

Annual Energy Accounting Report

Designated Consumer



Maharashtra Airport Development Company Limited
W Building, 1st Floor, Khapri, Nagpur - 441108

Prepared For



Bureau of Energy Efficiency
[Govt. of India – Ministry of Power]
4th Floor, SewaBhawan, R. K. Puram,
New Delhi – 110066, India.

Prepared by

SAVECAL ENERGY SOLUTIONS LLP
3215/21, Behind Gagan Regency, TatibandhRaipur, Chhattisgarh-492001

Acknowledgement

We are thankful to Maharashtra Airport Development Company Limited (SEZ MIHAN), for their positive support in undertaking this intricate task of Annual Energy Accounting study. The data verification process would not have been completed on time without their interaction and timely support. We are grateful for their co- operation during verification and provision of data for the study. We would like to particularly thank

Mr. SamreshChatterjee-

Chief Engineer

Mr. D. R. Deshmukh

-

Executive Engineer Electrical

Mr. AmolGhode- Assistant Engineer

andallothersupportingstaffwhohavegivenfullco-operationandsupport.Theytookkeeninterest and gave valuable inputs during the course ofstudy.

Study Team

The Annual Energy Accounting audit involved engagement of following team members representing Savecal Energy Solutions LLP that was awarded the said work by Maharashtra Airport Development Company Limited.

Company/ Institution/ Organization	Team Member	Designation	Role
Savecal Energy Solutions LLP	Mr. Sanjay Annaso Khot	Accredited Energy Auditor (AEA-0312)	Team Leader, Review of data and report
	Mr. Ashok Shrivastava	Sector Expert	Review of data and report
	Mr. Nilesh Kumar Jain	Certified Energy Auditor (EA-31164)	Document Verification and Report writing
	Mr. Himanshu Bhatt	Certified Energy Auditor (EA-31017)	Document Verification and Report writing

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1 Executive Summary

1.1 Brief Overview of Maharashtra Airport Development Company Limited (SEZ MIHAN)

Maharashtra Airport Development Company Limited (MADC) has been appointed by the Government of Maharashtra as the Nodal Agency and also Special Planning Authority for the planning and development of Multi-modal International Hub Airport at Nagpur (MIHAN) notified area to leverage on Nagpur's unique locational advantage.

The Government of India has already accorded approval and notified MIHAN-SEZ as a multi-product SEZ. MADC has already leased out about 600 ha. land in MIHAN-SEZ to majors IT companies like Infosys, TCS, Tech-Mahindra and other blue chip companies like Tata Aeronautics Limited, Kolland, Hexaware BPS (Caliberpoint), Lupin Pharma., Air India Boeing Inc., Reliance Aero Infrastructure etc. for setting up of IT parks, manufacturing units and MRO facilities etc. AIIMS, IIM and Govt. Engineering Colleges is also establishing their campus in the MIHAN area. Considering the overall development of MIHAN and its surrounding there could be demand of commercial and residential facility. The development of all support infrastructures, which MADC has committed to provide, is almost completed.

In order to provide electricity to the consumers, MADC constructed the electrical distribution network including 5 Power Sub-Station (4 in SEZ & 1 in NON SEZ) along with 4 DTH (2 in SEZ & 2 in NON SEZ). Earlier, the electrical distribution network including 33/11KV sub stations was under M/s. AMNEPL for operation and maintenance, but AMNEPL stopped power supply to MIHAN area in April – 2014 and handed over the network to MADC in same month. Since then, MADC was carrying out the operation and maintenance of infrastructure network and started purchasing and distribution of power.

2 Summary of Critical Analysis by Energy Auditor (including status and progress in compliance to prerequisites to energy accounting) and Management Analysis (Responses of DISCOM management on Comments by Auditor)

FY 2021-22 Summary

- Total no. of consumer during FY 2021-22 is 84.
- Total connected load during FY 2021-22 is 39.77 MW.
- Total Input energy (Purchased Energy) from MSEDCL during FY 2021-22 is 68 MU.
- T&D loss during FY 2021-22 is 1.73 MU i.e. 2.54 % of total Input Energy.
- AT&C loss during FY 2021-22 is 2.26 %.

Observation & Recommendations

- All Distribution transformers shall be metered with communicable meters. Presently MADC have no arrangement of DT metering in 33KV/11KV/415V voltage level.
- All consumer meter to be replaced with smart meter.
- The energy accounting and audit system and software shall be developed to create monthly, quarterly and yearly energy accounting reports.
- It is recommended to replace old in-efficient DTs with BEE Star rated DTs at all LT and HT Level (upto 2.5 MVA rating) having IS:1180 in phases during scheduled replacements. This will reduce the No-Load losses and Full-Load Losses for the DISCOMs.

3 Background

3.1 Extant Regulations and role of BEE

Energy Accounting means accounting of all energy inflows at various voltage levels in the distribution periphery of the network, including renewable energy generation and open access consumers, and energy consumption by the end consumers. Energy accounting and a consequent annual energy audit would help to identify areas of high loss and pilferage, and thereafter focus efforts to take corrective action.

Owing to the impact of energy auditing on the entire distribution and retail supply business and absence of an existing framework with dedicated focus on the same, it was imperative to develop a set of comprehensive guidelines that all Distribution utilities across India can follow and adhere to.

Bureau of Energy Efficiency (BEE) through Ministry of Power, Government of India issued regulations for Conduct of Mandatory Annual Energy Audit and Periodic Energy Accounting in DISCOMs. As per the regulation, all Electricity Distribution Companies are mandated to conduct annual energy audit and periodic energy accounting on quarterly basis.

These Regulations for Energy audit in Electricity Distribution Companies provides broad framework for conduct of Annual Energy Audit though and Quarterly Periodic Energy Accounting with necessary Pre-requisites and reporting requirements to be met.

3.2 Purpose of audit and accounting Report

Energy accounting is prompt and accurate accounting of the Energy inflows at various voltage levels of the network and the subsequent energy consumption by the end customers. Energy accounting and a consequent energy audit would help identify areas of high loss and pilferage, and focus efforts to take corrective action.

Objectives

- Quantify & determine actual energy consumption/losses (Consumer category wise)
- Identify areas of leakage, wastage or inefficient use, to reduce T&D losses
- Enable Independent 3rd party energy audit/ accounting of the distribution system
- Enable the Distribution utilities in undertaking targeted efficiency activities to reduce losses.
- Identification of overloaded segments of the network for necessary capacity additions.
- Facilitating the assessment of energy consumption & subsidy by state Govt.

3.3 Period of Energy Auditing and accounting

Intervals of time for conduct of annual energy audit.-

(1) Every electricity distribution company shall conduct an annual energy audit for every financial year and submit the annual energy audit report to the Bureau and respective State Designated Agency and also made available on the website of the electricity distribution company within a period of four months from the expiry of the relevant financial year: Provided that on the commencement of these regulations, the first annual energy audit of every electricity distribution company shall be conducted within six months from the date of such commencement, by taking into account the energy accounting of electricity distribution company for the financial year immediately preceding the date of the commencement of these regulations. 28 THE GAZETTE OF INDIA : EXTRAORDINARY [PART III—SEC.4]

(2) Where a new electricity distribution company is established after the commencement of these regulations, such electricity distribution company shall conduct its first annual energy audit on completion of the first financial year from the date of being notified as designated consumer.

Intervals of time for conduct of periodic energy accounting.-

(1) Every electricity distribution company shall —

(a) ensure that all feeder wise, circle wise and division wise periodic energy accounting shall be conducted by the energy manager of the electricity distribution company for each quarter of the financial year; and

(b) submit the periodic energy accounting report to the Bureau and respective State Designated Agency and also made available on the website of electricity distribution company within forty-five days from the date of the periodic energy accounting.

(2) After the commencement of these regulations, every electricity distribution company shall,

Notwithstanding anything in sub-regulation

(1), Every electricity distribution company shall —

(a) conduct its first periodic energy accounting, for the last quarter of the financial year immediately preceding the date of such commencement; and

(b) conduct its subsequent periodic energy accounting for each quarter of the financial year for a period of two financial years from the date of such commencement, and submit the periodic energy accounting report within sixty days from the date of periodic energy accounting.

4 Introduction of DISCOMs (DC)

4.1 Name and Address of Designated Consumer

Maharashtra Airport Development Company Limited (SEZ MIHAN)

Corporate Office : W Building, 1st Floor, Khapri, Nagpur, Maharashtra-441108

4.2 Registration Number Name and contact details of energy manager (BEE Certified, if any) and Authorized signatory of DC (Nodal Officer)

Energy Manager - Mr. D. R. Deshmukh (EA-9885)

Authorised signatory – Mr. D. R. Deshmukh (Executive Engineer Electrical)

Mob. 91- 9370472612

Email id. deshmkh.dr@madcindia.org

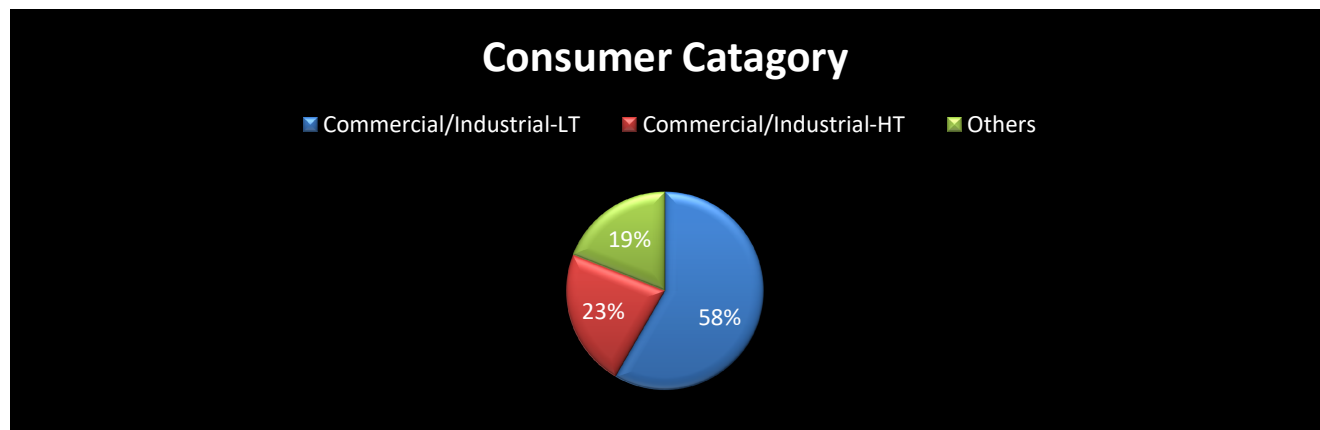
4.3 Summary profile of DCs (Assets, Energy Flow, Consumer base, salient features etc.)

