September	95890	0	11820	554	112	118	10680	16	0	7	1	34	91	40	10	0	0	12	114	0	0	0	0	0	0	0	0	0	0	0
S DISTRIBUTION, SHG	October	96270	0	11902	553	112	119	10698	0	16	7	1	34	91	40	10	0	0	12	115	0	0	0	0	0	0	0	0	0	0	0

NSHG	November	96581	0	11939	553	112	119	10688	0	16	7	1	34	91	42	10	0	0	12	115	0	0	0	0	0	0	0	0	0	120320
NSHG	December	96635	0	11951	553	112	119	10688	0	16	7	1	34	91	42	10	0	0	12	115	0	0	0	0	0	0	0	0	0	120388
NSHG	January	97454	0	12090	561	109	126	0	16	0	5	1	34	93	42	10	0	0	12	115	0	0	0	0	10693	0	0	0	0	121361
NSHG	February	97490	0	12095	561	108	126	0	16	0	0	1	34	93	42	10	0	0	12	116	0	0	0	0	10694	0	0	0	0	121398
NSHG	March	98344	0	12253	556	108	124	0	0	16	0	1	34	96	42	10	0	0	13	117	0	0	0	0	10717	0	0	0	0	122431
SE, SHG	April	34225	0	2190	286	106	104	35142	0	0	12	0	0	2	5	3	0	0	8	16	0	0	0	0	10379	4157	0	0	0	86635
SE, SHG	May	34369	0	2227	287	106	104	35832	0	0	12	0	0	2	5	2	1	0	8	16	0	0	0	0	10626	4199	0	0	0	87796
SE, SHG	June	34051	0	2186	284	106	103	35279	0	0	12	0	0	2	5	3	0	0	8	16	0	0	0	0	10777	4206	0	0	0	87038
SE, SHG	July	31354	0	1993	257	80	94	33768	0	0	3	0	0	1	5	2	0	0	8	16	0	0	0	0	11185	4213	0	0	0	82979
SE, SHG	August	31454	0	2005	258	80	94	33918	0	0	3	0	0	1	5	2	0	0	8	16	0	0	0	0	11542	4253	0	0	0	83639
SE, SHG	September	31591	0	2061	260	80	94	34148	0	1	3	0	0	1	5	2	0	0	8	16	0	0	0	0	11624	4391	0	0	0	90285
SE, SHG	October	34333	0	2113	289	56	129	43989	0	1	7	0	0	1	6	4	0	0	9	18	0	0	0	0	17697	5499	0	0	0	104151
SE, SHG	November	34447	0	2249	302	83	125	44055	0	1	7	0	0	1	6	2	0	0	4	17	0	0	0	0	17697	4483	0	0	0	103479
SE, SHG	December	34493	0	2279	317	33	121	44129	0	0	3	0	0	1	6	2	0	0	10	17	0	0	0	0	17956	4571	0	0	0	103938
SE, SHG	January	34509	0	2305	270	83	121	44118	0	1	3	0	0	1	6	2	0	0	10	17	0	0	0	0	18006	4572	0	0	0	104024
SE, SHG	February	34548	0	2328	314	83	119	44096	0	0	2	0	0	1	6	2	0	0	9	17	0	0	0	0	18066	4574	0	0	0	104165
SE, SHG	March	31822	0	2261	273	82	91	38062	0	0	2	0	0	1	5	2	0	0	10	16	0	0	0	0	18833	4584	0	0	0	96944
	April	30755	2	2491	221	130	16	10587	1	5	2	0	0	15	5	81	15	1	0	22	0	0	4	0	14366	433	0	0	1	0	59153
	May	34736	2	2486	254	131	23	16021	4	4	2	0	0	13	5	82	15	1	0	22	0	0	4	0	14387	433	0	0	1	0	68526
	June	34573	2	2534	294	141	27	16021	1	9	2	0	0	13	5	88	0	6	0	22	0	1	4	0	0	14269	364	0	0	2	0	68378
	July	34569	0	2508	298	138	30	24864	1	9	0	0	0	13	5	88	0	6	0	22	0	1	4	0	0	5614	0	0	0	2	0	68163
	August	34609	0	2519	297	137	30	24858	1	9	0	0	0	13	5	88	0	0	0	22	0	1	4	0	0	5614	0	0	7	2	0	68216
	September	29281	0	2335	249	111	25	19293	1	7	2	0	0	14	5	89	0	0	0	22	0	1	4	0	0	5616	0	0	7	2	0	57064
	October	29363	0	2347	249	111	25	19203	0	8	2	0	0	14	5	89	0	0	0	22	0	1	4	0	0	5613	0	0	7	2	0	57065
	November	28682	0	2166	249	110	20	19236	0	8	2	0	0	15	5	89	0	0	0	22	0	1	4	0	0	5613	0	0	7	3	0	56232
	December	29596	0	2198	223	111	25	19242	0	8	2	0	0	15	5	91	0	0	0	22	0	1	4	0	0	5613	0	0	6	3	0	57165
	January	34844	0	2562	269	136	30	9884	0	10	2	0	0	15	5	91	0	0	0	22	0	1	4	0	0	20693	0	0	7	3	0	68578
	February	29530	0	2417	218	118	25	9883	0	8	2	0	0	15	5	96	0	0	0	22	0	1	4	0	0	15320	0	0	7	3	0	57674
	March	30223	0	2495	221	117	25	9897	0	8	2	0	0	13	5	97	0	0	0	22	0	1	4	0	0	15467	0	0	0	2	3	0	58602
CLE	April	12163	0	879	188	9	4	3233	0	5	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	16532
CLE	May	12163	0	879	188	9	4	3233	0	5	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	16532
CLE	June	13220	0	950	213	10	4	4972	0	6	5	0	0	6	14	3	1	0	2	24	0	0	0	0	0	0	0	0	0	0	0	19430
CLE	July	12175	0	880	189	9	4	3272	0	6	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	16586
CLE	August	12016	0	878	189	9	4	3073	6	0	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	16226
CLE	September	12420	0	886	189	9	4	3862	6	0	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	17427
CLE	October	12542	0	891	189	9	4	4085	0	6	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	17777
CLE	November	12544	0	891	189	9	4	4078	0	6	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	17772
CLE	December	12652	0	895	189	9	4	4188	0	6	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	17994
CLE	January	12680	0	895	189	9	4	4228	0	6	4	0	0	6	14	1	0	0	2	24	0	0	0	0	0	0	0	0	0	0	0	18062
CLE	February	14140	0	982	204	10	6	3564	0	6	6	0	0	6	14	2	0	0	2	26	0	0	0	0	4069	440	0	0	0	0	0	23477
CLE	March	14159	0	989	204	10	6	3659	6	0	6	0	0	6	14	2	0	0	2	26	0	0	0	0	4085	440	0	0	0	0	0	23614

Column1	DLT	DLG	CLT	GP	HT	WSHT	KJ	PLG	PLN	AP	CRM	CEN	CHT	DHT	HHB	HTA	HHS	WSHT	BS	BSCP	EHT	EHTS	CP	ASSB	BPLM	BPLU	FERO	Sp.Tariff	FERRO FESTIVAL	Total
April	351219	48	27865	2334	658	414	92351	19	35	25	1	34	134	91	117	18	1	34	200	0	5	4	0	0	58067	13601	0	0	1	0	587276
May	355654	48	27870	2315	636	402	98735	20	22	25	1	34	132	92	112	17	1	35	215	0	5	4	0	0	102471	9149	0	0	1	0	597987
June	350614	39	27830	2361	614	393	97264	19	27	26	1	34	133	92	122	3	6	35	215	0	6	4	0	0	102241	9955	0	0	2	0	592036
July	350684	36	26727	2317	581	381	113190	18	27	14	1	34	134	93	121	0	6	37	216	0	6	4	0	0	91819	7388	0	0	2	0	593836
August	351925	36	27237	2293	575	374	121288	23	23	15	1	34	134	95	117	5	0	40	216	0	4	4	0	0	73824	12742	0	7	2	0	591014
September	338481	36	26911	2249	532	357	114385	23	21	17	1	34	138	94	119	5	0	39	218	0	4	4	0	0	81379	13226	0	8	2	0	578283
October	342475	36	27161	2228	508	392	124420	0	45	21	1	34	143	104	123	5	45	44	222	0	3	4	0	0	82112	14414	0	8	2	0	594560
November	348272	36	27706	2360	544	384	118585	0	46	22	1	34	143	108	119	2	0	43	221	0	3	4	0	0	91779	13345	0	11	3	0	603771
December	346583	36	27373	2254	492	387	112374	0	43	18	1	34	143	110	124	1	0	49	233	0	4	4	0	0	100433	8562	0	11	3	0	599272
January	352185	36	28009	2279	564	398	99751	16	34	17	1	34	144	111	125	4	0	52	222	0	4	4	0	0	120127	8663	0	8	3	0	612791
February	348773	36	28197	2302	545	393	99235	16	31	13	1	34	144	111	129	3	0	48	227	0	4	4	0	0	119278	9121	0	8	3	0	608656
March	351789	36	28605	2283	556	365	100080	6	44	13	1	34	148	112	135	2	0	52	225	0	5	4	0	0	105909	18342	0	3	3	0	608752

Energy Manager,
MeECL, Meghalaya
BEE Reg. No: EA-2330

- **Purchase Power (Bills)**

OTPC
ONGC-Tripura Power Company Ltd.

ONGC Tripura Power Company Limited

(JV Company of ONGC, IL&FS,IIF - II and Govt. of Tripura)

10th Floor, Core 4 and Central, SCOPE Minar, Laxmi Nagar, Delhi - 110092 | Phone : +91-11-22404700 | Fax: +91-11-22017731 / 22018831

Invoice No: OTPC/EB/2122/125
Ref No:OTPC/0322/B4/001

Beneficiary: **Meghalaya Power Distribution Corporation Ltd** Dated : 05-Apr-2022

Allocation: **10.881543%**

Period of Supply: **01-Mar-2022-to-31-Mar-2022** .

Sr.No	Particulars	Units	
1	Total Energy Supplied to beneficiary as per NERPC REA for Mar 2022 dt 04.04.2022	Kwh	45517304.02
2	Energy Charge Rate (ECR) per unit	Rs/Kwh	1.876
3	Total Energy Charges (1 x 2) for the period of supply	Rs	85390462.33
4	Capacity Charges for Peak hours in the period of supply	Rs	11761297.2
5	Capacity Charges for Off-peak hours in the period of supply	Rs	46402637.3
6	Total Capacity Charges for the period of supply	Rs	58163934.5
7	Total Bill (Energy Charge + Capacity Charge)	Rs	143554396.83
8	ED of 7.5% paid on auxiliary power as per allocation for Feb'2022	Rs	303267.13
9	Rebate settlement, if any	Rs	-1768093
10	Profit from URS Sale Mar'22 (if any)	Rs	0
11	Profit from RTM Sale Mar'22 (if any)	Rs	0
12	NERLDC Fee & Charges	Rs	206886.97
13	**Total Net Payable**	Rs	**142296458**
	Fourteen Crores Twenty Two Lakhs Ninety Six Thousands Four Hundred And Fifty Eight Rupees		
15	Amount after Rebate (1.50 %, if full payment is made within T+5 days)	Rs	140166560
16	Amount after Rebate (1 %, if full payment is made within T+30 days)	Rs	140876526

Note:

1) A rebate of 1.50% will be applicable on full payment done within T+5 days, T being the date on which the bill is issued
2) A rebate of 1% will be applicable on full payment done within T+30 days, T being the date on which bill is issued.
3) Late Payment Surcharges shall be as per relevant CERC regulations.
4) Adjustment of the payment will be made first towards late payment surcharges, if any, then towards outstanding payment, if any, and thereafter the current bill.
5) While making payments, details of payment made along with bill reference may please be indicated.
6) This is a provisional bill therefore subject to amendments / revisions.
7) *Rebate is not applicable on Surcharge and Electricity Duty.