Consumer Details

S.No.	Consumer No.	Consumer Details	Connected Load kW	Consumer Category
HT Consumer 33 KV				
1	3	M/S AI Engineering Services Ltd.	7485	HT Commercial
2	11	M/S Tata Consultancy Services	3500	HT Commercial
3	19	M/S Lupin Ltd.	7372	HT Commercial
HT Consumer 11 KV				
1	1	M/S Chief Engineer MADC	2000	Government offices and department
2	2	M/S Chief Engineer MADC Ltd. WTP	250	HT Water Supply
3	4	M/S Tata Advanced Systems Limited	4500	HT Commercial
4	7	M/S KOLLAND Developers Ltd.	500	HT Commercial
5	8	Hexawrae Technoloies Ltd. (Caliber Point Business Solution Ltd.)	600	HT Commercial
6	9	M/S KANAV Agronomy	298	HT Commercial
7	10	M/S Diet Food International	422	HT Commercial
8	12	M/S Smart Data Enterprises	430	HT Commercial
9	13	M/S Tech Mahindra Limited	650	HT Commercial
10	14	M/S Infosys Limited	300	HT Commercial

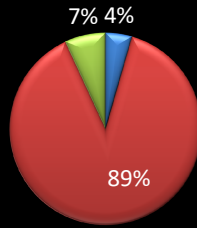
11	17	M/S AAR INDAMER Technics Pvt. Ltd.	600	HT Commercial
12	18	M/S Infocept Tech. Pct. Ltd. (unit III)	300	HT Commercial
13	20	M/S HCL Tech. Limited	3000	HT Commercial
14	21	M/S Dassault Reliance aerospace limited	2420	HT Commercial
15	22	M/S Thales Reliance Defence System Ltd.	800	HT Commercial
16	23	M/S Tata Consultancy Services	500	HT Commercial
17	24	M/S AAR INDAMER Technics Pvt. Ltd.	1400	HT Commercial
18	25	M/S Infosys Limited	192	HT Commercial
LT Consumer				
1	3	M/S Cenosphere India Pvt Ltd	80	Commercial
2	4	M/S Meta Tech Air Systems Pvt. Ltd	85	Commercial
3	5	M/S Sub Divisional Engineer BSNL	13	Commercial
4	6	M/S Chief Engineer MADC Nagpur	86	Public Lighting
5	7	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department
6	8	M/S Chief Engineer MADC Nagpur	80	Public Lighting
7	9	M/S Chief Engineer MADC Nagpur	80	Public Lighting
8	10	M/S Chief Engineer MADC Nagpur	40	Public Lighting
9	11	M/S Abhijeet MADC Nagpur energy pvt. Ltd		Government offices and department
10	15	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department
11	16	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department
12	17	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department
13	18	M/S Chief Engineer MADC Nagpur	14.74	Government offices and department
14	19	M/S Hass Corporation Pvt Ltd.	15	Commercial
15	20	M/S Devesh Pramod Khandelwal	78	Commercial
16	22	M/S Globallogic India Ltd	94	Commercial
17	23	M/S Veolia India Pvt. Limited	5.59	Commercial
18	26	M/S Chief Engineer MADC Nagpur	60	Public Lighting
19	28	M/S Chief Engineer MADC Nagpur	45	Water Supply
20	29	M/S Ebix Software India Oct. Ltd	60	Commercial
21	31	M/S Indus Towers Ltd.	15	Commercial
22	32	M/S Infocept Technologies Unit 3	80	Commercial
23	33	M/S Indus Towers Ltd	15	Commercial
24	34	M/S State Bank of India	12	Commercial
25	35	M/S Hazel Mercantile Limited	6.5	Commercial
26	37	M/S Lupin Ltd.	1	Commercial
27	39	M/S Reliance JiInficomm Ltd.	5	Commercial
28	40	M/S Reliance JiInfocomm Ltd.	5	Commercial
29	42	M/S Reliance JiInfocomm Ltd.	1	Commercial
30	43	M/S Railtel Corporation of India Ltd.	10	Commercial
31	46	M/S GIF Technologies pvt. Ltd	60	Commercial
32	47	M/S Techtire Structure Pvt. Ltd.	9	Commercial
33	48	M/S Altius Customer Services Pvt. Ltd.	70	Commercial

34	49	M/S Haldiram Foods Internationl Pvt. Ltd.	1.5	Commercial
35	50	M/S Patanjali Ayurved Limited	16	Commercial
36	51	M/S Turgis & Gaillard India Pvt Ltd	1	Commercial
37	52	M/S Lighthouse infosystem Pvt. Ltd.	150	Commercial
38	53	M/S Citius BPO(India) Pvt. Ltd.	20	Commercial
39	55	M/S Globallogic India Ltd.	70	Commercial
40	56	M/S Globallogic India Ltd.	100	Commercial
41	57	M/S Breads N Beyond	15	Commercial
42	58	M/S ESSEM Compliance Solutions Pvt Ltd.	10	Commercial
43	59	M/S Ascent Business Solution	20	Commercial
44	61	M/S HCL Technologies Ltd.	100	Commercial
45	63	M/S TRT Technologies	120	Commercial
46	64	M/S Infosys Ltd.	135	Commercial
47	65	M/S Chief Engineer MADC Nagpur	1	Public Lighting
48	66	M/S Sagacious IP Pvt. Ltd.	40	Commercial
49	67	M/S DNJ Creation LLP (unit 3)	50	Commercial
50	69	M/S Indo Healthcare Pvt. Ltd.	7.5	Commercial
51	70	M/S Maximist for Education & Software Pvt. Ltd.	30	Commercial
52	71	M/S Arfamo Perfumes Pvt. Ltd.	16.5	Commercial
53	72	M/S Canera Bank	5	Commercial
54	73	M/S Sanman Trade Impex Ltd.	8	Commercial
55	74	M/S Escion Research Labs Pvt Ltd.	10	Commercial
56	75	M/S Persistent Systems Ltd.	40	Commercial
57	76	M/S Chief Engineer MADC Nagpur	30	Public Lighting
58	77	M/S Infocept Tech. Pvt. Ltd. (Unit 4)	40	Commercial
59	78	M/S Neeyamo Enterprise Solutions Pvt Ltd	10	Commercial
60	79	M/S Reliance JIO Infocom Ltd	8	Commercial
61	80	M/S Reliance JIO Infocom Ltd	8	Commercial
62	81	M/S Reliance Jio Infocom Ltd	8	Commercial
63	82	M/S Relinace Jio Infocom Ltd	8	Commercial



Connected Load

■ Commercial/Industrial-LT
 ■ Commercial/Industrial-HT
 ■ Others



Infrastructure Details

S.NO.	Item Description	SEZ AREA								Total for SEZ Area	
		AMBPL S/S	PSS-1	PSS-2	PSS-3	PSS-4	DTH-1	DTH-4	CFB		
1	Transformer Details										
1.1	82.5MVA 220/33kv Oil Type	3									3.00
1.2	16 MVA, 33/11 KV, Dyn 11, Oil Type		2.00	2.00	2.00	2.00					8.00
1.3	630 KVA, 11/0.425 KV Dry Type		1.00	1.00	1.00	1.00					4.00
1.4	630 KVA, 11/0.425 KV Oil Type						2.00	2.00			4.00
1.5	2500 KVA, 11/0.425 KV, Dry Type									2.00	2.00
1.6	1000 KVA, 11/10425 KV. Oil Type									1.00	1.00
2	Feeder Details										
2.1	33 KV Outgoing Feeders including VCB, Relays, MFM, CT, PT etc from AMNPI s/s To 4nos MADC Substation.	4									4.00
2.2	33 KV Feeders including VCB, Relays, MFM, CT Pt etc.		2.00	2.00	2.00	2.00					8.00

2.3	11 KV Feeders Including VCB Relays, MFM, CT, PT etc.		17.00	17.00	17.00	17.00			2.00	70.00
2.4	LT Feeder including ACB, Relays, MFM, CT, PT etc.		1.00	1.00	1.00	1.00	2.00	2.00	12.00	20.00
3	Line Length									
3.1	Line length (ckt. km) at 33kV voltage level									53.48
3.2	Line length (ckt. km) at 11kV voltage level									49.54
3.3	Line length (km) at LT level									7.27
3.4	Length of Aerial Bunched Cables									0
3.5	Length of Underground Cables									110.29

5 Discussion and Analysis

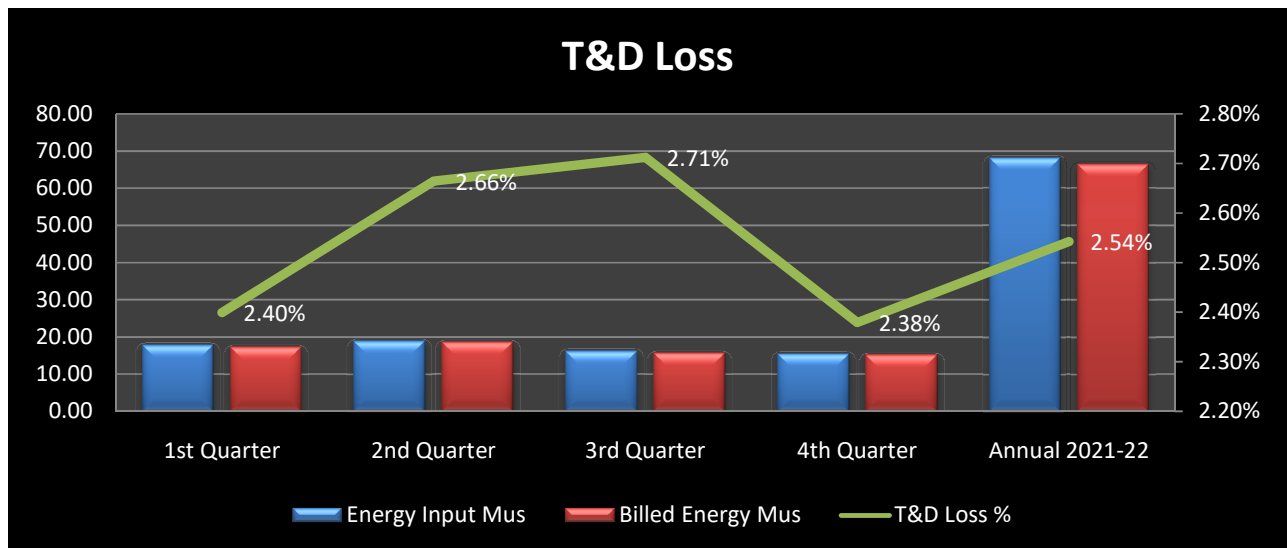
5.1 Energy accounts for previous years (Discussion and data in tabular format)