Executive Engineer, Management, MePDCL, Shillong

ONGC Tripura Power Company Limited
Arup Ch Sarmah
GM Commercial
arupc.sarmah@otpcindia.in

Udaipur-Karkaban Road, Palatana P.O, District Gomati, Tripura - 799105 Phone:0381-236-3714, Fax:0381-236-3717
CIN: U40101TR2004PLC007544, Website: www.otpcindia.in

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OTPC
ONGC-Tripura Power Company Ltd.
A JV Company of ONGC, IL&FS and Government of Tripura

ONGC Tripura Power Company Limited

(JV Company of ONGC, IL&FS,IIF - II and Govt. of Tripura)

10th Floor, Core 4 and Central, SCOPE Minar, Laxmi Nagar, Delhi - 110092 | Phone : +91-11-22404700 | Fax: +91-11-22017731 / 22018831

Invoice No: OTPC/EB/2122/114
Ref No:OTPC/0222/B4/012

Dated : 04-Mar-2022

Beneficiary: **Meghalaya Power Distribution Corporation Ltd**

Allocation: **10.881543%**

Period of Supply: **01-Feb-2022-to-28-Feb-2022**

Sr.No	Particulars	Units	
1	Total Energy Supplied to beneficiary as per NERPC REA for Feb 2022 dt 03.03.2022	Kwh	35844053.69
2	Energy Charge Rate (ECR) per unit	Rs/Kwh	1.876
3	Total Energy Charges (1 x 2) for the period of supply	Rs	67243444.72
4	Capacity Charges for Peak hours in the period of supply	Rs	9916132.43
5	Capacity Charges for Off-peak hours in the period of supply	Rs	40087108.64
6	Total Capacity Charges for the period of supply	Rs	50003241.07
7	Total Bill (Energy Charge + Capacity Charge)	Rs	117246685.79
8	ED of 7.5% paid on auxiliary power as per allocation for Jan'2021	Rs	345090.75
9	Rebate settlement, if any	Rs	-1349017
10	Profit from URS Sale Feb'22 (if any)	Rs	0
11	Profit from RTM Sale Feb'22 (if any)	Rs	0
12	NERLDC Fee & Charges	Rs	206886.97
13	**Total Net Payable**	Rs	**116449647**
	Eleven Crores Sixty Four Lakhs Forty Nine Thousands Six Hundred And Forty Seven Rupees		
15	Amount after Rebate (1.50 %, if full payment is made within T+5 days)	Rs	114708079
16	Amount after Rebate (1 %, if full payment is made within T+30 days)	Rs	115288601

Note:

1) A rebate of 1.50% will be applicable on full payment done within T+5 days, T being the date on which the bill is issued
2) A rebate of 1% will be applicable on full payment done within T+30 days, T being the date on which bill is issued.
3) Late Payment Surcharges shall be as per relevant CERC regulations.
4) Adjustment of the payment will be made first towards late payment surcharges, if any, then towards outstanding payment, if any, and thereafter the current bill.
5) While making payments, details of payment made along with bill reference may please be indicated.
6) This is a provisional bill therefore subject to amendments / revisions.
7) *Rebate is not applicable on Surcharge and Electricity Duty.

Superintending Engineer
Energy Management
MePDCL, Shillong

ONGC Tripura Power Company Limited
Arup Ch Sarmah
GM Commercial
arupc.sarmah@otpcindia.in

Udaipur-Karkaban Road, Palatana P.O, District Gomati, Tripura - 799105 Phone:0381-236-3714, Fax:0381-236-3717
CIN: U40101TR2004PLC007544, Website: www.otpcindia.in

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Invoice No: OTPC/EB/2122/114
Ref No:OTPC/0222/B4/012

Dated : 04-Mar-2022

Beneficiary: **Meghalaya Power Distribution Corporation Ltd**

Allocation: **10.881543%**

Period of Supply: **01-Feb-2022-to-28-Feb-2022**

Sr.No	Particulars	Units	
1	Total Energy Supplied to beneficiary as per NERPC REA for Feb 2022 dt 03.03.2022	Kwh	35844053.69
2	Energy Charge Rate (ECR) per unit	Rs/Kwh	1.876
3	Total Energy Charges (1 x 2) for the period of supply	Rs	67243444.72
4	Capacity Charges for Peak hours in the period of supply	Rs	9916132.43
5	Capacity Charges for Off-peak hours in the period of supply	Rs	40087108.64
6	Total Capacity Charges for the period of supply	Rs	50003241.07
7	Total Bill (Energy Charge + Capacity Charge)	Rs	117246685.79
8	ED of 7.5% paid on auxiliary power as per allocation for Jan'2021	Rs	345090.75
9	Rebate settlement, if any	Rs	-1349017
10	Profit from URS Sale Feb'22 (if any)	Rs	0
11	Profit from RTM Sale Feb'22 (if any)	Rs	0
12	NERLDC Fee & Charges	Rs	206886.97
13	**Total Net Payable**	Rs	**116449647**
	Eleven Crores Sixty Four Lakhs Forty Nine Thousands Six Hundred And Forty Seven Rupees		
15	Amount after Rebate (1.50 %, if full payment is made within T+5 days)	Rs	114708079
16	Amount after Rebate (1 %, if full payment is made within T+30 days)	Rs	115288601

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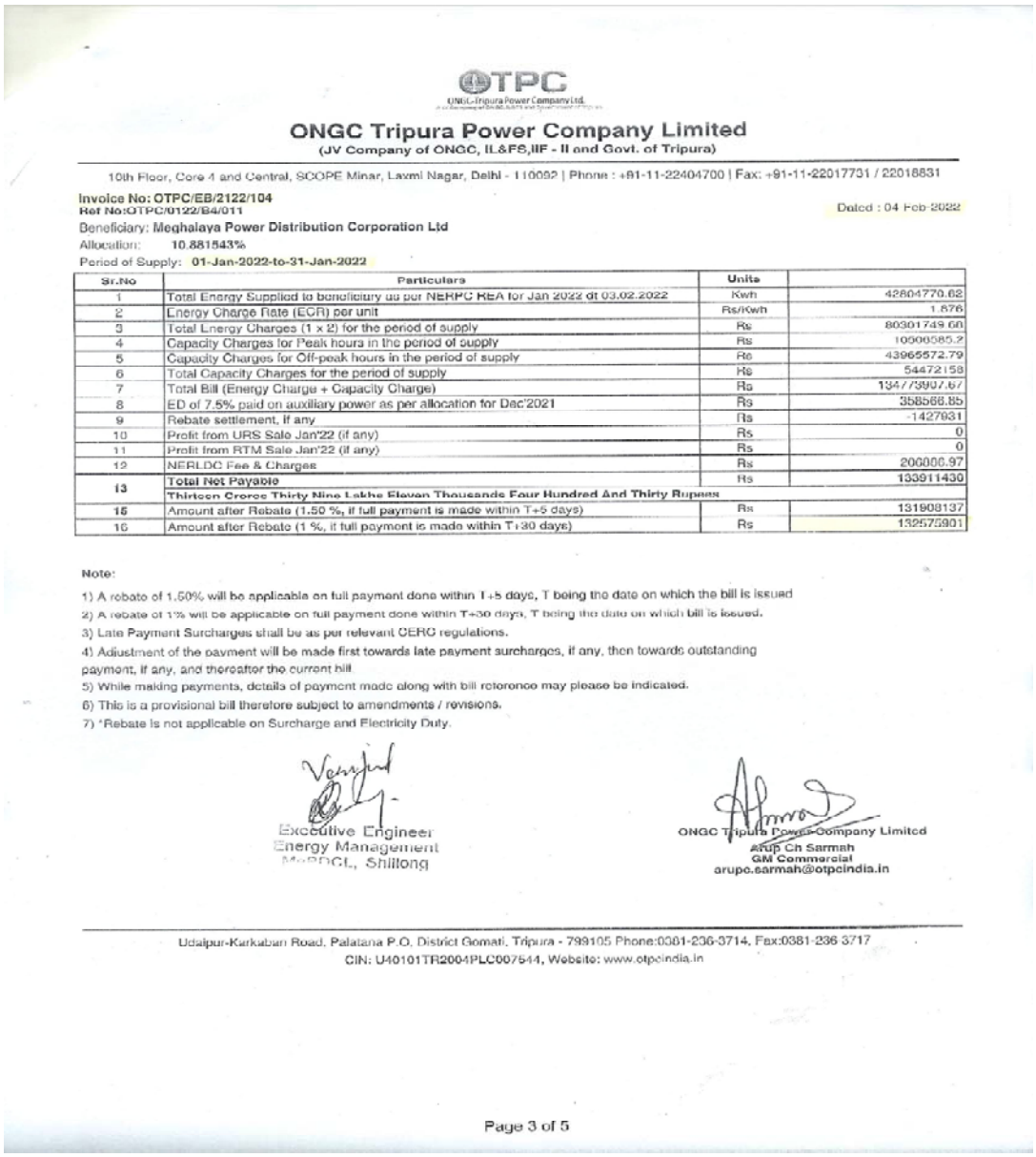
CIN: U40101TR2004PLC007544, Website: www.otpcindia.in



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Invoice No: OTPC/EB/2122/104
Ref No:OTPC/0122/B4/011

Dated : 04 Feb 2022

Beneficiary: **Meghalaya Power Distribution Corporation Ltd**
Allocation: **10.881543%**
Period of Supply: **01-Jan-2022-to-31-Jan-2022**

Sr.No	Particulars	Units	
1	Total Energy Supplied to beneficiary as per NERPC REA for Jan 2022 dt 03.02.2022	Kwh	42804770.62
2	Energy Charge Rate (ECR) per unit	Rs/Kwh	1.876
3	Total Energy Charges (1 x 2) for the period of supply	Rs	80301749.60
4	Capacity Charges for Peak hours in the period of supply	Rs	10999585.2
5	Capacity Charges for Off-peak hours in the period of supply	Rs	43965572.79
6	Total Capacity Charges for the period of supply	Rs	54472158
7	Total Bill (Energy Charge + Capacity Charge)	Rs	134773907.67
8	ED of 7.5% paid on auxiliary power as per allocation for Dec'2021	Rs	358566.85
9	Rebate settlement, if any	Rs	-1427931
10	Profit from URS Sale Jan'22 (if any)	Rs	0
11	Profit from RTM Sale Jan'22 (if any)	Rs	0
12	NERLDC Fee & Charges	Rs	200000.97
13	**Total Net Payable**	Rs	133911430
	Thirteen Crores Thirty Nine Lakhs Eleven Thousands Four Hundred And Thirty Rupees		
15	Amount after Rebate (1.50 %, if full payment is made within T+5 days)	Rs	131908137
16	Amount after Rebate (1 %, if full payment is made within T+30 days)	Rs	132575901