Not Applicable

5.2 Energy accounts and performance in the current year (% losses – aggregate, voltage-wise and category-wise, division-wise, feeder and DT wise)

Quarterly Summary of Input energy, Billed Energy & T&D Loss

S.N	Description	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual 2021-22
1	Energy Input	Mus	17.67	18.87	16.05	15.42	68.00
2	Billed Energy	Mus	17.24	18.37	15.61	15.05	66.27
3	T&D Loss	Mus	0.42	0.50	0.44	0.37	1.73
	T&D Loss	%	2.40%	2.66%	2.71%	2.38%	2.54%

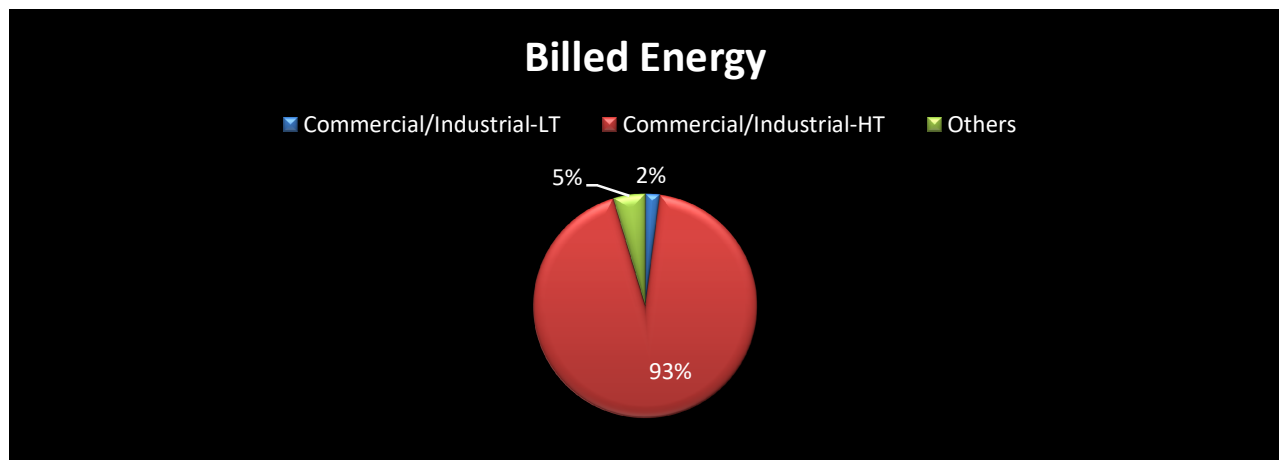


No. of Consumer with Connected Load

S. No	Name of Circle	Number of Metered Connections	Number of Unmetered Connections	Total Connected Load (MW)
1	MADC	84	0	39.77

Consumer Category With T&D Loss

Name of Circle	Consumer Category	Input Energy (Mus)	Billed Energy (MUS)	T&D Loss (Mus)	T&D Loss %
MADC	Residential	68.00	0	1.73	2.54%
	Agricultural		0		
	Commercial/Industrial-LT		1.38		
	Commercial/Industrial-HT		61.84		
	Others		3.06		
Total		68.00	66.27	1.73	3%



Infrastructure details

S.N	Parameter	Unit	FY 2021-22
1	Total Nos. of Circle	Nos.	1
2	Total Nos. of Metered Connection	Nos.	84
3	Total Nos. of Un metered Connection	Nos.	0
4	Connected Load of Metered Connections	MW	39.77
5	Connected Load of Unmetered Connections	MW	0
6	% of metering available at DT	%	0
7	% of metering available at consumer end	%	100
8	No of feeders at 66kV voltage level	Nos.	3
9	No of feeders at 33kV voltage level	Nos.	12
10	No of feeders at 11kV voltage level	Nos.	70
11	No of LT feeders level	Nos.	20
12	Line length (ckt. km) at 66kV voltage level	Km	0
13	Line length (ckt. km) at 33kV voltage level	Km	53.48
14	Line length (ckt. km) at 11kV voltage level	Km	49.54
15	Line length (km) at LT level	Km	7.27
16	Length of Aerial Bunched Cables	Km	0
17	Length of Underground Cables	Km	110.29
18	HT/LT ratio	Unit less	14.17

5.3 Unit-wise performance

Name of circle	Consumer Category	Total Number of connections (Nos)	Total Connected Load (MW)	Energy parameters		Losses		Commercial Parameter			AT & C loss (%)
				Input energy (MU)	Total energy	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	
MADC	Residential	0	0	68	0	1.73	2.54%	0	0	0.00%	2.26%
	Agricultural	0	0		0			0.00%			
	Commercial/Industrial-LT	49	1.77		1.38			0.73	0.65	88.47%	
	Commercial/Industrial-HT	19	35.27		61.84			25.47	25.71	100.91%	
	Others	16	2.73		3.06			1.35	1.28	94.84%	
Total		84	39.77	68	66.27	1.73	2.54%	27.56	27.64	100.29%	

- Total no. of consumer during FY 2021-22 is 84.
- Total connected load during FY 2021-22 is 39.77 MW.
- Total Input energy (Purchased Energy) from MSEDCL during FY 2021-22 is 68 MU.
- T&D loss during FY 2021-22 is 1.73 MU i.e. 2.54 % of total Input Energy.
- AT&C loss during FY 2021-22 is 2.26 %.

5.4 Energy Conservation measures already taken and proposed for future

- MADC had already installed Energy Efficient equipment's and lighting in office buildings and streets.
- MADC also encouraging its consumers for use of energy efficient equipment's and lightings.
- MADC is conducting Annual energy audit of office buildings to identify energy saving opportunity.

5.5 Critical analysis by Energy Auditor

Observation & Recommendations:

- All Distribution transformers shall be metered with communicable meters. Presently MADC have no arrangement of DT metering in 33KV/11KV/415V voltage level.
- All consumer meter to be replaced with smart meter.
- The energy accounting and audit system and software shall be developed to create monthly, quarterly and yearly energy accounting reports.
- It is recommended to replace old in-efficient DTs with BEE Star rated DTs at all LT and HT Level (upto 2.5 MVA rating) having IS:1180 in phases during scheduled replacements. This will reduce the No-Load losses and Full-Load Losses for the DISCOMs.

5.6 Inclusion and Exclusions

Not Applicable

6 Notes of the EA/EM along with queries and replies to data gaps

Observation & Recommendations:

- All Distribution transformers shall be metered with communicable meters. Presently MADC have no arrangement of DT metering in 33KV/11KV/415V voltage level.
- All consumer meter to be replaced with smart meter.
- The energy accounting and audit system and software shall be developed to create monthly, quarterly and yearly energy accounting reports.
- It is recommended to replace old in-efficient DTs with BEE Star rated DTs at all LT and HT Level (upto 2.5 MVA rating) having IS:1180 in phases during scheduled replacements. This will reduce the No-Load losses and Full-Load Losses for the DISCOMs.

7 Annexures

7.1 Introduction of Verification Firm

Savecal Energy Solutions LLP

office: 3215/21, Behind Gagan Regency, Tatibandh, Raipur, C.G.-492001

Tel: +91-9131136645/+91-7773012647

Email: savecalenergysolutions@gmail.com

7.2 Minutes of Meeting with the DISCOM team

MINUTES OF MEETING		
	Maharashtra Airport Development Company Limited (SEZ MIHAN), Nagpur	Date: 11 May 2022
	Savecal Energy Solutions LLP , Raipur	Revision : NA

Topic	Annual Energy Accounting of Maharashtra Airport Development Company Limited (SEZ MIHAN), Nagpur				
Meeting Details					
Date	11.05.2022	Time	5.00 PM	Venue	MADC Office, Nagpur
MADC Limited, Nagpur	1. Mr. D. R. Deshmukh , 2. Mr. Amol Ghode ,				
Savecal Energy Solutions LLP, Raipur	1. Mr. Sanjay Annaso Khot 2. Mr. Himanshu Bhatt 3. Mr. Nilesh Jain		4. Mr. Ashok Shriwastava		
<p>Meeting involved detailed discussion on the data provided by MADC Limited, Nagpur. Following points were discussed/reviewed:</p> <ul style="list-style-type: none"> • Discussed following points with authorized person of MADC Limited, Nagpur. <ul style="list-style-type: none"> a. The Purchase energy is verified from MSEDCL. b. DT metering is not provided at different voltage level. So, Total purchase energy is considered as Input energy. c. The billed energy is taken from Consumer Bills. d. The consumer details and connected load details are taken from Consumer Bills. e. The AT&C loss is taken from Account statement. f. Following are the major observation of audit: • All Distribution transformers shall be metered with communicable meters. Presently MADC have no arrangement of DT metering in 33KV/11KV/415V voltage level. • All consumer meter to be replaced with smart meter. • The energy accounting and audit system and software shall be developed to create .monthly, quarterly and yearly energy accounting reports. • It is recommended to replace old in-efficient DTs with BEE Star rated DTs at all LT and HT Level (upto 2.5 MVA rating) having IS:1180 in phases during scheduled replacements. This will reduce the No-Load losses and Full-Load Losses for the DISCOMs. 					

Signed on behalf MADC Limited, Nagpur		Signed on behalf of Savecal Energy Solutions LLP, Raipur	
Name	Signature & Date	Name	Signature & Date
1. Mr. D. R. Deshmukh		1. Mr. Sanjay Annaso Khot	 Dr. Sanjay Annaso Khot ESE Accredited Energy Auditor (AEA-0312)
2. Mr. Amol Ghode		2. Mr. Himanshu Bhatt	
		3. Mr. Nilesh Jain	
		4. Mr. Ashok Shrivastava	

7.3 Check List prepared by auditing Firm

7.3.1 Check List

(I) data collection and verification of energy distribution—

(a) monthly energy consumption data of consumers and system metering from electricity distribution company at following voltage levels —

- (i) 33/66/132 kV levels, including 33/66/132kV feeder and Sub-station;
- (ii) 11/22 kV levels, including 11/22 kV feeder and Distribution Sub-station;
- (iii) 440 V level, including Distribution Transformer and low tension consumer;

(b) input energy details for all metered input points;

(c) boundary meter details;

(d) source of energy supply (e.g. electricity from grid or self-generation), including generation from renewables.

(e) review of the current consumption practices in order to identify the energy loss in the system;

(II) data verification, validation and correction—

(a) a monitoring and verification protocol to quantify on annual basis the impact of each measure with respect to energy conservation and cost reduction for reporting to Bureau and the concerned State designated agency;

(b) Verification and correction of input energy, taking into account the following —

- (i) Recorded system meter reading by metering agency;
- (ii) all the input points of transmission system;
- (iii) details provided by the transmission unit;
- (iv) relevant records at each electricity test division for each month;
- (v) Recorded meter reading at all export points (where energy sent outside the State is from the distribution system); and
- (vi) System loading and corresponding infrastructure;

(c) Energy supplied to Open Access Consumers which is directly purchased by Open Access Consumers from any supplier other than electricity distribution company; and

(d) Verify and validate the system metering data provided by metering agency through random field visit (particularly for data irregularity).

7.4 Brief Approach, Scope & Methodology for audit

The methodology adopted for the Energy Accounting exercise is as under:

The below formed team visited the Discom Head office for collection and review of historical energy data, Meter calibrations, operating & maintenance practices and its data base system.

Verification of Yearly Purchased, Circle wise nos. of Consumers and their connected load, Consumer category wise Energysale, Transmissionloss, EHTSale, Openexcesssale, Netinputenergy, Feederwiseimport & ExportEnergy, YearlyT&DlossinMUand in%etc. Detailed verifications of data filled in specific proforma and supporting documents collected during visit. Identification & study of Energy conservation options adopted by the designated consumer and future Strategy for Energy conservation.

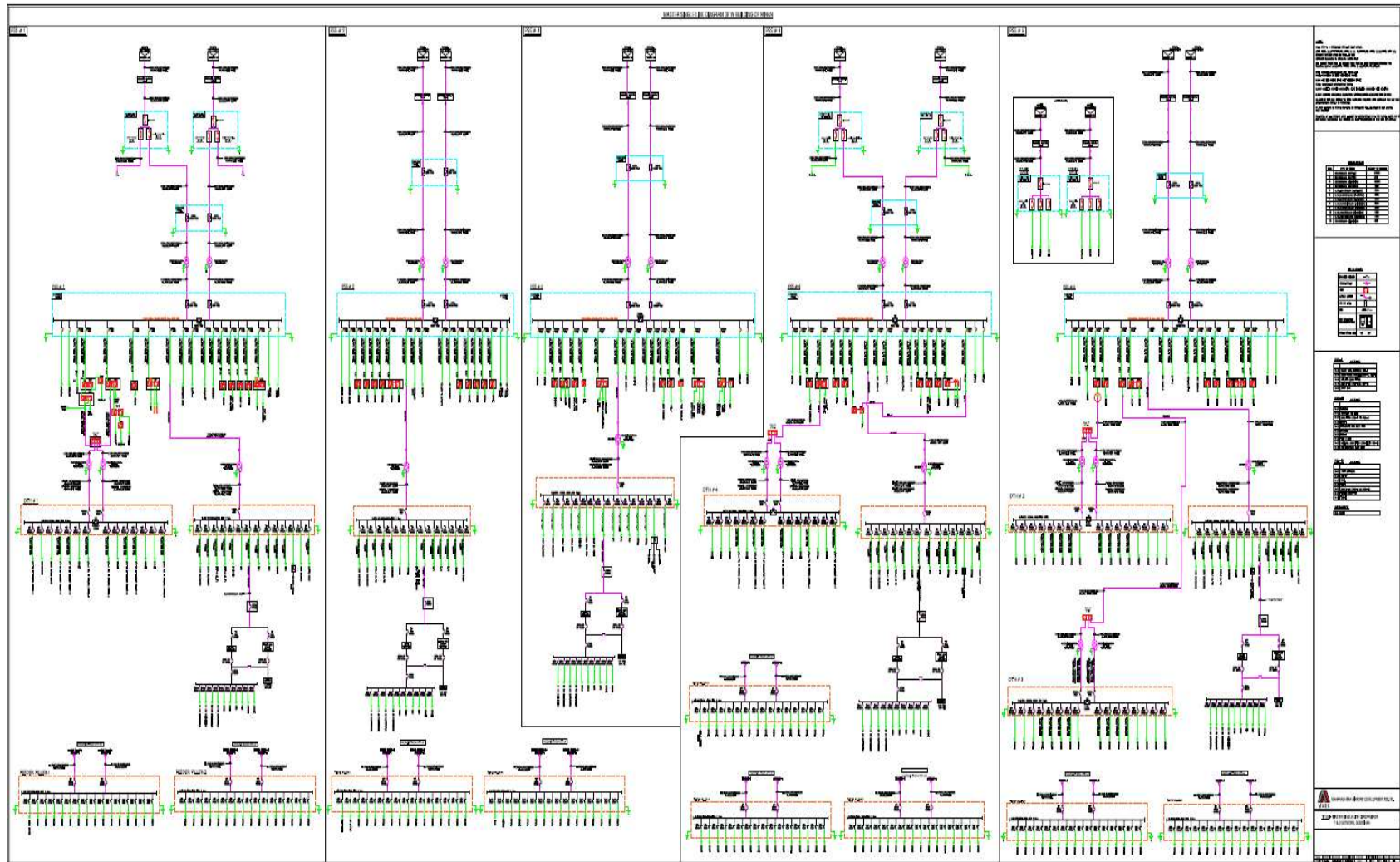
Team Member	Designation	Activity	Date
Mr. Himanshu Bhatt	Certified Energy Auditor(EA- 31017)	Initial Meeting	09/05/2022
Mr. Nilesh Kumar Jain	Certified Energy Auditor(EA-31164)	Initial Meeting	09/05/2022
Mr. Himanshu Bhatt	Certified Energy Auditor(EA-31017)	DataCollection	09/05/2022-11/05/2022
Mr. Nilesh Kumar Jain	Certified Energy Auditor(EA-31164)	Data Collection	09/05/2022-11/05/2022
Mr. Sanjay AnnasoKhot	Accredited Energy Auditor (AEA-0312)	Data Review & Verification	11/05/2022
Mr. Ashok Shriwastava	Sector Expert	Data Review & Verification	11/05/2022
Mr. Himanshu Bhatt	Certified Energy Auditor(EA-31017)	Report preparation	11/05/2022-20/05/200
Mr. Nilesh Kumar Jain	Certified Energy Auditor(EA-31164)	Report preparation	11/05/2022-20/05/200

7.5 Infrastructure Details

S.NO.	Item Description	SEZ AREA	Total
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		AMBPL S/S	PSS- 1	PSS- 2	PSS- 3	PSS- 4	DTH- 1	DTH- 4	CFB	
1	Transformer Details									
1.1	82.5MVA 220/33kv Oil Type	3								3.00
1.2	16 MVA, 33/11 KV, Dyn 11, Oil Type		2.00	2.00	2.00	2.00				8.00
1.3	630 KVA, 11/0.425 KV Dry Type		1.00	1.00	1.00	1.00				4.00
1.4	630 KVA, 11/0.425 KV Oil Type						2.00	2.00		4.00
1.5	2500 KVA, 11/0.425 KV, Dry Type								2.00	2.00
1.6	1000 KVA, 11/10425 KV. Oil Type								1.00	1.00
2	Feeder Details									
2.1	33 KV Outgoing Feeders including VCB, Relays, MFM, CT, PT etc from AMNPI s/s To 4nos MADC Substation.	4								4.00
2.2	33 KV Feeders including VCB, Relays, MFM, CT Pt etc.		2.00	2.00	2.00	2.00				8.00
2.3	11 KV Feeders Including VCB Relays, MFM, CT, PT etc.		17.00	17.00	17.00	17.00			2.00	70.00
2.4	LT Feeder including ACB, Relays, MFM, CT, PT etc.		1.00	1.00	1.00	1.00	2.00	2.00	12.00	20.00
3	Line Length									
3.1	Line length (ckt. km) at 33kV voltage level									53.48
3.2	Line length (ckt. km) at 11kV voltage level									49.54
3.3	Line length (km) at LT level									7.27
3.4	Length of Aerial Bunched Cables									0
3.5	Length of Underground Cables									110.29

7.6 Electrical Distribution System



7.7 Power Purchase Details

Maharashtra Airport Development Company Limited (SEZ MIHAN), FY 2021-22			
Power Purchase			
FY 2021-22	Bus 1	Bus 2	Total
	kWH	kWH	kWH
Quarter 1			
Apr-21	5499901	0	5499901
May-21	5966405	0	5966405
Jun-21	6200643	0	6200643
Sub Total	17666949	0	17666949
Quarter 2			
Jul-21	6499433	0	6499433
Aug-21	6313199	0	6313199
Sep-21	4320034	1736790	6056824
Sub Total	17132666	1736790	18869456
Quarter 3			
Oct-21	1511984	4409840	5921824
Nov-21	5030671	34528	5065199
Dec-21	5017766	40267	5058033
Sub Total	11560421	4484635	16045056
Quarter 4			
Jan-22	4830480	40636	4871116
Feb-22	4602151	34446	4636597
Mar-22	5880250	33878	5914128
Sub Total	15312881	108960	15421841
Total	61672917	6330385	68003302

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 4th Apr 2022
Ref No: 1182

Name of the Transmission : The Chief Engineer - MADC
System User (TSU)

Communication Address : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing,
of the TSU 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd
by the TSU Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the : 22nd November 2014
TSU

Billing Period : Month of March 2022

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	378.363555	Initial reading of Energy Meter at BUS-2	6.559300	01-03-2022 00:00 hrs	
Final reading of Energy Meter at BUS-1	384.243805	Final reading of Energy Meter at BUS-2	6.593178	31-03-2022 24:00 hrs	
Difference (GWH)	5.880250	Difference (GWH)	0.033878		
Difference (KWH)	5880250	Difference (KWH)	33878		5914128

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Mar 2022 to 31 st Mar 2022	5914128	0.46	2720498.88

Total Amount (Rs) : 27,20,499

In words : Twenty-Seven Lakh Twenty Thousand Four Hundred and Ninety-Nine Only


 For Abhijeet MADC Nagpur Energy Pvt. Ltd.

Authorised Signatory

Remark :

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per Orders of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 2nd Mar 2022
Ref No: 1180

Name of the Transmission : The Chief Engineer - MADC
System User (TSU)

Communication Address : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing,
of the TSU 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd
by the TSU Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the : 22nd November 2014
TSU

Billing Period : Month of February 2022

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	373.761404	Initial reading of Energy Meter at BUS-2	6.524854	01-02-2022 00:00 hrs	
Final reading of Energy Meter at BUS-1	378.363555	Final reading of Energy Meter at BUS-2	6.5593	28-02-2022 24:00 hrs	
Difference (GWH)	4.602151	Difference (GWH)	0.034446		
Difference (KWH)	4602151	Difference (KWH)	34446		4636597

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Feb 2022 to 28 th Feb 2022	4636597	0.46	2132834.62

Total Amount (Rs) : 21,32,835

In words : Twenty-One Lakh Thirty-Two Thousand Eight Hundred and Thirty-Five Only

Energy transmitted during 01/02/22 to 28/02/22 has verified with joint meter reading with MSETCL and found ok

Abhimukh



For Abhijeet MADC Nagpur Energy Pvt. Ltd.