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Executive Engineer
Energy Management
MePDCL, Shillong

ONGC Tripura Power Company Limited
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arupc.sarmah@otpcindia.in

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Invoice No: OTPC/EB/2122/094
Ref No:OTPC/1221/B4/010

Dated : 05-Jan-2022

Beneficiary: **Meghalaya Power Distribution Corporation Ltd**

Allocation: **10.881543%**

Period of Supply: **01-Dec-2021-to-31-Dec-2021**

Sr.No	Particulars	Units	
1	Total Energy Supplied to beneficiary as per NERPC REA for Dec 2021 dt 04.01.2022	Kwh	42596235.29
2	Energy Charge Rate (ECR) per unit	Rs/Kwh	1.876
3	Total Energy Charges (1 x 2) for the period of supply	Rs	79910537.4
4	Capacity Charges for Peak hours in the period of supply	Rs	11523805.82
5	Capacity Charges for Off-peak hours in the period of supply	Rs	47881025.3
6	Total Capacity Charges for the period of supply	Rs	59404831.12
7	Total Bill (Energy Charge + Capacity Charge)	Rs	139315368.52
8	ED of 7.5% paid on auxiliary power as per allocation for Nov'2021	Rs	337071.35
9	Effect of Correction in Electricity Duty (ED) on Auxiliary energy	Rs	7424.63
10	Rebate settlement, if any	Rs	-1313007
11	Profit from URS Sale Dec'21 (if any)	Rs	0
12	Profit from RTM Sale Dec'21 (if any)	Rs	0
13	NERLDC Fee & Charges	Rs	206886.97
14	Calculation of Energy Charges as per Debit Note raised by Fuel Supplier on account of adjustment of Royalty.	Rs	3155972.28
15	**Total Net Payable**	Rs	**141709717**
	Fourteen Crores Seventeen Lakhs Nine Thousand Seven Hundred And Seventeen Rupees		
17	Amount after Rebate (1.50 %, if full payment is made within T+5 days)	Rs	139589127
18	Amount after Rebate (1 %, if full payment is made within T+30 days)	Rs	140295991

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Verified
Executive Engineer
Energy Management
MePDCL, Shillong

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GM Commercial
arupc.sarmah@otpcindia.in

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Invoice No: OTPC/EB/2122/080
Ref No:OTPC/1121/B4/009

Dated : 03-Dec-2021

Beneficiary: **Meghalaya Power Distribution Corporation Ltd**

Allocation: **10.881543%**

Period of Supply: **01-Nov-2021-to-30-Nov-2021**

Sr.No	Particulars	Units	
1	Total Energy Supplied to beneficiary as per NERPC REA for Nov 2021 dt 02.12.2021	Kwh	39777344.45
2	Energy Charge Rate (ECR) per unit	Rs/Kwh	1.870
3	Total Energy Charges (1 x 2) for the period of supply	Rs	74383634.12
4	Capacity Charges for Peak hours in the period of supply	Rs	11235671.08
5	Capacity Charges for Off-peak hours in the period of supply	Rs	45588612.71
6	Total Capacity Charges for the period of supply	Rs	56824283.79
7	Total Bill (Energy Charge + Capacity Charge)	Rs	131207917.91
8	ED of 7.5% paid on auxiliary power as per allocation for Oct 2021	Rs	368209.84
9	Rebate settlement, if any	Rs	-1427026
10	Profit from URS Sale Nov'21 (if any)	Rs	0
11	Profit from RTM Sale Nov'21 (if any)	Rs	0
12	NERLDC Fee & Charges	Rs	206886.97
13	**Total Net Payable**	Rs	**130355989**
	Thirteen Crores Three Lakh Fifty Five Thousands Nine Hundred And Eighty Nine Rupees		
15	Amount after Rebate (1.50 %, if full payment is made within T+5 days)	Rs	128406172
16	Amount after Rebate (1 %, if full payment is made within T+30 days)	Rs	129056111

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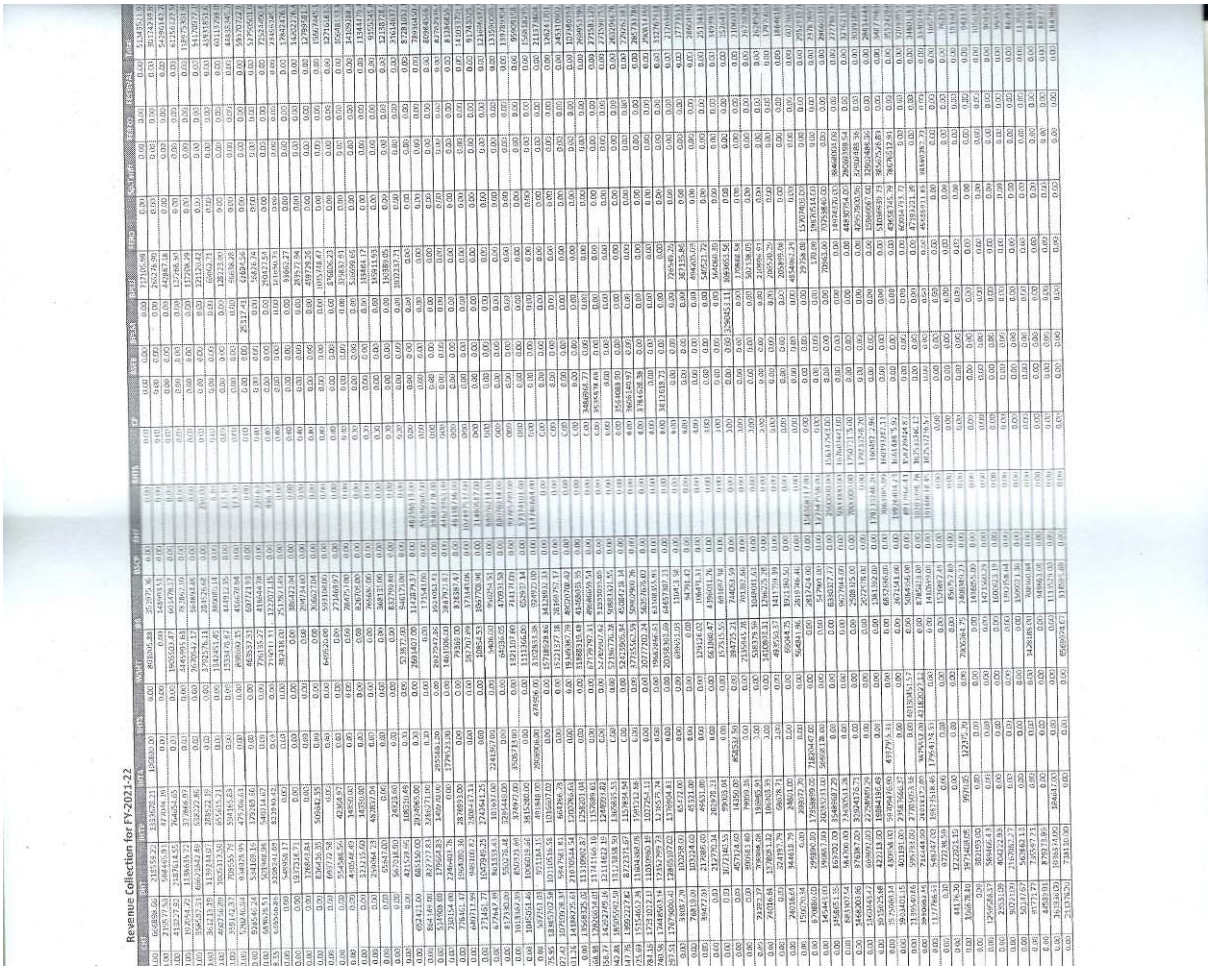
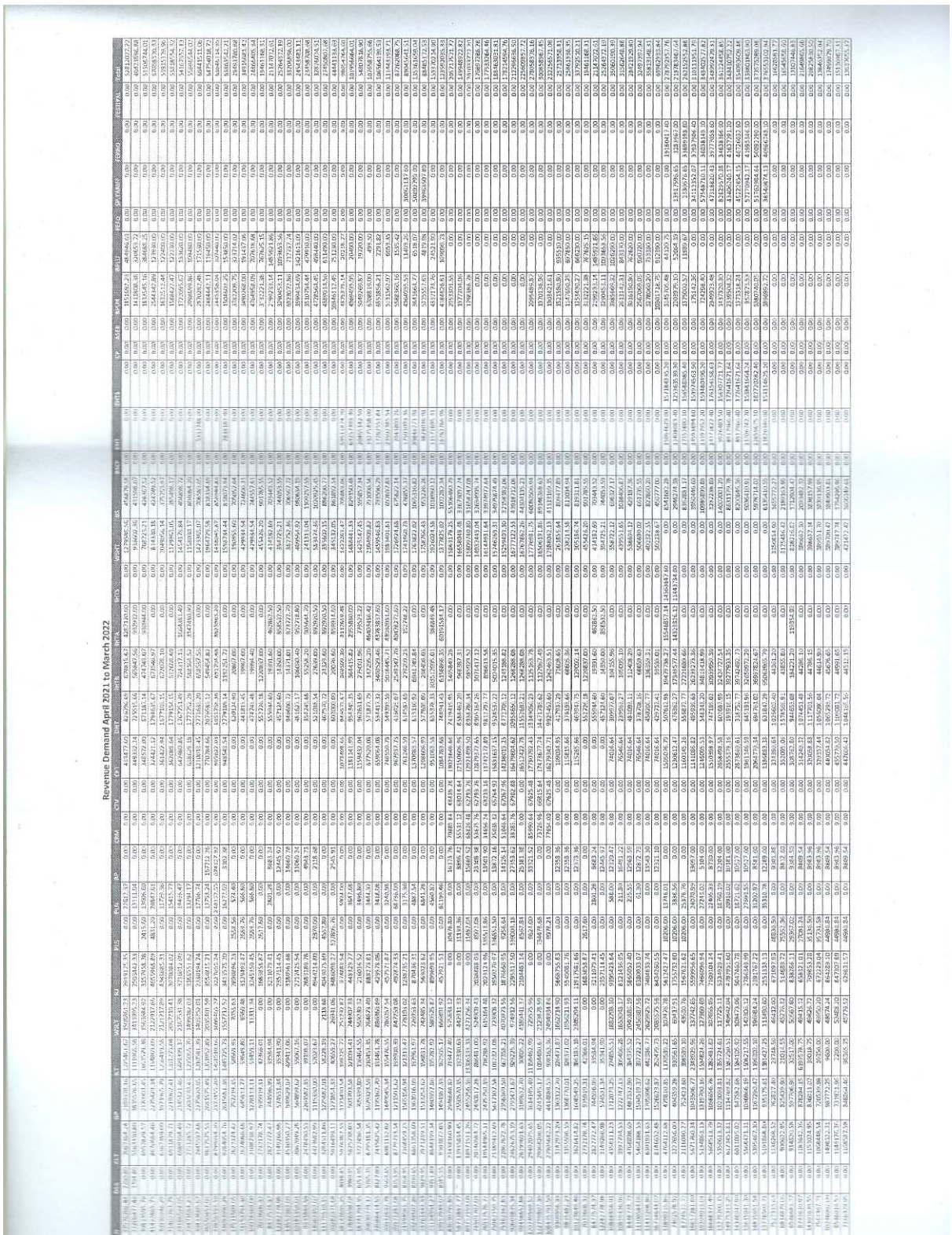
- **Collected Amount**