[Signature]
Authorised Signatory

Remark :

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per Orders of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 7th Feb 2022
Ref No: 1178

Name of the Transmission : The Chief Engineer - MADC
System User (TSU)

Communication Address : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing,
of the TSU 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd
by the TSU Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the : 22nd November 2014
TSU

Billing Period : Month of January 2022

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	368.930924	Initial reading of Energy Meter at BUS-2	6.484218	01-01-2022 00:00 hrs	
Final reading of Energy Meter at BUS-1	373.761404	Final reading of Energy Meter at BUS-2	6.524854	31-01-2022 24:00 hrs	
Difference (GWH)	4.830480	Difference (GWH)	0.040636		
Difference (KWH)	4830480	Difference (KWH)	40636		

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Jan 2022 to 31 st Jan 2022	4871116	0.46	2240713.36

Total Amount (Rs) : 22,40,713

In words : Twenty-Two Lakh Forty Thousand Seven Hundred and Thirteen Only



For Abhijeet MADC Nagpur Energy Pvt. Ltd.

Res
Authorised Signatory

Remark:

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per Orders of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 3rd Feb 2022
Ref No: 1176

Name of the Transmission System User (TSU) : The Chief Engineer - MADC

Communication Address of the TSU : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing, 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used by the TSU : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the TSU : 22nd November 2014

Billing Period : Month of December 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	363.913158	Initial reading of Energy Meter at BUS-2	6.443951	01-12-2021 00:00 hrs.	
Final reading of Energy Meter at BUS-1	368.930924	Final reading of Energy Meter at BUS-2	6.484218	31-12-2021 24:00 hrs.	
Difference (GWH)	5.017766	Difference (GWH)	0.040267		
Difference (KWH)	5017.766	Difference (KWH)	40.267		5058033

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Dec 2021 to 31 st Dec 2021	5058033	0.46	2326695.18

Total Amount (Rs) : 23,26,695

In words : Twenty-Three Lakh Twenty-Six Thousand Six Hundred and Ninety Five Only



Energy Transmitted during 1st Dec 21 to 31st Dec 21, has verified with joint meter Reading and found ok - *Abhimukh* 04/02/22

For Abhijeet MADC Nagpur Energy Pvt. Ltd.

PSE
Authorised Signatory

Remark :

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014
- This provisional bill for Transmission Charge is raised @Rs. 0.46/KWH, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No. 823 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh petition to be filed by AMNEPL as per Order of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 1st Dec 2021
Ref No: 1174

Name of the Transmission : The Chief Engineer - MADC

System User (TSU)

Communication Address of the TSU : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing, 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used by the TSU : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the TSU : 22nd November 2014

Billing Period : Month of November 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	358.882487	Initial reading of Energy Meter at BUS-2	6.409423	01-11-2021 00:00 hrs	
Final reading of Energy Meter at BUS-1	363.913158	Final reading of Energy Meter at BUS-2	6.443951	30-11-2021 24.00 hrs	
Difference (GWH)	5.030671	Difference (GWH)	0.034528		
Difference (KWH)	5030671	Difference (KWH)	34528		5065199

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Nov 2021 to 30 th Nov 2021	5065199	0.46	232999154

Total Amount (Rs) : 23,29,992

In words : Twenty-Three Lakh Twenty-Nine Thousand Nine Hundred and Ninety Two Only



For Abhijeet MADC Nagpur Energy Pvt. Ltd.

[Signature]
Authorized Signatory

Remark:

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No. 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of Abhijeet MADC Nagpur Energy Pvt. Ltd.
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per Orders of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 1st Nov. 2021
Ref No: 1172

Name of the Transmission : The Chief Engineer - MADC

System User (TSU)

Communication Address : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing,
of the TSU 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd
by the TSU Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the TSU : 22nd November 2014

Billing Period : Month of October 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	357.370503	Initial reading of Energy Meter at BUS-2	1.999583	01-10-2021 00:00 hrs	
Final reading of Energy Meter at BUS-1	358.882487	Final reading of Energy Meter at BUS-2	6.409423	31-10-2021 24:00 hrs	
Difference (GWH)	1.511984	Difference (GWH)	4.409840		
Difference (KWH)	1511984	Difference (KWH)	4409840		5921824

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Oct 2021 to 31 st Oct 2021	5921824	0.46	2724039.04

Total Amount (Rs) : 27,24,039

In words : Twenty-Seven Lakh Twenty-Four Thousand and Thirty-Nine Only


 For Abhijeet MADC Nagpur Energy Pvt. Ltd.
 Authorised Signatory

Remark :

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per Orders of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 4th Oct. 2021
Ref No: 1170

Name of the Transmission System User (TSU) : The Chief Engineer - MADC

Communication Address of the TSU : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, 8-Wing, 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used by the TSU : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the TSU : 22nd November 2014

Billing Period : Month of September 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	353.050469	Initial reading of Energy Meter at BUS-2	0.262793	01-09-2021 00:00 hrs	
Final reading of Energy Meter at BUS-1	357.370503	Final reading of Energy Meter at BUS-2	1.999583	30-09-2021 24.00 hrs	
Difference (GWH)	4.320034	Difference (GWH)	1.736790		
Difference (KWH)	4320034	Difference (KWH)	1736790		

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Sept 2021 to 30 th Sept 2021	6036024	0.16	2706153.04

Total Amount (Rs) : 27,86,139

In words : Twenty-Seven Lakh Eighty-Six Thousand One Hundred and Thirty-Nine Only

For Abhijeet MADC Nagpur Energy Pvt. Ltd.

Authorised Signatory

Remark :

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 19th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.16/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per Orders of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 12th Aug. 2021
Ref No: 1166


Name of the Transmission System User (TSU) : The Chief Engineer - MADC
Communication Address of the TSU : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing, 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108
Transmission System used by the TSU : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards
Date of start of use by the TSU : 22nd November 2014
Billing Period : Month of July 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	340.237837	Initial reading of Energy Meter at BUS-2	0.262793	01-07-2021 00:00 hrs	
Final reading of Energy Meter at BUS-1	346.737270	Final reading of Energy Meter at BUS-2	0.262793	31-07-2021 24:00 hrs	
Difference (GWH)	6.499433	Difference (GWH)	0.000000		
Difference (KWH)	6499433	Difference (KWH)	0		6499433

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st Jul 2021 to 31 st Jul 2021	6499433	0.46	2989739.18

Total Amount (Rs) : 29,89,739

In words : Twenty-Nine Lakh Eighty-Nine Thousand Seven Hundred and Thirty-Nine Only

For Abhijeet MADC Nagpur Energy Pvt. Ltd.

Authorized Signatory

Remark :

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per Orders of the Hon'ble MERC dated 31st Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 015

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 02 Jul. 2021
Ref No: 1164

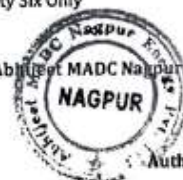
Name of the Transmission : The Chief Engineer - MADC
Communication Address : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing, 1st of the TSU Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108
Transmission System used : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd by the TSU Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards
Date of start of use by the : 22nd November 2014
Billing Period : Month of June 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	334.037194	Initial reading of Energy Meter at BUS-2	0.262793	01-06-2021 00:00 hrs	
Final reading of Energy Meter at BUS-1	340.237837	Final reading of Energy Meter at BUS-2	0.262793	30-06-2021 24:00 hrs	
Difference (GWH)	6.200643	Difference (GWH)	0.000000		6200643
Difference (KWH)	6200643	Difference (KWH)	0		

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st June 2021 to 30 th June 2021	6200643	0.46	2852295.78

Total Amount (Rs) : 28,52,296
In words : Twenty Eight Lakh Fifty Two Thousand Two Hundred and Ninety Six Only

For Abhijeet MADC Nagpur Energy Pvt. Ltd.



Authorised Signatory

Remark:

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd."
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of the fresh Petition to be filed by AMNEPL as per orders of the Hon'ble MERC dated 31 Dec 2020 (Case no. 331 of 2019) and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 012

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 02 Jun. 2021
Ref No: 1162

Name of the Transmission : The Chief Engineer - MADC

System User (TSU)

Communication Address : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing,
of the TSU 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd
by the TSU Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the : 22nd November 2014
TSU

Billing Period : Month of May 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	328.070789	Initial reading of Energy Meter at BUS-2	0.262793	01-05-2021 00:00 hrs	
Final reading of Energy Meter at BUS-1	334.037194	Final reading of Energy Meter at BUS-2	0.262793	31-05-2021 24:00 hrs	
Difference (GWH)	5.966405	Difference (GWH)	0.000000		
Difference (KWH)	5966405	Difference (KWH)	0		5966405

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st May 2021 to 31 st May 2021	5966405	0.46	2744546.30

Total Amount (Rs) : 27,44,546

In words : Twenty-Seven Lakh Forty-Four Thousand Five Hundred and Forty-Six Only

For Abhijeet MADC Nagpur Energy Pvt. Ltd.



Authorised Signatory

Remark:

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill can be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd.," or through RTGS in the account having the following details:
Bank:- INDUSIND Bank, Current A/c No:- 200999819427, IFSC Code: INDB0000025.
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of Petition no. 331 of 2019 and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 012

Abhijeet MADC Nagpur Energy Pvt. Ltd.
(AMNEPL)

Provisional Bill

Date: 03 May 2021
Ref No: 1160

Name of the Transmission : The Chief Engineer - MADC
System User (TSU)

Communication Address : CE, Maharashtra Airport Development Company Limited (MADC), Central Facility Building, B-Wing,
of the TSU 1st Floor, MIHAN SEZ, Khapri Railway, Nagpur-441 108

Transmission System used : 220 KV Transmission System of AMNEPL consisting of Switchyards located at Khairi Khurd
by the TSU Dist. Nagpur & MIHAN SEZ and the associated transmission line between these two switchyards

Date of start of use by the TSU : 22nd November 2014

Billing Period : Month of April 2021

BUS - 1	Reading (GWH)	BUS - 2	Reading (GWH)	Date of Reading & Time	Total Energy (KWH)
Initial reading of Energy Meter at BUS-1	322.570888	Initial reading of Energy Meter at BUS-2	0.262793	01-04-2021 00:00 hrs	
Final reading of Energy Meter at BUS-1	328.070789	Final reading of Energy Meter at BUS-2	0.262793	30-04-2021 24:00 hrs	
Difference (GWH)	5.499901	Difference (GWH)	0.000000		
Difference (KWH)	5499901	Difference (KWH)	0		5499901

Sr. No.	Period	Energy Transmitted during the Period (KWH)	Transmission Charge (Rs/Unit)	Total Transmission Charges for the Period (Rs)
1	1 st April 2021 to 30 th April 2021	5499901	0.46	2529954.46

Total Amount (Rs) : 25,29,954

In words : Twenty-Five Lakh Twenty-Nine Thousand Nine Hundred and Fifty-Four Only



Abhijeet MADC Nagpur Energy Pvt. Ltd.

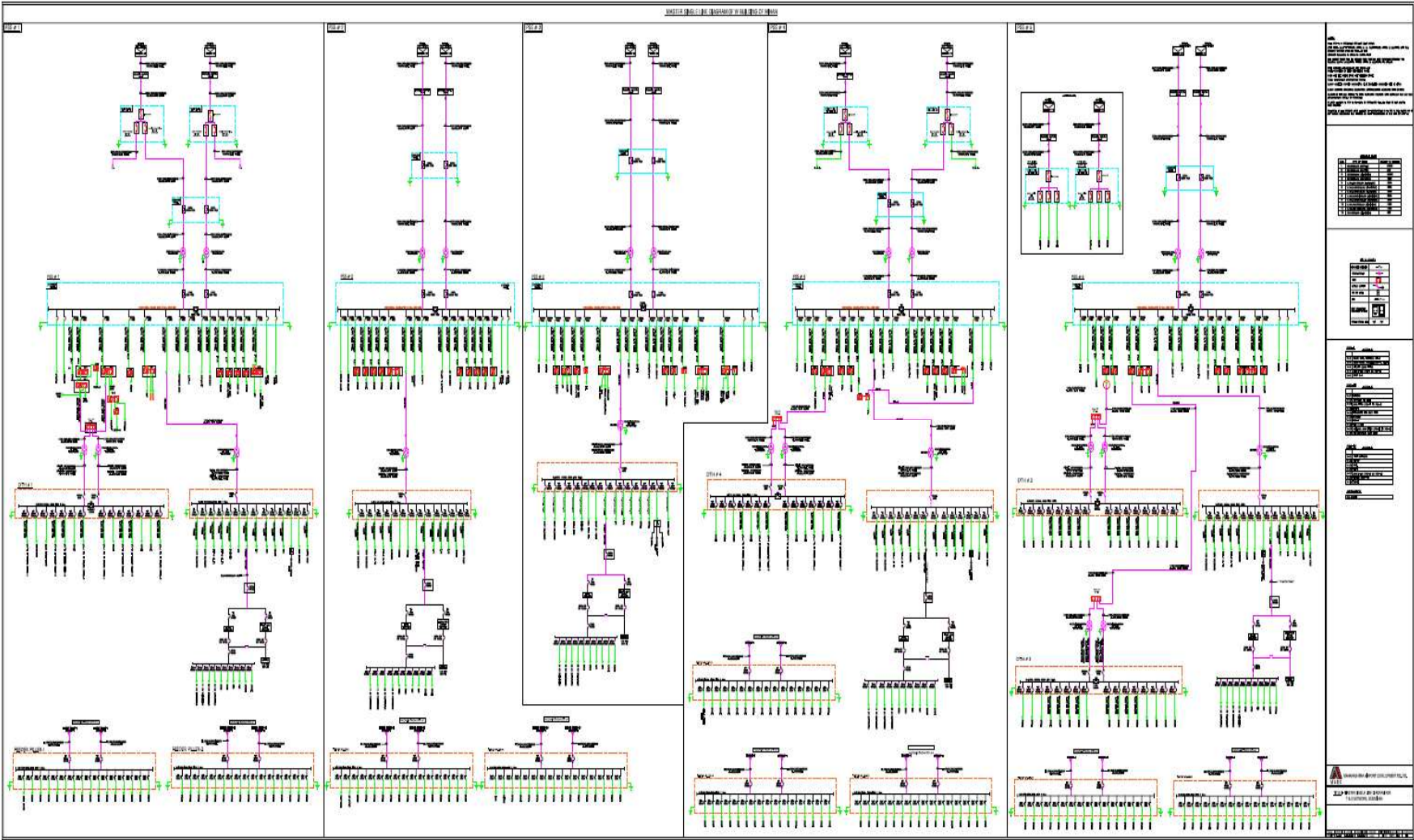
Authorised Signatory

Remark :

- MADC (TSU) has been using the Transmission System of AMNEPL as per the order dated 18th Nov. 2014 passed by Hon. MERC in Case No. 149 of 2014.
- This provisional bill for Transmission Charges is raised @Rs. 0.46/KWh, the rate which is applicable to MSETCL for FY 2014-15, as per the Order dated 14th August 2014 passed by Hon'ble MERC in Case No 123 of 2014. Bills towards Taxes/Duties, if any, shall be raised separately.
- The payment of the Provisional Bill shall be made through Cheque/DD in favour of "Abhijeet MADC Nagpur Energy Pvt. Ltd." or through RTGS in the account having the following details:
Bank:- INDUSIND Bank, Current A/c No:- 200999819427, IFSC Code: INDB0000025.
- The Final Bill shall be raised by AMNEPL upon fixation of the Transmission Charge by Hon'ble MERC in future in respect of Petition no. 331 of 2014 and adjustments, if any, shall be settled between AMNEPL & the TSU accordingly.
- The TSU is requested to release the payment within 15 days of the date of this provisional bill.

Abhijeet Centre, Level 03, 79/4, Prashant Nagar, Ajni, Nagpur-440 012

7.8 Single Line Diagram (SLD)



7.9 Category of service details (With Consumer and voltage-wise)


S.No.	Consumer No.	Consumer Details	Connected Load kW	Consumer Category
HT Consumer 33 KV				
1	3	M/S AI Engineering Services Ltd.	7485	HT Commercial
2	11	M/S Tata Consultancy Services	3500	HT Commercial
3	19	M/S Lupin Ltd.	7372	HT Commercial
HT Consumer 11 KV				
1	1	M/S Chief Engineer MADC	2000	Government offices and department
2	2	M/S Chief Engineer MADC Ltd. WTP	250	HT Water Supply
3	4	M/S Tata Advanced Systems Limited	4500	HT Commercial
4	7	M/S KOLLAND Developers Ltd.	500	HT Commercial
5	8	HexawraeTechnoloies Ltd. (Caliber Point Business Solution Ltd.)	600	HT Commercial
6	9	M/S KANAV Agronomy	298	HT Commercial
7	10	M/S Diet Food International	422	HT Commercial
8	12	M/S Smart Data Enterprises	430	HT Commercial
9	13	M/S Tech Mahindra Limited	650	HT Commercial
10	14	M/S Infosys Limited	300	HT Commercial
11	17	M/S AAR INDAMER Technics Pvt. Ltd.	600	HT Commercial
12	18	M/S Infocept Tech. Pct. Ltd. (unit III)	300	HT Commercial
13	20	M/S HCL Tech. Limited	3000	HT Commercial
14	21	M/S Dassault Reliance aerospace limited	2420	HT Commercial
15	22	M/S Thales Reliance Defence System Ltd.	800	HT Commercial
16	23	M/S Tata Consultancy Services	500	HT Commercial
17	24	M/S AAR INDAMER Technics Pvt. Ltd.	1400	HT Commercial
18	25	M/S Infosys Limited	192	HT Commercial
LT Consumer				
1	3	M/S Cenosphere India Pvt Ltd	80	Commercial
2	4	M/S Meta Tech Air Systems Pvt. Ltd	85	Commercial
3	5	M/S Sub Divisional Engineer BSNL	13	Commercial
4	6	M/S Chief Engineer MADC Nagpur	86	Public Lighting
5	7	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department
6	8	M/S Chief Engineer MADC Nagpur	80	Public Lighting
7	9	M/S Chief Engineer MADC Nagpur	80	Public Lighting
8	10	M/S Chief Engineer MADC Nagpur	40	Public Lighting
9	11	M/S Abhijeet MADC Nagpur energy pvt. Ltd		Government offices and department
10	15	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department
11	16	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department

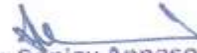
12	17	M/S Chief Engineer MADC Nagpur	11.75	Government offices and department
13	18	M/S Chief Engineer MADC Nagpur	14.74	Government offices and department
14	19	M/S Hass Corporation Pvt Ltd.	15	Commercial
15	20	M/S Devesh Pramod Khandelwal	78	Commercial
16	22	M/S Globallogic India Ltd	94	Commercial
17	23	M/S Veolia India Pvt. Limited	5.59	Commercial
18	26	M/S Chief Engineer MADC Nagpur	60	Public Lighting
19	28	M/S Chief Engineer MADC Nagpur	45	Water Supply
20	29	M/S Ebix Software India Oct. Ltd	60	Commercial
21	31	M/S Indus Towers Ltd.	15	Commercial
22	32	M/S Infocept Technologies Unit 3	80	Commercial
23	33	M/S Indus Towers Ltd	15	Commercial
24	34	M/S State Bank of India	12	Commercial
25	35	M/S Hazel Mercantile Limited	6.5	Commercial
26	37	M/S Lupin Ltd.	1	Commercial
27	39	M/S Reliance JioInficomm Ltd.	5	Commercial
28	40	M/S Reliance JioInfocomm Ltd.	5	Commercial
29	42	M/S Reliance JioInfocomm Ltd.	1	Commercial
30	43	M/S Railtel Corporation of India Ltd.	10	Commercial
31	46	M/S GIF Technologies Pvt. Ltd	60	Commercial
32	47	M/S Techtire Structure Pvt. Ltd.	9	Commercial
33	48	M/S Altius Customer Services Pvt. Ltd.	70	Commercial
34	49	M/S Haldiram Foods Internationals Pvt. Ltd.	1.5	Commercial
35	50	M/S PatanjaliAyurved Limited	16	Commercial
36	51	M/S Turgis & Gaillard India Pvt Ltd	1	Commercial
37	52	M/S Lighthouse infosystem Pvt. Ltd.	150	Commercial
38	53	M/S Citius BPO(India) Pvt. Ltd.	20	Commercial
39	55	M/S Globallogic India Ltd.	70	Commercial
40	56	M/S Globallogic India Ltd.	100	Commercial
41	57	M/S Breads N Beyond	15	Commercial
42	58	M/S ESSEM Compliance Solutions Pvt Ltd.	10	Commercial
43	59	M/S Ascent Business Solution	20	Commercial
44	61	M/S HCL Technologies Ltd.	100	Commercial
45	63	M/S TRT Technologies	120	Commercial
46	64	M/S Infosys Ltd.	135	Commercial
47	65	M/S Chief Engineer MADC Nagpur	1	Public Lighting
48	66	M/S Sagacious IP Pvt. Ltd.	40	Commercial
49	67	M/S DNJ Creation LLP (unit 3)	50	Commercial
50	69	M/S Indo Healthcare Pvt. Ltd.	7.5	Commercial
51	70	M/S Maximist for Education & Software Pvt. Ltd.	30	Commercial
52	71	M/S Arfamo Perfumes Pvt. Ltd.	16.5	Commercial
53	72	M/S Canera Bank	5	Commercial
54	73	M/S Sanman Trade Impex Ltd.	8	Commercial
55	74	M/S Escion Research Labs Pvt Ltd.	10	Commercial
56	75	M/S Persistent Systems Ltd.	40	Commercial