Energy Manager,
MeECL, Meghalaya
EE Reg. No: EA-23306

- **Billed Amount**



Energy Manager,
MeECL, Meghalaya
CF Reg. No: EA-2

- **Technical Details**

TECHNICAL DATA AS ON 31ST MARCH 2022

SUMMARY OF TECHNICAL DATA AS ON 31ST MARCH 2022

2	Eastern Zone	2 Khasi Hill Circle	81.00	4587.13	0.00	4587.13	63.00	22.00	2948.00	2948.00	153489.00	496.00	2452.00	4089.24	211.22	0.00	1921.30	0.00	6221.76	25.00	99.10	12.00	0.76	5.00	78.18	25.00	424.94
		3 Ri Bhoi Circle	37.00	1739.99	593.38	2333.37	26.00	11.00	1523.00	1523.00	125939.00	378.00	1143.00	2793.69	294.43	3.00	783.84	1.09	3785.98	16.00	89.10	28.00	54.29	7.00	54.00	29.00	317.00
		4 Jaintia Circle	36.00	771.26	793.62	1564.88	31.00	25.00	1501.00	1502.00	96630.00	333.00	1169.00	1249.82	103.19	0.00	540.24	0.00	1893.27	18.00	72.03	13.00	4.59	12.00	211.55	18.00	235.73
3	Western Zone	5 East Garo Hill	43.00	3402.70	1775.94	5178.64	20.00	23.00	2373.00	2373.00	100069.00	610.00	1953.00	5598.71	2046.03	0.00	2912.49	30.20	13587.43	17.00	72.37	8.00	0.66	14.00	424.80	9.00	221.20
		6 West Garo Hills	41.00	1039.44	1706.50	2745.94	23.00	18.00	2333.00	2381.00	86396.00	492.00	1889.00	3773.96	512.07	0.00	1312.92	7.50	5606.45	12.00	55.25	5.00	0.36	4.00	92.00	11.00	283.50
		7 Tura	19.00	146.29	334.73	481.02	15.00	4.00	545.00	545.00	48077.00	108.00	437.00	585.13	311.56	0.00	644.73	201.50	1742.92	7.00	52.50	2.00	0.35	4.00	17.03	4.00	15.50
TOTAL			367.00	14477.03	8206.10	19683.13	255.00	112.00	12804.00	12853.00	889235.00	3317.00	9536.00	18863.74	3543.69	13.30	8859.44	478.22	31758.38	114.00	634.45	77.00	62.49	63.00	1026.02	121.00	1604.64
																			(including 1.86 km. UG)								
			11 KV Level						Distribution Substations:					LT Level						33 KV LEVEL DATA (Including consumers)							
			Feeders	Length (CktKms)			Feeder Metering:		Substations / DTs			DT Metering:		LT lines in Ckt.Kms.						33/11 KV SS		33/0.4 KV SS		33 KV line connected		33 KV line connected	
			Total No.	Main	Spur	Total	OK (In Nos.)	NOT OK (In Nos.)	No. of Sub Stations:	No. of DTs	Total Capacity	OK (In Nos.)	NOT OK (In Nos.)	1Ph 2 wire	2Ph 3 wire	2Ph 4 wire	3Ph 4 wire	3Ph 5 wire	Total	Total No of SS	Total Capacity (MVA)	Total No of SS	Total Capacity (MVA)	Total No of 33 KV Feeders	Ckt. Kms	Total No of 33 KV Feeders	Ckt. Kms
TOTAL			262.00	7888.60	1388.93	9277.53	197.00	65.00	7353.00	7354.00	654693.00	2107.00	5247.00	8905.94	674.01	13.30	3989.30	239.02	13821.57	78.00	454.33	62.00	61.12	41.00	492.21	97.00	1084.44
TOTAL			105.00	6588.44	3817.17	10405.60	58.00	47.00	5451.00	5499.00	234542.00	1210.00	4289.00	9957.80	2869.66	0.00	4870.14	239.20	17936.81	36.00	180.12	15.00	1.37	22.00	533.81	24.00	520.20