57	76	M/S Chief Engineer MADC Nagpur	30	Public Lighting
58	77	M/S Infocept Tech. Pvt. Ltd. (Unit 4)	40	Commercial
59	78	M/S Neeyamo Enterprise Solutions Pvt Ltd	10	Commercial
60	79	M/S Reliance JIO Infocom Ltd	8	Commercial
61	80	M/S Reliance JIO Infocom Ltd	8	Commercial
62	81	M/S Reliance Jio Infocom Ltd	8	Commercial
63	82	M/S RelinaceJioInfocom ltd	8	Commercial

7.10 Detailed Formats to be annexed

General Information				
1	Name of the DISCOM	Maharashtra Airport Development Company Limited (SEZ MIHAN)		
2	ii) Year of Establishment	2013		
	iii) Government/Public/Private	Government		
3	DISCOM's Contact details & Address			
i	City/Town/Village	Khapri		
ii	District	Nagpur		
iii	State	Maharashtra	Pin	441108
iv	Telephone	07104-281612	Fax	
4	Registered Office			
i	Company's Chief Executive Name	Mr. Samresh Chatterjee		
ii	Designation	Chief Engineer		
iii	Address	W Building, 1st Floor		
iv	City/Town/Village	Khapri	P.O.	Khapri
v	District			
vi	State	Maharashtra	Pin	441108
vii	Telephone	022-66151300	Fax	022-22163814
5	Nodal Officer Details*			
i	Nodal Officer Name (Designated at DISCOM's)	Mr. D. R. Deshmukh		
ii	Designation	Executive Engineer		
iii	Address	W Building, 1st Floor		
iv	City/Town/Village	Khapri	P.O.	Khapri
v	District			
vi	State	Maharashtra	Pin	441108
vii	Telephone	07104-665665	Fax	07104-665600
6	Energy Manager Details*			
i	Name	Mr. D. R. Deshmukh		
ii	Designation	Executive Engineer Electrical	Whether EA or EM	EM
iii	EA/EM Registration No.	EA 9885		
iv	Telephone	07104-281612	Fax	
v	Mobile	9370472612	E-mail ID	deshmukh.dr@madcinda.co
7	Period of Information			
	Year of (FY) information including Date and Month (Start & End)	1st Apr, 2021 - 31th March, 2022		


D. R. DESHMUKH
 Certified Energy Manager
 Reg. No. EA-9885


Dr. Sanjay Annaso Khot
 BEE Accredited Energy Auditor (AEA-0012)

Performance Summary of Electricity Distribution Companies			
1	Period of Information Year of (FY) information including Date and Month (Start & End)	1st April 2021 - 31st March 2022	
2	Technical Details		
(a)	Energy Input Details		
(i)	Input Energy Purchase (From Generation Source)	Million kwh	68.00
(ii)	Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh	68.00
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	65.27
(b)	Transmission and Distribution (T&D) loss Details		Million kwh
		%	1.73
	Collection Efficiency	%	2.54%
		%	100.29%
(c)	Aggregate Technical & Commercial Loss	%	2.26%

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: *S.K. Chatterjee*
Name of the DISCOM: *MADC*

Full Address:-



Seal

Signature:-
Name of AEA*:
Registration Number:

Dr. Sanjay Annaso Khot
BEE Accredited Energy Auditor (AEA-0312)

Form-Details of Input Infrastructure					
Sl. No.	Parameters	Total	Control during in audit	Verified by Auditor in Sample Check	Remarks (Reverse of data)
1	Number of DISCOM	1		1 Yes	Infrastructure Details
2	Number of substation	1		1 Yes	Infrastructure Details
3	Number of feeders	120		120 Yes	Infrastructure Details
4	Number of DTs	18		18 Yes	Infrastructure Details
5	Number of consumers	88		88 Yes	Consumer Data
6	Parameters	66kV and above	18kV	147.5kV	
a.1	Number of conventional metered consumers		1	1	SI
b	Number of consumers with 'smart meters'				
c	Number of consumers with 'smart prepaid' meters				
d	Number of consumers with 'AMR' meters				
e	Number of consumers with 'open smart prepaid' meters				
f	Number of un-metered consumers				
g	Number of total consumers	1	1	1.7	SI
h.1	Number of connections by metered Distribution Transformers	1	1	1	
i	Number of DTs with communicable meters				
j	Number of un-metered DTs				
k	Number of total Transformers	1	1	1	
l	Number of un-metered feeders	12	12	20	SI
m	Number of feeders with communicable meters				
n	Number of un-metered feeders				
o	Number of total feeders	1	12	20	SI
p	Line length (kV km)		118.28		
q	Length of Aerial Bunched Cables		0		
r	Length of Underground Cables		118.28		
3	Voltage level	Particulars	MW	Reference	Remarks (Reverse of data)
1	66kV and above	Long Term Conventional			
		Medium Conventional	88 (80/302)		Includes input energy for franchisee
		Short Term Conventional			
		Renewable			
		Long Term Renewable energy			
		Medium and Short Term RE			Includes power from bilateral PPA/DEP
		Captive, open access input			Any power withdrawn for any activities other than sale to DISCOM. Does not include input for franchisee.
		State of surplus power			
		Quantity of inter-state transmission loss			As confirmed by 2-DC, 3-DC etc.
		Power purchased from inter-state sources	00		Based on data from Form 5
Power at state transmission boundary	88				
2	33kV	Long Term Conventional			
		Medium Conventional			
		Short Term Conventional			
		Renewable			
		Long Term Renewable energy			
		Medium and Short Term RE			
		Captive, open access input			
		State of surplus power			
		Quantity of inter-state transmission loss	0		
		Power purchased from inter-state sources	0		
3	11kV	Input to DISCOM wires network	88		
		Renewable Energy Procurement			
		Wind capacity conventional biomass/ hydro plants			
		Procurement			
		Captive, open access input			
		Renewable Energy Procurement			
		Wind capacity conventional biomass/ hydro plants			
		Procurement			
		State Migration Input			
		Renewable Energy Procurement			
4	1T level	State Migration Input			
		Energy Embedded within DISCOM wires network	0		
		Total Energy Available/ Input	88		
		DISCOM consumers	88		Reference
		Energy Sales Particulars			
		DISCOM consumers	8		Include sales to consumers in franchisee areas, un-metered consumers
		Demand from open access, captive			Non DISCOM's sales
		Embedded generation (net at 1T level)			Demand from embedded generation at a 1T level
		Sales at 1T level	0		
		Quantity of 1T level losses	-2		
5	33kV level	Energy Input at 1T level			
		DISCOM consumers	27		Include sales to consumers in franchisee areas, un-metered consumers
		Demand from open access, captive			Non DISCOM's sales
		Embedded generation at 33 kV level (net)			Demand from embedded generation at 33kV level
		Sales at 33kV level	27		
		Quantity of Losses at 33 kV	27		
		Energy Input at 33 kV level	27		
		DISCOM consumers	27		Include sales to consumers in franchisee areas, un-metered consumers
		Demand from open access, captive			Non DISCOM's sales

D. R. Deshmukh
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 Certified Energy Manager
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H	33 kV Level	Embedded generation at 33 kV or below level		This is DISCOM and OA demand met via energy generated at same voltage level
		Sales at 33 kV level	37	
W	33 kV	Element of Losses at 33 kV	-37	
		Energy input at 33 kV Level		
		DISCOM purchases		
		Dermsal from open access, captive		Include sales to consumers in franchise areas, unstarred customers
		Cross border sale of energy		New DISCOM's sales
		Sale to other DISCOMs		
		Marketing		
		Energy input at > 33 kV Level	68	
		Sales at 66 kV and above (TTR)		
			Total Energy Requirements	68
	Total Energy Sales	68		

Energy Accounting Summary					
S	DISCOM	Input (in MUE)	Sale (in MUE)	Loss (in MUE)	Loss %
L	LT	0	0	0	0
S	33 kV	3	3	0	0
W	33 kV	37	37	0	0
W	33 kV	37	37	0	0
S	Open Access, Captive	Input (in MUE)	Sale (in MUE)	Loss (in MUE)	Loss %
L	LT				
S	33 kV				
W	33 kV				
W	33 kV				

Loss Subvention for DISCOM	
TRE Loss	1.74
Q Loss	1.73
TRE Loss (Q)	2.34%
Q Loss (Q)	2.34%

D. R. Deshmukh
D. R. DESHMUKH
 Certified Energy Manager
 Reg. No. EA-9885

Dr. Sanjay Annaso Khot
Dr. Sanjay Annaso Khot
 BEE Accredited Energy Auditor (AEA-0312)

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

Period from 1st April 2021 to 31st March 2022

Sl. No.	Name of State	Name of Division	Consumer profile				Energy parameters				Losses		Commercial Parameter		
			No. of connected metered (No.)	No. of unmetered (No.)	% of metered consumers	Total number of consumers	Connected load (MW)	Unmetered load (MW)	Total Connected Load (MW)	% of energy passivity	1BD loss (MW)	2BD loss (%)	billed Amount in Rs. Crore	Collection Amount in Rs. Crore	AT & C loss (%)
1	MAHARASHTRA		0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Residential	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Commercial	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Commercial/Industrial	49	0	100%	49	0	0%	49	0	49	0	0	0	0.00%
		Commercial/Industrial/Agri	19	0	100%	19	0	0%	19	0	19	0	0	0	0.00%
		Others	10	0	100%	10	0	0%	10	0	10	0	0	0	0.00%
		Sub-total	78	0	100%	78	0	0%	78	0	78	0	0	0	0.00%
76	TELANGANA		0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Residential	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Commercial	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Commercial/Industrial	18	0	100%	18	0	0%	18	0	18	0	0	0	0.00%
		Commercial/Industrial/Agri	18	0	100%	18	0	0%	18	0	18	0	0	0	0.00%
		Others	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Sub-total	36	0	100%	36	0	0%	36	0	36	0	0	0	0.00%
77	Andhra Pradesh		0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Residential	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Commercial	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Commercial/Industrial	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Commercial/Industrial/Agri	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	0.00%
		Sub-total	0	0	0%	0	0	0%	0	0	0	0	0	0	0.00%
		Total	114	0	100%	114	0	0%	114	0	114	0	0	0	0.00%

* Note - It shall be necessary to record the energy supplied separately for each category of consumer which is being provided a separate rate of supply in the tariff by the state government, so that the energy due for the electricity distribution company is quarterly calculated by multiplying the

Sl. No.	Particulars
1	Power supply value of meter
2	Power supply value of meter
3	Power supply value of meter
4	Power supply value of meter
5	Power supply value of meter

We undertake that the information supplied in this Document and Form is accurate to the best of my knowledge and I agree to be furnished and such information shall not be used for any other purpose without my written consent. I have undertaken to indemnify such loss.