Energy Manager,
MeECL, Meghalaya
BEE Reg. No: EA-23306

XI. Technical Details

TECHNICAL DATA AS ON 31ST MARCH 2022

Zones		Circle		Division		Sub Division		11 KV Level						Distribution Substations:					LT Level						33 KV LEVEL DATA (Including consumers)					
								Feeders	Length (CktKms)			Feeder Metering:		Substations / DTs			DT Metering:		LT lines in Ckt.Kms.						33/11 KV SS		33/0.4 KV SS		33 KV line connected		33 KV line connected
								Total No.	Main	Spur	Total	OK (In Nos.)	NOT OK (In Nos.)	No. of Sub Stations:	No. of DTs	Total Capacity	OK (In Nos.)	NOT OK (In Nos.)	1Ph 2 wire	2Ph 3 wire	2Ph 4 wire	3Ph 4 wire	3Ph 5 wire	Total	Total No of SS:	Total Capacity (MVA)	Total No of SS:	Total Capacity (MVA)	Total No of 33 KV Feeders:	Ckt. Kms	Total No of 33 KV Feeders:	Ckt. Kms
1	Central Zone	1	Shillong Circle	1	Shillong East	1	Nongthymmai	10.00	35.6897	0.56	36.25	8	2	185	185	42814	58	127	**8.498**	**7.338**	**0**	**65.601**	**180.05**	**261.49**	1	15	0	0	0	0	2	8.89
						2	New Shillong	2	**137.02**	**1.02**	138.04	2	0	105	105	13796	38	67	**85.305**	**4.14**	**0**	**49.77**	**0**	**139.22**	0	0	0	0	0	0	0	0
						3	Lapalang	14	**71.71**	**0.04**	71.75	11	3	208	208	35629	170	38	114.22	10.8	0	129.774	0	**254.79**	4	41.3	1	0.2	3	18.1	3	21
						4	Umiew	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	**0.00**	0	10	0	0	0	0	0	0
						5	Upper Shillong	10	216.622	0.2	216.82	10	0	170	170	14114	115	55	507.3109	36.6	0	69.2	0	**613.11**	3	10	1	0.01	4	56	4	8
					Shillong West	6	Umlyngka	6	135.223	0	135.22	5	1	111	111	14136	95	16	110.339	18.58	0	41.35	0	**170.27**	1	15	1	0.05	2	24	3	24
						7	Mawlai	9	20.01	0.03	20.04	9	0	75	75	20802	71	4	7.25	3.5	0	141.27	1.25	**153.27**	1	20	1	0.063	1	0.8	1	4
						8	Shillong Central	9	38.754	0	38.75	9	0	210	210	58193	167	43	3.075	0.4	0	92.681	0	**96.16**	2	25	2	0.35	1	1.7	2	2.8
					Shillong Central	9	Umjarain	7	29.865	0	29.87	7	0	78	78	15391	20	58	3.065	0	0	31.72	0	**34.79**	3	12.5	1	0.25	3	4.57	3	8.9
						10	Polo	12	50.27	0.05	50.32	12	0	126	126	35283	116	10	9.39	2.05	0	60.58	27.74	**99.76**	2	25	1	0.5	2	11.5	1	5
						11	Mawprem	6	31.033	0.033	31.07	5	1	113	113	28477	50	63	14.735	0	10.3	59.715	28.98	**113.73**	6	20.126	2	20	1	1.51	6	6.06
				Sub Total (Circle)				85.00	766.20	1.93	768.13	78.00	7.00	1381	1381	278635	900.00	481.00	863.19	83.41	10.30	741.66	238.02	1936.58	23.00	193.93	10.00	21.42	17.00	118.18	25.00	88.75
1	Central Zone	2	Khasi Hill Circle	4	East Khasi Hills	12	Sohra	9	389.07	0	389.07	6	3	234	234	15726	58	176	139.64	31.3	0	239.59	0	410.53	3	14.1	2	0.126	1	0.2	3	63.7
						13	Sohiong	4	281.24	0	281.24	4	0	251	251	12644	28	223	380.376	19.75	0	84.584	0	484.71	1	5	1	0.063	0	0	1	12.9
						14	Pynursla	4	363.308	0	363.308	2	2	240	240	11495	47	193	228.398	2	0	170.214	0	400.612	1	5	0	0	0	0	1	18.5
						15	Mawryngkneng	9	456.6	0	456.6	9	0	301	301	17990	60	240	740.496	14.84	0	446.356	0	1201.692	4	15	1	0.1	0	0	5	48
					West Khasi Hills	16	Riangdo	11	674.656	0	674.656	8	3	396	396	11066	12	384	635.2824	11.59	0	177.433	0	824.30544	2	7.5	1	0.063	1	21	2	37.2
						17	Nongstoin	13	671.932	0	671.932	6	7	477	477	26656	72	405	554.123	26.89	0	209.572	0	790.585	4	18.2	2	0.088	1	12	2	48
						18	Mairang	10	577.633	0	577.633	10	0	352	352	20559	119	233	490.754	25.95	0	255.537	0	772.241	3	9.1	1	0.063	0	0	4	56
					South West Khasi Hills	19	Mawkyrwat	10	473.714	0	473.714	3	7	315	315	15825	53	262	365.803	78.15	0	97.937	0	541.89	3	12.5	1	0.063	1	25.28	4	70.635
						20	Mawsynram (DFA)	15	699	0	699	15	0	382	382	20728	47	335	554.366	0.75	0	240.08	0	795.196	4	13	3	0.189	1	20	3	70
				Sub Total (Circle)				85.00	4587.15	0.00	4587.15	63.00	22.00	2948	2948	153489	496.00	2451.00	4089.24	211.22	0.00	1921.30	0.00	6221.76	25.00	99.4.0	12.00	0.76	5.00	78.48	25.00	424.94
2	Eastern Zone	3	Ri Bhoi Circle	7	Umiam	21	Umiam	8	142.26	5.35	147.61	7	1	156	156	22591	82	74	95.02	8.85	0	63.02	0	166.89	6	30.6	3	0.43	1	0.5	3	56.5
						22	Umiam Rural	5	415.23	147.8	563.03	5	0	369	369	21537	135	234	609.21	59.0975	0	151.3	0	819.6075	1	5	0	0	0	0	1	20
						23	Umsning	11	430	300	730	1	10	257	257	23286	29	228	1400	200	3	234	1	1838	3	8.5	0	0	1	27	3	90
					Nongpoh	24	Nongpoh Urban	3	119.26	0	119.26	3	0	130	130	11140	80	49	82.1	7.73	0	45.66	0	135.49	1	10	0	0	0	0	2	51
						25	Nongpoh Rural	3	279.94	0	279.94	3	0	237	237	12260	36	0	244.08	15.19	0	50.95	0	310.22	1	5	0	0	0	0	1	13
						26	Patharkhmah	1	234	0	234	1	0	132	132	4990	11	0	103.66	3.46	0	36.35	0	143.47	0	0	0	0	0	0	0	0
					Byrnihat	27	Byrnihat -I	2	18.2	41.2	59.4	2	0	83	83	11464	2	81	63.3	0	0	48.66	0	111.96	1	10	16	34.24	2	23	5	27
						28	Byrnihat -II	2	35	20.8	55.8	2	0	42	42	6317	1	41	15.4	0	0	23.4	0	38.8	1	10	9	19.62	3	3.5	10	32.5
						29	Killing	2	86.1	78.23	164.33	2	0	117	117	12354	2	114	90.92	0.12	0	130.5	0	221.54	2	10	0	0	0	0	4	27
				Sub Total (Circle)				37.00	1759.99	593.38	2353.37	26.00	11.00	1523	1523	125939	378.00	821.00	2703.69	294.45	3.00	783.84	1.00	3785.98	16.00	89.1.0	28.00	54.29	7.00	54.00	29.00	317.00
2	Eastern Zone	4	Jaintia Circle	10	Jowai Division	30	Jowai	8	81.7	56	137.7	8	0	152	153	18636	18	135	175.32	27.15	0	75.85	0	278.32	2	12.5	2	0.3	1	6	0	0
						31	Amlarem	9	168.2	68.8	237	2	7	171	171	9200	39	132	201.5	24.14	0	60.1	0	285.74	3	6.6	1	0.063	2	36	0	0
					Jowai Rural Division	32	Shangpung	11	146.46	0	146.46	3	8	203	203	9658	49	154	205.39	9.56	0	63.92	0	281.87	3	4.73	1	0.63	4	93	4	93
						33	Khliehriyrsi	11	122.9	159.5	282.4	11	0	333	333	16149	87	246	311.2	26.85	0	110.9	0	448.95	4	14.1	3	0.263	0	0	9	56.2
					Khliehriat	34	Khliehriat	8	135	254.21	389.21	5	3	332	332	22700	87	245	218.37	10.55	0	150.26	0	379.18	3	27.5	5	1.73	2	60.55	2	60.55
						35	Sutnga	9	121	255.11	376.11	2	7	310	310	20287	53	258	135.039	4.94	0	79.232	0	219.211	3	6.6	1	1.6	3	46	3	46
				Sub Total (Circle)				56.00	775.26	793.62	1568.88	31.00	25.00	1501	1502	96630	333.00	1170.00	1249.82	103.19	0.00	540.26	0.00	1893.27	18.00	72.03	13.00	4.59	12.00	241.55	18.00	255.75
3	Western Zone	5	East Garo Hill	13	South Garo Hills	36	Chockpot	2	32	156	188	0	2	121	121	2763	4	117	73.5	0	0	81.5	0	155	1	1.6	0	0	0	0	2	61.7
						37	Baghmara	7	1865.15	156.74	2021.89	3	4	374	374	13578	51	323	1151.2	601.8	0	609.4	6.5	2368.9	3	14.52	3	0.189	1	42	1	42
						38	Nangalbibra (DFA)	6	80	112.1	192.1	6	0	147	147	6217	19	128	226.4	88.16	0	46.5	0	361.06	1	10	1	0.02	2	45.5	3	45.5
						39	Songsak (DFA)	4	83	324	407	0	4	288	288	8507	35	253	678	147.2	0	96.5	0	921.7	3	6.7	0	0	3	72	3	72
						40	Williamnagar	7	510.252	0	510.252	7	0	365	365	20846	72	293	486.45	19.19	0	315.534	23.7	844.874	2	11.6	0	0	2	50	0	0
					East Garo Hills	41	Mendipathar	10	517.3	268.1	785.4	4	6	409	409	18992	141	268	664.92	592.2	0	709.75	0	1966.87	3	14.75	2	0.35	3	52.3	0	0
						42	Kharkutta	3	64	170	234	0	3	301	301	10017	77	224	404.2	128.27	0	144.71	0	677.18	1	4.1	1	0	1	64	0	0
						43	Bajengdoba	6	2251	589	2840	0	6	568	568	19149	211	357	1914.04	469.21	0	908.6	0	3291.85	3	9.1	1	0.1	2	99	0	0
				Sub Total (Circle)				45.00	5402.70	1775.94	7178.64	20.00	25.00	2573	2573	100069	610.00	1963.00	5598.71	2046.03	0.00	2912.49	30.20	10587.43	17.00	72.37	8.00	0.66	14.00	424.80	9.00	221.20
3	Western Zone	6	West Garo Hills	15	West Garo Hills	44	Raksamgre (DFA)	2	137.42	218.76	356.18	2	0	242	274	8566	74	200	489.649	4.2	0	117.307	0	611.156	1	2.5	0	0	0	0	1	27
						45	Phulbari (DFA)	4	108.1	157.78	265.88	4	0	215	227	11141	58	169	452.652	2.92	0	133.3164	0	588.8884	1	10	1	0.1	0	0	1	20
						46	Dalu (DFA)	12	197.874	418.98	616.854	7	5	590	590	16136	25	565	978.75	477.15	0	470.97	0	1926.87	3	9.8	2	0.2	0	0	2	58
						47	Dadengre	2	94.75	122.5	217.25	1	1	146	146	4126	17	129	304.0778	13.4	0	90.969762	0	408.44757	1	2.5	0	0	0	0	1	32
					West Garo Hills Hills	48	Selsella	5	262.209	90.927	353.136	4	1	260	260	10159	81	179	333.025	5.5	0	93.78	0	432.305	2	6.6	0	0	0	0	2	46
						49	Mahendraganj	5	48.36	203.15	251.51	2	3	255	257	12135	52	205	282.617	0	0	110.882	0	393.499	2	6.6	1	0	0	0	0	0
						50	Garobadda	6	130.3	228.72	359.02	2	4	348	347	13723	121	226	481.634	4.35	0	120.82	7.5	624.304	1	11.6	1	0.06	3	77	2	46
						51	Ampati	5	60.43	265.68	326.11	1	4	279	280	11410	64	216	441.56	4.55	0	174.87	0	620.98	1	5.65	0	0	1	15	2	54.5
				Sub Total (Circle)				41.00	1039.44	1706.50	2745.94	23.00	18.00	2333	2381	86396	492.00	1889.00	3773.96	512.07	0.00	1312.92	7.50	5606.45	12.00	55.25	5.00	0.36	4.00	92.00	11.00	283.50
3	Western Zone	7	Tura	17	Tura	52	Tura West	10	58.59	20.47	79.06	10	0	244	244	20098	32	212	253.14	218.612	0	356.49	175.52	1003.7622	4	30	1	0.1	3	9.01	2	4.5
						53	Tura East	9	19.7	67.25	86.95	5	4	151	151	14797	34	117	135.42	81.2	0	193.79	25.98	436.39	3	22.5	1	0.25	1	8	2	11
						54	Tura North	0	68	247.01	315.01	0	0	150	150	5182	42	108	196.57	11.75	0	94.45	0	302.77	0	0	0	0	0	0	0	0
				Sub Total (Circle)				19.00	146.29	334.73	481.02	15.00	4.00	545	545	40077	108.00	437.00	585.13	311.56	0.00	644.73	201.50	1742.92	7.00	52.50	2.00	0.35	4.00	17.01	4.00	15.50

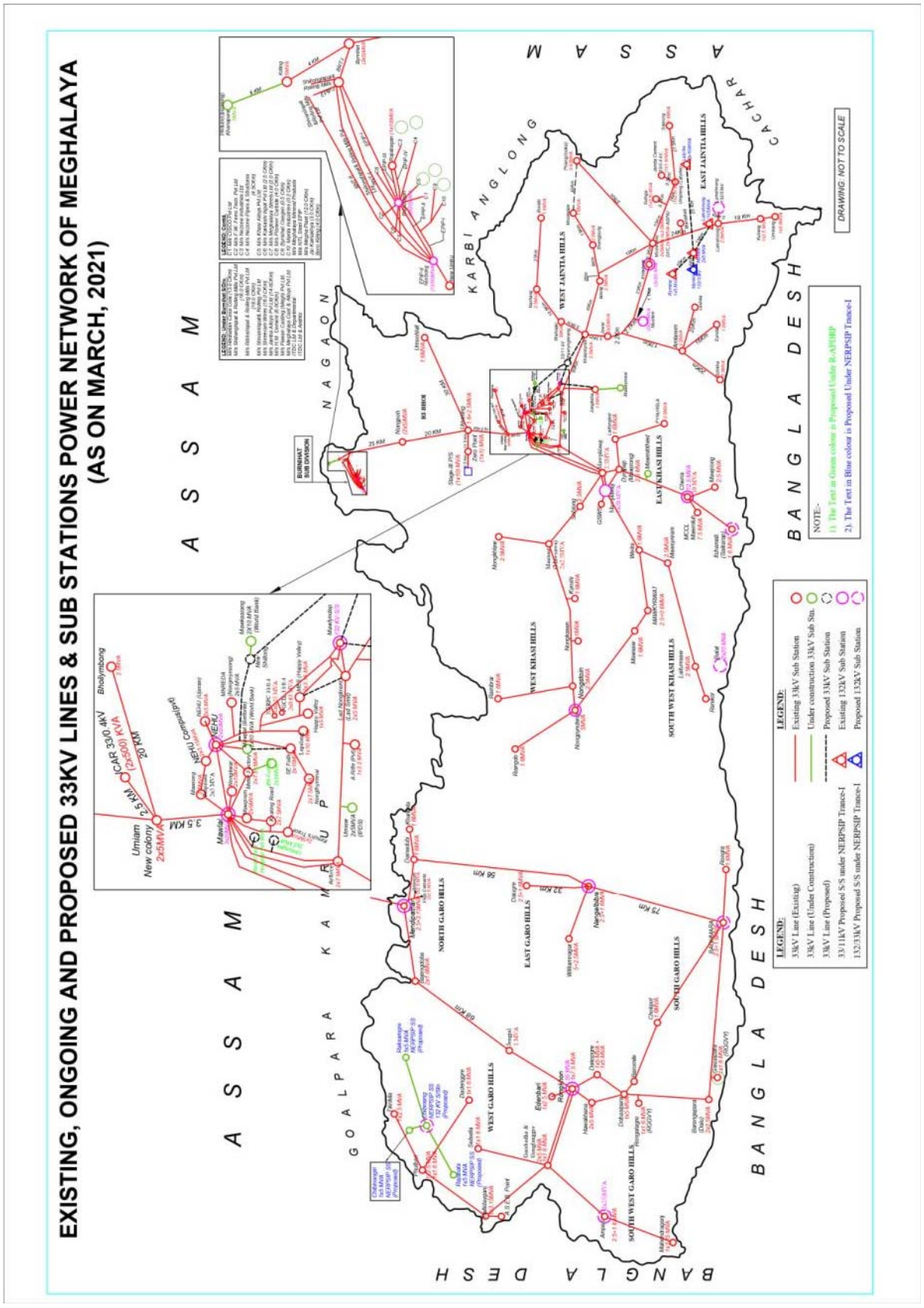
SUMMARY OF TECHNICAL DATA AS ON 31ST MARCH 2022

Sl. No	Name of the Zone:	Circle:	11 KV Level			Distribution Substations:		LT Level	33 KV LEVEL DATA (Including consumers)		
			Feeders	Length (CktKms)	Feeder Metering	Substations / DTs	DT Metering:	LT lines in Ckt Kms:	33/11 KV SS	33/0.4 KV SS	33 KV line connected

				Total No.	Main	Spur	Total	OK (In Nos.)	NOT OK (In Nos.)	No. of Sub Stations:	No. of DTs	Total Capacity	OK (In Nos.)	NOT OK (In Nos.)	1Ph 2 wire	2Ph 3 wire	2Ph 4 wire	3Ph 4 wire	3Ph 5 wire	Total	Total No of SS:	Total Capacity (MVA)	Total No of SS:	Total Capacity (MVA)	Total No of 33 KV Feeders:	Ckt. Kms	Total No of 33 KV Feeders:	Ckt. Kms
1	Central Zone	1	Shillong Circle	85.00	766.20	1.93	768.13	78.00	7.00	1381.00	1381.00	278635.00	900.00	481.00	863.19	83.41	10.30	741.66	238.02	1936.58	23.00	193.93	10.00	21.42	17.00	118.18	25.00	88.75
		2	Khasi Hill Circle	85.00	4587.15	0.00	4587.15	63.00	22.00	2948.00	2948.00	153489.00	496.00	2451.00	4089.24	211.22	0.00	1921.30	0.00	6221.76	25.00	99.40	12.00	0.76	5.00	78.48	25.00	424.94
2	Eastern Zone	3	Ri Bhoi Circle	37.00	1759.99	593.38	2353.37	26.00	11.00	1523.00	1523.00	125939.00	378.00	821.00	2703.69	294.45	3.00	783.84	1.00	3785.98	16.00	89.10	28.00	54.29	7.00	54.00	29.00	317.00
		4	Jaintia Circle	56.00	775.26	793.62	1568.88	31.00	25.00	1501.00	1502.00	96630.00	333.00	1170.00	1249.82	103.19	0.00	540.26	0.00	1893.27	18.00	72.03	13.00	4.59	12.00	241.55	18.00	255.75
3	Western Zone	5	East Garo Hill	45.00	5402.70	1775.94	7178.64	20.00	25.00	2573.00	2573.00	100069.00	610.00	1963.00	5598.71	2046.03	0.00	2912.49	30.20	10587.43	17.00	72.37	8.00	0.66	14.00	424.80	9.00	221.20
		6	West Garo Hills	41.00	1039.44	1706.50	2745.94	23.00	18.00	2333.00	2381.00	86396.00	492.00	1889.00	3773.96	512.07	0.00	1312.92	7.50	5606.45	12.00	55.25	5.00	0.36	4.00	92.00	11.00	283.50
		7	Tura	19.00	146.29	334.73	481.02	15.00	4.00	545.00	545.00	48077.00	108.00	437.00	585.13	311.56	0.00	644.73	201.50	1742.92	7.00	52.50	2.00	0.35	4.00	17.01	4.00	15.50
TOTAL				**368.00**	**14477.03**	**5206.10**	**19683.13**	**256.00**	**112.00**	**12804.00**	**12863.00**	**889235.00**	**3317.00**	**9212.00**	**18863.74**	**3561.93**	**13.30**	**8857.21**	**478.22**	**31774.39**	**118.00**	**634.58**	**78.00**	**82.42**	**63.00**	**1026.02**	**121.00**	**1606.64**

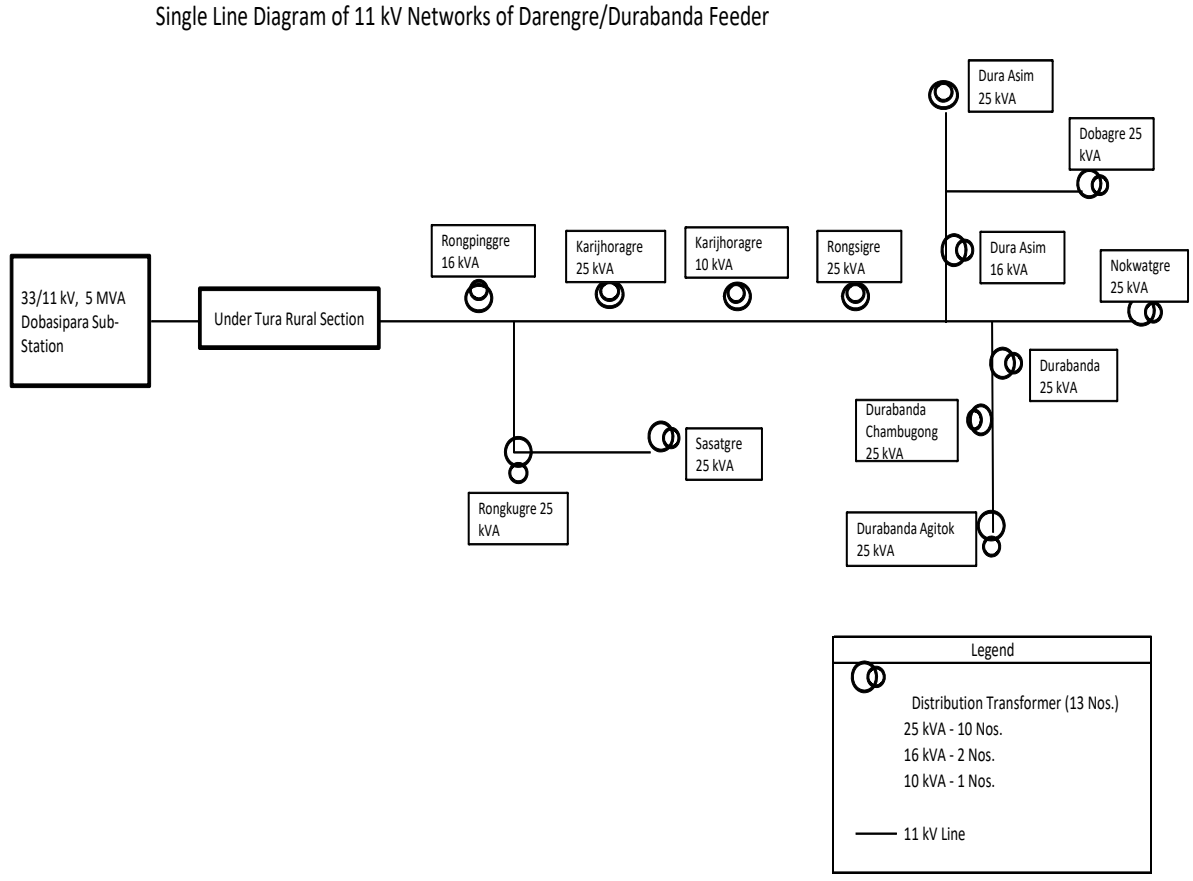
				11 KV Level						Distribution Substations:					LT Level						33 KV LEVEL DATA (Including consumers)							
				Feeders	Length (CktKms)			Feeder Metering:		Substations / DTs			DT Metering:		LT lines in Ckt.Kms.						33/11 KV SS		33/0.4 KV SS		33 KV line connected		33 KV line connected	
				Total No.	Main	Spur	Total	OK (In Nos.)	NOT OK (In Nos.)	No. of Sub Stations:	No. of DTs	Total Capacity	OK (In Nos.)	NOT OK (In Nos.)	1Ph 2 wire	2Ph 3 wire	2Ph 4 wire	3Ph 4 wire	3Ph 5 wire	Total	Total No of SS:	Total Capacity (MVA)	Total No of SS:	Total Capacity (MVA)	Total No of 33 KV Feeders:	Ckt. Kms	Total No of 33 KV Feeders:	Ckt. Kms
TOTAL				**263.00**	**7888.60**	**1388.93**	**9277.53**	**198.00**	**65.00**	**7353.00**	**7354.00**	**654693.00**	**2107.00**	**4923.00**	**8905.94**	**692.27**	**13.30**	**3987.07**	**239.02**	**13837.59**	**82.00**	**454.46**	**63.00**	**81.05**	**41.00**	**492.21**	**97.00**	**1086.44**
TOTAL				**105.00**	**6588.44**	**3817.17**	**10405.60**	**58.00**	**47.00**	**5451.00**	**5499.00**	**234542.00**	**1210.00**	**4289.00**	**9957.80**	**2869.66**	**0.00**	**4870.14**	**239.20**	**17936.81**	**36.00**	**180.12**	**15.00**	**1.37**	**22.00**	**533.81**	**24.00**	**520.20**