Name of the consumer: S.K. Deshpande
 Name of the meter: MAPE
 Pin Address: MAPE

Signature: [Signature]
 Name of Energy Manager: D. R. DESHMUKH
 Designation: Verified Energy Manager
 Reg. No. EA-9885



[Signature]
 Dr. Sanjay Annaso Khot
 BEE Accredited Energy Auditor (AEA-0312)

Form-Input energy (Details of input energy & infrastructure)
A. Summary of energy input & infrastructure

S.No	Particulars	Particular Price.../sq	Remarks (Source of data)
A.1	Input Energy purchased (MWh)	0.00	
A.2	Transmission loss (%)	0.00	MHDCCL 88%
A.3	Transformer loss (%)	0.00	
A.4	Energy used to start the appliances (MWh)	0.00	
A.5	Appl. losses (MWh)	0.00	
A.6	WTG loss	0.00	
A.7	Net input energy purchased at DISCOM premises or at distribution point (MWh)	0.00	
A.8	1000V metering available at MHCL 4V (Direct cost or via Reg. 50)	88.00	
A.9	1000V metering available at 22 KV (Direct cost or via Reg. 50)	0.00	Infrastructure Details
A.10	% of metering available at consumer end	0%	Infrastructure Details
A.11	% of metering at 33KV voltage level	100%	Infrastructure Details
A.12	% of metering at 11KV voltage level	0	Infrastructure Details
A.13	% of metering at 11KV voltage level	12	Infrastructure Details
A.14	% of metering at 11KV voltage level	78	Infrastructure Details
A.15	% of metering at 11KV voltage level	0	Infrastructure Details
A.16	Line length (km) at 33KV voltage level	0	Infrastructure Details
A.17	Line length (km) at 11KV voltage level	51.82	Infrastructure Details
A.18	Line length (km) at 11KV voltage level	89.74	Infrastructure Details
A.19	Line length (km) at 11KV level	2.21	Infrastructure Details
A.20	Length of single busbar cables	0	Infrastructure Details
A.21	Length of double busbar cables	135.78	Infrastructure Details
A.22	MVCL loss	14.2850	Infrastructure Details

B. Meter reading of input energy at injection points

S.No	Zone	Circle	Voltage level (KV)	Station (KV)	Sub-Station (KV)	Phase ID	Transformer Name	Metering Status (Free-Run or Meter)	Meter ID	Meter Type (Industrial, Residential, etc.)	% of metering available	Metering Details		Particulars, Rs.				Remarks (Source of data)							
												Start Date	End Date	Meter S.No	CT/PT ratio	Input (MWh)	Export (MWh)								
B.1	AMDC 002.1		330				metered	Functional		Industrial	100%	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	MHDCCL 88%			
B.2	AMDC 002.2		330				metered	Functional		Industrial	100%	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	01.07.2020	MHDCCL 88%		
Total (MWh)												88.00	0.00												
Net input energy at DISCOM premises (MWh)												88.00	0.00												

C. Meter reading of input energy at injection points

Circle	Zone	Circle	Voltage level (KV)	Station (KV)	Sub-Station (KV)	Phase ID	Transformer Name	Metering Status (Free-Run or Meter)	Meter ID	Meter Type (Industrial, Residential, etc.)	% of metering available	Start Date	End Date	Meter S.No	CT/PT ratio	Input (MWh)	Export (MWh)	Remarks (Source of data)


I/We undertake that the information supplied in the above Form 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: Dr. Sanjay Annaso Khot
 Name of the DISCOM: MADC
 P.O. Address: MADC

Signature: Dr. Sanjay Annaso Khot
 Dr. Sanjay Annaso Khot
 PEE Accredited Energy Auditor (AEA-0312)

Signature: D R. DESHMUKH
 D R. DESHMUKH
 Certified Energy Manager
 Reg. No. EA-9885



[Details of Consumers]						
Summary of Energy						
Period From 1st April 2021 - 31st March 2022						
S.No	Type of Consumers	Category of Consumers (HT/HT/LT/Others)	Voltage Level (in Voltage)	No of Consumers	Total Consumption (in MTU)	Remarks (Source of data)
1	Domestic					
2	Commercial	LT	415	49	1.88	Consumer Bills
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	415	1	0.04	Consumer Bills
8	Public Lighting	LT	415	7	0.93	Consumer Bills
9	HT Water Supply	HT	11	1	0.95	Consumer Bills
10	HT Industrial					
11	Industrial (Small)					
12	Industrial (Medium)					
13	HT Commercial	HT	11	19	61.84	Consumer Bills
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	11/415	7	1.15	Consumer Bills
19	Others-1 (if any, specify in remarks)					
20	Others-2 (if any, specify in remarks)					
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						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
				Total	84	66.27


O R. DESHMUKH
 Certified Energy Manager
 No. EA-9885


Dr. Sanjay Annaso Khot
 BEE Accredited Energy Auditor (AEA-0312)

7.11 List of documents verified with each parameter

S.No.	Data	Unit	Sources of data
1	Input Energy Purchased	MUs	MSEDCL Bills
2	Transmission Loss	%	
3	Energy sold outside the periphery	MUs	
4	Open access sale	MUs	
5	EHT sale	MUs	
6	% of metering available at DT	%	Infrastructure Details
7	% of metering available at consumer end	%	Infrastructure Details
8	No of feeders at 66kV voltage level	Nos.	Infrastructure Details
9	No of feeders at 33kV voltage level	Nos.	Infrastructure Details
10	No of feeders at 11kV voltage level	Nos.	Infrastructure Details
11	No of LT feeders level	Nos.	Infrastructure Details
12	Line length (ckt. km) at 66kV voltage level	Km	Infrastructure Details
13	Line length (ckt. km) at 33kV voltage level	Km	Infrastructure Details
14	Line length (ckt. km) at 11kV voltage level	Km	Infrastructure Details
15	Line length (km) at LT level	Km	Infrastructure Details
16	HT/LT ratio	Unit Less	Infrastructure Details
17	Feeder wise Import & Export Energy	MUs	Infrastructure Details
18	Nos. of Consumers	Nos.	Infrastructure Details
19	Connected Load of Consumers	MW	Infrastructure Details
20	Input Energy	MUs	Infrastructure Details
21	Consumer wise Billed Energy		Infrastructure Details
22	T&D Loss	MUs	Infrastructure Details
23	T&D Loss	%	Infrastructure Details

7.12 Brief Description of Unit

Maharashtra Airport Development Company Limited (MADC) has been appointed by the Government of Maharashtra as the Nodal Agency and also Special Planning Authority for the planning and development of Multi-modal International Hub Airport at Nagpur (MIHAN) notified area to leverage on Nagpur's unique locational advantage.

The Government of India has already accorded approval and notified MIHAN-SEZ as a multi-product SEZ. MADC has already leased out about 600 ha. land in MIHAN-SEZ to majors IT companies like Infosys, TCS, Tech-Mahindra and other blue chip companies like Tata Aeronautics Limited, Kolland, Hexaware BPS (Caliberpoint), Lupin Pharma., Air India Boeing Inc., Reliance Aero Infrastructure etc. for setting up of IT parks, manufacturing units and MRO facilities etc. AIIMS, IIM and Govt. Engineering Colleges is also establishing their campus in the MIHAN area. Considering the overall development of MIHAN and its surrounding there could be demand of commercial and residential facility. The development of all support infrastructures, which MADC has committed to provide, is almost completed.

In order to provide electricity to the consumers, MADC constructed the electrical distribution network including 5 Power Sub-Station (4 in SEZ & 1 in NON SEZ) along with 4 DTH (2 in SEZ & 2 in NON SEZ). Earlier, the electrical distribution network including 33/11KV sub stations was under M/s. AMNEPL for operation and maintenance, but AMNEPL stopped power supply to MIHAN area in April – 2014 and handed over the network to MADC in same month. Since then, MADC was carrying out the operation and maintenance of infrastructure network and started purchasing and distribution of power.

7.13 List of Parameters arrived through calculation or formulae with list of documents as source of data

S.No.	Data	Unit	Sources of data
1	T&D Loss	MUs	MSEDCL & Consumer Bills
2	T&D Loss	%	MSEDCL & Consumer Bills
3	Transmission Loss	MUs	MSEDCL & Consumer Bills
4	Net input energy (received at DISCOM periphery or at distribution point, after adjustment)	MUs	MSEDCL & Consumer Bills

Computation of Input Energy

MADC is measuring input Energy by ring fencing of network through installation of import/export Energy meters at project area boundaries.

Computation of Billed Energy

From total input Energy some is lost in the form of technical losses as heat dissipation which is termed as I^2R losses. Some energy also is left unaccounted due to discrepancies in meter reading, non-metering and theft which is termed as commercial losses.

MADC is computing Billed Energy by adding the total energy consumed during the defined period by all consumers indicated in their meters (Meter-Sales as Billed).

Computation of Un metered Energy

During analysis of last four years' data, we have observed that MADC Discom has 100 % metered connections.

Computation of T&D Loss

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's used for transmission, transformation, sub-transmission and distribution of power.

Methodology

Net Input Energy at Discom Periphery = Feeder wise input energy at 66 KV, 33 KV and 11 KV Voltage level including Solar Energy

Transmission Loss in Mus = % Transmission Loss * Input Energy Purchased

Input Energy inside Discom Periphery for T&D Loss Calculation inside the Periphery =

Input Energy Purchased – (Transmission loss+ EHT Sale+ Energy Outside the Periphery)

Transmission & Distribution losses (T&D losses) = {1- (Total energy Billed/ Total energy Input inDiscom Periphery)} x 100

THANK YOU