XII. Power Mapping

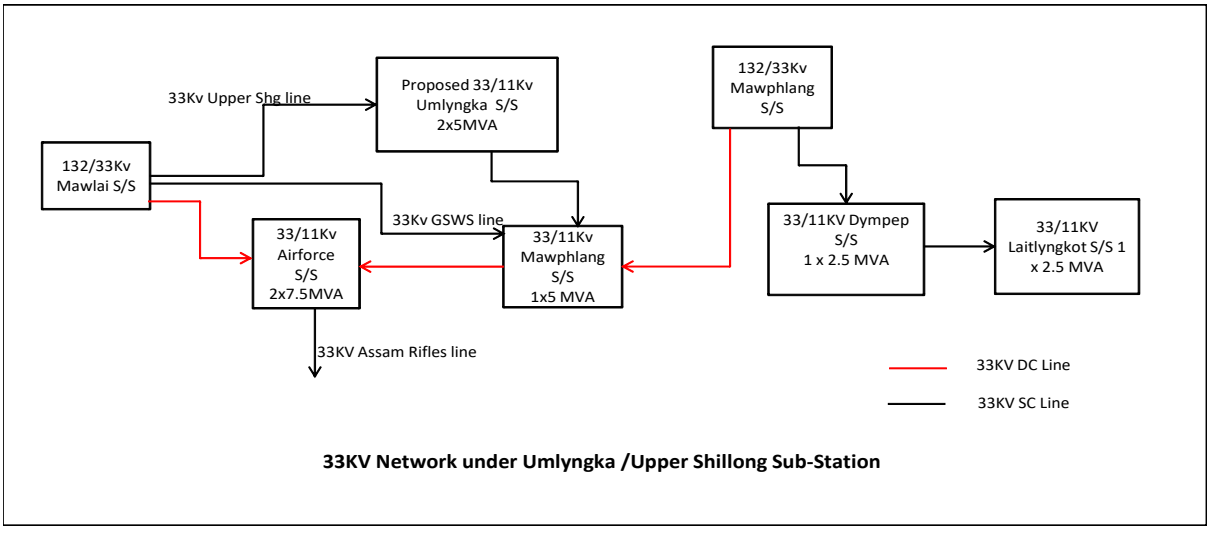


XIII. SLD (Single Line Diagram)

- Western Zone 11kV SLD Network of Durabanda Feeder

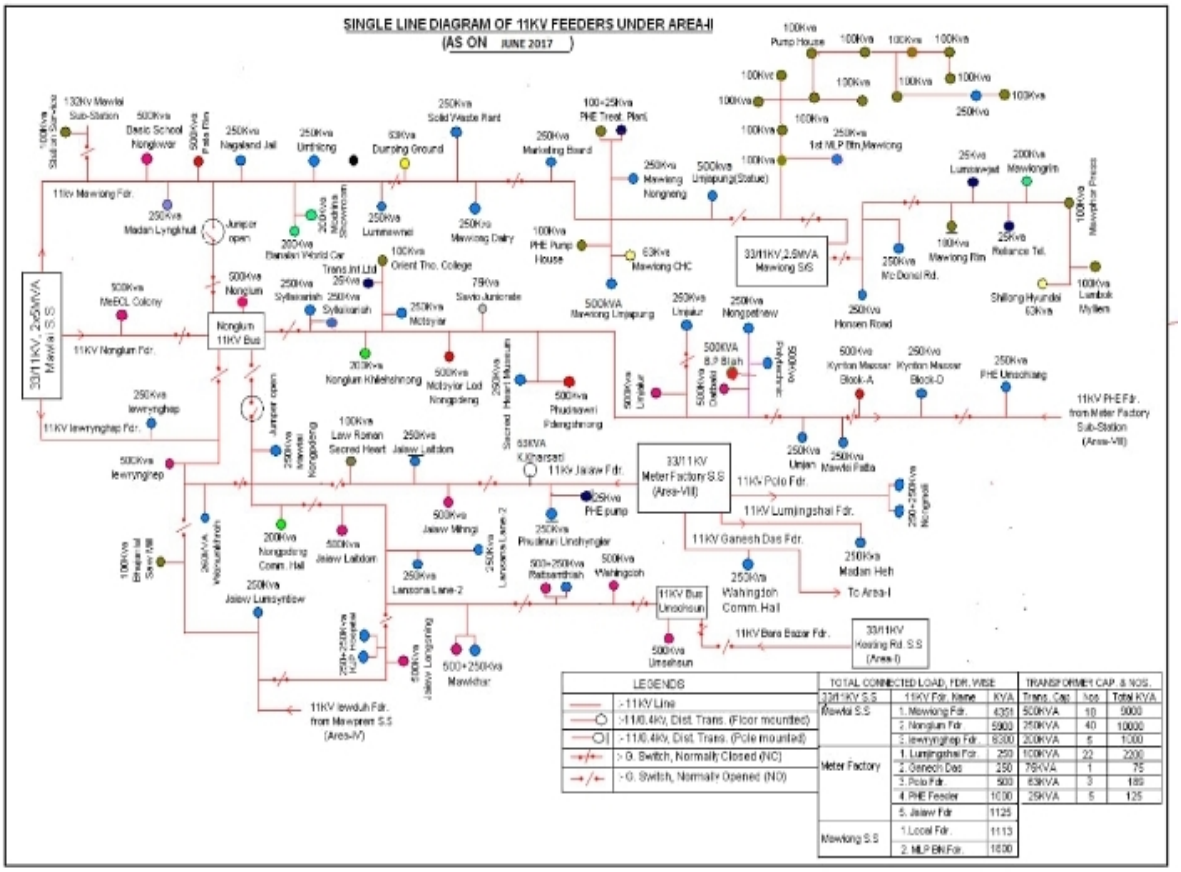


- Eastern Zone 11kV SLD Network of Upper Shillong Circle Feeder



33KV Network under Umlyngka /Upper Shillong Sub-Station

- Eastern Zone 11kV SLD Network of Feeder Under Area-II



XIV. Organisational Data

Organizational Structure_MePDCL_Distribution_2023

Sl no.	Sub-division	Division	Circle	Zone
	Asst. Executive Engineer	Executive Engineer	Superintendent Engineer	Addl. Chief Engineer
1	Nongthymmai DSD	Shillong (East) Distribution Division	Shillong Distribution Circle	Central Zone
2	Lapalang DSD			
3	New Shillong DSD			
4	Mawlai DSD	Shillong (West) Distribution Division		
5	Upper Shillong DSD			
6	Umlyngka DSD			
7	Umjarain DSD	Shillong Central Distribution Division		
8	Central DSD			
9	Polo DSD			
10	Mawprem DSD			
11	Mawrymkneg DSD	East Khasi Hills Distribution Division	Khasi Hills Distribution Circle	
12	Pynursla DSD			
13	Cherra DSD			
14	Sohiong DSD			
15	Mairang DSD	West Khasi Hills Distribution Division		
16	Nongstoin DSD			
17	Riangdo DSD			
18	Weiloi DSD	South Khasi Hills Distribution Division		
19	Mawkyrwat DSD			
20	Mawsynram DSD_DF			
21	Umiam DSD	Umiam Distribution Division	Ri-Bhoi Distribution Circle	Eastern Zone
22	Umsning DSD			
23	Umiam Rural DSD			
24	Nongpoh DSD	Nongpoh Distribution Division		
25	Nongpoh Rural DSD			
26	Patharkhmah DSD			
27	Byrnihat DSD-I	Byrnihat Distribution Division		
28	Killing DSD			
29	Byrnihat DSD-II			
30	Sutnga DSD	Khliehriat Distribution Division	Jaintia Hills Distribution Circle	
31	Khliehriat DSD			
32	Jowai DSD	Jowai Distribution Division		
33	Amlarem DSD			
34	Shangpung DSD	Jowai Rural Distribution Division		
35	Khliehtyrshi DSD			
36	Tura (West) DSD	Tura Distribution Division	Tura Distribution Circle	Western Zone
37	Tura (East) DSD			
38	Tura (North) DSD			
39	Baghmara DSD	South Garo Hills Distribution Division	East Garo Hills Distribution Circle	
40	Nangalbibra DSD_DF			
41	Chokpot DSD			
42	Williamnagar DSD	East Garo Hills Distribution Division		
43	Mendipathar DSD			
44	Bajengdoba DSD			
45	Songsak DSD (non-functional)			
46	Kharkutta DSD			
47	Dalu DSD_DF	West Garo Hills Distribution Division	West Garo Hills Circle	
48	Dadengre DSD			
49	Tikrikilla DSD (non-functional)			
50	Phulbari DSD_DF			
51	Selsella DSD	South-West Garo Hills Distribution Division		
52	Garobadha DSD			
53	Ampati DSD			
54	Mahendraganj DSD			

* DSD= Distribution Sub-Division

** DSD_DF= DSD under Distribution Franchise

XV. Action taken report during FY 2021-2022

Action Plan reporting format (2021-22)

Sr. No.	Energy efficiency improvement measures (EEIM)	Investment Rupees (Lakh)/ Quantity	Location/ Quantity	Date of completion of measure/ likely completion	Life cycle year1	Energy Consumption (TOE)		Annual Energy saving				
						Before Measures	After Measures	Electricity (kWh)	Oil (Tonne)	Gas (SCM)	Coal (Tonne)	Other (if any)
1.	Construction of Gas Insulated Substation (GIS, E-House) 33/11KV Substation: under Integrated Power Development Scheme (IPDS-II)		1. Shillong – 33/11KV, 2x10MVA 2. Jowai – 33/11KV, 2x5MVA	December, 2021		YBD	YBD	YBD	NA	NA	NA	
2.	Construction of 12 new 33/11 kV substation in Khasi Hills Distribution Circle Under ADB funded project		1. Construction of new 33/11kV New Shillong 2. Construction of new 33/11kV Mylliem 3. Construction of new 33/11kV MAWSHABUIT 4. Construction of new 33/11 kV Lawbah 5. Construction of new 33/11 kV Tyrsad 6. Construction of new 33/11 kV Nongkyllan 7. Construction of new 33/11kV Pongtung	Aug, 2025		YBD	YBD	YBD	NA	NA	NA	
3.	Augmentation / Upgrading existing 33/11 kV Substations in Khasi Hills Distribution Circle under ADB funded project		1. Augmentation / Upgrading of 33/11 kV Ichamati 2. Augmentation / Upgrading of 33/11 kV Wellci 3. Augmentation / Upgrading of 33/11 kV Jonksa 4. Augmentation / Upgrading of 33/11 kV Mawsynram 5. Augmentation / Upgrading of 33/11 kV Sohiong 6. Augmentation / Upgrading of 33/11 kV Jaklon 7. Augmentation / Upgrading of 33/11 kV Sohra 8. Upgrading 132/33 of Mawphlang 9. Upgrading 33/11 kV of Ranikor	Aug, 2025		YBD	YBD	YBD	NA	NA	NA	

		10. Upgrading 33/11 KV of Airforce 11. Upgrading 33/11 KV of Happy Valley 12. Augmentation / Upgrading of 33/11 kV RAMBRAI 13. Augmentation / Upgrading of 33/11 kV Nongksen 14. Augmentation / Upgrading of 33/11 kV Nongkhlaw 15. Augmentation / Upgrading of 33/11 KVMawsaw 16. Augmentation / Upgrading of 33/11 kV Riangdo 17. Augmentation / Upgrading of 33/11 kV Kynshi 18. Upgrading 33/11 kV Mawkyrwat 19. Augmentation / Upgrading 33/11 kV Mawasawa 20. Augmentation / Upgrading 33/11 kV Nongstoin 21. Upgrading of 33KV Nongpyndeng SS				YBD	YBD	YBD	NA	NA	NA	
4.	Augmentation / Upgrading existing 33/11 kV Substations in Tura Distribution Circle under ADB funded project	1. Augmentation / Upgrading of 33/11 kV Paharinagar SS 2. Upgrading of 33/11 kV Dakopre SS	Aug, 2025									
5.	Construction of 12 new 33/11 kV substation in East Garo Hills Distribution Circle Under ADB funded project	1. Construction of new 33/11 kV Dagalapal 2. Construction of new 33/11 kV Pedaldoba 3. Construction of new 33/11 kV Mangsang 4. Construction of new 33/11 kV Samgong 5. Construction of new 33/11 kV Cherangre 6. Construction of new 33/11 kV Jengjal 7. Construction of new 33/11 kV Rongjeng 8. Construction of new 33/11 kV Sibbari	Aug, 2025			YBD	YBD	YBD	NA	NA	NA	
6.	Augmentation / Upgrading existing 33/11 kV Substations in East Garo Hills Distribution Circle	1. Augmentation / Upgrading of 33/11 kV Songsak 2. Augmentation / Upgrading of 33/11 kV Samanda 3. Augmentation / Upgrading of 33/11 kV Kharkuta	Aug, 2025			YBD	YBD	YBD	NA	NA	NA	

	ADB funded project		4. Augmentation / Upgrading of 33/11 kV Bajengdoba-I (old) 5. Augmentation / Upgrading of 33/11 kV Chokpot 6. Augmentation / Upgrading of 33/11 kV Mendipathar(Old) 7. Augmentation / Upgrading of 33/11 kV Dainadubi 8. Upgrading of 33/11 kV Williamnagar 9. Upgrading of 33/11KV Jaksongram 10. Upgrading of 33/11 KV Resubelpara			YBD	YBD	YBD	NA	NA	NA	
7.	Construction of 12 new 33/11 kV substation in West Garo Hills Distribution Circle Under ADB funded project		1. Construction of New SS at 33/11kV Babadam 2. Construction of New SS at 33/11kV Damalgre 3. Construction of New SS at 33/11 kV Zikzak 4. Construction of New SS at 33/11kV New Chengkompara (New Ampati)	Aug, 2025								
8.	Augmentation / Upgrading existing 33/11 kV Substations in West Garo Hills Distribution Circle ADB funded project		1. Augmentation / Upgrading of 33/11 kV Selsella SS 2. Augmentation / Upgrading of 33/11 kV Ampati SS 3. Augmentation / Upgrading of 33/11 kV Daddengre SS 4. Augmentation / Upgrading of 33/11 kV Baromile SS 5. Upgrading of 33/11 kV Purkhasia SS 6. Upgrading of 33/11 kV Dalu SS 7. Augmentation / Upgrading of 33/11 kV Haldiyaganj SS 8. Upgrading of 33/11 kV Phulbari SS 9. Augmentation / Upgrading of 33/11 kV Gongglangre SS 10. Upgrading of 33/11 kV Mahendraganj SS	Aug, 2025		YBD	YBD	YBD	NA	NA	NA	
9.	Installation of 1Ph Smart Meters for		178022 Nos.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA	

	consumers under ADB funded project				YBD	YBD	YBD	NA	NA	NA			
10.	Installation of 3Ph Smart Meters for consumersunder ADB funded project	1978 Nos.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			
11.	Installation of HT & LT Bulk Smart Meters for consumersunder ADB funded project	515 Nos.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			
12.	Installation of LT Smart Meters for DTsunder ADB funded project	6500 Nos.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			
13.	Construction of New 33KV Single Ckt (S/C) line (Km)under ADB funded project	771.2 Km.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			
14.	Conversion of existing 33KV S/C line to 100 Sqmm Covered conductor (Km)under ADB funded project	52 Km.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			
15.	Re-conductoring of 33KV S/C Line (Km)under ADB funded project	444 Km.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			
16.	Construction of New 11KV Single Ckt (S/C) line (Km)under ADB funded project	669 Km.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			
17.	Re-conductoring of 11KV S/C Line	278 Km.	Aug, 2025		YBD	YBD	YBD	NA	NA	NA			

	(Km)under ADB funded project				YBD	YBD	YBD	NA	NA	NA	
18.	Replacement of 11KV poles (No)under ADB funded project	6310	Aug, 2025		YBD	YBD	YBD	NA	NA	NA	
19.	Installation of Auto-Reclosers (No)under ADB funded project	136	Aug, 2025		YBD	YBD	YBD	NA	NA	NA	
20.	Installation of FPIs (No)under ADB funded project	597	Aug, 2025		YBD	YBD	YBD	NA	NA	NA	
21.	Preparation of Distribution Master Planunder ADB funded project	1	Jun, 2024		YBD	YBD	YBD	NA	NA	NA	
22.	Smart Prepaid Consumer Metering under RDSS	4,60,000 Nos.	March, 2025		YBD	YBD	YBD	NA	NA	NA	
23.	Smart DT Meteringunder RDSS	11,419 Nos.	March, 2025		YBD	YBD	YBD	NA	NA	NA	
24.	Smart Feeder Meteringunder RDSS	904 Nos.	March, 2025		YBD	YBD	YBD	NA	NA	NA	
25.	Smart Boundary Meteringunder RDSS	420 Nos.	March, 2025		YBD	YBD	YBD	NA	NA	NA	
26.	LT AB Cableunder RDSS	2373 Ckm.	March, 2025		YBD	YBD	YBD	NA	NA	NA	
27.	Re-Conductoring 11 KV MVCC/HT Bare to Bareunder RDSS	1138 Ckm	March, 2025		YBD	YBD	YBD	NA	NA	NA	
28.	Re-Conductoring 33 KV MVCC/HT Bare to Bareunder RDSS	245 Ckm	March, 2025		YBD	YBD	YBD	NA	NA	NA	
29.	HT Line New	1091 Ckm	March, 2025		YBD	YBD	YBD	NA	NA	NA	

30.	LT Lines (incl LT-HT Conversion) under RDSS		1926 Ckm	March, 2025		YBD	YBD	YBD	NA	NA	NA	
31.	LT Lines with AB Cableunder RDSS		1250 Ckm	March, 2025		YBD	YBD	YBD	NA	NA	NA	
32.	Installation of Distribution Transformerunder RDSS		2595 Nos.	March, 2025		YBD	YBD	YBD	NA	NA	NA	
33.	Unified Billing Solution under RDSS		1	March, 2025		YBD	YBD	YBD	NA	NA	NA	

'BD= Yet to be decided

gnature

ame of the energy manager:
gd. No.:
ob. No.:
nail ID:

Energy Manager,
MeECL, Meghalaya
BEE Reg. No: EA-23306

Signature 1/2/23

Name of the plant head:
Mob. No.:
Email ID:

Chief Engr.
Planning Monitoring & Commercial
MePDCL, Shillong

ame of the company: Meghalaya Energy Corporation Ltd.
ill address:
ntact person:
nail address:
lephone/ Fax numbers:
ant address:

Seal

XVI. Brief description of Unit

The Meghalaya Energy Corporation Ltd. (MeECL) is a Government Company within the meaning of section 45 of the Companies Act, 2013, wholly owned by the Government of Meghalaya, incorporated under the Companies Act, 2013 in the year 2009 and inherited its business from the erstwhile Meghalaya State Electricity Board (MeSEB) in the year 2010. It has wholly owned three subsidiary Companies namely, Meghalaya Power Generation Corporation Ltd. (MePGCL), Meghalaya Power Transmission Corporation Ltd. (MePTCL) and Meghalaya Power Distribution Corporation Ltd. (MePDCL) responsible for Generation, Transmission and Distribution of Electricity respectively throughout the State as State Utilities.

The erstwhile Meghalaya State Electricity Board (MeSEB) was formed in the year 1975 after the formation of new State of Meghalaya from undivided State of Assam. The first Hydro Electric project in Meghalaya had started its operation in the year 1921, thereafter different Hydro Electric projects are being constructed throughout the State of Meghalaya utilising the natural water resources, efficient and experienced engineering wing and beautiful working environment of the State.

FUNCTIONS OF MeECL

The MeECL is a Government Company within the meaning of section 45 of the Companies Act, 2013. Your Company is 100% owned by the Government of Meghalaya.

The MeECL is comprising of all the assets, liabilities including all rights, obligations, contingences and proceedings belonging/related to the common activities or not specifically associated with the generation, transmission and distribution activities.

Inter-alia, the MeECL is performing the following major activities:

i) HR & Administration of the MeECL and its three subsidiaries.
ii) Maintaining the provident Fund, Pension Fund, Gratuity Fund etc. for employees of MeECL and its three subsidiaries.
iii) Corporate Social Responsibility
iv) Preparation of Accounts and Fund Management
v) Commercial, Material Management and Planning & Design for MeECL and of subsidiary companies.

- Administration Details of MeECL

The total number of circles, Divisions, Feeders & DT’s of MeECL is given in the below table:

Parameters	Total
Number of circles	7
Number of divisions	17
Number of sub-divisions	54
Number of feeders	367
Number of DTs	12853
Number of consumers	608752

- Voltage wise Meter Consumers

The voltage wise meter types of meter values given table:

Parameters	66kV and above	33kV	11/22kV	LT
Number of conventional metered consumers	11	19	659	579928
Number of consumers with 'smart' meters				
Number of consumers with 'smart prepaid' meters				
Number of consumers with 'AMR' meters				
Number of consumers with 'non-smart prepaid' meters				9793
Number of unmetered consumers				18342
Number of total consumers	11	19	659	608063

- Numbers of Distribution Transformers

Parameters	66kV and above	33kV	11/22kV	LT
Number of conventionally metered Distribution Transformers				3317
Number of DTs with communicable meters				
Number of unmetered DTs				9536
Number of total Transformers	36	183		12853

- Numbers of Feeders

Parameters	66kV and above	33kV	11/22kV	LT
Number of metered feeders			255	
Number of feeders with communicable meters				
Number of unmetered feeders			112	
Number of total feeders			367	

- Length of Cables

Particulars	Value (kM)
Line length (ct km)	31756.52 (LT line)+ 19683.13 (11 kV line)+ 2630.66 (33kV line)
Length of Aerial Bunched Cables	0
Length of Underground Cables	1.86

XVII. List of parameters arrived through calculation or Formulae with list of source of data

➢ Transmission and Distribution Losses (T&D Losses)

- Energy losses occur in the process of supplying electricity to consumers due to technical and commercial reasons.
- The technical losses are due to energy dissipated in the conductors, transformers and other equipment used for transmission, transformation, sub-transmission and distribution of power.
- These technical losses are inherent in a system and can be reduced to a certain level.
- Pilferage by hooking, bypassing meters, defective meters, errors in meter reading and in estimating un-metered supply of energy are the main sources of the commercial losses.
- There is another component of commercial losses, which is attributable to non-recovery of the billed amount, which is reflected in collection efficiency.
- T&D losses together with loss in collection give us Aggregate Technical & Commercial (AT&C) losses.

Calculation of transmission losses:

Particulars	Values
Input Energy purchased (MU)	2460.835
Transmission loss (%)	4.265%
Transmission loss (MU)	104.95
Energy sold outside the periphery(MU)	293.91
Net input energy (received at DISCOM periphery or at distribution point)-(MU)	2061.97
Billed Units (Mus)	1549.63
T& D Losses (Mus)	512.33
Billed Amount (Rs Crore)	931.602
Collected Amount (Rs Crore)	930.153
Collection Efficiency (Rs Crore)	99.84%
% T& D Loss	24.85%
% AT&C	24.96%

XVIII. Recommendation to improved technical losses& commercial losses

1. Ensure Installation of Smart Meter/ Functional Meter in all consumers. DTR &Feeder.
2. Installation of Capacitor bank in S/s for power factor improvement.
3. GIS based mapping of all 33/11 KV Substations, 11KV Lines, DTR and all Consumers both HT & LT.
4. Development & Implementation of technology based energy accounting system including associated software as per guideline of BEE.

(Dr.P.P.Mittal)
Director